



EPBC Annual Compliance Report

Year 2 – 29 March 2022 to 28 March 2023 (EPBC 2017/7875)
Woogaroo Heights Master Planned Residential Development,
Springfield, Queensland

Prepared for Lendlease Communities (Springfield) Pty Limited
16 June 2023

Job No. 7927

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Acronyms and References

ACR	Annual Compliance Report
DAM	Declared Area Map
DAWE	Department of Agriculture, Water and the Environment (Cth – former)
DCCEEW	Department of Climate Change, Energy, the Environment and Water (Cth)
DOR	Department of Resources (Qld)
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cth)
EPSC	Environmental Pre-start Checklist
GHFF	Grey-headed Flying-fox
ha	hectares
ICC	Ipswich City Council
km	kilometres
m	metres
MNES	Matters of National Environmental Significance
PMAV	Property Map of Assessable Vegetation
QFC	Queensland Fauna Consultancy
SAT	Spot Assessment Technique
SHG	Saunders Havill Group
VDEC	Voluntary Declaration (under the <i>Vegetation Management Act 1999</i>)
VMA	<i>Vegetation Management Act 1999</i> (Qld)
WHIMP	Wildlife Habitat Impact Mitigation Plan
WPMP	Wildlife Protection Management Plan

1. Introduction

The Environmental Management Division of **Saunders Havill Group** was engaged by **Lendlease Communities (Springfield) Pty Limited** (Lendlease) to prepare this EPBC Annual Compliance Report (ACR) for the Woogaroo Heights Master-Planned Residential Development at Spring Mountain, Queensland. This report provides an assessment of project compliance with the approval granted under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (ref EPBC 2017/7875), and is specifically required by condition 16 of the approval granted on 30 November 2020 (refer **Appendix A**).

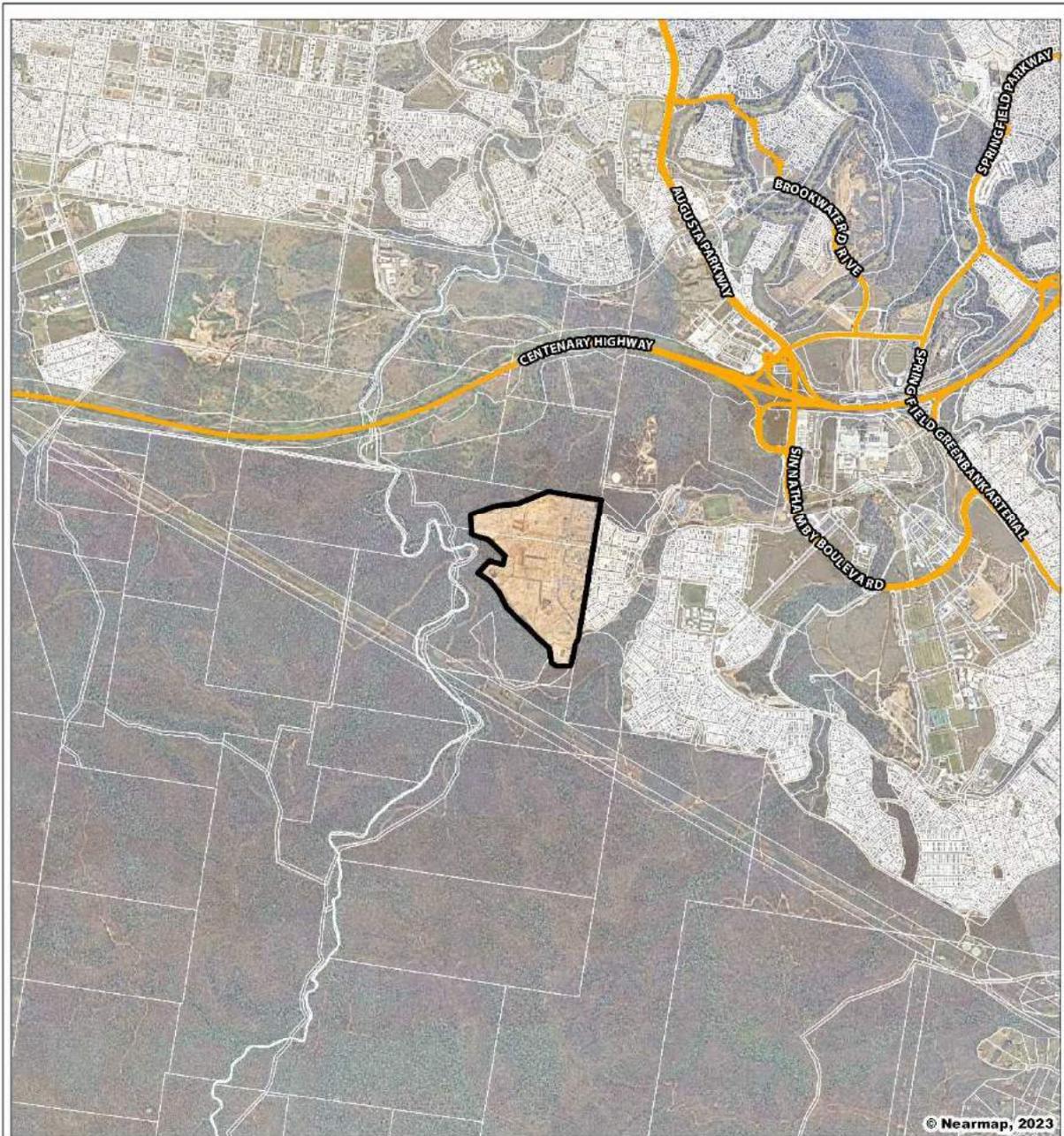
The project area covers approximately 57.03 hectares (ha) and is located 1 kilometre (km) west of Springfield Central (refer to project context map at **Figure 1**). Woogaroo Heights is located adjacent to EPBC Act approved development EPBC 2013/7057. The EPBC 2017/7875 approval conditions permit an impact to 57.03 ha of Matters of National Environmental Significance (MNES) habitat being Koala habitat and Grey-headed Flying-fox (GHFF) foraging habitat.

1.1. Approval details

Lendlease Communities (Springfield) Pty Ltd, as the Proponent of the Project (ref EPBC 2017/7875) was issued with an approval by the former Department of Agriculture, Water and the Environment, now Department of Climate Change, Energy, the Environment and Water (DCCEEW) on 30 November 2020, subject to conditions. Refer to **Appendix A** for a copy of the EPBC Act approval. Key details related to EPBC 2017/7875 are provided in **Table 1**.

Table 1: Approval Details

Commonwealth reference	EPBC 2017/7875
Approval holder	Lendlease Communities (Springfield) Pty Ltd
ACN	087 876 864
Approval date	30 November 2020
Expiry date of approval	01 January 2033
Approved action	To develop the Woogaroo Heights residential development located within the Greater Springfield Master Planned Development Area, approximately 10 km east of the Ipswich Central Business District, Queensland.
Controlling provision	Approved – listed threatened species and communities (sections 18 & 18A)
Project commencement	29 March 2021
Reporting period	Year 2 — 29 March 2022 to 28 March 2023
Address	London Avenue, Spring Mountain
Local government area	Ipswich City Council (ICC)



Legend

- Qld DCDB
- Woogaroo Heights
- Major Roads

Figure 1

Woogaroo Heights
Site Context

File ref: 7927 E Figure 1 Project Context A
Date: 31/05/2023
Project: Woogaroo Heights

0 200 400 600 800 1,000 m

Scale (A4): 1:35,000 [GDA 1994 MGA Z56]



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Layer Source: © State of Queensland 2023

Figure 1: Project context

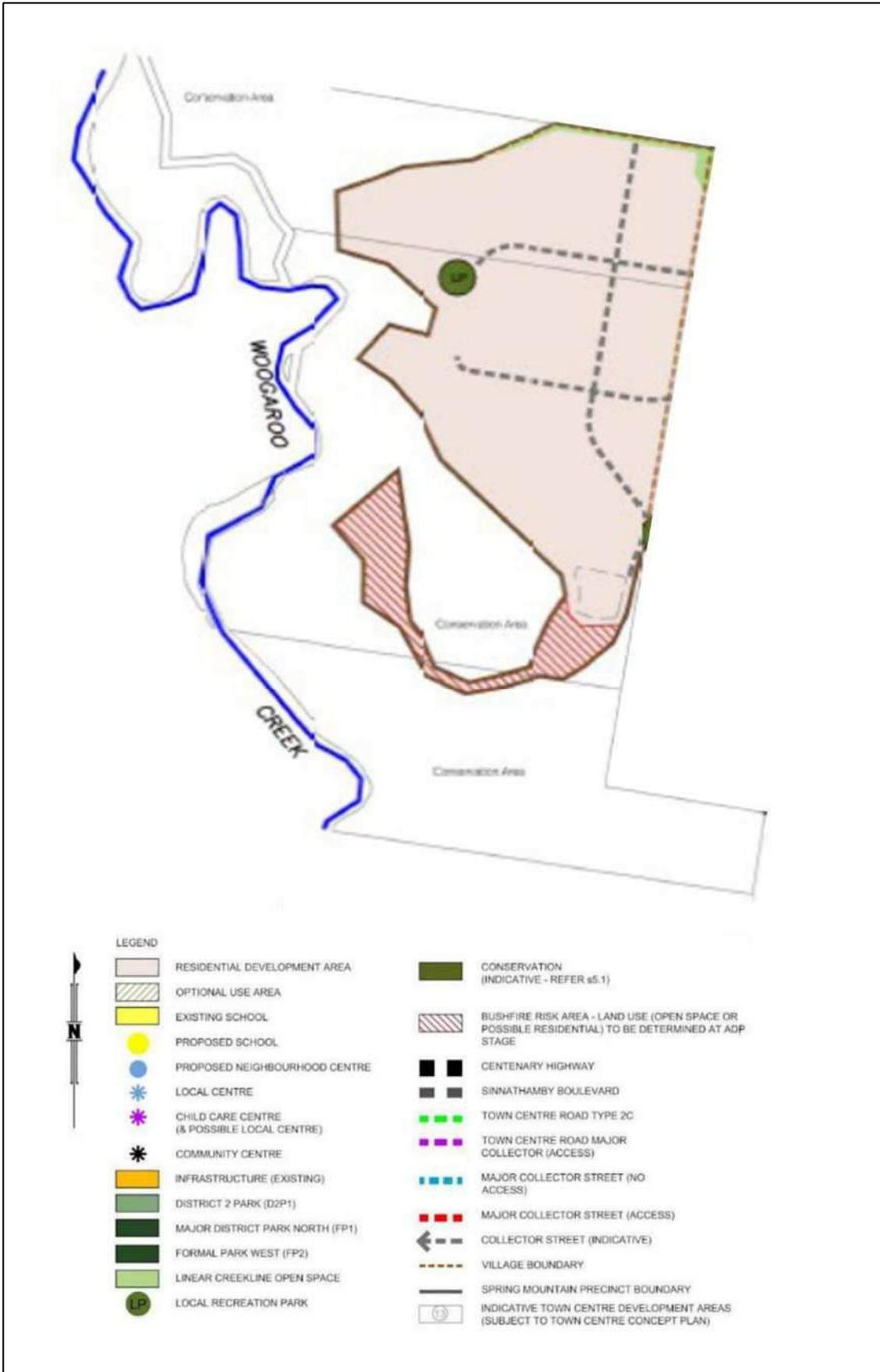


Figure 2: Woogaroo Heights Precinct Plan

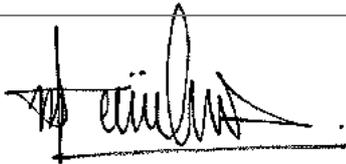
1.2. Reporting Period

This ACR details the status and compliance of the Project for the 12 month reporting period between the 29 March 2022 to the 28 March 2023.

In accordance with Condition 16 of the EPBC Act approval conditions, the ACR must be published on the Proponent's website and notification provided to the Department of Climate Change, Energy, the Environment and Water (DCCEEW or 'the Department') within 60 business days of the 12 month anniversary of the commencement of the action, being the 22 June 2023.

1.3. Declaration of accuracy

In making this declaration, I am aware that sections 490 and 491 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (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	16 June 2023

1.4. Overview of Key Activities

1.4.1 Commencement of the Action 2021

The project commenced on the 29 March 2021 with the commencement of baseline surveys at The Meads offset site.

1.4.2 Year 2 Activities

Key impact and offset site activities that occurred during the year 2 reporting period include:

- Progression of clearing works over the impact site;
- Commencement of construction as defined under the EPBC approval;
- Completion of management activities across the Meads offset site including the management of threats being Weeds of National Significance and non-vertebrate pest species; and
- General track maintenance repairs within the offset site.

1.5. Report structure

The approval includes eleven site-specific approval conditions and a further eleven administrative approval conditions. Site-specific conditions have been categorised into:

1. Impact management
2. Offset site management

The approval conditions include a number of ‘outcomes based’ conditions and Parts A and B of this report detail how the implemented management actions will achieve, or are achieving, the outcomes. This includes details of the management strategies and any adaptations that occur during the term of the approval. The compliance table is presented in **Section 2** followed by Parts A and B, and Appendices as illustrated in the **Figure 3** below.

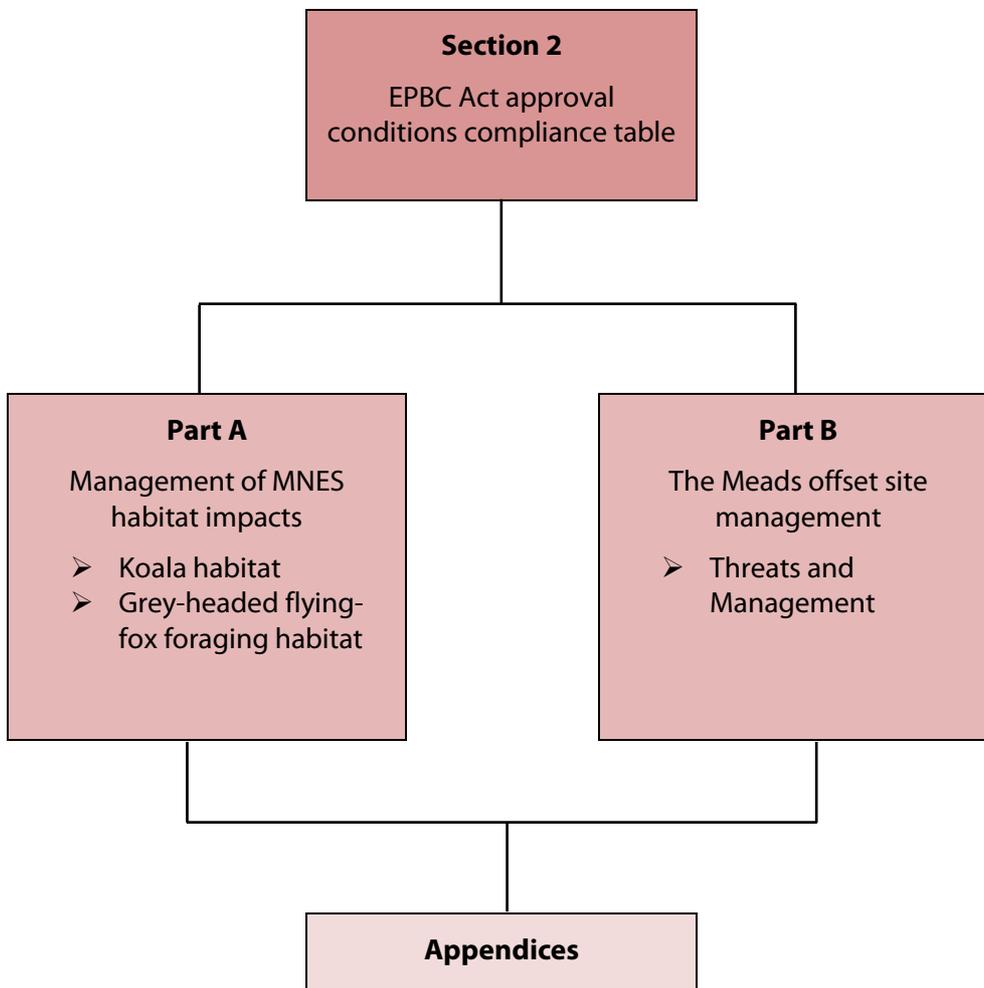


Figure 3: Annual Compliance Report Structure

1.6. Key Consultants and Roles

Table 2 below is a list of the key appointed contractors and their roles in the Project.

Table 2: Key Consultants and Roles

Role	Appointed Contractor
Development Manager	Lendlease
Project Engineer	Northrop Consulting Engineers (NCE)
Civil Contractor / Site Supervisor	Shadforth Civil
Clearing Contractor	Wood Mulching Industries
Environmental Coordinator	Saunders Havill Group
Fauna Spotter Catcher	Queensland Fauna Consultancy (QFC)

2. EPBC approval conditions compliance table

The EPBC Act approval conditions for the Woogaroo Heights residential development are replicated in **Table 3** 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 Act approval and conditions is provided in **Appendix A**.

Table 3: EPBC approval conditions compliance table

Condition number / reference	Condition	Is the project compliant with this condition?	Evidence / comments
1	For the protection of the Koala and Grey-headed Flying-fox, the approval holder must not clear more than 57.03 ha of Koala Habitat and Grey-headed Flying-fox habitat. The approval holder must only clear within the development area.	Compliant	Approximately 22.63 ha of habitat was cleared at the Woogaroo Heights impact site between 28 July 2022 and 28 March 2023. The total clearing completed is 55.11 ha.
2	For the protection of the Koala and Grey-headed Flying-fox at the development area, the approval holder must: <ul style="list-style-type: none"> a. Ensure that a fauna spotter/catcher is present during all clearing and construction activities and given sufficient authority to ensure that such activities do not cause injury or death of koalas; b. clear in accordance with the Nature Conservation (Koala) Conservation Plan 2017 under the Nature Conservation Act 1992 (Qld) to allow Koalas to safely move out of clearing areas and into connected areas of koala habitat, and implement all provisions for sequential clearing; c. install temporary Koala exclusion fencing around any area of construction work, immediately after clearing and prior to the commencement of construction in that area, so as to prevent Koalas entering any area where construction is 	Compliant Compliant Compliant	<ul style="list-style-type: none"> a. A suitably qualified and experienced fauna spotter catcher was present on-site during vegetation clearing which had the potential to impact wildlife clearing. There was no Koala injury or mortality as a result of vegetation clearing at the project site. As detailed in the post-clearing services fauna spotter catcher report, one (1) Koala was identified during clearing in October 2022 (refer Appendix C). An exclusion zone was established and was flagged off. The Koala was left to self-relocate and no harm to a Koala occurred. b. All vegetation clearing was supervised by QFC and in accordance with stipulations as expressed in the <i>Nature Conservation (Koala) Conservation Plan 2017</i> as detailed in the post-clearing fauna spotter catcher reports completed by QFC (refer Appendix C). c. Temporary Koala exclusion fencing was installed around the perimeter of the clearing area during the reporting period (refer Section 3.2 Photo 1).

Condition number / reference	Condition	Is the project compliant with this condition?	Evidence / comments
	<p>taking place until all construction activities within that fenced construction area are completed;</p> <p>d. implement measures to prevent dogs from entering the development area during clearing and construction to minimise the risk to Koalas of predation by domestic dogs at the development area and adjacent conservation areas. Such measures must include (but are not limited to) prohibition of workers bringing animals in to the development area;</p> <p>e. Implement traffic calming measures and ensure that the speed of all vehicles on construction roads in the development area is no greater than 40 km/h at any time (except an emergency) so as to minimise the risk to Koalas of vehicle strike;</p> <p>f. Construct roads consistent with Queensland’s fauna sensitive road design guidelines to minimise the risk to Koalas of vehicle strike. In particular, on roads flanking adjacent conservation areas or waterways, or which cross waterways, vehicle speeds must be limited to 50 km/h, and safe fauna movement solutions, fauna exclusion/koala proof fencing and local traffic management measures must be implemented; and</p> <p>g. Install prominent Koala awareness signage consistent with Queensland’s wildlife signing guidelines prior to opening to motorists, any road where the presence of animals along the road path is well-known or expected, such as on roads flanking adjacent conservation areas or adjacent to fauna movement solutions.</p>	<p>Compliant</p> <p>Compliant</p> <p>Not applicable</p> <p>Not applicable</p>	<p>d. Domestic dogs are not permitted to be brought on-site. There were no incidents on-site between dogs and Koalas during the reporting period.</p> <p>e. A speed limit of 40 km/h applies to all of site which is indicated through clear signage and site inductions.</p> <p>f. Fauna sensitive design measures will be incorporated into the construction and completion of roads and infrastructure.</p> <p>g. Fauna sensitive design measures will be incorporated into the construction and completion of roads and infrastructure.</p>

Condition number / reference	Condition	Is the project compliant with this condition?	Evidence / comments
3	<p>To compensate for the clearing of 57.03 hectares of Koala habitat and Grey-headed Flying-fox foraging habitat, the approval holder must:</p> <ul style="list-style-type: none"> a. Legally secure a minimum of 132 hectares at The Meads offset site prior to undertaking any clearing at the development area; b. Within 20 business days of legally securing The Meads offset site, provide the Department with written evidence demonstrating that The Meads offset site has been legally secured (e.g. legal security documentation), and the shapefiles of the offset attributes; c. Limit uses and permissible activities at The Meads offset site such that the value of The Meads offset site as Koala habitat and Grey-Headed Flying-fox foraging habitat cannot lawfully be reduced. 	<p>Compliant</p> <p>Compliant</p> <p>Compliant</p>	<ul style="list-style-type: none"> a. The Meads offset site was legally secured on 12 March 2021 prior to the commencement of vegetation clearing on 28 July 2021 using the Voluntary Declaration process administered under the <i>Vegetation Management Act 1999</i> (VMA). The Chief Executive of the Department of Resources (DOR) declared the Offset Area in a Declared Area Map (DAM 2020/014171) as an area of high nature conservation value in accordance with section 19F(1) of the VMA. The Meads offset site is shown as Category A on a Property Map of Assessable Vegetation (PMAV 2020/014172). Documentation was provided in ACR 1. b. DCCEEW was notified and provided evidence via e-mail correspondence on 18 March 2021 that the offset site was legally secured, within the 20-business day timeframe. A shapefile of the offset attributes was provided at this same time. c. The Meads offset site is managed by New Ground as the third party offset provider. The only activities undertaken on-site are relevant offset activities carried out by New Ground.
4	<p>Within 6 months from the date of this approval, the approval holder must complete baseline surveys of the entire area at The Meads offset site. The baseline surveys must be conducted by a suitably qualified field ecologist in accordance with a scientifically valid, robust, and repeatable methodology and include details of the:</p> <ul style="list-style-type: none"> a. Vegetation condition attributes for each Regional Ecosystem; b. Number and condition of Grey-Headed Flying-fox foraging species in each quarter (25%) of The Meads offset site; c. extent of weed cover; d. Number of non-native predators and non-native herbivores; and 	<p>Compliant</p>	<p>The approval is dated 30 November 2020, therefore the due date for completing baseline surveys was 30 May 2021. Baseline surveys of The Meads offset site were completed by New Ground between 29 March and 15 May 2021. The baseline survey report is provided in ACR 1 and included the details required by <i>a. to e.</i> of this condition.</p>

Condition number / reference	Condition	Is the project compliant with this condition?	Evidence / comments
	e. Rate of Koala mortalities attributable to non-native predators.		
5	Within 3 months of completion of the baseline surveys required under condition 4, the approval holder must publish on the website and provide to the Department a report detailing the results of the baseline surveys required under condition 4 (including survey methodology and dates).	Compliant	<p>The baseline surveys were completed at the offset site on 15 May 2021 making the associated report due on 15 August 2021. The report was published and provided to DCCEEW on 2 August 2021.</p> <p>The baseline survey ecological report is available on the Proponent’s website at the following weblink: <https://communities.lendlease.com/queensland/springfield-rise/living-in-springfield-rise/sustainability-and-environment/></p>
6	<p>For the protection of the Koala (and Koala habitat) and the Grey-headed Flying-fox (and Grey-headed Flying-fox foraging habitat), the approval holder must achieve the following outcomes at The Meads offset site by the end of year 1:</p> <ul style="list-style-type: none"> a. Repair and maintain the existing perimeter fencing to exclude all livestock from The Meads offset site; b. Remove all barbed-wire fencing at The Meads offset site, excluding existing perimeter barbed-wire fencing; and c. Increase the visibility to fauna of perimeter barbed-wire fencing, including by affixing visibility tags at every 30 cm interval along the top strand of perimeter barbed-wire fencing. 	Compliant	<p>The last day of Year 1 was 29 November 2021. New Ground confirmed on 15 November 2021 that the following outcomes were achieved on The Meads offset site:</p> <ul style="list-style-type: none"> a. The perimeter fence was repaired to exclude livestock from the offset area. b. All barbed wire throughout the offset area was removed. c. Permission was gained from all neighbours to replace the top strand of barbed wire along the perimeter with plain wire, negating the need for metal tags.
7	For the protection of the Koala (and Koala habitat) and the Grey-headed Flying-fox (and Grey-headed Flying-fox foraging habitat), the approval holder must achieve the following outcomes at The Meads offset site by the end of year 8:	Not applicable	<p>Baseline surveys were conducted by New Ground to determine baseline habitat values on The Meads offset site during Year 1.</p> <p>Condition 7 is not required to be met until Year 8.</p>

Condition number / reference	Condition	Is the project compliant with this condition?	Evidence / comments
	<ul style="list-style-type: none"> a. Restore vegetation condition to the 'BioCondition Benchmarks to be achieved' for each Regional Ecosystem, as specified at Attachment A; b. Ensure that at least 6 different Grey-Headed Flying-fox foraging species (which in combination must provide annual winter and spring foraging resources for the Grey-headed Flying-fox) occurs within each quarter (25%) of The Meads offset site; c. Ensure that the extent of weed cover across the whole of The Meads offset site is less than 5%; d. A reduction in the numbers of non-native predators and non-native herbivores by 90%, relative to the numbers identified during baseline surveys; and e. A reduction in the rate of Koala mortalities attributable to non-native predators by 90%, relative to the numbers identified during baseline surveys. 		
8	Once achieved, environmental outcomes specified under conditions 6 and 7 must be maintained for the remainder of the period of effect of the approval.	Compliant	The requirements of Condition 6 were met during this reporting period as detailed above. Fences will continue to be monitored and repaired where necessary.
9	For the protection of the Spotted-tail Quoll present at The Meads offset site, the approval holder must ensure that any use of 1080 baits at The Meads offset site is undertaken in accordance with the Administrative Guidelines on the use of 1080.	Compliant	Condition 7 is not applicable until Year 8. 1080 bait was not used on The Meads offset site during the Year 2 reporting period.
10	The approval holder must engage a suitably qualified independent expert to undertake an assessment of The Meads offset site at the end of year 4 to assess whether the outcomes required in	Not applicable	This condition relates to future work that is not required until Year 4 (2024/2025).

Condition number / reference	Condition	Is the project compliant with this condition?	Evidence / comments
	conditions 6, 7 and 8 have been, or are likely to be, achieved. The findings of the assessment must be published within 6 months of the end of year 4 and be provided to the Department within 5 business days of being published.		
11	<p>If, at any time during the period of effect of the approval, the Minister is not satisfied that any of the requirements or outcomes required under conditions 6, 7 and 8 have been or are likely to be achieved or maintained, the Minister may require the approval holder to submit a corrective action plan for The Meads offset site for the Minister’s approval, or to monitor, manage, avoid, mitigate, offset, record and/or report on, impacts to the Koala, the Grey-headed Flying-fox, or the Spotted-tail Quoll.</p> <ul style="list-style-type: none"> a. The Minister may set a timeframe in which the corrective action plan must be submitted, and may specify that the corrective action plan must be prepared or reviewed by an independent suitably qualified field ecologist. b. If the Minister approves the corrective action plan, the approval holder must implement the approved corrective action plan. 	Not applicable	A corrective action plan was not requested by the Minister.
Notification of date of commencement of the action			
12	<p>The approval holder must notify the Department in writing of:</p> <ul style="list-style-type: none"> a. the date of commencement of the action within 5 business days after the date of commencement of the action; b. the date of commencement of clearing within 5 business days after the date of commencement of clearing; and c. the date of commencement of construction within 5 business days after the date of commencement of construction. 	<p>12a Non-compliant</p> <p>12b Compliant</p> <p>12c Compliant</p>	<ul style="list-style-type: none"> a. The action commenced through the baseline surveys at The Meads offset site on the 29 March 2021. DCCEEW was notified on 8 April 2021 of the commencement of the action. The notification was one business day late. The non-compliance was addressed within the notification and no further action was taken by the Department given the circumstances. b. Vegetation removal associated with undertaking UXO clearances commenced on the 28 July 2021. The Department was notified on

Condition number / reference	Condition	Is the project compliant with this condition?	Evidence / comments
			<p>3 August 2021, which was the fourth day after the commencement of the clearing and therefore within the accepted timeframe.</p> <p>c. Construction as defined under the approval commenced on 3 November 2022. The Department was notified on 7 November 2022 via email correspondence.</p>
13	<p>If the commencement of the action does not occur within 5 years from the date of this approval, then the approval holder must not undertake commencement of the action without the prior written agreement of the Minister.</p>	Not applicable	<p>The action commenced through the commencement of baseline surveys at The Meads offset site on 29 March 2021.</p>
Compliance Records			
14	<p>The approval holder must maintain accurate and complete compliance records.</p>	Compliant	<p>All records substantiating all activities associated with or relevant to the conditions of approval are maintained by the approval holder. If required by the Minister, these records can be made available to allow a third-party audit of the Project.</p>
15	<p>If the Department makes a request in writing, the approval holder must provide electronic copies of compliance records to the Department within the timeframe specified in the request.</p>	Not applicable	<p>A request from the Department for compliance records was not received during the reporting period.</p>
Annual Compliance reporting			
16	<p>The approval holder must prepare a compliance report for each 12 month period following the date of commencement of the action, or otherwise in accordance with an annual date that has been agreed to in writing by the Minister. The approval holder must:</p> <ol style="list-style-type: none"> a. publish each compliance report on the website within 60 business days following the relevant 12 month period; b. notify the Department by email that a compliance report has been published on the website and provide the 	Compliant	<p>This report is the second annual compliance report for the project which commenced on 29 March 2021. The Year 2 report is for the reporting period 29 March 2022 to 28 March 2023 inclusive with lodgment to the DCCEEW be completed before 26 June 2023.</p>

Condition number / reference	Condition	Is the project compliant with this condition?	Evidence / comments
	<p>weblink for the compliance report within 5 business days of the date of publication;</p> <ul style="list-style-type: none"> c. keep all compliance reports publicly available on the website until this approval expires; d. exclude or redact sensitive ecological data from compliance reports published on the website; and e. where any sensitive ecological data has been excluded from the version published, submit the full compliance report to the Department within 5 business days of publication. 		
Reporting non-compliance			
17	<p>The approval holder must notify the Department in writing of any incident; or non-compliance with the conditions. The notification must be given as soon as practicable, and no later than 2 business days after becoming aware of the incident or non-compliance. The notification must specify:</p> <ul style="list-style-type: none"> a. any condition which is or may be in breach; b. a short description of the incident and/or non-compliance; and c. the location (including co-ordinates), date, and time of the incident and/or non-compliance. In the event the exact information cannot be provided, provide the best information available. 	Compliant	<p>A minor non-compliance occurred during the Year 1 reporting period, being the notification to the Department outside of the required timeframe for the commencement of the action (Condition 12a).</p> <p>The action commenced through baseline surveys at the offset site on 29 March 2021. DCCEEW was notified on the 8 April 2021 which was one business day late.</p>
18	<p>The approval holder must provide to the Department the details of any incident or non-compliance with the conditions as soon as practicable and no later than 10 business days after becoming aware of the incident or non-compliance, specifying:</p>	Compliant	<p>A minor non-compliance occurred during the 2021/2022 reporting period, being the notification to the Department outside of the required timeframe for the commencement of the action (Condition 12a).</p>

Condition number / reference	Condition	Is the project compliant with this condition?	Evidence / comments
	<ul style="list-style-type: none"> a. any corrective action or investigation which the approval holder has already taken or intends to take in the immediate future; b. the potential impacts of the incident or non-compliance; and c. the method and timing of any remedial action that will be undertaken by the approval holder. 		<p>The non-compliance was addressed within the notification. The following response was provided by the Department response via e-mail: <i>"I note the delay in providing a notification of commencement to the Department due to recent changes in the COVID-19 situation. While the delay constitutes a breach of condition 12.a. of the approval, enforcement action is not considered appropriate in this instance, and as such no further action will be taken in response to the non-compliance."</i></p>
Independent Audit			
19	The approval holder must ensure that independent audits of compliance with the conditions are conducted as requested in writing by the Minister.	Not applicable	The Minister did not request an independent audit during the reporting period.
20	<p>For each independent audit, the approval holder must:</p> <ul style="list-style-type: none"> a. provide the name and qualifications of the independent auditor and the draft audit criteria to the Department; b. only commence the independent audit once the audit criteria have been approved in writing by the Department; and c. submit an audit report to the Department within the timeframe specified in the approved audit criteria. 	Not applicable	The Minister did not request an independent audit during the reporting period.
21	The approval holder must publish the audit report on the website within 10 business days of receiving the Department's approval of the audit report and keep the audit report published on the website until the end date of this approval.	Not applicable	The Minister did not request an independent audit during the reporting period.
Completion of the Action			
22	Within 30 days after the completion of the action, the approval holder must notify the Department in writing and provide completion data.	Not applicable	The action was not completed during the reporting period.

3. Part A – MNES habitat impact management

3.1. Vegetation Clearing Protocol

Approvals relating to impacts on ecological matters were collated from Commonwealth, State and Local governments for the project and included several overarching environmental management plans. To streamline pre-start documentation and environmental management authorisations, an Environmental Pre-Start Checklist (EPSCl) was developed for Woogaroo Heights. This checklist was integral to ensuring clearing proceeded within the demarcated limits, suitable fencing was installed across the work area and the necessary checks for threatened fauna were completed prior to the clearing of any vegetation. The diagram below illustrates the key steps in this process. After completing the checklist and all required parties sign-off, vegetation clearance activities proceeded under the supervision of the fauna spotter catcher. Refer to **Figure 5** for the EPSCl template. A completed EPSCl for Woogaroo Heights from October 2022 is located at **Appendix B**.

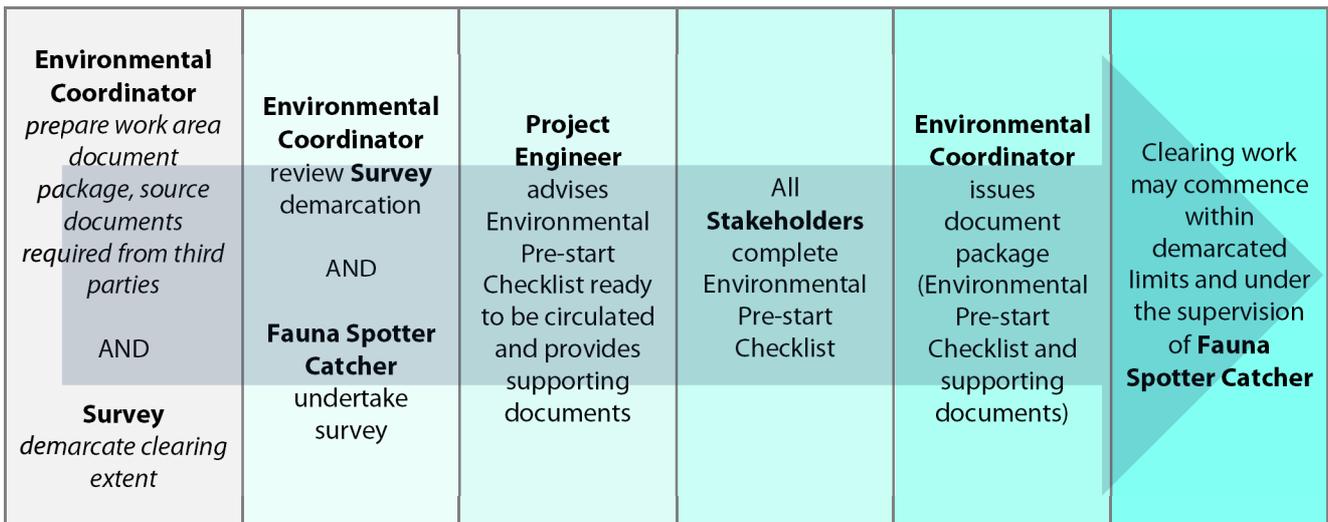


Figure 4: Key steps prior to commencing impact work at Woogaroo Heights

Woogaroo Heights Environmental Pre-Start Checklist

Project Area: Woogaroo Heights		Date:			
Contractor:		Construction Stage/ Activity:			
Date work is to start:					
Date work is to cease (estimate):					
Compliance					
#	Control Measure	Yes	No	N/A	Comments
1	Is the works extent within the EPBC approved clearing area?				
2	Are clearing extents marked out and fenced? (N.B. Fencing is required as per ICC permits unless instructed otherwise by Council, Fauna Spotter or Environmental Coordinator)				
3	Has the fencing of clearing extents demarcation been inspected by the Environmental Coordinator?				
4	Has sign off been provided by the Environmental Coordinator for demarcation areas?				
5	Has certification for pre-clearance flora been provided? (N.B. Exemptions/permits for protected plants under the NCA must be obtained by DES where works occur in a High Risk Area). Please provide date and reference.				
6	Have pre-clearance checks surveys for <i>Coleus habrophyllus</i> been completed over the clearing area?				
7	If <i>Coleus habrophyllus</i> 'no-go' zones have been identified within the clearing area, have these been demarcated, fenced, signed and inspected by the Environmental Coordinator and Contractor?				
8	If works involve clearing within a Fisheries mapped waterway for waterway barrier works, are the works compliant with applicable accepted development codes and / or permits?				
9	If works involve clearing within a watercourse defined under the <i>Water Act 2000</i> , are the works compliant with applicable exemptions and / or permits?				
10	Has the appointed DES permitted Fauna Spotter completed pre-clearance surveys and reports within 2 weeks of clearing?				

Figure 5: Environmental Pre-start Checklist template example

Woogaroo Heights Environmental Pre-Start Checklist

11	If the appointed Fauna Spotter identified any sensitive areas for consideration in clearing methods, have these been addressed?			
12	If a sick or injured animal, specifically a koala, is identified during clearing, are appropriate controls in place to ensure the animal can seek medical attention if required?			
13	Have all contractors, subcontractors and associated personnel been instructed on environmental procedures and controls?			
14	Has a Council pre-start been completed?			

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

- Attachment 1 — Works Extent
- Attachment 2 — EPBC Referral Extent Confirmation
- Attachment 3 — Environmental Coordinator Demarcation Flagging Sign-off
- Attachment 4 — DES Exempt Clearing Protected Plants Notification
- Attachment 5 — *Coleus habrophyllus* survey and sign-off by Environmental Coordinator
- Attachment 6 — Pre-clearance survey and Wildlife Protection & Management Plan (WPMP) prepared by Fauna Spotter Catcher
- Attachment 7 — Wildlife and Habitat Impact Mitigation Plan (WHIMP) prepared by Fauna Spotter Catcher
- Attachment 8 — Contractor Environmental Awareness Acknowledgement Notice
- Attachment 9 — Pre-start completion confirmation

Compliance Awareness

All works are to be undertaken in accordance with the Woogaroo Heights approvals which includes this Environmental Pre-Start Checklist and attachments.

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

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

3.2. Review of impacts

The removal of vegetation from the development area impacted MNES habitat which is defined under the approval conditions as Koala habitat and Grey-headed Flying-fox foraging habitat. Vegetation clearing progressed over the impact site during the year 2 period. Approximately 22.63 ha of MNES habitat was cleared at the Woogaroo Heights impact site between 28 July 2022 and 28 March 2023. The total clearing of MNES habitat completed is 55.11 ha (refer **Figure 6**). The approval conditions permit the approval holder a maximum impact of 57.03 ha of habitat in the development area, therefore the approval holder has complied with the approved limit (condition 1).

It is noted that some minor overlap of clearing occurred along the south-western boundary, however, this is attributed to minor discrepancies between the on-ground GPS location and referral area boundary. Clearing remains below the maximum clearing limit and measures have been implemented to ensure this is not exceeded including modification to the clearing extent along the western boundary. It is understood that the project only requires minor clearing along the western boundary to complete the necessary remaining clearing works. This will involve some minor encroachment into the conservation land to the west for the purpose of bushfire management within the adjoining VDEC area and will be performed under the direction of Ipswich City Council. Minor clearing for bushfire management is an acceptable activity within the VDEC area.

Clearing progressed to the next clearing tranches during the Year 2 period:

- Tranche 3 – July 2022
- Tranche 4 – October 2022

An environmental pre-start package was compiled prior to the commencement of each tranche. The EPSCL is a procedure in place that is the approval holder's review of proposed impacts on MNES habitat and sets out to prevent injuries to wildlife during all works. Examples of such measures implemented on the site include:

- Installation and maintenance of temporary fauna exclusion fencing along the western edge of the construction site to prevent fauna from entering the work area (refer **Photo 1**).
- Pre-clearance survey of clearing areas by the project fauna spotter catcher and preparation of pre-clearance reports including Wildlife Protection Management Plan (WPMP) and Wildlife Habitat and Impact Mitigation Plan (WHIMP).
- Presence of project fauna spotter catcher during all clearing activities. Post-works reporting completed by the project fauna spotter catcher indicated the mitigation measures were successful as no Koala injuries or mortalities occurred during vegetation clearing.

Refer to **Appendix B** for all pre-works reporting completed as part of the EPSCL and **Appendix C** for the post-clearing services report for October 2022.

During clearing works, observed fauna were mostly limited to common fauna species. One (1) Koala was observed by the project fauna spotter catcher during clearing works in October 2022. An exclusion zone was

created around the identified tree with no works to occur in or near this area. The Koala was left to self-relocate overnight. No harm occurred to a Koala as a result of clearing.



Photo 1: Temporary perimeter fauna exclusion fencing

3.2.1 Commencement of construction

The project commenced construction and civil works within the impact site. Construction, as defined under the EPBC approval commenced on 3 November 2022. The DCCEEW was notified via email on 7 November 2022 in accordance with Condition 12c of the approval.

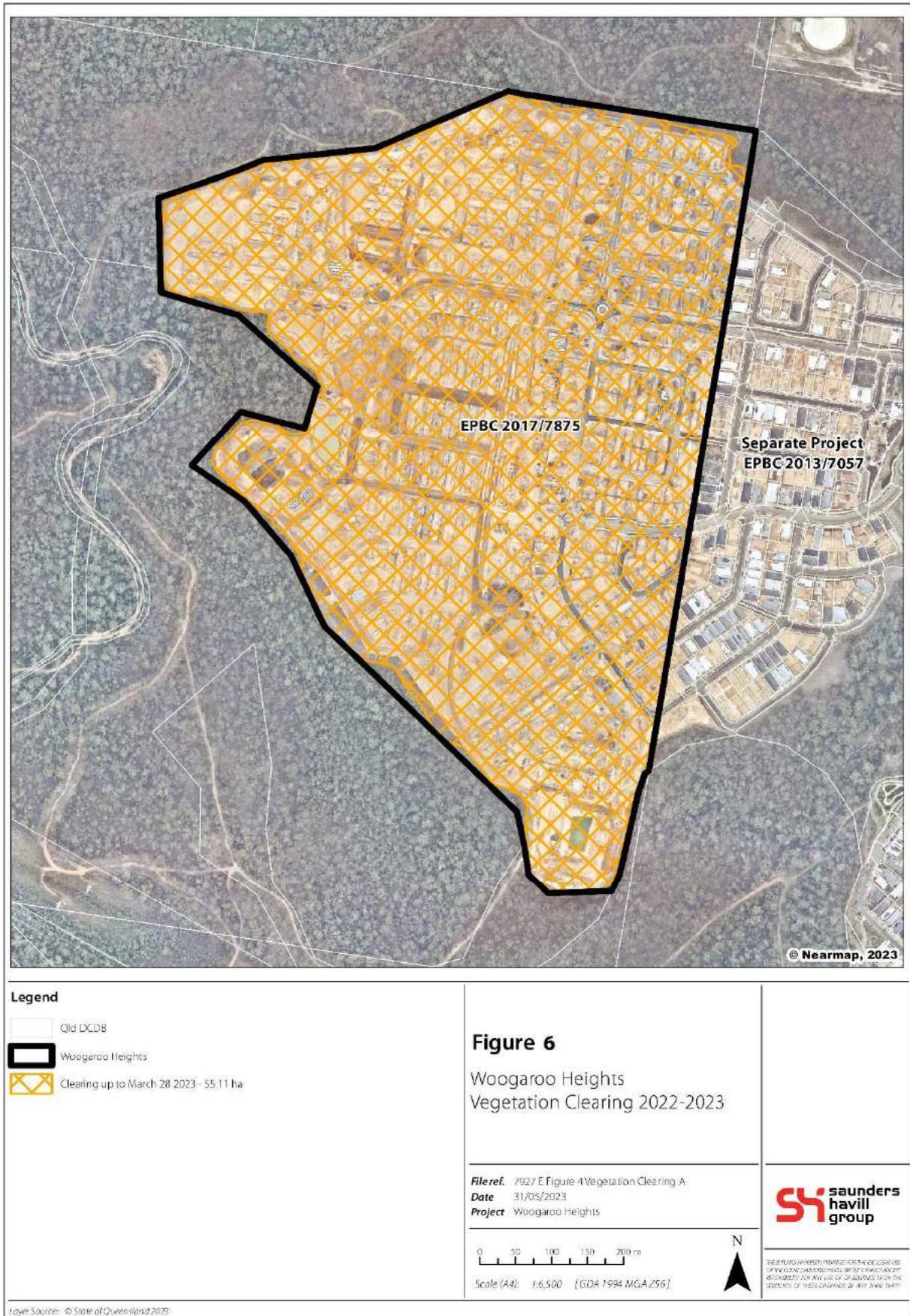


Figure 6: Vegetation Clearing 2022-2023

4. Part B – Offset site management

The 132 ha offset under Condition 3 of the approval is located on part of Lot 18 on CA31460 and provides Koala habitat and Grey-headed Flying-fox foraging habitat (refer **Appendix A**). To deliver the environmental offset, Lendlease have partnered with New Ground as the third-party environmental offset provider. The offset area was legally secured on 12 March 2021 prior to the commencement of vegetation clearing on 28 July 2021 using the Voluntary Declaration process administered under the *Vegetation Management Act 1999*. The Chief Executive of the Department of Resources (DOR) declared the offset area in a Declared Area Map (DAM 2020/014171) as an area of high nature conservation value in accordance with section 19F(1) of the VMA. The Meads offset site is shown as Category A on the certified Property Map of Assessable Vegetation (PMAV 2020/014172). This documentation was provided as part of the Year 1 ACR.

The objective as per Condition 7, to managing the offset area for the Koala, Grey-headed Flying Fox and their habitat is to achieve the following outcomes by Year 8.

- *Restore Vegetation condition to the 'BioCondition Benchmarks to be achieved' for each Regional Ecosystem, as specified in Approval Document – Attachment A (refer to **Appendix A**).*
- *Ensure that at least 6 different Grey-headed Flying-fox foraging species (which in combination much provided annual winter and spring foraging resources for the GHFF) occurs within each quarter.*
- *Ensure that the extent of weed cover across the whole of The Meads offset site is less than 5%*
- *A reduction in the number of non-native predators and non-native herbivores by 90%, relative to the number identified during baseline surveys.*
- *A reduction in the rate of Koala mortalities attributable to non-native predators by 90%, relative to the numbers identified during baseline surveys.*

The 132 ha offset area under Condition 2 of the approval is confirmed koala and GHFF habitat. The offset area was legally secured on 12 March 2021 prior to the commencement of construction on 04 April 2018 using the Voluntary Declaration process administered under the *Vegetation Management Act 1999*.

The primary objective to managing the offset area is to achieve a gain in habitat quality across 90% of the offset before 9 January 2038. The approval conditions define this as:

Within 20 years of the date of the decision, achieve a gain in koala habitat quality across the offset site, as described and measured by Item 6 of Attachment B.

4.1. Management of threats

Key threats to Koala and GHFF present within the offset site include:

1. Weeds — specifically Weeds of National Significance (WONs) namely *Lantana camara* (Lantana).
2. Pest animals — evidence of wild dogs and wild deer across the site.

In addition to the threats listed above, the presence of barbed wire fencing throughout and along the perimeter offset site pose a risk to Koalas and GHFF. In Year 1, the barbed wire fencing was modified whereby the top barbed wire strand was replaced with a single plain wire to reduce the threat this poses to GHFF.

To support the future achievement of the gain in habitat quality milestone for benefit of the Grey-headed Flying-fox and Koala, several management actions have been undertaken to address the threats. These actions are discussed in the following subsections and detailed in **Table 4**. This table will be reviewed annually as part of annual compliance reporting and the status/results of actions discussed accordingly.

During Year 2 of the project, New Ground completed routine maintenance and feral dog/deer control across the offset site. New Ground also began extensive internal track maintenance and track repair works, in response to the significant rain events throughout 2022, in preparation for vertebrate pest management and weed management. A summary report completed by New Ground is provided at **Appendix D**.

4.1.1 WONs Management

Baseline surveys throughout the offset site identified *Lantana camara* (Lantana) and *Ligustrum lucidum* (Broad-leaved Privet) as the dominant weed species. These species are known to form thickets that can impede Koala movement and suppress succession of native flora species (New Ground 2021). New Ground are currently completing detailed planning for a broadscale weed control event located at The Meads offset site.

An extensive survey of dominant weeds throughout the offset area was completed in 2021 and identified *Lantana camara* (Lantana) and *Ligustrum lucidum* (Broad-leaved Privet) as the dominant weed species. Targeted weed management work was undertaken during Year 2 using a combination of spray rig and tractor where works were concentrated in areas of high Lantana density. New Ground engaged a new vegetation management contractor (Total Environmental Concepts Pty Ltd) on 2 November 2022 to undertake weed management works incorporating tracked bobcats with custom-built Lantana mulching attachments and spray crews. Works were scheduled for late January 2023, however, were postponed due to inclement weather. These works were rescheduled for March/April 2023 and completed per this timing.

4.1.2 Pest Animal Management

During Year 2, New Ground completed feral dog and deer control across The Meads offset site. Due to high level of rainfall received during 2022, pest management personnel were unable to drive on the site, therefore greatly reducing overall accessibility across the site. The inability to drive over the site proved a disadvantage to pest controllers during the period.

Pest management was undertaken in March and April 2022. However, no feral dogs or deer were identified for removal.

4.2. Access Track Management

Due to high level of rainfall received during 2022, tracks throughout the site became washed out and damaged. Track repair works were undertaken during Year 2; with significant track repair/improvement works undertaken from November 2022 to January 2023. These track works allowed for the re-instatement of key

site management tracks in readiness for broadscale weed management works and supplementary track site weed management works.

Table 4: Offset site management actions summary – Year 1 to Year 8.

Current threat / quality improvement restoration	Base case	Improvement proposed	Achievement criteria	Measured by	Timeframes	Reporting	Comment
1. Restore vegetation communities to the ‘BioCondition Benchmarks to be achieved’ for each Regional Ecosystem, as specified.	Baseline BioCondition surveys have been completed at 9 transects across the offset site.	Reduction and management of WONS through the Offset Area to stop the suppression by weed species for the succession native species.	Vegetation communities meet the BioCondition Benchmarks to be achieved for each Regional Ecosystem by Year 8.	BioCondition surveys recording Tree Canopy Height, Tree Canopy cover, Tree Sub-canopy height and Tree Sub-canopy cover.	BioCondition Benchmarks to be met by Year 8 and maintained for the remainder of the period of effect of the approval.	BioCondition surveys to be completed to alignment with Annual Compliance Report. Approval holder must engage a suitably qualified independent expert to assess The Meads offset site at the end of Year 4 to assess if the conditions have been or are likely to be achieved.	Offset ‘BioCondition Benchmarks’ will be assessed at the end of Year 8.
2. Ensure that at least 6 different GHFF foraging species (which in combination must provide annual winter and spring foraging resources) occur	Baseline BioCondition surveys have been completed at 9 transects and 21 observation sites across the offset site. This data was used to compile species	Reduction of WONS throughout the offset site will allow for native species to regenerate without suppression from exotic species.	At least 6 different GHFF foraging species, providing both annual winter and spring resources must occur within each quarter of the offset site.	BioCondition surveys for Regional Ecosystems present. Observation points.	To be achieved by Year 8.	Offset site surveys are to be completed to align with the Annual Compliance Report. Approval holder must engage a suitably qualified independent expert	GHFF foraging species will be assessed at the end of Year 8.

Current threat / quality improvement restoration	Base case	Improvement proposed	Achievement criteria	Measured by	Timeframes	Reporting	Comment
within each quarter of The Meads offset site.	richness for the Regional Ecosystems which were then assessed for GHFF foraging.					to assess The Meads offset site at the end of Year 4 to assess if the conditions have been or are likely to be achieved.	
3. Ensure that the extent of weed cover across the offset site is less than 5%	<p>Baseline surveys were used to ground-truth previous weed mapping completed by New Ground in 2019.</p> <p>Currently, <i>Lantana camara</i> and <i>Ligustrum lucidum</i> are present across the offset site, ranging from a scattered density to impenetrable thickets.</p>	<p>New Ground completed the baseline surveys, as well as routine maintenance and began extensive internal track maintenance to prepare for the commencement of a broadscale weed control event.</p> <p>New Ground began detailed planning for the broadscale weed control event in Year 1.</p>	By Year 8, weed coverage across the offset site is to be less than 5%.	Weed mapping during offset site surveys.	Weed management is to reduce weed coverage by Year 8.	<p>Offset site surveys to be completed to align with the Annual Compliance Report.</p> <p>After the commencement of weed management, weed mapping should continue to monitor progress.</p> <p>Approval holder must engage a suitably qualified independent expert to assess The Meads offset site at the end of Year 4 to assess if the conditions have been or are likely to be achieved.</p>	<p>Targeted weed management work was undertaken during Year 2, concentrated in areas of rapid <i>Lantana camara</i> growth. Works were scheduled for late January 2023, however, was postponed due to inclement weather. These works were rescheduled for March/April 2023 and completed per this timing.</p>

Current threat / quality improvement restoration	Base case	Improvement proposed	Achievement criteria	Measured by	Timeframes	Reporting	Comment
4. A reduction in the numbers of non-native predators and non-native herbivores by 90% relative to the numbers identified during baseline surveys.	Camera trapping completed during baseline surveys provided data to determine the abundance index of 5 vertebrate pest species across the offset site.	Perimeter fences repaired to prevent livestock from entering the offset site from neighbouring properties. Monitor pest species to ensure no increase of presence/density.	Reduction in both non-native predators and herbivores by 90% relative to baseline numbers.	Camera trapping and potentially thermal imagery surveys as required.	Reduction by 90% to be achieved by Year 8.	Camera trapping and potential for thermal imagery surveys as required and results reported in the relevant ACR.	Pest management was undertaken in March and April 2022. However, no feral dogs or deer were identified for removal.
5. A reduction in the rate of Koala mortalities attributable to non-native predators by 90% relative to numbers identified during baseline surveys.	SAT surveys were completed during baseline surveys to identify the Koala usage across the offset site. In addition, a Koala was detected on a camera trap during baseline surveys.	Ensure that Vertebrate Pest Management reduced non-native predators across the offset site.	Koala mortalities as a result of non-native predators decrease by 90% relative to the number identified during baseline surveys.	SAT surveys to determine Koala usage on-site. Camera trapping and potential for thermal imagery surveys as required.	Reduction by 90% to be achieved by Year 8.	SAT surveys and camera trapping as required and results reported in the relevant ACR. While non-native predators were recorded on the offset site, no evidence of Koala Mortality attributable to non-native predators was observed.	Koala surveys will be conducted at the end of Year 8.

5. Appendices

Appendix A

EPBC Act approval and conditions granted 30 November 2020

Appendix B

Woogaroo Heights Environmental Pre-start Checklist – October 2022

Appendix C

Fauna spotter catcher post-works report – October 2022

Appendix D

The Meads offset site summary of activities Year 2

Appendix A

EPBC Act approval and conditions
granted 30 November 2020



APPROVAL

Woogaroo Heights master planned residential development, Springfield, Queensland (EPBC 2017/7875)

This decision is made under sections 130(1) and 133(1) of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth). Note that section 134(1A) of the **EPBC Act** applies to this approval, which provides in general terms that if the approval holder authorises another person to undertake any part of the action, the approval holder must take all reasonable steps to ensure that the other person is informed of any conditions attached to this approval, and that the other person complies with any such condition.

Details

Person to whom the approval is granted (approval holder)	Lendlease Communities (Springfield) Pty Limited
ACN or ABN of approval holder	19 087 876 864
Action	To develop the Woogaroo Heights residential development located within the Greater Springfield Master Planned Development Area, approximately 10 kilometres east of the Ipswich Central Business District, Queensland [See EPBC Act referral 2017/7875].

Approval decision

My decision on whether or not to approve the taking of the action for the purposes of the controlling provision for the action is as follows.

Controlling Provisions

Listed Threatened Species and Communities	
Section 18	Approve
Section 18A	Approve

Period for which the approval has effect

This approval has effect until 2033.

Decision-maker

<i>Name and position</i>	Kim Farrant Assistant Secretary, Environment Approvals Queensland and Sea Dumping Branch Department of Agriculture, Water and the Environment
<i>Signature</i>	
<i>Date of decision</i>	30 November 2020

Conditions of approval

This approval is subject to the conditions under the EPBC Act as set out in ANNEXURE A.

ANNEXURE A – CONDITIONS OF APPROVAL

Part A – Conditions specific to the action

Development area

1. For the protection of the **Koala** and the **Grey-headed Flying-fox**, the approval holder must not **clear** more than 57.03 hectares of **Koala habitat** and **Grey-headed Flying-fox foraging habitat**. The approval holder must only **clear** within the **development area**.
2. For the protection of the **Koala** and the **Grey-headed Flying-fox** at the **development area**, the approval holder must:
 - a. Ensure that a **fauna spotter/catcher** is present during all **clearing** and **construction** activities and given sufficient authority to ensure that such activities do not cause injury or death of **Koalas**;
 - b. **Clear** in accordance with the *Nature Conservation (Koala) Conservation Plan 2017* under the *Nature Conservation Act 1992 (Qld)* to allow **Koalas** to safely move out of **clearing** areas and into connected areas of **Koala habitat**, and implement all provisions for **sequential clearing**;
 - c. Install temporary **Koala exclusion fencing** around any area of **construction** work, immediately after **clearing** and prior to the commencement of **construction** in that area, so as to prevent **Koalas** entering any area where **construction** is taking place. The **Koala exclusion fencing** around any **construction** area must remain in place until all **construction** activities within that fenced **construction** area are completed;
 - d. Implement measures to prevent dogs from entering the **development area** during **clearing** and **construction** to minimise the risk to **Koalas** of predation by domestic dogs at the **development area** and **adjacent conservation areas**. Such measures must include (but are not limited to) prohibition of workers bringing animals in to the **development area**;
 - e. Implement traffic calming measures and ensure that the speed of all vehicles on construction roads in the **development area** is no greater than 40 km/h at any time (except an emergency) so as to minimise the risk to **Koalas** of vehicle strike;
 - f. Construct roads consistent with **Queensland's fauna sensitive road design guidelines** to minimise the risk to **Koalas** of vehicle strike. In particular, on roads flanking **adjacent conservation areas** or waterways, or which cross waterways, vehicle speeds must be limited to 50 km/h, and **safe fauna movement solutions, fauna exclusion/koala proof fencing** and **local traffic management measures** must be implemented; and
 - g. Install prominent **Koala awareness signage** consistent with **Queensland's wildlife signing guidelines** prior to opening to motorists, any road where the presence of animals along the road path is well-known or expected, such as on roads flanking **adjacent conservation areas** or adjacent to **fauna movement solutions**.

Environmental Offset Requirements

3. To compensate for the **clearing** of 57.03 hectares of **Koala habitat** and **Grey-headed Flying-fox foraging habitat**, the approval holder must:
 - a. **Legally secure** a minimum of 132 hectares at **The Meads offset site** prior to undertaking any **clearing** at the **development area**;
 - b. Within 20 **business days** of **legally securing** **The Meads offset site**, provide the **Department** with written evidence demonstrating that **The Meads offset site** has been **legally secured** (e.g. **legal security documentation**), and the **shapefiles** of the **offset attributes**;

- c. Limit uses and permissible activities at **The Meads offset site** such that the value of **The Meads offset site** as **Koala habitat** and **Grey-Headed Flying-fox foraging habitat** cannot lawfully be reduced.
4. Within 6 months from the date of this approval, the approval holder must complete baseline surveys of the entire area at **The Meads offset site**. The baseline surveys must be conducted by a **suitably qualified field ecologist** in accordance with a scientifically valid, robust, and repeatable methodology and include details of the:
 - a. **Vegetation condition attributes** for each **Regional Ecosystem**;
 - b. Number and condition of **Grey-Headed Flying-fox** foraging species in each quarter (25%) of **The Meads offset site**;
 - c. **Extent of weed cover**;
 - d. Number of **non-native predators** and **non-native herbivores**; and
 - e. Rate of **Koala** mortalities attributable to **non-native predators**.
 5. Within 3 months of completion of the baseline surveys required under condition 4, the approval holder must publish on the **website** and provide to the **Department** a report detailing the results of the baseline surveys required under condition 4 (including survey methodology and dates).
 6. For the protection of the **Koala** (and **Koala habitat**) and the **Grey-headed Flying-fox** (and **Grey-headed Flying-fox foraging habitat**), the approval holder must achieve the following outcomes at **The Meads offset site** by the end of **year 1**:
 - a. Repair and maintain the existing perimeter fencing to exclude all livestock from **The Meads offset site**;
 - b. Remove all barbed-wire fencing at **The Meads offset site**, excluding existing **perimeter barbed-wire fencing**; and
 - c. Increase the visibility to fauna of **perimeter barbed-wire fencing**, including by affixing visibility tags at every 30 cm interval along the top strand of **perimeter barbed-wire fencing**.
 7. For the protection of the **Koala** (and **Koala habitat**) and the **Grey-headed Flying-fox** (and **Grey-headed Flying-fox foraging habitat**), the approval holder must achieve the following outcomes at **The Meads offset site** by the end of **year 8**:
 - a. Restore vegetation condition to the 'BioCondition Benchmarks to be achieved' for each **Regional Ecosystem**, as specified at Attachment A;
 - b. Ensure that at least 6 different **Grey-Headed Flying-fox foraging species** (which in combination must provide annual winter and spring foraging resources for the **Grey-headed Flying-fox**) occurs within each quarter (25%) of **The Meads offset site**;
 - c. Ensure that the **extent of weed cover** across the whole of **The Meads offset site** is less than 5%;
 - d. A reduction in the numbers of **non-native predators** and **non-native herbivores** by 90%, relative to the numbers identified during baseline surveys; and
 - e. A reduction in the rate of **Koala** mortalities attributable to **non-native predators** by 90%, relative to the numbers identified during baseline surveys.
 8. Once achieved, environmental outcomes specified under conditions 6 and 7 must be maintained for the remainder of the period of effect of the approval.
 9. For the protection of the **Spotted-tail Quoll** present at **The Meads offset site**, the approval holder must ensure that any use of 1080 baits at **The Meads offset site** is undertaken in accordance with the **Administrative Guidelines on the use of 1080**.

10. The approval holder must engage a **suitably qualified independent expert** to undertake an assessment of **The Meads offset site** at the end of **year 4** to assess whether the outcomes required in conditions 6, 7 and 8 have been, or are likely to be, achieved. The findings of the assessment must be **published** within 6 months of the end of **year 4** and be provided to the **Department** within **5 business days** of being **published**.
11. If, at any time during the period of effect of the approval, the **Minister** is not satisfied that any of the requirements or outcomes required under conditions 6, 7 and 8 have been or are likely to be achieved or maintained, the **Minister** may require the approval holder to submit a corrective action plan for **The Meads offset site** for the **Minister's** approval, or to monitor, manage, avoid, mitigate, offset, record and/or report on, impacts to the **Koala**, the **Grey-headed Flying-fox**, or the **Spotted-tail Quoll**.
 - a. The **Minister** may set a timeframe in which the corrective action plan must be submitted, and may specify that the corrective action plan must be prepared or reviewed by an **independent suitably qualified field ecologist**.
 - b. If the **Minister** approves the corrective action plan, the approval holder must implement the approved corrective action plan.

Part B – Standard administrative conditions

Notification of date of commencement of the action

12. The approval holder must notify the **Department** in writing of:
 - a. the date of **commencement of the action** within **5 business days** after the date of **commencement of the action**;
 - b. the date of commencement of **clearing** within **5 business days** after the date of commencement of **clearing**; and
 - c. the date of commencement of **construction** within **5 business days** after the date of commencement of **construction**.
13. If the **commencement of the action** does not occur within 5 years from the date of this approval, then the approval holder must not undertake **commencement of the action** without the prior written agreement of the **Minister**.

Compliance records

14. The approval holder must maintain accurate and complete **compliance records**.
15. If the **Department** makes a request in writing, the approval holder must provide electronic copies of **compliance records** to the **Department** within the timeframe specified in the request.

Note: **Compliance records** may be subject to audit by the **Department** or an independent auditor in accordance with section 458 of the **EPBC Act**, and or used to verify compliance with the conditions. Summaries of the result of an audit may be published on the **Department's** website or through the general media.

Annual compliance reporting

16. The approval holder must prepare a **compliance report** for each 12 month period following the date of **commencement of the action**, or otherwise in accordance with an annual date that has been agreed to in writing by the **Minister**. The approval holder must:
 - a. publish each **compliance report** on the **website** within **60 business days** following the relevant 12 month period;
 - b. notify the **Department** by email that a **compliance report** has been published on the **website** and provide the weblink for the **compliance report** within **5 business days** of the date of publication;
 - c. keep all **compliance reports** publicly available on the **website** until this approval expires;

- d. exclude or redact **sensitive ecological data** from **compliance reports** published on the **website**; and
- e. where any **sensitive ecological data** has been excluded from the version published, submit the full **compliance report** to the **Department** within **5 business days** of publication.

Note: **Compliance reports** may be published on the **Department's** website.

Reporting non-compliance

- 17. The approval holder must notify the **Department** in writing of any: **incident**; or non-compliance with the conditions. The notification must be given as soon as practicable, and no later than **2 business days** after becoming aware of the **incident** or non-compliance. The notification must specify:
 - a. any condition which is or may be in breach;
 - b. a short description of the **incident** and/or non-compliance; and
 - c. the location (including co-ordinates), date, and time of the **incident** and/or non-compliance. In the event the exact information cannot be provided, provide the best information available.
- 18. The approval holder must provide to the **Department** the details of any **incident** or non-compliance with the conditions as soon as practicable and no later than **10 business days** after becoming aware of the **incident** or non-compliance, specifying:
 - a. any corrective action or investigation which the approval holder has already taken or intends to take in the immediate future;
 - b. the potential impacts of the **incident** or non-compliance; and
 - c. the method and timing of any remedial action that will be undertaken by the approval holder.

Independent audit

- 19. The approval holder must ensure that **independent audits** of compliance with the conditions are conducted as requested in writing by the **Minister**.
- 20. For each **independent audit**, the approval holder must:
 - a. provide the name and qualifications of the independent auditor and the draft audit criteria to the **Department**;
 - b. only commence the **independent audit** once the audit criteria have been approved in writing by the **Department**; and
 - c. submit an audit report to the **Department** within the timeframe specified in the approved audit criteria.
- 21. The approval holder must publish the audit report on the **website** within **10 business days** of receiving the **Department's** approval of the audit report and keep the audit report **published** on the **website** until the end date of this approval.

Completion of the action

- 22. Within 30 days after the **completion of the action**, the approval holder must notify the **Department** in writing and provide **completion data**.

Part C - Definitions

In these conditions, except where contrary intention is expressed, the following definitions are used:

Adjacent conservation area/s means areas adjacent to the **development area**, which have been designated for conservation purposes under the Springfield Structure Plan, and the White Rock–Spring Mountain Conservation Estate.

Administrative Guidelines on the use of 1080 means Department of the Environment and Heritage 2004, *Administrative Guidelines on Significance: Supplement for the Tiger Quoll (southeastern mainland population)* and the use of 1080, Commonwealth of Australia, or subsequent published revision.

Business day means a day that is not a Saturday, a Sunday or a public holiday in the state or territory of the action.

Clear/Clearing means the cutting down, felling, thinning, logging, removing, killing, destroying, poisoning, ringbarking, uprooting or burning of vegetation (but not including weeds – see the *Australian weeds strategy 2017 to 2027* for further guidance). **Clearing** does not include any relevant prescribed burns or actions undertaken for bushfire management, where required.

Commencement of the action means the first instance of any specified activity associated with the action including **clearing, construction** and/or **management activities** at **The Meads offset site**.

Commencement of the action does not include minor physical disturbance necessary to:

- i. undertake pre-clearance surveys or monitoring programs;
- ii. install signage and /or temporary fencing to prevent unapproved use of the project area so long as these are located where it will have no impact on the **protected matters**;
- iii. protect environmental and property assets from fire, weeds and feral animals, including use of existing surface access tracks;
- iv. install temporary site facilities for persons undertaking pre-commencement activities so long as these are located where they have no impact on the **protected matters**; and
- v. undertake soil sampling or geotechnical investigations provided these cause only minor physical disturbance and are required in advance of formal commencement of site works.

Completion data means an environmental report and spatial data clearly detailing how the conditions of this approval have been met. The **Department's** preferred spatial data format is **shapefile**.

Completion of the action means the time at which all approval conditions (except condition 22) have been fully met.

Compliance records means all documentation or other material in whatever form required to demonstrate compliance with the conditions of approval in the approval holder's possession or that are within the approval holder's power to obtain lawfully.

Compliance reports means written reports:

- i. providing accurate and complete details of compliance, **incidents**, and non-compliance with the conditions;
- ii. consistent with the **Department's Annual Compliance Report Guidelines (2014)**; and
- iii. include a **shapefile** of any clearance of any **protected matters**, or their habitat, undertaken within the relevant 12 month period.

Construction means the erection of a building or structure that is or is to be fixed to the ground and wholly or partially fabricated on-site; the alteration, maintenance, repair or demolition of any building or structure; preliminary site preparation work which involves breaking of the ground (including pile driving); the laying of pipes and other prefabricated materials in the ground, and any associated excavation work; but excluding the installation of temporary fences and signage.

Department means the Australian Government agency responsible for administering the **EPBC Act**.

Development area means the area designated as 'Referral Area' on the map at **Attachment B** and enclosed by a thick black border.

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

Extent of weed cover means the proportion (expressed as a percentage) of the total land area in which any square metre contains a non-native plant species known to restrict the movement of **Koala** and/or degrade the quality of **Koala habitat** and/or habitat for **Grey-headed Flying-fox**, or its ability to regenerate. Such non-native plant species include *Lantana camera* and *Ligustrum lucidum*.

Fauna exclusion/koala proof fencing means fencing to guide **Koalas** away from roads and/or guide them towards safe fauna movement structures (such as underpasses) as described in *Fauna Sensitive Road Design: Volume 2 – Preferred Practices* (Queensland Department of Main Roads 2010).

Fauna spotter/catcher means a person licenced under the Queensland *Nature Conservation Act 1992* to detect, capture, care for, assess, and release wildlife disturbed by vegetation clearance activities.

Grey-Headed Flying-fox means the Grey-Headed Flying-fox (*Pteropus poliocephalus*) listed as a threatened species under the **EPBC Act**.

Grey-Headed Flying-fox foraging habitat means areas of vegetation that contain **Grey-headed Flying-fox** foraging trees, including winter and spring flowering species.

Incident means any event which has the potential to, or does, impact on one or more **protected matter(s)**.

Independent means does not have any individual, or by employment or family affiliation, conflicting or competing interests with the approval holder; the approval holder's staff, representatives or associated persons; or the project, including any personal, financial, business or employment relationship, other than receiving payment for undertaking the role for which the condition requires and independent person.

Independent audit means an audit conducted by an **independent** and suitably qualified person as detailed in the *Environment Protection and Biodiversity Conservation Act 1999 Independent Audit and Audit Report Guidelines* (2019).

Koala means the 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 exclusion fencing means fencing which prevents the movement of koalas from one area to another. Suitable examples are found in *Koala Sensitive Design Guideline: A guide to koala sensitive designed measures for planning and development activities*, (Queensland Department of Environment and Heritage Protection, 2012) and in the **Koala referral guidelines**.

Koala food trees means a species of tree of genus *Angophora*, *Corymbia*, *Eucalyptus*, *Lophostemon* or *Melaleuca*, with a height of more than 4 metres or with a trunk circumference more than 31.5 centimetres at 1.3 metres above the ground, the leaves of which are known to be consumed by the **Koala**.

Koala habitat means any forest or woodland containing species that are known **Koala food trees**, or shrubland with emergent food trees (as defined in the **Koala referral guidelines**).

Koala referral guidelines means the **Department's EPBC Act referral guidelines for the vulnerable Koala** (combined populations of Queensland, New South Wales and the Australian Capital Territory), Commonwealth of Australia, 2014.

Legally secure/ed/ing means to provide ongoing conservation protection on the title of the land, under a voluntary declaration under the *Vegetation Management Act 1999* (Qld).

Legal security documentation means any documentation associated with **legally securing the Meads offset site**, including (but not limited to) associated management plans (for example, the Declared

Area Management Plan to support the voluntary declaration under the *Vegetation Management Act 1999* (Qld)). **Legal security documentation** must include (at a minimum) the following:

- i. Details of the **management activities** to be undertaken to achieve the outcomes prescribed under conditions 6 and 7; and
- ii. A commitment to achieve and maintain the outcomes prescribed under conditions 6 and 7 for the duration of the impact.

Local traffic management measures means devices that reduce the speed and/or volume of traffic, for example, road closures, chicanes, crosswalks, lighting, signage and rumble strips, as described in **Queensland's fauna sensitive road design guidelines**.

Management activities means activities to be undertaken at **The Meads offset site**, including (but not limited to):

- i. Baseline surveys to inform development and implementation of management measures to achieve outcomes;
- ii. Perimeter fencing repairs and maintenance;
- iii. Barbed-wire fencing removal and modification;
- iv. Weed management; or
- v. Non-native predator and/or non-native herbivore management.

Minister means the Australian Government Minister administering the **EPBC Act** including any delegate thereof.

Non-native predators means any non-native animals known to predate on the **Koala**.

Non-native herbivores means any non-native animals known to degrade the quality of **Koala habitat** and/or **Grey-headed Flying-fox foraging habitat** and/or prevent its ability to regenerate.

Offset attributes means an '.xix' file capturing relevant attributes of **The Meads offset site**, including:

- i. **EPBC Act** reference number
- ii. Physical address of **The Meads offset site**;
- iii. Coordinates of the boundary points in decimal degrees;
- iv. **Protected matters** that the offset compensates for;
- v. Any additional **EPBC Act** listed threatened species and communities that are benefiting from the offset; and
- vi. Size of **The Meads offset site** in hectares.

Perimeter barbed-wire fencing means existing barbed-wire along the north, east and south perimeter of **The Meads offset site** erected to manage livestock.

Protected matter means a matter protected under a controlling provision in Part 3 of the **EPBC Act** for which this approval has effect.

Publish means make publicly available on the **website** for the duration of this approval.

Queensland's fauna sensitive road design guidelines means Queensland Department of Main Roads 2010, *Fauna Sensitive Road Design. Volume 2 – Preferred Practices*, or subsequent published revision.

Queensland's wildlife signing guidelines means Queensland Department of Transport and Main Roads 2019, *Traffic and Road Use Management, Transport and Main Roads Volume 3 – Signing and Pavement Marking, Part 8: Wildlife Signing Guidelines*, or subsequent published revision.

Regional Ecosystem means a vegetation community in a bioregion that is consistently associated with a particular combination of geology, landform and soil as classified by the Queensland Government under the *Vegetation Management Act 1999* (Qld). **Regional Ecosystems at The Meads offset site** include RE 12.3.7, RE 12.8.14, RE 12.9-10.17c, RE 12.9-10.14b, RE 12.12.2 and RE 12.12.23, located as shown on the map at Attachment D.

Safe fauna movement solutions means measures to minimise the risk of injury or deaths of **Koalas** during **construction** and subsequently, such as **fauna exclusion/koala proof fencing**, fauna underpasses or overpasses, and/or bridges as described in **Queensland's fauna sensitive road design guidelines**.

Sensitive ecological data means data as defined in the Australian Government Department of the Environment (2016) *Sensitive Ecological Data – Access and Management Policy V1.0*.

Sequential clearing means the conditions for *Sequential clearing in Koala district A or B* under the *Nature Conservation (Koala) Conservation Plan 2017* under the *Nature Conservation Act 1992* (Qld). The conditions include provisions for the amount of area which may be **cleared** in any one stage, periods of non-**clearing** between stages, maintaining habitat links and restrictions on **clearing** trees containing **Koalas**.

Shapefile means location and attribute information of the action provided in an ESRI shapefile format. Shapefiles must contain '.shp', '.shx', '.dbf' files and a '.prj' file that specifies the projection/geographic coordinate system used. Shapefiles must also include an '.xml' metadata file that describes the shapefile for discovery and identification purposes.

Spotted-tail Quoll means the Spotted-tail Quoll (*Dasyurus maculatus maculatus*) (southeastern mainland population) listed as a threatened species under the **EPBC Act**.

Suitably qualified field ecologist means a person who has professional qualifications and at least 3 years' work experience **designing** and **implementing** flora and fauna surveys and management plans for the **Koala** and/or the **Grey-headed Flying-fox** using relevant protocols, standards, methods and/or literature.

Suitably qualified independent expert means an **independent** person who has professional qualifications, training, skills and at least 5 years' experience in the nominated subject matter 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.

The Meads offset site means the area to be managed as an offset for the impacts on the **Koala habitat** and **Grey-headed Flying-fox foraging habitat**, situated at Lot 18 on CA31460 at Pipeclay Dip Road, Ravensbourne, Queensland, and shown as 'Offset Area' and shaded in yellow on the map at Attachment C.

Vegetation condition attributes means attributes that indicate vegetation functions for biodiversity, as defined in the most recent officially released version of *Queensland's BioCondition Assessment Manual*.

Website means a set of related web pages located under a single domain name attributed to the approval holder and available to the public.

Year 1 means the period within 1 year from the date of this approval.

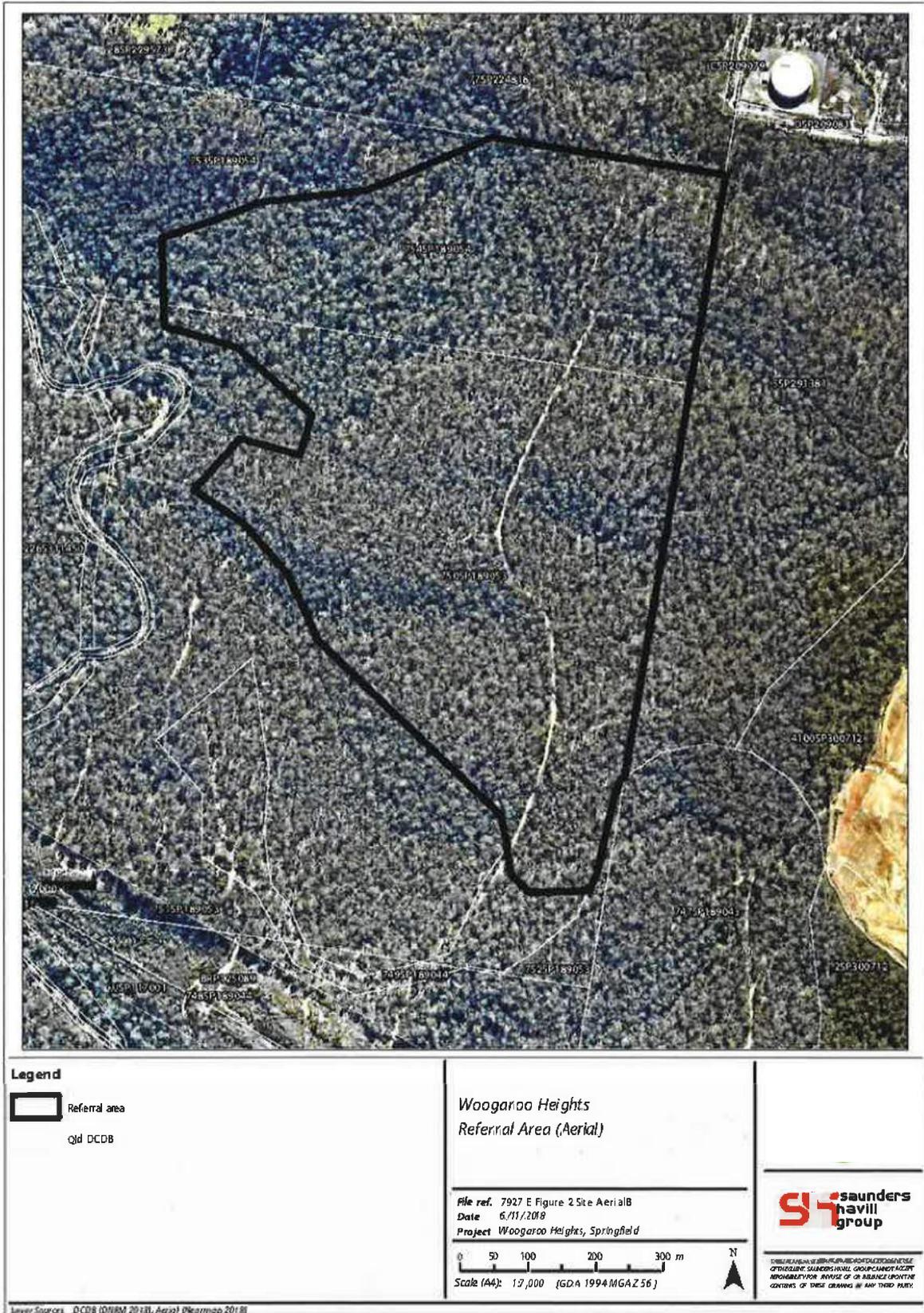
Year 4 means the period within 4 years from the date this of approval.

Year 8 means the period within 8 years from the date of this approval.

BioCondition Benchmarks for Regional Ecosystems at the Meads offset site

BioCondition Benchmarks to be achieved	Regional Ecosystem					
	RE 12.3.7	RE 12.8.14	RE 12.9-10.14b	RE 12.9-10.17c	RE 12.12.2	RE 12.12.23
Tree canopy median height (m)	16	22	32	24	33	25
Tree canopy cover(%)	30	60	55	57	59	56
Tree sub-canopy median height (m)	11	11	17	11	13	12
Tree sub-canopy cover(%)	30	15	25	33	10	10

Map – Development area – aerial



Legend

-  Referral area
-  Old DCDB

*Woogaroo Heights
Referral Area (Aerial)*

File ref. 7927 E Figure 2 Site AerialB
Date 6/11/2018
Project Woogaroo Heights, Springfield

0 50 100 200 300 m
Scale (AA): 1:7,000 (GDA 1994 MGAZ 56)



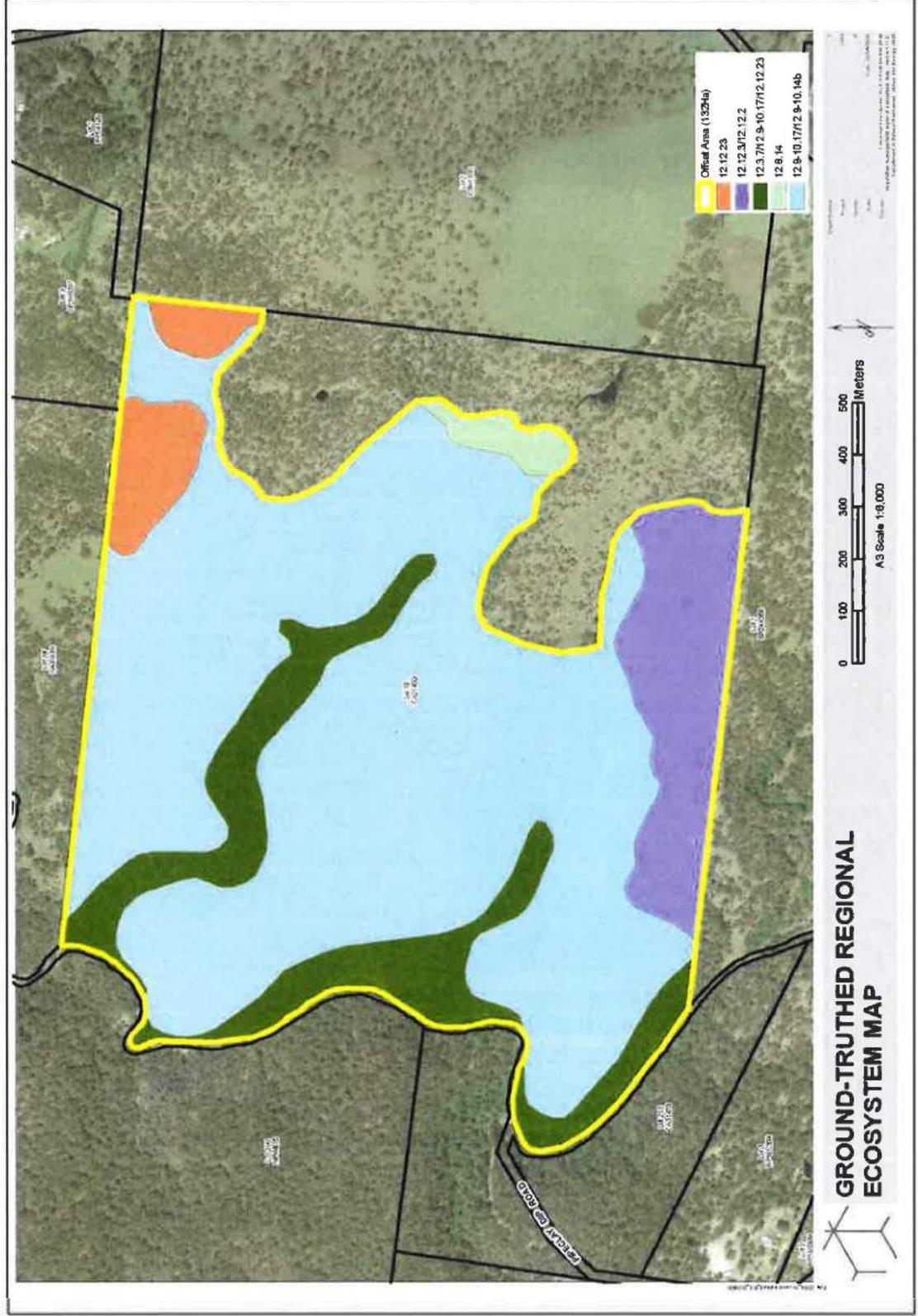
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Layer Sources: DCDB (DNRM 2018), Aerial (Pleasmap 2018)

Map – The Meads offset site – aerial



Map – The Meads offset site – Regional Ecosystems



Appendix B

Woogaroo Heights Environmental Pre-start Checklist – October 2022

Woogaroo Heights

Environmental Pre-Start Checklist

Project Area: Woogaroo Heights		Date: 7 October 2022			
Contractor: Shadforth		Construction Stage/ Activity:			
Date work is to start: October 2022 (ASAP from sign-off from Lendlease)		Involving the clearing within the ultimate BEW approval area. The Works Extent is shown in Attachment 1.			
Date work is to cease (estimate): 31 October 2022					
		Compliance			
#	Control Measure	Yes	No	N/A	Comments
1	Is the works extent within the EPBC approved clearing area?	✓			Refer Attachment 2 for the works extent in relation to EPBC approved clearing area. Note, minor discrepancies arise from lot parcel boundary, survey and GPS. The total allowable clearing limit is not exceeded.
2	Are clearing extents marked out and fenced? (N.B. Fencing is required as per ICC permits unless instructed otherwise by Council, Fauna Spotter or Environmental Coordinator)	✓			Fencing extents were set out by the project surveyor on 11 July 2022.
3	Has the fencing of clearing extents demarcation been inspected by the Environmental Coordinator?	✓			Demarcation check conducted on 13 July 2022. Refer Attachment 3.
4	Has sign off been provided by the Environmental Coordinator for demarcation areas?	✓			Refer Attachment 3 for sign off by the Environmental Coordinator.
5	Has certification for pre-clearance flora been provided? (N.B. Exemptions/permits for protected plants under the NCA must be obtained by DES where works occur in a High Risk Area). Please provide date and reference.	✓			See Attachment 4. V18 DES Reference: APP0075497, obtained 13 May 2021.
6	Have pre-clearance checks surveys for <i>Coleus habrophyllus</i> been completed over the clearing area?	✓			Completed by SHG on these occasions: 1. 21,22, 23 April 2021, 2. 27 January 2022. 3. 13 July 2022 See Attachment 5 for sign off by the Environmental Coordinator.
7	If <i>Coleus habrophyllus</i> 'no-go' zones have been identified within the clearing area, have these been demarcated, fenced, signed and inspected by the Environmental Coordinator and Contractor?			✓	<i>Coleus habrophyllus</i> was not recorded within the works extent. See Attachment 5.
8	If works involve clearing within a Fisheries mapped waterway for waterway barrier works, are the works compliant with applicable accepted development codes and / or permits?			✓	No works are proposed for mapped waterway for waterway barrier works.

Woogaroo Heights

Environmental Pre-Start Checklist

9	If works involve clearing within a watercourse defined under the <i>Water Act 2000</i> , are the works compliant with applicable exemptions and / or permits?			✓	No works are in a watercourse under the <i>Water Act 2000</i> .
10	Has the appointed DES permitted Fauna Spotter completed pre-clearance surveys and reports within 2 weeks of clearing?	✓			A Pre-Clearance was completed by QFC on 5 October 2022. See Attachment 6 for the Fauna Spotter Catcher pre-clearance survey and Wildlife Protection & Management Plan (WPMP).
11	If the appointed Fauna Spotter identified any sensitive areas for consideration in clearing methods, have these been addressed?	✓			See Attachment 6 for the Fauna Spotter Catcher WPMP.
12	If a sick or injured animal, specifically a koala, is identified during clearing, are appropriate controls in place to ensure the animal can seek medical attention if required?	✓			See Attachment 7 for the Fauna Spotter Catcher Wildlife and Habitat Impact Mitigation Plan (WHIMP) including acknowledgement of <i>Procedure for the management of sick Koalas encountered during works</i> .
13	Have all contractors, subcontractors and associated personnel been instructed on environmental procedures and controls?	✓			Environmental Awareness Acknowledgement Notice, signed by Shadforth (October 2021). See Attachment 8.
14	Has a Council pre-start been completed?	✓			A pre-start with ICC was completed on 5 October 2022. See Attachment 9 for meeting notes as confirmation.

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

- Attachment 1 — Works Extent
- Attachment 2 — EPBC Referral Extent Confirmation
- Attachment 3 — Environmental Coordinator Demarcation Flagging Sign-off
- Attachment 4 — DES Exempt Clearing Protected Plants Notification
- Attachment 5 — *Coleus habrophyllus* survey and sign-off by Environmental Coordinator
- Attachment 6 — Pre-clearance survey and Wildlife Protection & Management Plan (WPMP) prepared by Fauna Spotter Catcher
- Attachment 7 — Wildlife and Habitat Impact Mitigation Plan (WHIMP) prepared by Fauna Spotter Catcher
- Attachment 8 — Contractor Environmental Awareness Acknowledgement Notice
- Attachment 9 — Pre-start evidence

Woogaroo Heights

Environmental Pre-Start Checklist

Compliance Awareness

All works are to be undertaken in accordance with the Woogaroo Heights approvals which includes this Environmental Pre-Start Checklist and attachments.

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

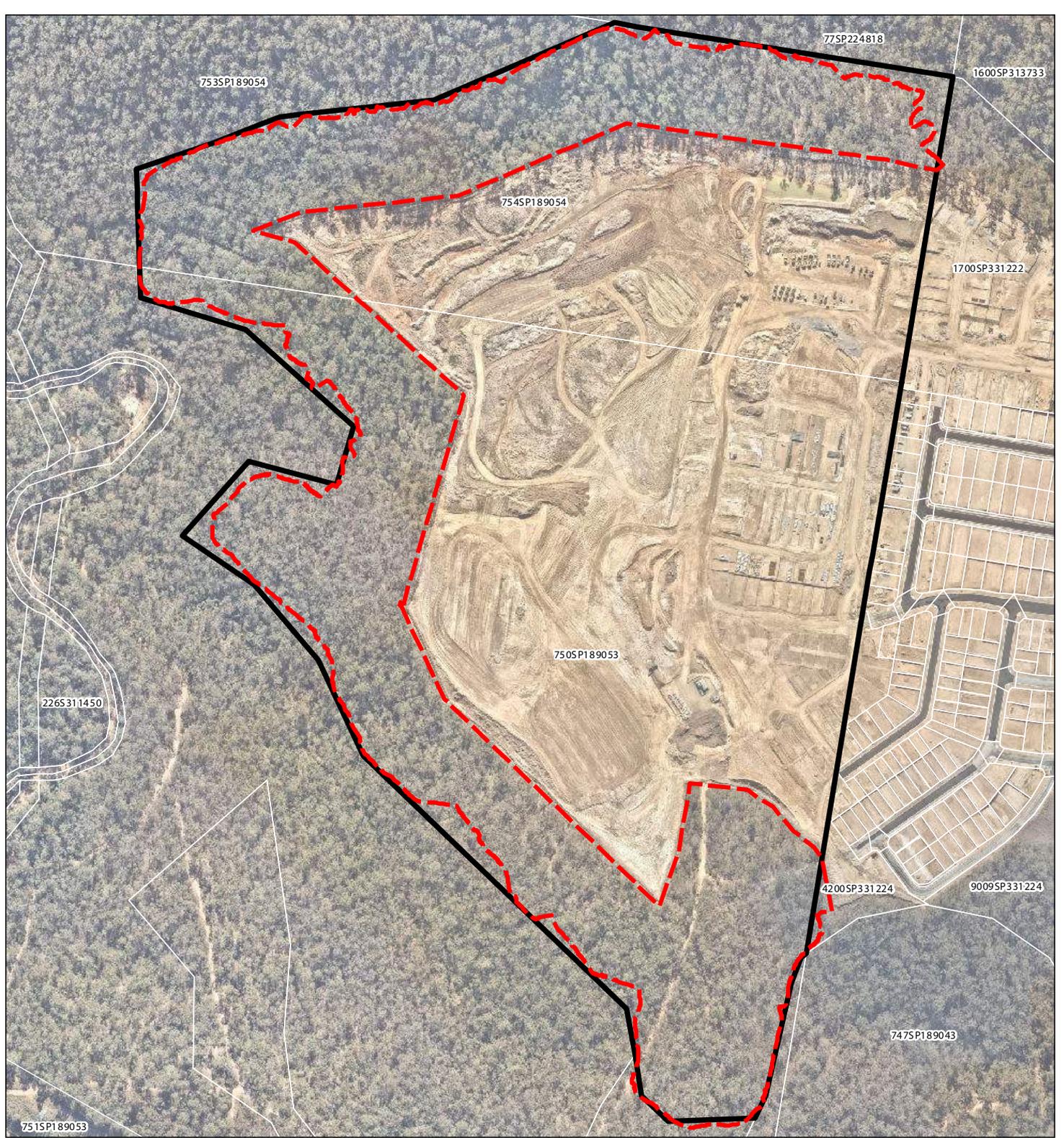
Name	Company	Position	Signature	Date
Tom Duffy	Lendlease Communities	Client Representative		7/10/22
Stephen Oddo	Shadforth	Site Contractor		07/10/2022
Dustyn North	WMI	Clearing Contractor		07/10/2022
Bryan Robinson	QFC	Fauna Spotter Catcher		07/10/2022
NICK GILL	Northrop	Project Engineer		07/10/2022
Jordan Bachmann	Saunders Havill Group	Environmental Coordinator		07/10/2022

Woogaroo Heights

Environmental Pre-Start Checklist

Attachment 1

Works Extent



Legend

- Woogaroo Heights
- Qld DCDB
- Vegetation Clearing Area

Figure 1

Woogaroo Heights
Works Extent

File ref. 7927 VAR3 Figure 1 Works Extent A
Date 16/09/2022
Project Springfield Rise Village 18 - Op-works



Scale (A4): 1:5,600 [GDA 1994 MGA Z56]



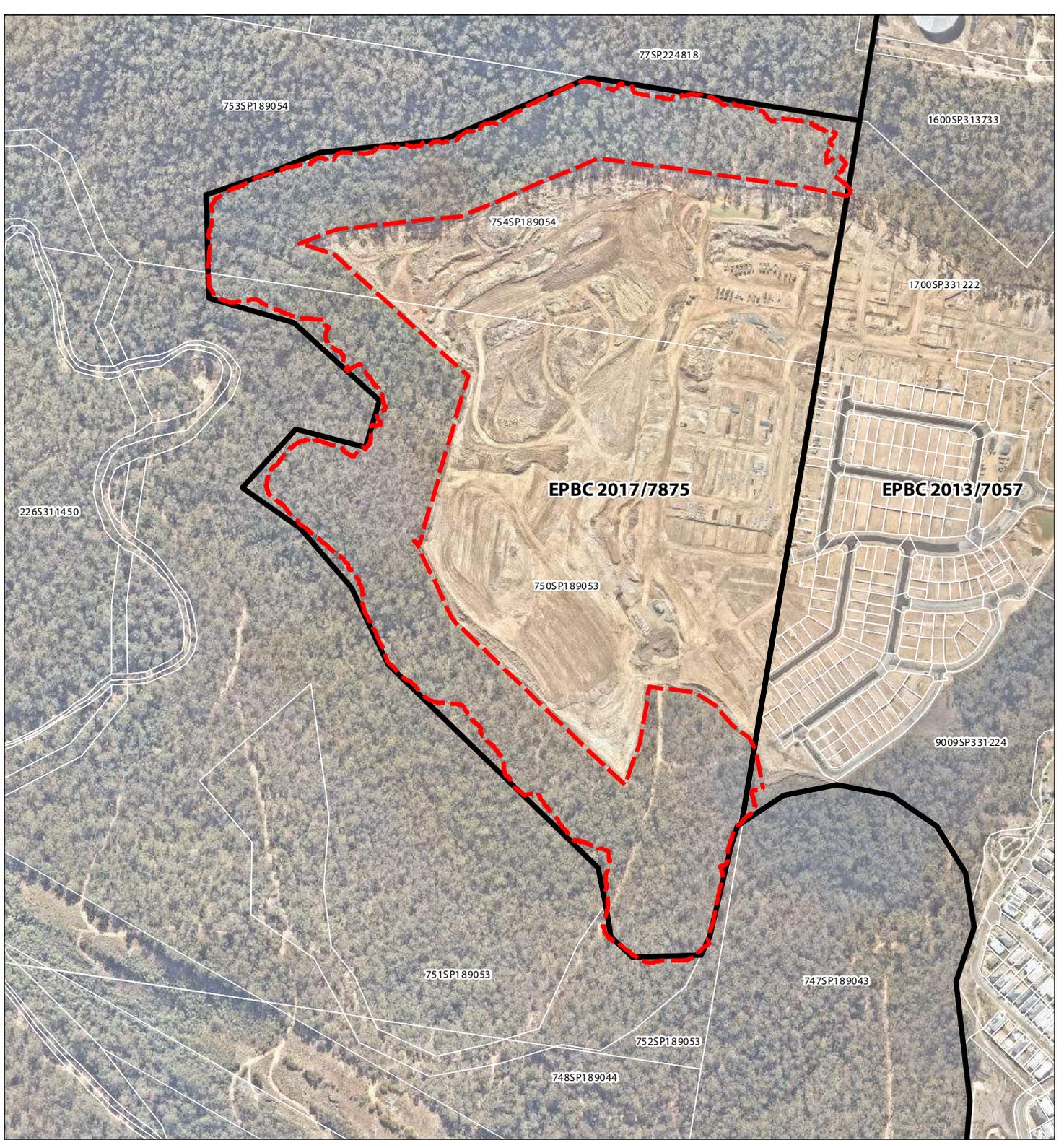
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Woogaroo Heights

Environmental Pre-Start Checklist

Attachment 2

EPBC Referral Extent Confirmation



Legend

-  Project EPBC Referral Areas
-  Vegetation Clearing Areas

Figure 2

Village 18
Project Referral Area

File ref. 7927 VAR3 Figure 2 EPBC Referral A
Date 16/09/2022
Project Springfield Rise Village 18 - Op-works



Scale (A4): 1:7,000 [GDA 1994 MGA Z56]



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Woogaroo Heights

Environmental Pre-Start Checklist

Attachment 3

Environmental Coordinator Demarcation Flagging Sign-off

Our ref: 7927

15 September 2022

Attention: Ian Murray
Lendlease Communities (Australia) Limited
Via email: Ian.Murray@lendlease.com

Dear Ian

RE: WOOGAROO HEIGHTS: DEMARCATION OF CLEARING EXTENTS

The Environmental Management Division of Saunders Havill Group was engaged by Lendlease Communities to carry out an inspection of flagging for demarcation fencing for the Woogaroo Heights works extent (refer **Attachment 1** for approved works area).

Flagging of the works area was undertaken by the site contractor, Shadforth, in conjunction with the appointed surveyor, on 11 July 2022. Two Ecologists from Saunders Havill Group reviewed the demarcated area on 13 July 2022 to ensure the flagged extent was in accordance with relevant Commonwealth and Council permit requirements.

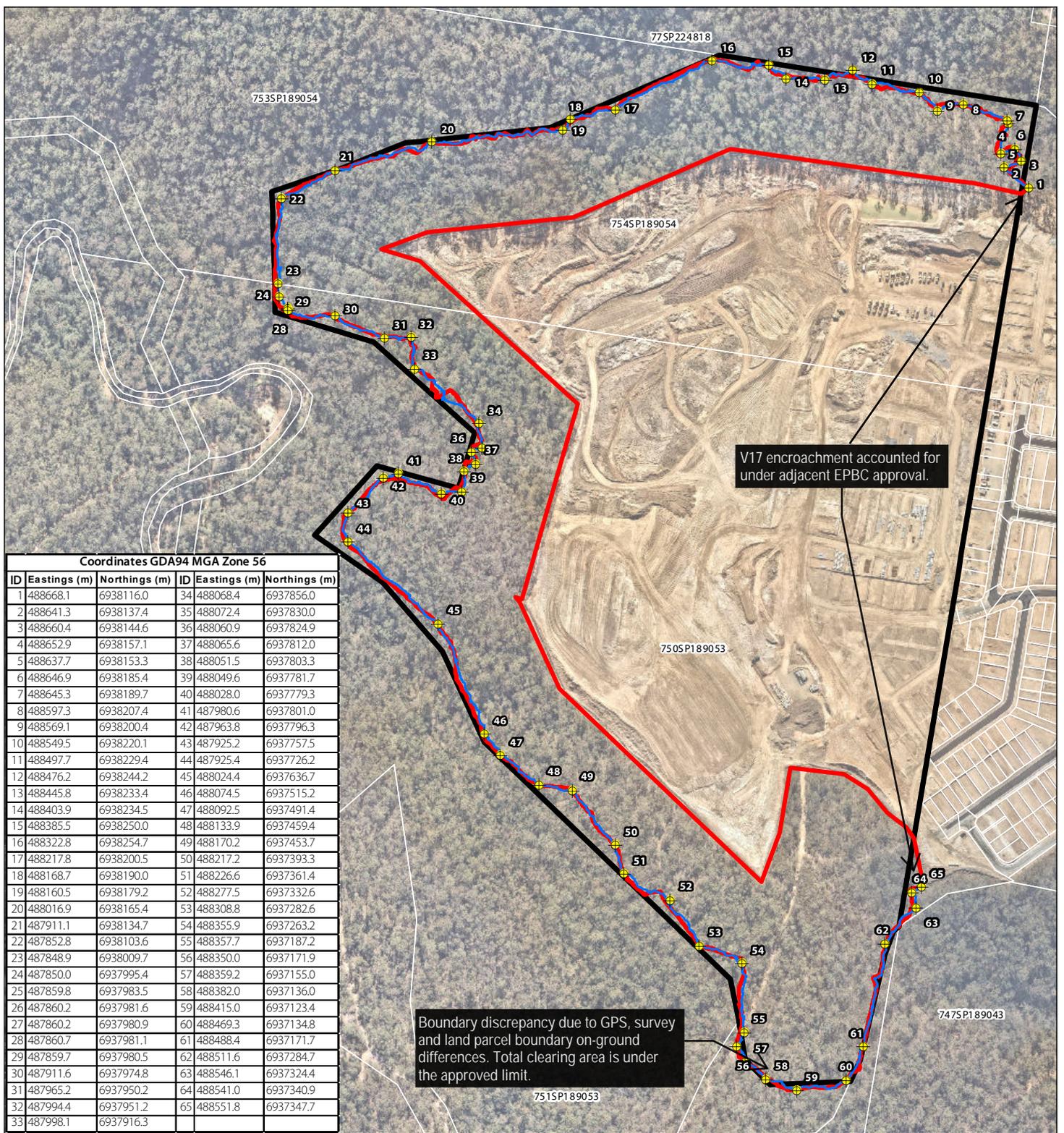
The GPS track log of the inspection extent is provided as **Attachment 2**. The post-inspection notifications are provided as **Attachment 3** to be kept for your records.

Yours sincerely



Murray Saunders
Director - Saunders Havill Group

Attachment 1 – Approved works area



Coordinates GDA94 MGA Zone 56

ID	Eastings (m)	Northings (m)	ID	Eastings (m)	Northings (m)
1	488668.1	6938116.0	34	488068.4	6937856.0
2	488641.3	6938137.4	35	488072.4	6937830.0
3	488660.4	6938144.6	36	488060.9	6937824.9
4	488652.9	6938157.1	37	488065.6	6937812.0
5	488637.7	6938153.3	38	488051.5	6937803.3
6	488646.9	6938185.4	39	488049.6	6937781.7
7	488645.3	6938189.7	40	488028.0	6937779.3
8	488597.3	6938207.4	41	487980.6	6937801.0
9	488569.1	6938200.4	42	487963.8	6937796.3
10	488549.5	6938220.1	43	487925.2	6937757.5
11	488497.7	6938229.4	44	487925.4	6937726.2
12	488476.2	6938244.2	45	488024.4	6937636.7
13	488445.8	6938233.4	46	488074.5	6937515.2
14	488403.9	6938234.5	47	488092.5	6937491.4
15	488385.5	6938250.0	48	488133.9	6937459.4
16	488322.8	6938254.7	49	488170.2	6937453.7
17	488217.8	6938200.5	50	488217.2	6937393.3
18	488168.7	6938190.0	51	488226.6	6937361.4
19	488160.5	6938179.2	52	488277.5	6937332.6
20	488016.9	6938165.4	53	488308.8	6937282.6
21	487911.1	6938134.7	54	488355.9	6937263.2
22	487852.8	6938103.6	55	488357.7	6937187.2
23	487848.9	6938009.7	56	488350.0	6937171.9
24	487850.0	6937995.4	57	488359.2	6937155.0
25	487859.8	6937983.5	58	488382.0	6937136.0
26	487860.2	6937981.6	59	488415.0	6937123.4
27	487860.2	6937980.9	60	488469.3	6937134.8
28	487860.7	6937981.1	61	488488.4	6937171.7
29	487859.7	6937980.5	62	488511.6	6937284.7
30	487911.6	6937974.8	63	488546.1	6937324.4
31	487965.2	6937950.2	64	488541.0	6937340.9
32	487994.4	6937951.2	65	488551.8	6937347.7
33	487998.1	6937916.3			

Boundary discrepancy due to GPS, survey and land parcel boundary on-ground differences. Total clearing area is under the approved limit.

V17 encroachment accounted for under adjacent EPBC approval.

Legend

- Woogaroo Heights
- Qld DCDB
- Vegetation Clearing Area
- Fence Check Demarcation (GPS Log)
- Fence Coordinates (GDA94)

Plan 1
 Woogaroo Heights
 Vegetation Clearing
 Demarcation

File ref. 7927 VAR3 01 Demarcation A
Date 16/09/2022
Project Springfield Rise Village 18 - Op-works



Scale (A4): 1:6,000 [GDA 1994 MGA Z56]



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Attachment 2 – Clearing Demarcation Plan

Attachment 3 – Demarcation Flagging Inspection Notification

Area Inspected:	Woogaroo Heights
Location:	Centenary Highway, Spring Mountain (Lot 750 on SP189053 and Lot 754 on SP189054)
Date of Inspection:	13 July 2022
Appointed Contractor:	Shadforth Construction Manager — Tony Hooper
Environmental Representative:	Saunders Havill Group – Jonny Pickvance and Lisa Fry
Environmental features:	Nil

Photos of flagged clearing extent



Woogaroo Heights

Environmental Pre-Start Checklist

Attachment 4

DES Exempt Clearing Protected Plants Notification

Acknowledgement

Saunders Havill Group Pty Ltd
9 Thompson St
BOWEN HILLS
QLD 4006
Australia

Where clearing is to be conducted:
LOT 750/SP189053
LOT 754/SP189054

DES Reference: APP0075497

Dear Saunders Havill Group Pty Ltd,

Thank you for submitting a flora survey report related to clearing native plants under a protected plant clearing exemption.

Please retain this acknowledgement as receipt of your flora survey report submitted under the requirements of "Code of Practice For The Take or Use of a Protected Plant Under An Exemption" which confirms your compliance with Section 48 of Nature Conservation (Plants) Regulation 2020. Please note this acknowledgement is not a clearing permit.

For clearing related to this flora survey report to be exempt under the relevant regulations the clearing must commence within 12 months after the relevant flora survey was conducted and must be completed within 3 years after the relevant flora survey was conducted.

It is strongly recommended that for audit purposes you keep this email and acknowledgement of receipt together with the relevant flora survey trigger map, flora survey report and any other documentation relating to the clearing in question.

Please visit www.ehp.qld.gov.au for information about available online services.

Enquiries:

Email: wildlife@des.qld.gov.au
Postal Address: PO Box 102, Toowoomba, QLD, 4350



Flora Survey Report

Springfield Rise (Village 18)
London Avenue, Spring Mountain

Prepared for Lendlease Communities (Springfield) Pty Ltd

13 May 2021

Job No. 7522 E

Document Control

Document: Flora Survey Report for Springfield Rise, Village 18, London Avenue, Spring Mountain, prepared by Saunders Havill Group for Lendlease Communities (Springfield) Pty Ltd.

Document Issue

Issue	Date	Prepared By	Checked By
A	13/05/2021	LT	JB / DH

Prepared by

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1. Introduction

Saunders Havill Group was engaged by Lendlease Communities (Springfield) Pty Ltd to prepare this Flora Survey Report to re-assess if threatened flora were present within development and 100 m buffer areas associated with Village 18 of the Springfield Rise Estate, London Avenue, Spring Mountain. The development is located within a mapped 'High Risk' area under the *Nature Conservation Act 1992* (NCA) which indicates there may be flora protected under the *Nature Conservation (Plants) Regulation 2020* at this location. Ipswich City Council (ICC) is the local government stakeholder and the development was approved under the Ipswich Planning Scheme with conditions.

Since 2014, the Queensland Government has implemented a risk-based approach to the regulation of protected plants under the NCA. The regulatory framework captures activities that pose a high risk to plant biodiversity, and regulatory, educational and compliance effort are consequently focused on high risk activities. Under the framework, when a non-exempt clearing activity is proposed within a 'High Risk' area, the proponent of that activity is required to complete a flora survey prior to the commencement of clearing.

The main objective of the flora survey is to locate any extinct, extinct in the wild, critically endangered, endangered, vulnerable or near threatened plants (threatened plants or near threatened plants) that may be present within the impact area. This action is especially important for determining the degree of assessment required for a particular clearing activity. For example, if the survey establishes that threatened plants or near threatened plants are not present within the impact area, the proposed clearing will be exempt and, following notification to the Queensland Government department administering the NCA, a clearing permit will not be required for the work to proceed. Alternatively, if threatened plants or near threatened plants are identified, and clearing is considered to impact on the threatened plants or near threatened plants (*i.e.*, clearing directly impacts or occurs within 100 m) then an application for a *Clearing Permit (Protected Plants)* is required.

Contextually, the site is located approximately 250 m north of Centenary Highway and 1.3 km south of Cunningham Highway. The site is located between existing high density residential development and the Centenary Highway forming an isolated pocket of vegetation (refer **Figure 1**). The flora survey area is mapped under the *Vegetation Management Act 1999* (VMA) containing both remnant and non-remnant vegetation.

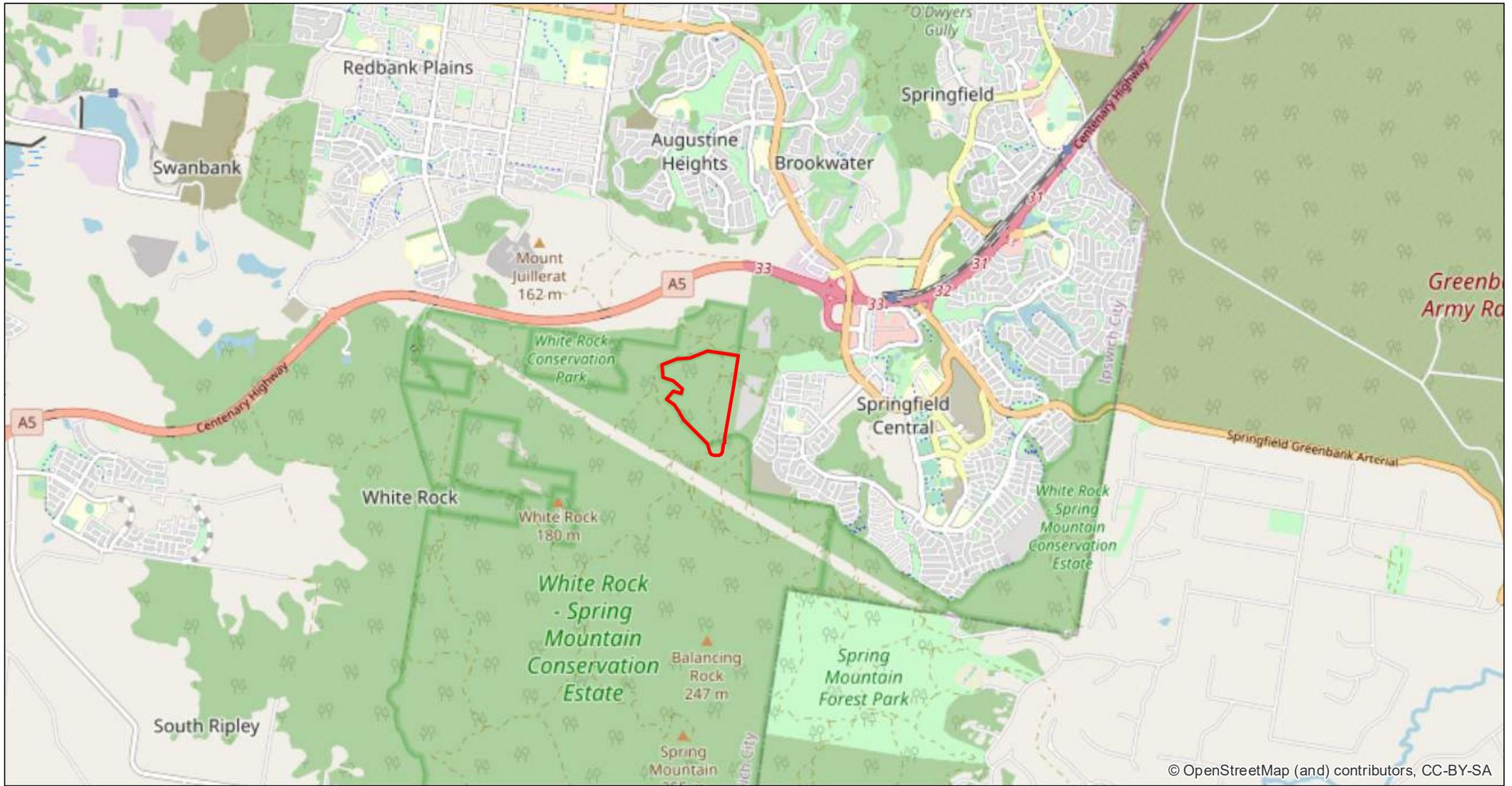
The flora survey detailed in this report was conducted where clearing is proposed or may occur within areas mapped as 'High Risk' under the Protected Plants Flora Survey Trigger Map (refer **Figure 2**), and in accordance with the *Flora Survey Guidelines – Protected Plants* (Department of Environment and Science (DES) 2020).

1.1. Property summary

Key site details are provided in **Table 1**.

Table 1: Property summary

Address	London Avenue, Spring Mountain
Lot/plan	<p>Impact Area: Part Lot 754 on SP189054 Part Lot 750 on SP189053</p> <p>Buffer: Part Lot 5 on SP291381 Part Lot 77 on SP224818 Part Lot 226 on S311450 Part Lot 747 on SP189043 Part Lot 751 on SP189053 Part Lot 752 on SP189053 Part Lot 753 on SP189054</p>
Local government area	Ipswich City Council
Planning scheme	<i>Ipswich Planning Scheme 2006</i>
Area classification / zone	Residential Low Density and Recreation
Existing land use	Vacant land
Approved land use	Residential development

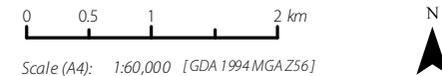


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Legend

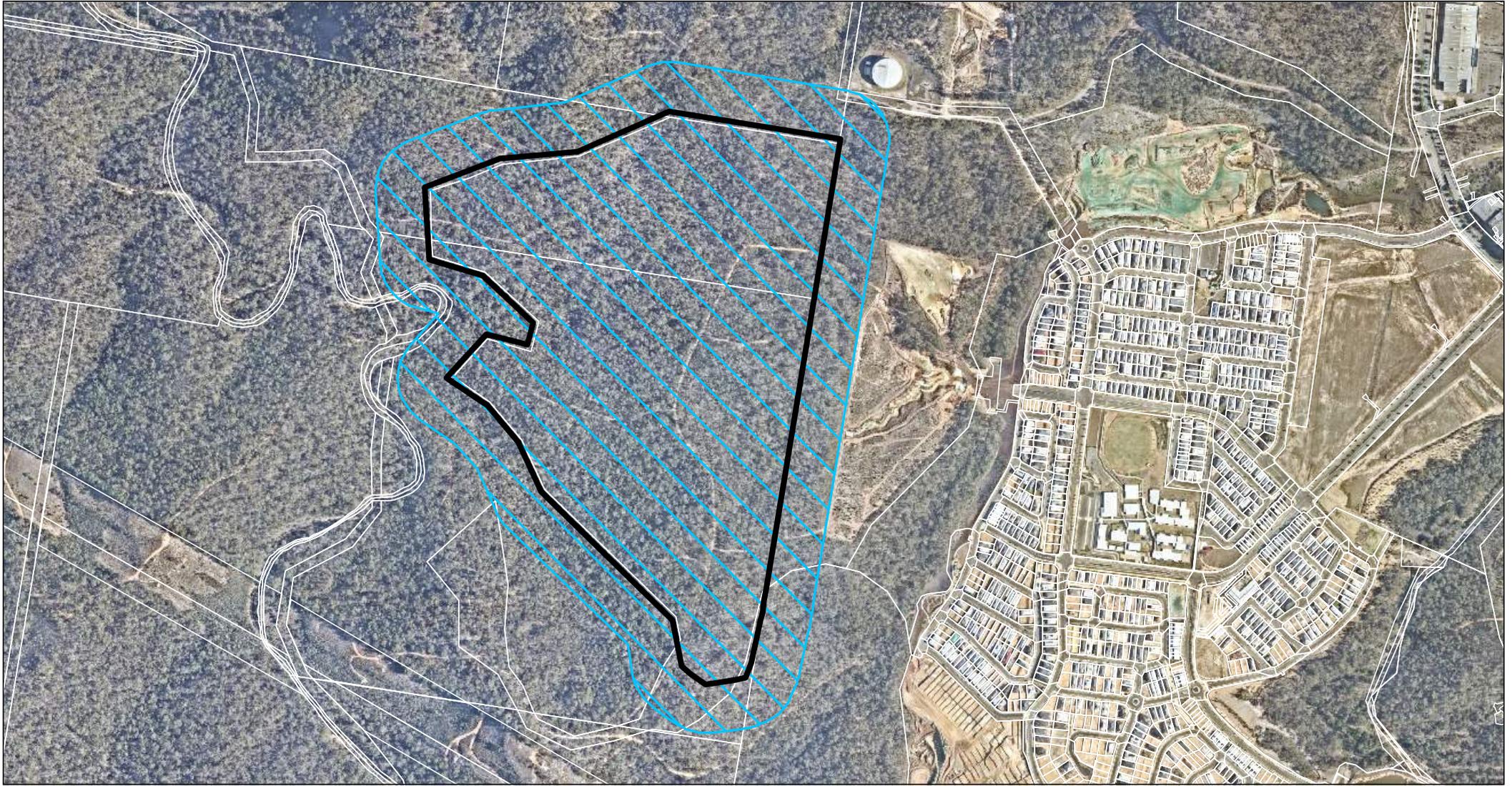
 Village 18 Impact Area

Figure 1 Site Locality



File ref. 7522 E Figure 1 NCA_v18 Site Locality A
Date 13/05/2021
Project Village 17 Springfield Rise

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Legend

-  Qld DCDB
-  Village 18 Impact Area
-  Vegetated 100m NCA buffer

Figure 2 Impact Area and Buffer

0 50 100 200 300 400 m

Scale (A4): 1:11,000 [GDA 1994 MGA Z56]



File ref. 7522 E Figure 2 NCA_v18 Impact Area and Buffer A

Date 14/05/2021

Project Village 17 Springfield Rise

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1.2. Suitably qualified person details

David Havill is a person suitably qualified (tertiary qualifications and field-based experience) to undertake flora surveys for the stated purpose, and completed the flora surveys described in this report. Refer to **Appendix A** for the suitably qualified person's curriculum vitae.

I, David Havill certify that (a) I have adhered to all statutory requirements and flora survey guideline requirements, and (b) the flora survey report is an accurate and full account of the flora survey.

Signature: 

Date: 13/05/2021

2. Desktop assessment

2.1. Nature Conservation Act 1992

The *Nature Conservation Act 1992* (NCA) classifies and protects significant areas (Protected Areas) and protects threatened plant and animal species. The *Nature Conservation (Plants) Regulation 2020* (NCPR) lists plant species presumed extinct, critically endangered, endangered, vulnerable, near threatened, least concern, international or prohibited.

The Queensland Government has implemented a regulatory framework that captures activities that pose a high risk to plant biodiversity. Under the framework, when a non-exempt clearing activity is proposed within a 'High Risk' area, the proponent of that activity is required to complete a flora survey prior to commencement of clearing. The Protected Plants Flora Survey Trigger Map shows 'High Risk' areas for protected plants and is used to help determine flora survey and clearing permit requirements for a particular location.

The Protected Plants Flora Survey Trigger Map confirms that clearing within the subject site is categorised as 'High Risk' and therefore subject to flora survey requirements prior to clearing (refer **Figure 3**).

Prior to flora surveys, the schedules of the NCPR were considered in this report using a Wildlife Online Database Search with a 5 km radius from the site. Five (5) flora species listed under the NCPR was identified as having the potential to occur on-site and are presented in **Table 2**.

Refer to **Appendix B** for full search results.

Table 2: Wildlife Online search results – flora

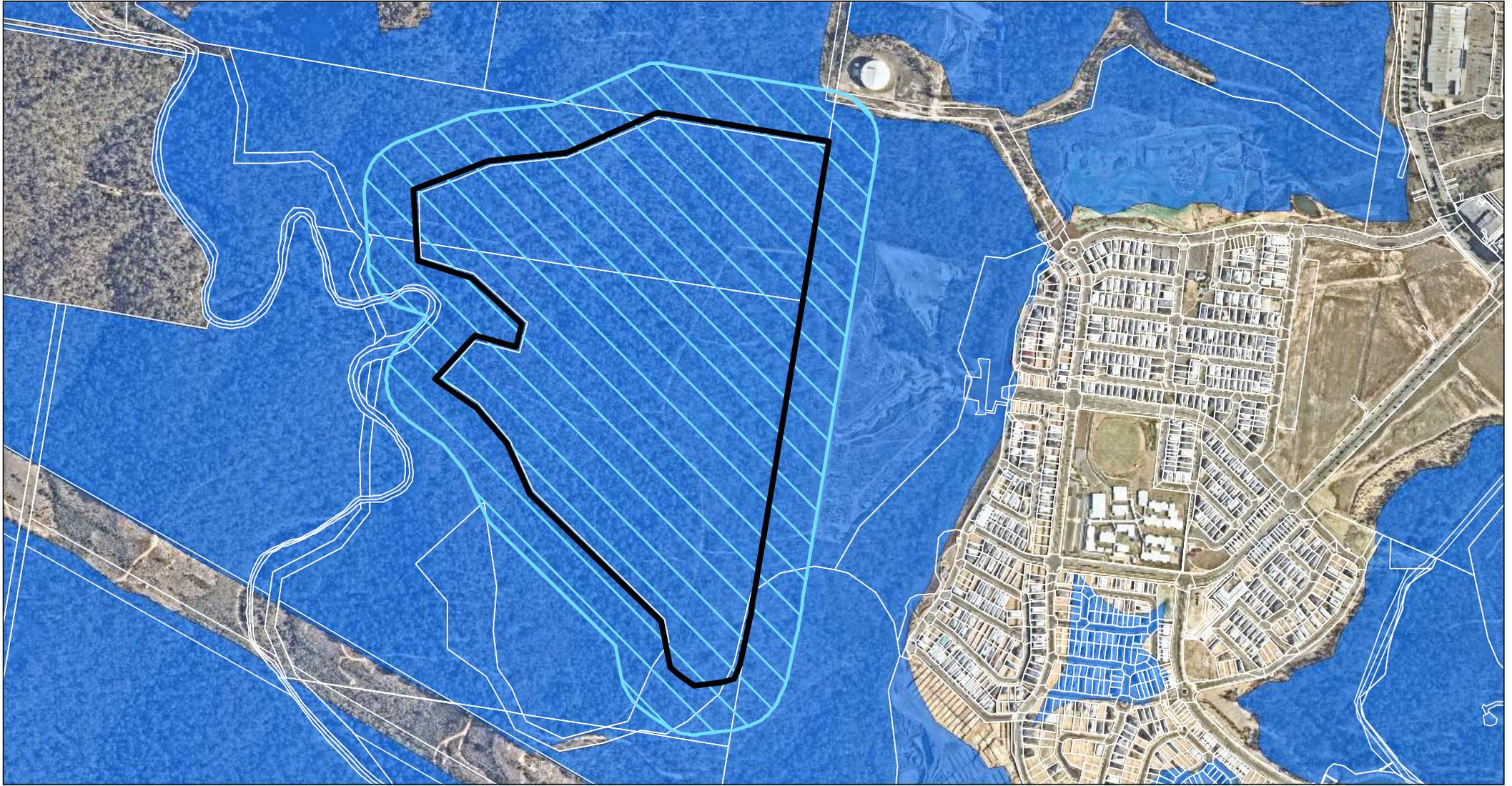
Scientific name	Common name	NCA status
<i>Coleus habrophyllus</i>		Endangered
<i>Eucalyptus curtisii</i>	Plunkett mallee	Near Threatened
<i>Marsdenia coronata</i>	Slender milkvine	Vulnerable
<i>Melaleuca irbyana</i>	Swamp Tea-tree	Endangered
<i>Rhodamnia maideniana</i>	Smooth scrub turpentine	Critically Endangered

Interrogation of the Biomaps and Wildnet Online extract identified the following relating to sightings of these flora species:

- *Coleus habrophyllus* – Recent sightings within 2 km of the study area.
- *Eucalyptus curtisii* (Plunkett mallee) – No recent sightings within 2 km of the study area
- *Marsdenia coronata* (Slender milkvine) - No recent sightings within 2 km of the study area
- *Melaleuca irbyana* (Swamp Tea-tree) – No recent sightings within 2 km of the study area.

■ Flora Survey Report

- *Rhodamnia maideniana* (Smooth scrub turpentine) - No recent sightings within 2 km of the study area



Legend

-  Village 18 Impact Area
-  Qld DCDB
-  NCA Protected Plants
-  Vegetated 100m NCA buffer

Figure 3 NCA Protected Plants

0 50 100 200 300 400 m

Scale (A4): 1:11,000 [GDA 1994 MGA Z56]



File ref. 7522 E Figure 3 NCA_v18 NCA A

Date 14/05/2021

Project Village 17 Springfield Rise



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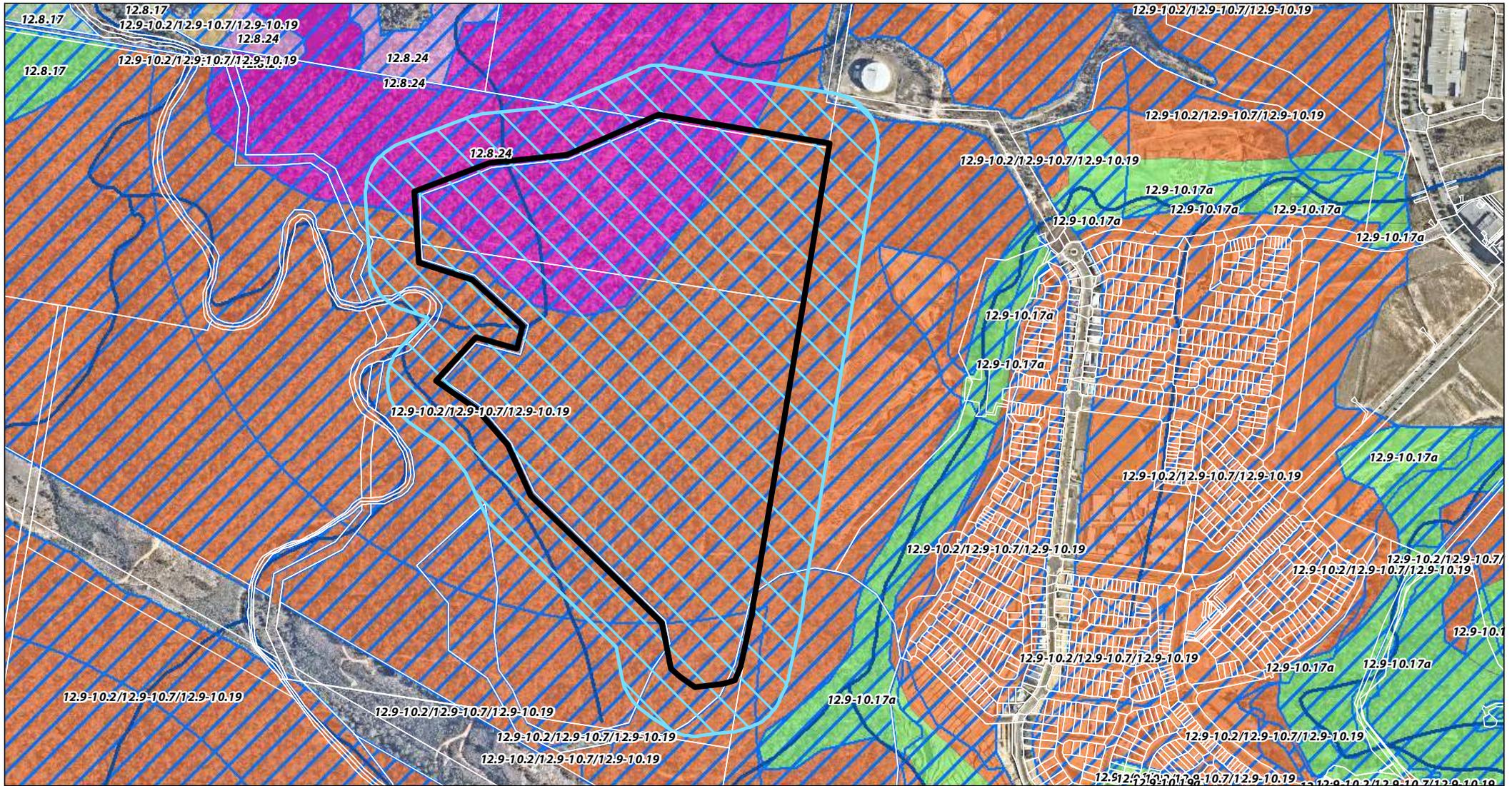
2.2. Habitat types

The study area is mapped entirely as Category B (remnant) vegetation. A review of aerial imagery alongside regional ecosystem mapping (contemporary and preclear) indicated one habitat type present across the area of clearing and buffer area—eucalypt open forest/woodland. This habitat type comprises of Endangered RE12.8.24 and Of Concern composite RE12.9-10.2/12.9-10.7/12.9-10.19 (65/20/15) (refer **Table 3** and **Figure 4**).

Highly modified environments were noted within the impact area and within the buffer attributable to existing infrastructure and adjacent residential development associated with the Springfield Rise estate. A minimum of four (4) meanders were required in accordance with the *Flora Survey Guidelines – Protected Plants* (DES 2020) for the resulting impact area of approximately 83.9 ha (refer **Figure 5**).

Table 3: Regional Ecosystem Description

RE	VMA	Description
12.8.24	Endangered	<i>Corymbia citriodora subsp. variegata</i> , <i>Eucalyptus crebra</i> +/- <i>E. moluccana</i> open forest. Occurs on Cainozoic igneous rocks especially lower slopes of rhyolite and trachyte hills.
12.9-10.2	Least Concern	<i>Corymbia citriodora subsp. variegata</i> +/- <i>Eucalyptus crebra</i> open forest on sedimentary rocks
12.9-10.7	Of Concern	<i>Eucalyptus crebra</i> +/- <i>E. tereticornis</i> , <i>Corymbia tessellaris</i> , <i>Angophora spp.</i> and <i>E. melanophloia</i> woodland on sedimentary rocks
12.9-10.19	Least Concern	<i>Eucalyptus fibrosa subsp. fibrosa</i> woodland on sedimentary rocks



Legend

- | | | |
|---------------------------|---|--|
| Qld DCDB | Regional Ecosystems mapping | Category C area containing endangered regional ecosystems |
| Village 18 Impact Area | Category A or B area containing endangered regional ecosystems | Category C area containing of concern regional ecosystems |
| Vegetated 100m NCA buffer | Category A or B area containing of concern regional ecosystems | Category C area that is a least concern regional ecosystem |
| VM Watercourses | Category A or B area that is a least concern regional ecosystem | |
| VM Essential Habitat | | |
| VM Wetland | | |

Figure 4 Regulated Vegetation Supporting Map

File ref. 7522 E Figure 4 NCA_v18 RVSM A
Date 14/05/2021
Project Village 17 Springfield Rise

0 50 100 200 300 400 m
 Scale (A4): 1:11,000 [GDA 1994 MGA Z56]



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2.3. Survey timing and limitations

The flora survey was completed on 21 and 22 of April 2021 (autumn). The survey timing is considered appropriate for the flora identified during the desktop assessment (refer to **Table 2**), as the flora species are either woody or non-woody with definitive key characteristics beyond the flower, fruit and seed attributes. **Table 4** provides further detail on the flora species identified during the desktop assessment, their defining characteristics and specific survey timing (if applicable).

Table 4: Threatened or Near Threatened Flora Species Profiles

Scientific Name	Common Name	Woody (W) / Non-woody (NW)	Flower	Fruit/seed	Other key characteristics
<i>Coleus habrophyllus</i>		W	Yes - Inflorescences are terminal spikes to 20 cm long, with clusters (verticillasters) of 10–12, light purple, two-lipped flowers, 7–8.8 mm long.	-	<i>Coleus habrophyllus</i> is a woody, square-stemmed herb growing up to 40 cm tall with scented foliage. Soft, hairy leaves to 7cm long are opposite and toothed with a velvety feel.
<i>Eucalyptus curtisii</i>	Plunkett mallee	W	Yes- White flowers are borne in large corymbose panicles. Individual flowers are 2 cm across and appear in spring and early summer.	Yes - Fruits are bell-shaped 1 by 0.8 cm, and often wrinkled or ribbed when dry, and usually have five or six internal chambers, Seeds are yellow brown and linear with a terminal scar	Plunkett Mallee grows from 2 to 7 metres in height and has smooth grey bark that peels in long strips.
<i>Marsdenia coronata</i>	Slender milkvine	W	Yes - Flowering in summer with 4 mm, five-petalled pale yellow or greenish-yellow flowers.	Yes - Fruit pods to 5 cm ripen summer to winter, splitting to reveal dark seeds with long silky hairs.	<i>Marsdenia coronata</i> is a herbaceous vine, with white latex. The roots are tuberous.

Scientific Name	Common Name	Woody (W) / Non-woody (NW)	Flower	Fruit/seed	Other key characteristics
<i>Melaleuca irbyana</i>	Swamp Tea-tree	W	Yes – 20 mm white flower spikes during spring and summer.	Yes – Small woody seed capsules to 3 mm.	Shrub or tree to 8 – 10 m, bark papery. Stem-clasping, 5 mm leaves spirally arranged.
<i>Rhodamnia maideniana</i>	Smooth scrub turpentine	W	Yes - Small white flowers appear in late spring or early summer.	Yes- The fruit is a black berry, around 10 mm in diameter.	Bushy shrub growing up to 3 m tall. Hairless leaves are clearly three veined with a prominent drip tip, 5 to 10 cm long, 2 to 4.5 cm wide.

NB: information is referenced from the following: Leiper, G, Glazebrook, J, Cox, D and Rathie, K 2014, *Mangroves to Mountains (Revised Edition): A field guide to the native plants of south-east Queensland*, Society for Growing Australian Plants (Queensland Region) Inc.

3. Flora survey

3.1. Project impact area

A majority of the site is mapped as a High Risk area on the Protected Plants Flora Survey Trigger Map (refer **Figure 3**). The impact area, which is identified as the clearing area and the buffer area excluding obvious *highly modified environments*, is shown on **Figure 2**. Additional highly modified environments were identified by the suitably qualified person while completing the survey.

3.2. Survey extent and limitations

The spatial details of the transect survey extents are listed in **Table 5** and illustrated in **Figure 5**. Surveys excluded *highly modified environments* including the existing cleared areas within Village 18 and surrounding urban development (e.g., houses, bitumen road) within the buffer area. Thus, four (4) meanders were undertaken across the impact area and 100 m buffer.

Table 5: Transect coordinates

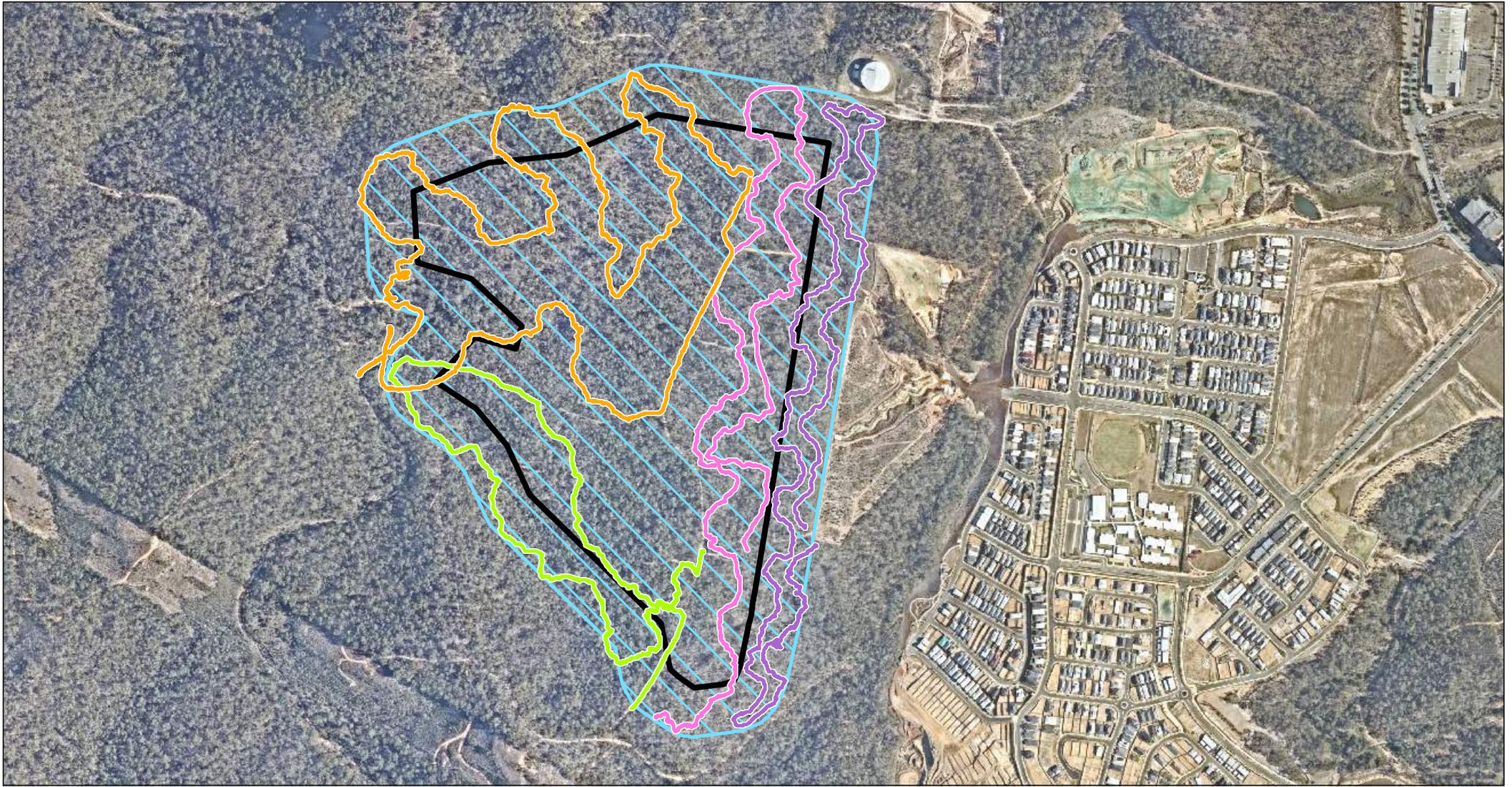
Transect	Start (longitude)	Start (latitude)	Finish (longitude)	Finish (latitude)
2	152.88485°	-27.68760°	152.88470°	-27.68727°
3	152.88107°	-27.69055°	152.88243°	-27.68766°
4	152.88352°	-27.68765°	152.88157°	-27.69070°
6	152.88357°	-27.68080°	152.88356°	-27.68089°

3.3. Flora survey methodology

The impact area was surveyed using the preferred timed meander survey technique as per the *Flora Survey Guidelines – Protected Plants* by two (2) Ecologists from Saunders Havill Group, including Senior Ecologist David Havill (the suitably qualified person) (refer to **Appendix A** for Curricula Vitae).

The surveys were carried out as follows:

1. The impact area was traversed by foot by project Ecologist (refer **Figure 5**).
2. The start and finish times of each meander were recorded.
3. The tracklog of the project Ecologists' transects were recorded using a handheld GPS unit accurate to < 1 m.
4. All unique plant species encountered during each meander within each habitat type were recorded.
5. The site and surrounds were photographed, and any relevant observations were recorded.



Legend

-  Village 18 Impact Area
-  Vegetated 100m NCA buffer
-  NCA Meander 3
-  NCA meander 2
-  NCA Meander 4
-  NCA Meander 6

Figure 5 NCA Survey Results

0 50 100 200 300 400 m
 Scale (A4): 1:11,000 [GDA 1994 MGA Z56]



File ref. 7522 E Figure 5 NCA_v18 NCA Survey Results A
Date 14/05/2021
Project Village 17 Springfield Rise



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4. Flora survey results

The preferred timed meander survey did not encounter threatened or near threatened species protected under the NCA within the impact area (refer **Figure 5**). Based on the survey effort it is stated with a high level of confidence that threatened or near threatened species will not be cleared or impacted by the proposed works.

A total of 166 unique flora species were identified throughout the survey (refer **Appendix C**). A total transect length of 17,921 m (approximately 17.9 km) was searched for threatened and near threatened flora species by two (2) Ecologists using the meander survey method. Four (4) meander surveys were completed in accordance with the flora survey guidelines (refer **Figure 5**).

Table 6 summarises the time period details of the timed meanders. A description of the transect areas and respective species with associated photographs is provided in the following subsections.

Table 6: Meander survey summary

Site	Date	Start time (hr:min)	Finish time (hr:min)	Duration (hr:min)	Distance (m)	No. Flora species
2	21.04.2021	11:20	14:00	2:40	4,629 m	99
3	22.04.2021	08:35	10:30	0:55	3,122 m	87
4	22.04.2021	10:40	12:45	2:05	3,969 m	88
6	23.04.2021	09:45	12:40	2:55	6,201m	107

4.1. Meander survey — transect 2

Transect 2 was located within the buffer, east of the impact area within Of Concern composite RE RE12.9-10.2/12.9-10.7/12.9-10.19 on 21 April 2021. It is noted that a small portion of this transect traverses mapped Category X (non-remnant) vegetation towards the north associated with existing infrastructure. This transect covered approximately 4,629 m and recorded ninety-nine (99) flora species.

Transect 2 area is characterised by steep slopes and rocky outcrops (refer **Photo Set 1**). Topography ranges from approximately 70 m ASL to 110 m ASL, with the highest elevations located nearest White Rock Spring Mountain Conservation Estate to the south and west of the transect area. Additionally, a large den site was located within the furthest most southern portion of the transect area, within the impact area (refer **Photo 1**).

The canopy layer within is dominated species composition more representative of Of Concern RE12.9-10.7 and Least Concern RE12.9-10.19, particularly RE12.9-10.19a. Canopy species include *Angophora leiocarpa* (Smooth-barked Apple), *Corymbia citriodora* (Spotted Gum), *Corymbia henryi* (Large-leaved Spotted Gum), *Corymbia tessellaris* (Moreton Bay Ash), *Eucalyptus carnea* (Broad-leaved White Mahogany), *Eucalyptus fibrosa* (Broad-leaved Red Ironbark), *Eucalyptus major* (Grey Gum) and *Eucalyptus siderophloia* (Grey Ironbark) (refer

Photo Set 2). Vegetation within this transect was considered more likely to represent these mapped regional ecosystems given the absence of key species including *Eucalyptus crebra* (Narrow-leaved Ironbark).

The sub-canopy and shrub layers are intact within mapped Category B (remnant) vegetation areas, however slightly disturbed near clearing boundaries. Species identified included *Acacia disparrima* (Hickory Wattle), *Acacia fimbriata* (Brisbane Wattle), *Allocasuarina littoralis* (Black She Oak), *Alphitonia excelsa* (Soap Tree), *Breynia oblongifolia* (Coffee Bush), *Callistris gracilis* (Rottnest Island Pine), *Dodonaea viscosa* (Hop Bush) and *Xanthorrhoea johnsonii* (Forest Grass Tree).

Although largely undisturbed, the introduced species were recorded predominantly within the ground layer of transect 2. Species identified included *Bidens pilosa* (Cobbler's Pegs), *Gomphocarpus physocarpus* (Cotton Balloon Bush), *Lantana montevidensis* (Creeping Lantana), *Megathyrsus maximus* (Guinea Grass), *Oxalis corniculata* (Creeping Oxalis) and *Passiflora suberosa* (Corky Passion Vine) (refer **Photo Set 3**). These species were largely recorded between the remnant vegetation and existing cleared area interface.

No threatened or near threatened flora species were recorded throughout this transect, refer **Table 7** for transect details.



Photo Set 1: Transect 2 area characterised by steep slopes and rocky outcrops.



Photo 1: Den site located within southern portion of the Transect 2.



Photo Set 2: Typical vegetation within Transect 2 area.



Photo Set 3: Remnant vegetation edges and disturbed areas.

Table 7: Transect 2 – flora species observed

Time	Species	Common Name
11:20am START	<i>Corymbia trachyphloia</i>	Brown Bloodwood
	<i>Eucalyptus carnea</i>	Broad-leaved White Mahogany
	<i>Acacia leiocalyx</i>	Early Flowering Black Wattle
	<i>Xanthorrhoea johnsonii</i>	Forest Grass Tree
	<i>Cymbopogon refractus</i>	Barbed Wire Grass
	<i>Lophostemon confertus</i>	Brush Box
	<i>Ottochloa gracillima</i>	Graceful Grass
	<i>Angophora woodsiana</i>	Rough-barked Apple
	<i>Aristida vagans</i>	Threeawn Speargrass
	<i>Poa labillardierei</i>	Common Tussock Grass
	<i>Corymbia citriodora</i>	Spotted Gum
	11:25am	<i>Themeda triandra</i>
<i>Imperata cylindrica</i>		Blady Grass
<i>Eragrostis brownii</i>		Brown's Lovegrass
<i>Wahlenbergia stricta</i>		Australian Bluebell
<i>Daviesia villifera</i>		Daviesia
<i>Pomax umbellata</i>		Pomax
<i>Lepidosperma laterale</i>		Variable Swordsedge
<i>Corymbia intermedia</i>		Pink Bloodwood
<i>Acacia disparrima</i>		Hickory Wattle
<i>Melichrus procumbens</i>		Jam Tarts
<i>Angophora leiocarpa</i>		Smooth-barked Apple
<i>Pultenaea flexilis</i>		Graceful Bush Pea
<i>Panicum decompositum</i>		Native Millet
11:30am		<i>Cheilanthes distans</i>
	<i>Dodonaea viscosa</i>	Hop Bush
11:35am	<i>Alphitonia excelsa</i>	Soap Tree
	<i>Asplenium australasicum</i>	Bird's Nest Fern
	<i>Oxalis corniculata</i>	Creeping Oxalis
	<i>Phyllanthus virgatus</i>	Creeping Phyllanthus
	<i>Melinis repens</i>	Red Natal Grass
	<i>Nephrolepis exaltata</i>	Fishbone Fern
	<i>Commelina benghalensis</i>	Wandering Jew
11:40am	<i>Plectranthus parviflorus</i>	Cockspur Flower
	<i>Passiflora suberosa</i>	Corky Passion Vine

Time	Species	Common Name
	<i>Desmodium intortum</i>	Greenleaf Desmodium
	<i>Jacksonia scoparia</i>	Dogwood
	<i>Acacia fimbriata</i>	Brisbane Wattle
	<i>Eucalyptus microcorys</i>	Tallowwood
	<i>Eucalyptus major</i>	Grey Gum
	<i>Cassytha pubescens</i>	Devil's Twine
	<i>Eucalyptus siderophloia</i>	Grey Ironbark
	<i>Aristida calycina</i>	Dark Wiregrass
	<i>Prunus spinosa</i>	Black Thorn
	<i>Eustrephus latifolius</i>	Wombat Berry
11:45am	<i>Dichondra repens</i>	Kidney Weed
	<i>Lomandra multiflora</i>	Many Flowered Mat Rush
11:50am	<i>Breynia oblongifolia</i>	Coffee Bush
12:00pm	<i>Eucalyptus fibrosa</i>	Broad-leaved Red Ironbark
	<i>Corymbia henryi</i>	Large-leaved Spotted Gum
	<i>Lomandra longifolia</i>	Long-leaved Matrush
12:10pm	<i>Petalostigma pubescens</i>	Quinine Bush
	<i>Chrysocephalum apiculatum</i>	Yellow Buttons
	<i>Glycine microphylla</i>	Small-leaf Glycine
	<i>Hybanthus stellarioides</i>	Spade Flower
	<i>Lantana camara</i>	Lantana
12:25pm	<i>Lobelia purpurascens</i>	White Root
	<i>Pteridium esculentum</i>	Bracken Fern
12:30pm	<i>Boronia rosmarinifolia</i>	Forest Rose
12:35pm	<i>Allocasuarina littoralis</i>	Black She-oak
	<i>Dianella caerulea</i>	Blue Flax Lily
	<i>Callitris gracilis</i>	Rottnest Island Pine
12:40pm	<i>Heteropogon contortus</i>	Black Speargrass
	<i>Lantana montevidensis</i>	Creeping Lantana
	<i>Eucalyptus tereticornis</i>	Forest Red Gum
	<i>Corymbia tessellaris</i>	Moreton Bay Ash
	<i>Desmodium uncinatum</i>	Silver-leaf Desmodium
	<i>Epacris longiflora</i>	Fuchsia Heath
	<i>Eucalyptus seeana</i>	Narrow-leaved Red Gum
13:05	<i>Eremophila debilis</i>	Winter Apple
	<i>Smilax australis</i>	Barbed-wire Vine

Time	Species	Common Name
	<i>Megathyrsus maximus</i>	Guinea Grass
	<i>Gahnia aspera</i>	Saw Sedge
	<i>Cayratia clematidea</i>	Slender Grape Vine
	<i>Westringia fruticosa</i>	Coastal Rosemary
13:15	<i>Pultenaea villosa</i>	Hair Pea Bush
	<i>Gomphocarpus physocarpus</i>	Balloon Cotton Bush
	<i>Bidens pilosa</i>	Cobbler's Pegs
13:20	<i>Macroptilium lathyroides</i>	Phasey Bean
	<i>Capillipedium parviflorum</i>	Scented Top Grass
	<i>Sporobolus pyramidalis</i>	Giant Rat's Tail Grass
	<i>Baccharis halimifolia</i>	Groundsel
	<i>Tradescantia spathacea</i>	Sitaria
	<i>Chloris gayana</i>	Rhodes Grass
	<i>Urochloa decumbens</i>	Signal Grass
	<i>Bothriochloa decipiens</i>	Pitted Blue Grass
	<i>Tipuana tipu</i>	Tipuana
	<i>Pennisetum pureum</i>	Elephant Grass
	<i>Tagetes minuta</i>	Southern Cone Marigold
13:25	<i>Alternanthera brasiliana</i>	Purple Joyweed
13:30	<i>Cryptocarya sp</i>	Laurel
	<i>Polystichum proliferum</i>	Mother Shield Fern
13:45	<i>Pimelea linifolia</i>	Rice Flower
	<i>Lophostemon suaveolens</i>	Swamp Box
	<i>Grewia latifolia</i>	Dog's Balls
	<i>Stephania japonica</i>	Tape Vine
13:50	<i>Hibbertia vestita</i>	Hairy Guinea Flower
14:00 END		

4.2. Meander survey — transect 3

Transect 3 was undertaken across the south-eastern portion of the impact area on 22 April 2021. This NCA meander covered approximately 3,122m of mapped Category B (remnant) comprised completely of Of Concern composite RE12.9-10.2/12.9-10.7/12.9-10.19 (65/20/15). Eighty-seven (87) flora species were recorded throughout this transect.

This transect is within the Village 18 impact area east of the existing cleared areas within Village 17 and developed urban areas to the east. As such, disturbances were largely associated with existing tracks and boundaries (refer **Photo Set 4**).

One (1) mapped waterway (Stream Order 1) runs in a north-west direction through Transect 3 area converging with another mapped waterway (Stream Order 2) just north of Transect 3. Topography ranged from approximately 120m ASL to 60m ASL sloping in a north-west direction.

Species recorded within the canopy were consistent with mapped RE12.9-10.17 and included *Eucalyptus carnea* (Broad-leaved White Mahogany), *Eucalyptus major* (Flooded Gum), *Eucalyptus siderophloia* (Grey Ironbark) and *Corymbia citriodora* (Spotted Gum). Other scattered canopy species included *Eucalyptus Crebra* (Narrow-leaved Ironbark), *Eucalyptus tereticornis* (Forest Red Gum), *Angophora leiocarpa* (Smooth-Barked Apple), *Lophostemon confertus* (Brush box) and *Lophostemon saueolens* (Swamp Box) representative of Of Concern RE12.9-10.7 and Least Concern RE 12.9-10.19.

The sub-canopy and shrub layers remain intact. Species recorded were identified as *Acacia disparrima* (Hickory Wattle), *Acacia fimbriata* (Brisbane Wattle), *Acacia leiocalyx* (Early Flowering Black Wattle), *Alphitonia excelsa* (Soap Tree) and *Allocasuarina littoralis* (Black She Oak).

The introduced species recorded were generally associated with disturbed edges and the ground cover, including *Ageratum houstonianum* (Blue Billygoat Weed), *Conzoya sumatrensis* (Tall Fleabane), *Lantana camara* (Lantana), *Lantana montevidensis* (Creeping Lantana), *Megathyrsus maximus* (Guinea Grass), *Melinis repens* (Red Natal Grass), *Oxalis corniculata* (Creeping Oxalis) and *Passiflora suberosa* (Corky Passion Vine).

No threatened or near threatened flora species were recorded throughout this transect, refer **Table 8** for transect details.



Photo Set 4: Disturbed areas along edges and existing access tracks.



Photo Set 5: Steep slopes within Transect 3 area.



Photo Set 6: Typical vegetation within Transect 3 area dominated by RE12.9-10.17.

Table 8: Transect 3 – flora species observed

Time	Species	Common Name
8:35	<i>Corymbia citriodora</i>	Spotted Gum
	<i>Acacia leiocalyx</i>	Early Flowering Black Wattle
	<i>Acacia disparrima</i>	Hickory Wattle
	<i>Eucalyptus carnea</i>	Broad-leaved White Mahogany
	<i>Alphitonia excelsa</i>	Soap Tree
	<i>Aristida vagans</i>	Threeawn Speargrass
	<i>Melinis repens</i>	Red Natal Grass
	<i>Poa labillardierei</i>	Common Tussock Grass
	<i>Heteropogon contortus</i>	Black Speargrass
	<i>Gahnia aspera</i>	Saw Sedge

Time	Species	Common Name
	<i>Petalostigma pubescens</i>	Quinine Bush
	<i>Jacksonia scoparia</i>	Dogwood
8:40	<i>Eucalyptus crebra</i>	Narrow-leaved Ironbark
	<i>Ottochloa gracillima</i>	Graceful Grass
	<i>Corymbia trachyphloia</i>	Brown Bloodwood
	<i>Eragrostis brownii</i>	Brown's Lovegrass
	<i>Oxalis corniculata</i>	Creeping Oxalis
	<i>Aristida calycina</i>	Dark Wiregrass
	<i>Lantana camara</i>	Lantana
8:45	<i>Boronia rosmarinifolia</i>	Forest Rose
	<i>Breynia oblongifolia</i>	Coffee Bush
	<i>Eucalyptus major</i>	Grey Gum
	<i>Lomandra multiflora</i>	Many Flowered Mat Rush
	<i>Epacris longiflora</i>	Fuchsia Heath
	<i>Phyllanthus virgatus</i>	Creeping Phyllanthus
	<i>Xanthorrhoea johnsonii</i>	Forest Grass Tree
	<i>Imperata cylindrica</i>	Blady Grass
	<i>Corymbia intermedia</i>	Pink Bloodwood
	<i>Megathyrsus maximus</i>	Guinea Grass
	<i>Phyllanthus virgatus</i>	Creeping Phyllanthus
	<i>Eucalyptus siderophloia</i>	Grey Ironbark
	<i>Cheilanthes distans</i>	Bristle Cloak Fern
	<i>Chrysocephalum apiculatum</i>	Yellow Buttons
	<i>Cymbopogon refractus</i>	Barbed Wire Grass
8:50	<i>Lepidosperma laterale</i>	Variable Swordsegde
	<i>Passiflora suberosa</i>	Corky Passion Vine
	<i>Angophora leiocarpa</i>	Smooth-barked Apple
	<i>Allocasuarina littoralis</i>	Black She-oak
	<i>Melichrus procumbens</i>	Jam Tarts
8:45	<i>Lophostemon confertus</i>	Brush Box
	<i>Dianella caerulea</i>	Blue Flax Lily
	<i>Solanum aviculare</i>	Kangaroo Apple

Time	Species	Common Name
	<i>Plectranthus parviflorus</i>	Common Plectranthus
9:00	<i>Eustrephus latifolius</i>	Wombat Berry
	<i>Neonotonia wightii</i>	Green Glycine
	<i>Lobelia purpurascens</i>	White Root
	<i>Themeda triandra</i>	Kangaroo Grass
9:05	<i>Conyza sumatrensis</i>	Tall Fleabane
	<i>Goodenia rotundifolia</i>	Star Goodenia
	<i>Pteridium esculentum</i>	Bracken Fern
	<i>Parsonsia straminea</i>	Monkey Rope
	<i>Acacia fimbriata</i>	Brisbane Wattle
9:15	<i>Lophostemon suaveolens</i>	Swamp Box
	<i>Cassytha pubescens</i>	Devil's Twine
	<i>Lomandra longifolia</i>	Long-leaved Matrush
9:20	<i>Ficus coronata</i>	Sandpaper Fig
	<i>Capillipedium parviflorum</i>	Scented Top Grass
9:25	<i>Eucalyptus fibrosa</i>	Broad-leaved Red Ironbark
	<i>Wahlenbergia stricta</i>	Australian Bluebell
	<i>Eucalyptus tereticornis</i>	Forest Red Gum
	<i>Ficus rubiginosa</i>	Rock Fig
9:30	<i>Lantana montevidensis</i>	Creeping Lantana
	<i>Desmodium uncinatum</i>	Silver-leaf Desmodium
	<i>Lotus corniculatus</i>	Bird's-foot Trefoil
	<i>Ochna serrulata</i>	Ochna
	<i>Pultenaea flexilis</i>	Graceful Bush Pea
	<i>Corymbia henryi</i>	Large-leaved Spotted Gum
9:35	<i>Panicum decompositum</i>	Native Millet
	<i>Amyema quandang</i>	Grey Mistletoe
9:40	<i>Polystichum proliferum</i>	Mother Shield Fern
	<i>Ageratum houstonianum</i>	Blue Billygoat Weed
	<i>Corymbia tessellaris</i>	Moreton Bay Ash
	<i>Cayratia clematidea</i>	Slender Grape Vine
9:45	<i>Glycine microphylla</i>	Small-leaf Glycine

Time	Species	Common Name
9:50	<i>Cyperus polystachyos</i>	Bunchy Sedge
9:55	<i>Smilax australis</i>	Barbed-wire Vine
	<i>Schinus terebinthifolius</i>	Broadleaf Pepper Tree
	<i>Bidens pilosa</i>	Cobbler's Pegs
	<i>Paspalum mandiocanum</i>	Broad-leaved Paspalum
	<i>Dodonaea viscosa</i>	Hop Bush
	<i>Callitris gracilis</i>	Rottneest Island Pine
10:05	<i>Synedrella nodiflora</i>	Cinderella Weed
	<i>Pomax umbellata</i>	Pomax
10:10	<i>Opuntia tomentosa</i>	Velvet Tree Pear
10:15	<i>Banksia integrifolia</i>	Coastal Banksia
	<i>Pimelea linifolia</i>	Rice Flower
10:30 END		

4.3. Meander survey — transect 4

Transect 4 was undertaken within the buffer area west of the impact area and Transect 2 on 22 April 2021. This transect traversed predominantly Of Concern composite RE RE12.9-10.2/12.9-10.7/12.9-10.19. A small portion of Endangered RE12.8.24 is located within the furthest north portion of the transect area and is located outside of the impact area. Transect 2 covered approximately 3,969 m and recorded eighty-eight (88) flora species.

Transect 3 area is characterised by steep slopes and rocky outcrops (refer **Photo Set 7**). Topography ranges from approximately 90 ASL to 120m ASL, with the highest elevations located nearest White Rock Spring Mountain Conservation Estate to the south and west of the transect area.

As noted above, Transect 4 area is dominated by the same regional ecosystem mapping as Transect 2 and as such the canopy layer within is dominated species composition more representative of Of Concern RE12.9-10.7 and Least Concern RE12.9-10.19, particularly RE12.9-10.19a. Canopy species include *Angophora leiocarpa* (Smooth-barked Apple), *Corymbia citriodora* (Spotted Gum), *Corymbia henryi* (Large-leaved Spotted Gum), *Corymbia tessellaris* (Moreton Bay Ash), *Eucalyptus carnea* (Broad-leaved White Mahogany), *Eucalyptus fibrosa* (Broad-leaved Red Ironbark), *Eucalyptus major* (Grey Gum) and *Eucalyptus siderophloia* (Grey Ironbark) (refer **Photo Set 7**). Vegetation within this transect was considered more likely to represent these mapped regional ecosystems given the absence of key species including *Eucalyptus crebra* (Narrow-leaved Ironbark).

Although sparse, the sub-canopy and shrub layers are intact as the entire transect is mapped Category B (remnant) vegetation. Species identified included *Acacia disparrima* (Hickory Wattle), *Acacia fimbriata* (Brisbane Wattle), *Allocasuarina littoralis* (Black She Oak), *Alphitonia excelsa* (Soap Tree), *Breynia oblongifolia*

(Coffee Bush), *Callistris gracilis* (Rottneest Island Pine), *Dodonaea viscosa* (Hop Bush) and *Xanthorrhoea johnsonii* (Forest Grass Tree).

Although largely undisturbed, the introduced species were recorded predominantly within the ground layer of transect 2. Species identified included *Ageratum houstonianum* (Blue Billygoat Weed), *Lantana camara* (Lantana), *Lantana montevidensis* (Creeping Lantana), *Megathyrsus maximus* (Guinea Grass), *Oxalis corniculata* (Creeping Oxalis) and *Passiflora suberosa* (Corky Passion Vine) (refer **Photo Set 5**).

Nil threatened or near threatened flora species were recorded throughout this transect, refer **Table 7** for transect details.



Photo Set 7: Transect 3 characterised by steep slopes and rocky outcrops.



Photo Set 8: Typical vegetation within Transect 4.



Photo Set 9: Introduced species observed within Transect 4.

Table 9: Transect 4 – flora species observed

Time	Species	Common Name
10:40am Start	<i>Corymbia trachyphloia</i>	Brown Bloodwood
	<i>Acacia leiocalyx</i>	Early Flowering Black Wattle
	<i>Hibbertia vestita</i>	Hairy Guinea Flower
	<i>Lomandra multiflora</i>	Many Flowered Mat Rush
	<i>Xanthorrhoea johnsonii</i>	Forest Grass Tree
	<i>Poa labillardierei</i>	Common Tussock Grass
	<i>Jacksonia scoparia</i>	Dogwood
	<i>Acacia disparrima</i>	Hickory Wattle
	<i>Angophora leiocarpa</i>	Smooth-barked Apple
	<i>Lepidosperma laterale</i>	Variable Swordsedge
	<i>Cymbopogon refractus</i>	Barbed Wire Grass
	<i>Eucalyptus carnea</i>	Broad-leaved White Mahogany
	<i>Eucalyptus fibrosa</i>	Broad-leaved Red Ironbark
	<i>Corymbia intermedia</i>	Pink Bloodwood
	<i>Epacris longiflora</i>	Fuchsia Heath
	<i>Aristida vagans</i>	Threeawn Speargrass
	<i>Imperata cylindrica</i>	Blady Grass
	<i>Sporobolus caroli</i>	Fairy Grass
	<i>Dianella caerulea</i>	Blue Flax Lily
10:45am	<i>Corymbia henryi</i>	Large-leaved Spotted Gum

Time	Species	Common Name
	<i>Aristida calycina</i>	Dark Wiregrass
	<i>Themeda triandra</i>	Kangaroo Grass
		Darwinia / Homoranthus
10:50am	<i>Cheilanthes distans</i>	Bristle Cloak Fern
	<i>Phyllanthus virgatus</i>	Creeping Phyllanthus
	<i>Oxalis corniculata</i>	Creeping Oxalis
	<i>Alphitonia excelsa</i>	Soap Tree
	<i>Allocasuarina littoralis</i>	Black She-oak
	<i>Melichrus procumbens</i>	Jam Tarts
	<i>Corymbia citriodora</i>	Spotted Gum
	<i>Passiflora suberosa</i>	Corky Passion Vine
10:55am	<i>Lobelia purpurascens</i>	White Root
	<i>Eucalyptus major</i>	Grey Gum
	<i>Eucalyptus siderophloia</i>	Grey Ironbark
	<i>Conyza sumatrensis</i>	Tall Fleabane
	<i>Gahnia aspera</i>	Saw Sedge
11:00am	<i>Persoonia cornifolia</i>	Geebung
	<i>Heteropogon contortus</i>	Black Speargrass
	<i>Boronia rosmarinifolia</i>	Forest Rose
	<i>Megathyrsus maximus</i>	Guinea Grass
	<i>Chrysocephalum apiculatum</i>	Yellow Buttons
11:05am	<i>Callitris gracilis</i>	Rottneet Island Pine
	<i>Plectranthus parviflorus</i>	Cockspur Flower
	<i>Melinis repens</i>	Red Natal Grass
	<i>Pimelea linifolia</i>	Rice Flower
11:10am	<i>Desmodium intortum</i>	Greenleaf Desmodium
	<i>Lophostemon confertus</i>	Brush Box
	<i>Glycine microphylla</i>	Small-leaf Glycine
11:15am	<i>Cassytha pubescens</i>	Devil's Twine
	<i>Lantana camara</i>	Lantana
	<i>Eucalyptus seeana</i>	Narrow-leaved Red Gum
	<i>Lantana montevidensis</i>	Creeping Lantana

Time	Species	Common Name
	<i>Breynia oblongifolia</i>	Coffee Bush
	<i>Wahlenbergia stricta</i>	Australian Bluebell
	<i>Ageratum houstonianum</i>	Blue Billygoat Weed
	<i>Eustrephus latifolius</i>	Wombat Berry
11:20am	<i>Eragrostis curvula</i>	African Lovegrass
	<i>Eucalyptus cloeziana</i>	Gympie Messmate
	<i>Crotalaria montana</i>	Fuzzy Rattlepod
11:30am	<i>Eragrostis brownii</i>	Brown's Lovegrass
	<i>Opuntia tomentosa</i>	Velvet Tree Pear
11:35am	<i>Petalostigma pubescens</i>	Quinine Bush
	<i>Commelina benghalensis</i>	Wandering Jew
	<i>Dodonaea viscosa</i>	Hop Bush
11:40am	<i>Acacia fimbriata</i>	Brisbane Wattle
	<i>Cyperus polystachyos</i>	Bunchy Sedge
11:45am	<i>Tephrosia glomeruliflora</i>	Pink Tephrosia
11:50am	<i>Glossocardia bidens</i>	Native Cobbler's Pegs
	<i>Pultenaea flexilis</i>	Graceful Bush Pea
11:55am	<i>Sida acuta</i>	Common Wireweed
	<i>Westringia fruticosa</i>	Coastal Rosemary
	<i>Parsonsia straminea</i>	Monkey Rope
	<i>Goodenia rotundifolia</i>	Star Goodenia
	<i>Hardenbergia violacea</i>	Native Sarsaparilla
12:00pm	<i>Capillipedium parviflorum</i>	Scented Top Grass
	<i>Urochloa decumbens</i>	Signal Grass
	<i>Chloris gayana</i>	Rhodes Grass
	<i>Daviesia villifera</i>	Daviesia
12:05pm	<i>Smilax australis</i>	Barbed-wire Vine
	<i>Cryptocarya sp</i>	Laurel
12:15pm	<i>Eucalyptus pilularis</i>	Blackbutt
	<i>Pteridium esculentum</i>	Bracken Fern
	<i>Sida cordifolia</i>	Flannel Weed
	<i>Heliotropium amplexicaule</i>	Blue Heliotrope

Time	Species	Common Name
	<i>Lophostemon suaveolens</i>	Swamp Box
	<i>Eucalyptus tereticornis</i>	Forest Red Gum
	<i>Stephania japonica</i>	Tape Vine
12:20pm	<i>Corymbia tessellaris</i>	Moreton Bay Ash
12:45pm END		

4.4. Meander survey — transect 6

Transect 6 was undertaken across the north-east portion of the impact area 23 April 2021. This NCA meander covered approximately 6,201m of mapped Category B (remnant) vegetation including Endangered RE12.8.24 and Of Concern composite RE12.9-10.2/12.9-10.7/12.9-10.19 (65/20/15). One-hundred and seven (107) flora species were recorded throughout this transect. Transect 6 is dominated by Endangered composite 12.8.24.

This transect is located within the Village 18 impact area, east of Village 17 and existing developed urban areas. As such, disturbances are minimal and only associated with existing access tracks (refer **Photo Set 10**).

Two (2) mapped waterways (Stream Order 1 and Stream Order 3), discussed in Transect 3 converge within the western portion of Transect 6 area forming Woogaroo Creek (refer **Photo 2**). Woogaroo Creek continues north and converges with another mapped Waterway (Stream Order 1). Topography ranges from approximately 60 m ASL associated with Woogaroo Creek to highest point at approximately 130m ASL towards the north.

Although Transect 6 area is predominantly mapped as endangered RE12.8.24, key canopy species including *Eucalyptus crebra* and *Eucalyptus moluccana* were not recorded throughout the transect. Canopy species were considered to evenly represent the regional ecosystems within composite Of Concern RE12.9-10.2/12.9-10.7/12.9-10.19. Canopy species included *Angophora leiocarpa* (Smooth-barked Apple), *Angophora subvelutina* (Broad-leaved Apple), *Angophora woodsiana* (Rough-barked Apple), *Corymbia citriodora* (Spotted Gum), *Corymbia henryi* (Large-leaved Spotted Gum), *Corymbia tessellaris* (Moreton Bay Ash), *Eucalyptus acmenoides* (White Mahogany), *Eucalyptus carnea* (Broad-leaved White Mahogany), *Eucalyptus fibrosa* (Broad-leaved Red Ironbark), *Eucalyptus grandis* (Flooded Gum), *Eucalyptus major* (Grey Gum), *Eucalyptus moluccana* (Gum-topped Box), *Eucalyptus tereticornis* (Forest Red Gum), *Eucalyptus saligna* (Sydney Blue Gum), *Eucalyptus siderophloia* (Grey Ironbark) (refer **Photo Set 11**).

The sub-canopy and shrub layers remain intact as the transect area is mapped Category B (remnant) vegetation. Species identified included *Acacia disparrima* (Hickory Wattle), *Acacia fimbriata* (Brisbane Wattle), *Acacia leiocalyx* (Early Flowering Black Wattle), *Allocasuarina littoralis* (Black She Oak), *Allocasuarina torulosa* (Forest She Oak), *Alphitonia excelsa* (Soap Tree), *Breynia oblongifolia* (Coffee Bush), *Dodonaea viscosa* (Hop Bush) and *Xanthorrhoea johnsonii* (Forest Grass Tree).

Although largely undisturbed, introduced species were recorded, though predominantly within the ground and shrub layers of Transect 6. Species identified included *Ageratum houstonianum* (Blue Billygoat Weed),

Bidens pilosa (Cobbler's Pegs), *Desmodium intortum* (Greenleaf Desmodium), *Gomphocarpus physocarpus* (Balloon Cotton Bush), *Koelreuteria elegans* (Golden Raintree), *Lantana camara* (Lantana), *Lantana montevidensis* (Creeping Lantana), *Megathyrsus maximus* (Guinea Grass), *Nephrolepis cordifolia* (Fishbone Fern), *Opuntia stricta* (Prickly Pear), *Oxalis stricta* (Yellow Woodsorrel), *Passiflora suberosa* (Corky Passion Vine) and *Senecio madagascariensis* (Fireweed).



Photo Set 10: Disturbed areas largely associated with existing tracks within Transect 6.



Photo Set 11: Typical vegetation within Transect 6.



Photo 2: Woogaroo Creek.

Table 10: Transect 6 – flora species observed

Time	Species	Common Name
9:45 AM	<i>Eucalyptus siderophloia</i>	Grey Ironbark
	<i>Corymbia citriodora</i>	Spotted Gum
	<i>Acacia leiocalyx</i>	Early Flowering Black Wattle
	<i>Alphitonia excelsa</i>	Soap Tree
	<i>Dianella caerulea</i>	Blue Flax Lily
	<i>Gahnia aspera</i>	Saw Sedge
	<i>Aristida calycina</i>	Dark Wire Grass
	<i>Aristida vagans</i>	Threeawn Speargrass
	<i>Lantana camara</i>	Lantana
	<i>Phyllanthus virgatus</i>	Phyllanthus
	<i>Commelina diffusa</i>	Wandering Jew

Time	Species	Common Name
	<i>Cymbopogon refractus</i>	Barbed Wire Grass
	<i>Poa labillardieri</i>	Tussock Grass
	<i>Imperata cylindrica</i>	Blady Grass
	<i>Corymbia intermedia</i>	Pink Bloodwood
	<i>Sporobolus africanus</i>	Paramatta Grass
	<i>Lomandra multiflora</i>	Many Flowered Mat Rush
9:50 AM	<i>Angophora leiocarpa</i>	Smooth Bark Apple
	<i>Eucalyptus tereticornis</i>	Forest Red Gum
	<i>Megathyrsus maximus</i>	Guinea Grass
	<i>Jacksonia scoparia</i>	Dogwood
	<i>Conyza sumatrensis</i>	Tall Fleabane
	<i>Sida cordifolia</i>	Flannel Weed
	<i>Oxalis stricta</i>	Yellow Woodsorrel
	<i>Lantana montevidensis</i>	Creeping Lantana
	<i>Melinis repens</i>	Red Natal Grass
	<i>Plectranthus parviflorus</i>	Plectranthus
	<i>Glycine microphylla</i>	Glycine
	<i>Cheilanthes distans</i>	Bristle Cloak Fern
	<i>Passiflora suberosa</i>	Corky Passion Vine
	<i>Cassytha pubescens</i>	Devil's Twine
	<i>Panicum decompositum</i>	Native Millet
	<i>Chrysocephalum apiculatum</i>	Yellow Buttons
9:55 AM	<i>Lobelia purpurascens</i>	White Root
	<i>Eucalyptus acmenoides</i>	White Mahogany
	<i>Heteropogon contortus</i>	Blackspear Grass
	<i>Desmodium intortum</i>	Greenleaf Desmodium
	<i>Eucalyptus carnea</i>	Broad Leaf White Mahogany
	<i>Melichrus procumbens</i>	Jam Tarts
	<i>Acacia fimbriata</i>	Fringed Wattle
	<i>Eragrostis bronwii</i>	Brown's Love Grass
	<i>Opuntia stricta</i>	Prickly Pear
	<i>Eustrephus latifolius</i>	Wombat Berry

Time	Species	Common Name
	<i>Dillwynia retorta</i>	Heathy Parrot Pea
10:00 AM	<i>Lophostemon confertus</i>	Brush Box
	<i>Xanthorrhoea johnsonii</i>	Grass Tree
	<i>Hardenbergia violacea</i>	Native Sarsparilla
	<i>Acacia disparrima</i>	Hickory Wattle
	<i>Drynaria rigidula</i>	Basket Fern
	<i>Senecio madagascariensis</i>	Fireweed
	<i>Gomphocarpus physocarpus</i>	Balloon Cotton Bush
10:05 AM	<i>Nephrolepis cordifolia</i>	Fishbone Fern
	<i>Bidens pilosa</i>	Cobbler's Pegs
	<i>Lobelia inflata</i>	Indian Tobacco
	<i>Allocasuarina torulosa</i>	Forest She Oak
	<i>Goodenia rotundifolia</i>	Goodenia
	<i>Pultenaea euchila</i>	Orange Pultenaea
	<i>Buursaria spinosa</i>	Black Thorn
	<i>Daviesia umbellulata</i>	Daviesia
	<i>Eucalyptus fibrosa</i>	Broad-leaved Ironbark
	<i>Cayratia clematidea</i>	Slender Grape
	<i>Eremophila deblis</i>	Winter Apple
10:10 AM	<i>Cyperus polystachyos</i>	Bunchy Sedge
	<i>Lepidosperma laterale</i>	Variable Swordsedge
	<i>Allocasuarina littoralis</i>	Black She Oak
	<i>Oplismenus aemulus</i>	Creeping Beard Grass
10:15 AM	<i>Eucalyptus pilularis</i>	Blackbutt
	<i>Corymbia tessellaris</i>	Moreton Bay Ash
	<i>Capillipedium spicigerum</i>	Scentop Top Grass
	<i>Ageratum houstonianum</i>	Blue Billygoat Weed
	<i>Juncus usitatus</i>	Common Juncus
10:20 AM	<i>Crotalaria lanceolata</i>	Lance-leaved Rattlepod
	<i>Sida rhombifolia</i>	Arrowleaf Sida
	<i>Koelreuteria elegans</i>	Golden Rain Tree
	<i>Celtis sinensis</i>	Chinese Elm

Time	Species	Common Name
	<i>Eucalyptus saligna</i>	Sydney Blue Gum
10:25 AM	<i>Pteridium esculentum</i>	Bracken
	<i>Trema tomentosa</i>	Poison Peach
	<i>Lomandra longifolia</i>	Mat Rush
	<i>Ipomoea plebeia</i>	Bell Vine
10:30 AM	<i>Lophostemon sueveolens</i>	Swamp Box
	<i>Banksia integrifolia</i>	Coastal Banksia
	<i>Petelostigma pubescens</i>	Quinine Bush
10:35 AM	<i>Cassia pendula</i>	Smooth Cassia
	<i>Heliotropium amplexicaule</i>	Blue Heliotrope
10:45 AM	<i>Cynodon dactylon</i>	Green Couch
	<i>Eucalyptus major</i>	Grey Gum
10:55 AM	<i>Corymbia henryii</i>	Large-leaved Spotted Gum
11:00 AM	<i>Solanum nigrum</i>	Blackberry Nightshade
11:30 AM	<i>Hybanthus stellarioides</i>	Spade Flower
11:35 AM	<i>Paspalum mandiocanum</i>	Broad-leaved Paspalum
	<i>Dodonaea viscosa</i>	Hop Bush
11:40 AM	<i>Angophora subvelutina</i>	Broad-leaved Apple
11:45 AM	<i>Adiantum atroviride</i>	Maidenhair Fern
	<i>Cestrum parqui</i>	Green Cestrum
	<i>Pennisetum purpureum</i>	Elephant Grass
	<i>Phragmites australis</i>	Common Reed
	<i>Smilax australis</i>	Barbed Wire Vine
	<i>Setaria sphacelata</i>	South African Pigeon Grass
11:50 AM	<i>Rubus parvifolius</i>	Pink Flowered Native Raspberry
	<i>Melaleuca viminalis</i>	Weeping Bottlebrush
12:00	<i>Stephania japonica</i>	Tape Vine
	<i>Wahlenbergia graniticola</i>	Bluebell
12:10 PM	<i>Breynia oblongifolia</i>	Coffee Bush
	<i>Eragrostis curvula</i>	African Lovegrass
	<i>Angophora woodsiana</i>	Rough-barked Apple
12:15 PM	<i>Eucalyptus grandis</i>	Flooded Gum

Time	Species	Common Name
12:40 PM	<i>END</i>	

5. Summary

Field surveys were carried out by Saunders Havill Group on behalf of Lendlease Communities (Springfield) Pty Ltd within the project site located at London Avenue, Spring Mountain in association with the Springfield Rise estate development. The impact area is mapped as 'High Risk' on the Protected Plants Flora Survey Trigger Map which triggers the requirements for protected plant surveys to be completed prior to any clearing work. A flora survey was undertaken by two (2) Ecologists from Saunders Havill Group across the impact area to ascertain if protected plant specimens were present and would therefore be impacted by the pending clearing activities. The surveys utilised the preferred random meander techniques as outlined in the *Flora Survey Guidelines – Protected Plants* (DES 2020) to detect threatened or near threatened flora species. Four meanders within two habitat types were completed over the impact area (clearing and buffer areas) in accordance with the guidelines.

Surveys transects covered 17,921 m and **did not detect any threatened or near threatened flora species within the impact area.**

6. Appendices

Appendix A

Curricula Vitae

Appendix B

Wildlife Online Extract

Nature Conservation Act 1992

Appendix C

Flora Survey Species List

Appendix A

Curricula Vitae

Senior Ecologist – David Havill

David Havill – 20.04.2021

David Havill has significant practical experience in the areas of ecological site assessments (flora and fauna), weed management programs, large scale revegetation projects, wetland rehabilitation and waterway restoration.

He has a strong understanding of the intricate workings of the *Vegetation Management Act 1999*, *Nature Conservation Act 1992* and *Environment Protection and Biodiversity Conservation Act 1999* and the complex codes and policies which influence site vegetation constraints.

David's expertise relates to the on-site identification and spatial mapping of fauna and flora species including endangered, rare and vulnerable plants and animals. He has an accurate understanding of site survey processes and standards developed by the State and Commonwealth Governments. This provides the ability to challenge the various inaccuracies that occur within broad scale vegetation mapping developed by these Government agencies.

David works closely with our in-house team of GIS, environmental planning, and landscape rehabilitation specialists to document findings of ecological survey and prepare targeted restoration and rehabilitation strategies. He has a strong understanding of construction techniques associated with development projects and can prepare practical flora and fauna management plans to assist in guiding the construction process within sensitive areas.

Qualifications

Bachelor of Applied Science (Natural Systems and Wildlife Management), The University of Queensland (1998).

Self-Assessment

Qualification / Experience	Condition	Evidence	Points
A relevant qualification from a recognised institution (e.g. University, TAFE) that results in a thorough knowledge of plant identification and flora surveys.	Queensland focussed	Bachelor of Applied Science (Natural Systems and Wildlife Management), The University of Queensland (1998)	50
Experience within the last 2 years and a total of at least 5 years at leading flora surveys in a field-based environment at a rate of no less than 5 comprehensive botanical surveys that focus on locating and identifying EVNT plants, per year.	Qld based field flora surveys experience	Specific experience carrying out NCA protected plants surveys provided in the table below. David carries out numerous flora and fauna surveys every year. Additional information on specific projects can be provided on request.	60
TOTAL			110

Applicant	Street Address / Lot on Plan	DES Exemption / Permit	Date Issued
Boral Resources Pty Ltd	Lot 8 & 9 Plan RP749301	WIPA15213114	16/10/2014
Boral Resources Pty Ltd	720 Moy Pocket Road, Moy Pocket	AR083681	16/02/2016
Boral Resources Pty Ltd	580 Upper Ormeau Road, Kingsholme	Not provided	21/11/2016
Varsity Property Pty Ltd ATF Varsity Development Unit Trust	Weale Street, Mount Kynoch	AR095583	30/11/2016
Lend Lease Communities (Springfield) Pty Ltd	Sinnathamby Boulevard, Springfield	AR09563	12/12/2016
Frasers Property Bahrs Scrub Pty Ltd	Sinnathamby Boulevard, Springfield	AR095953	23/01/2017 (surveys completed in 2016)
Lend Lease Communities (Springfield) Pty Ltd	Sinnathamby Boulevard, Springfield	AR098350	01/03/2017
Lend Lease Communities (Springfield) Pty Ltd	Sinnathamby Boulevard, Springfield	AR098906	14/03/2017
Lend Lease Communities (Springfield) Pty Ltd	Menora Road, Bahrs Scrub	AR100016	21/04/2017
Lend Lease Communities (Springfield) Pty Ltd	Sinnathamby Boulevard, Springfield	AR101106	29/05/2017
Time Investments Pty Ltd	34-80 Stegalls Road, Yandina	AR101049	29/05/2017
Villa Green Pty Ltd	Pub Lane, Greenbank	APP0013977	15/02/2018
Springfield City Group Pty Limited	LOT 62, 63, 65, 66 & 67 Plan SP291400	APP0015371	09/03/2018
Stockland Development Pty Ltd	LOT 9997, 9000 and 9002 Plan SP292760	APP0015654	19/03/2018
Peet No. 119 Pty Ltd	LOT 2/RP47120	APP0015925	12/04/2018
Boral Resources Pty Ltd	Lot 8 & 9 Plan RP749301	APP0016964	20/04/2018

Applicant	Street Address / Lot on Plan	DES Exemption / Permit	Date Issued
Frasers Property Pty Ltd	Lot 281 Plan SP283121	APP0017471	03/05/2018
Podium Property Group	95-107 Logan Reserve Rd WATERFORD WEST QLD 4133	APP0019173	14/06/2018
QM Properties Pty Ltd	LOT 850/SP297470 and LOT 851/SP297470	APP0019193	14/06/2018
Celestino Pty Ltd	LOT 800 /sp247625, LOT 101/sp254145, LOT 102/sp254145, LOT 104/sp254145, LOT 105/sp254145 and LOT 106/sp254145	APP0016941	22/06/2018
Frasers Property Australia	Menora Road, Bahrs Scrub	APP0020142	13/07/2018
Frasers Property Australia	Menora Road, Bahrs Scrub	APP0021378	01/08/2018
Mirvac Queensland Pty Ltd	LOT 1/sp297192	APP0020125	24/08/2018
Ventura 2018 Pty Ltd	LOT 117/RP87803, LOT 118/RP87803 and LOT 119/RP87803	APP0023338	12/09/2018
Impact Developments	LOT 3/RP101021	APP0024076	26/09/2018
Lexen Pty Ltd	LOT 37/SP185150	APP0024047	26/09/2018
Boral Resources (Qld) Pty Ltd	Lot 43/SP243239 and Lot 1/RP164904	APP0024984	16/10/2018
Lendlease Communities (Springfield) Pty Ltd	LOT 750/SP189053 and	APP0025073	18/10/2018
Philip User Constructions	LOT 901/SP264807	APP0025508	29/10/2018
Springfield City Group Pty Ltd	LOT 8/SP291381, LOT 7/SP291381 and LOT 9014/SP301015	APP0026176	09/11/2018
Backshall Group Pty Ltd	LOT 2/SP241230 and 77 Darlington Drive YATALA QLD 4207	APP0026862	21/11/2018
Boral Resources (Qld) Pty Ltd	Lot 4/RP159242 and Lot 1/SP221900	APP0026944	22/11/2018
Boral Resources (Qld) Pty Ltd	LOT 171/SP269293	APP0029212	21/12/2018

Applicant	Street Address / Lot on Plan	DES Exemption / Permit	Date Issued
Diligent Development Pty Ltd	471-479 Chambers Flat Rd PARK RIDGE QLD 4125	APP0030307	10/01/2019
Orchard Property Group Pty Ltd	LOT 6/RP193185 and LOT 9/SP203507	APP0030600	14/01/2019
Canberra Estates Consortium No36 Pty Ltd	LOT 5007/SP266999	APP0032245	12/02/2019
Peet No. 119 Pty Ltd	LOT 89/SL4604	APP0032644	19/02/2019
Urbex Pty Ltd	LOT 48/MAR619	APP0033564	08/03/2019
Canberra Estates Consortium No36 Pty Ltd	LOT 5007/SP266999, LOT 5/RP221982 and LOT 519/SL10400	APP0034679	01/04/2019
Urbex Pty Ltd	LOT 9/RP170908 and LOT 6/RP154403	APP0034802	04/04/2019
Stockland Development Pty Ltd	LOT 207/CH31135	APP0035363	18/04/2019
Lendlease Communities (Springfield) Pty Ltd	LOT 4100/SP304382	APP0035536	24/04/2019
Blue Care	LOT 650/CP841247	APP0035228	02/05/2019
Canberra Estates Consortium No36 Pty Ltd	LOT 5007/SP266999, LOT 5/RP221982 and LOT 519/SL10400	APP0036790	28/05/2019
Lendlease Communities (Springfield) Pty Ltd	LOT 909/SP300997, LOT 900/SP297531 and LOT 9019/SP303695	APP0037855	21/06/2019
Frasers Property Pty Ltd	LOT 8014/SP162774 and LOT 817/SP301196	APP0038058	27/06/2019
Lendlease Communities (Springfield) Pty Ltd	LOT 5/SP291381	APP0038502	08/07/2019
QM Properties	LOT 1/SP101489	APP0038230	12/09/2019
Golf Links Land Development Pty Ltd	LOT 1/sp304751, LOT 2/sp304751, LOT 97/RP102544 and LOT 98/RP102544	APP0041324	13/09/2019
Sekisui House Australia Holdings	LOT 1007/SP311770	APP0041878	26/09/2019

Applicant	Street Address / Lot on Plan	DES Exemption / Permit	Date Issued
Orchard (Daleys) Development Pty Ltd	LOT 1/RP186731, LOT 329/S3157, LOT 330/SP271650, LOT 321/SP187287 and LOT 902/SP187287	APP0040886	16/10/2019
Orchard (Lakeview) Developments Pty Ltd	LOT 321/SP187287	APP0044333	20/11/2019
Frasers Property Australia	LOT 218/SP283121, LOT 207/CH31135, LOT 1/RP186731 and LOT 191/CC1874	APP0039567	28/11/2019
Peet Limited	Lot 1/SP242604, LOT 1018/SP308022 and LOT 903/SP238670	APP0049618	21/02/2020
Westera Partners Pty Ltd	1991 - 1777 Chambers Flat Rd Chambers Flat CHAMBERS FLAT QLD 4133	APP0056620	09/07/2020
Celestino Pty Ltd	LOT 800 /sp247625, LOT 101/sp254145, LOT 102/sp254145, LOT 104/sp254145, LOT 105/sp254145 and LOT 106/sp254145	APP0056543	01/09/2020
Mirvac Queensland Pty Ltd	LOT 9001/SP300875, LOT 9002/SP317644 and LOT 9003/SP317644	APP0057006	23/08/2020
Frasers Property Australia	Menora Road BAHRS SCRUB QLD 4207	APP0058927	24/08/2020
Conmus Enterprises Pty Ltd	LOT 906/SP291413	APP0059060	26/08/2020
Boral Resources Pty Ltd	Lot 43/SP243239 and Lot 1/RP164904	APP0061749	16/10/2020
Orchard (Daleys) Development Pty Ltd	LOT 3/RP180932, LOT 5/RP180932 and LOT 6/RP180932	APP0064210	26/11/2020
Halcyon Developments No. 9 Pty Ltd	LOT 3/SP283716, LOT 3/RP160702, LOT 3/RP202269, LOT 1/RP175851, LOT 1/RP149090 and LOT 2/RP202269	APP0066291	18/12/2020

Applicant	Street Address / Lot on Plan	DES Exemption / Permit	Date Issued
Boral Resources Pty Ltd	Lot 8/RP749301 and Lot 9/RP749301	APP0067610	06/01/2021
Orchard (Daleys) Development Pty Ltd	LOT 5/RP180932 and LOT 6/RP180932	APP0066297	11/02/2021
Chris Orr	63 Haven Road Upper Brookfield UPPER BROOKFIELD QLD 4069	APP0070497	17/02/2021
Canberra Estates Consortium No36 Pty Ltd	LOT 5007/SP317659	APP0073043	30/03/2021
Defence Housing Australia – Property Provisioning Group	LOT 7000/SP307619	APP0073828	13/04/2021

Appendix B

Wildlife Online Extract

Nature Conservation Act 1992



Queensland Government

Wildlife Online Extract

Search Criteria: Species List for a Specified Point
Species: Plants (including other non-animals such as fungi and protists)
Type: All
Status: Rare and threatened species
Records: Confirmed
Date: Since 1980
Latitude: -27.6843
Longitude: 152.8858
Distance: 5
Email: laurathorley@saundershavill.com
Date submitted: Tuesday 27 Apr 2021 11:51:06
Date extracted: Tuesday 27 Apr 2021 12:00:17

The number of records retrieved = 5

Disclaimer

As the DSITIA is still in a process of collating and vetting data, it is possible the information given is not complete. The information provided should only be used for the project for which it was requested and it should be appropriately acknowledged as being derived from Wildlife Online when it is used.

The State of Queensland does not invite reliance upon, nor accept responsibility for this information. Persons should satisfy themselves through independent means as to the accuracy and completeness of this information.

No statements, representations or warranties are made about the accuracy or completeness of this information. The State of Queensland disclaims all responsibility for this information and all liability (including without limitation, liability in negligence) for all expenses, losses, damages and costs you may incur as a result of the information being inaccurate or incomplete in any way for any reason.

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Apocynaceae	<i>Marsdenia coronata</i>	slender milkvine		V		7/7
plants	land plants	Lamiaceae	<i>Coleus habrophyllus</i>			E	E	13/13
plants	land plants	Myrtaceae	<i>Rhodamnia maideniana</i>	smooth scrub turpentine		CR		1/1
plants	land plants	Myrtaceae	<i>Melaleuca irbyana</i>			E		3/3
plants	land plants	Myrtaceae	<i>Eucalyptus curtisii</i>	Plunkett mallee		NT		2/2

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 C

Flora Survey Species List

Species	Common Name
<i>Acacia disparrima</i>	Hickory Wattle
<i>Acacia fimbriata</i>	Brisbane Wattle
<i>Acacia leiocalyx</i>	Early Flowering Black Wattle
<i>Adiantum atroviride</i>	Maidenhair Fern
<i>Ageratum houstonianum</i>	Blue Billygoat Weed
<i>Allocasuarina littoralis</i>	Black She-oak
<i>Allocasuarina torulosa</i>	Forest She Oak
<i>Alphitonia excelsa</i>	Soap Tree
<i>Alternanthera brasiliana</i>	Purple Joyweed
<i>Amyema quandang</i>	Grey Mistletoe
<i>Angophora leiocarpa</i>	Smooth-barked Apple
<i>Angophora subvelutina</i>	Broad-leaved Apple
<i>Angophora woodsiana</i>	Rough-barked Apple
<i>Aristida calycina</i>	Dark Wiregrass
<i>Aristida vagans</i>	Threeawn Speargrass
<i>Asplenium australasicum</i>	Bird's Nest Fern
<i>Baccharis halimifolia</i>	Groundsel
<i>Banksia integrifolia</i>	Coastal Banksia
<i>Bidens pilosa</i>	Cobbler's Pegs
<i>Boronia rosmarinifolia</i>	Forest Rose
<i>Bothriochloa decipiens</i>	Pitted Blue Grass
<i>Breynia oblongifolia</i>	Coffee Bush
<i>Buursaria spinosa</i>	Black Thorn
<i>Callitris gracilis</i>	Rottnest Island Pine
<i>Capillipedium parviflorum</i>	Scented Top Grass
<i>Capillipedium spicigerum</i>	Scentop Top Grass
<i>Cassia pendula</i>	Smooth Cassia
<i>Cassytha pubescens</i>	Devil's Twine
<i>Cayratia clematidea</i>	Slender Grape Vine
<i>Celtis sinensis</i>	Chinese Elm
<i>Cestrum parqui</i>	Green Cestrum
<i>Cheilanthes distans</i>	Bristle Cloak Fern

Species	Common Name
<i>Chloris gayana</i>	Rhodes Grass
<i>Chrysocephalum apiculatum</i>	Yellow Buttons
<i>Commelina benghalensis</i>	Wandering Jew
<i>Commelina diffusa</i>	Wandering Jew
<i>Conyza sumatrensis</i>	Tall Fleabane
<i>Corymbia citriodora</i>	Spotted Gum
<i>Corymbia henryi</i>	Large-leaved Spotted Gum
<i>Corymbia intermedia</i>	Pink Bloodwood
<i>Corymbia tessellaris</i>	Moreton Bay Ash
<i>Corymbia trachyphloia</i>	Brown Bloodwood
<i>Crotalaria lanceolata</i>	Lance-leaved Rattlepod
<i>Crotalaria montana</i>	Fuzzy Rattlepod
<i>Cryptocarya sp</i>	Laurel
<i>Cymbopogon refractus</i>	Barbed Wire Grass
<i>Cynodon dactylon</i>	Green Couch
<i>Cyperus polystachyos</i>	Bunchy Sedge
<i>Daviesia umbellulata</i>	Daviesia
<i>Daviesia villifera</i>	Daviesia
<i>Desmodium intortum</i>	Greenleaf Desmodium
<i>Desmodium uncinatum</i>	Silver-leaf Desmodium
<i>Dianella caerulea</i>	Blue Flax Lily
<i>Dichondra repens</i>	Kidney Weed
<i>Dillwynia retorta</i>	Heathy Parrot Pea
<i>Dillwynia sp.</i>	Parrot Pea
<i>Dodonaea viscosa</i>	Hop Bush
<i>Drynaria rigidula</i>	Basket Fern
<i>Epacris longiflora</i>	Fuchsia Heath
<i>Eragrostis bronwii</i>	Brown's Love Grass
<i>Eragrostis curvula</i>	African Lovegrass
<i>Eragrostis curvula</i>	African Lovegrass
<i>Eremophila debilis</i>	Winter Apple
<i>Eucalyptus acmenoides</i>	White Mahogany

Species	Common Name
<i>Eucalyptus carnea</i>	Broad-leaved White Mahogany
<i>Eucalyptus cloeziana</i>	Gympie Messmate
<i>Eucalyptus crebra</i>	Narrow-leaved Ironbark
<i>Eucalyptus fibrosa</i>	Broad-leaved Red Ironbark
<i>Eucalyptus grandis</i>	Flooded Gum
<i>Eucalyptus major</i>	Grey Gum
<i>Eucalyptus microcorys</i>	Tallowwood
<i>Eucalyptus pilularis</i>	Blackbutt
<i>Eucalyptus saligna</i>	Sydney Blue Gum
<i>Eucalyptus seeana</i>	Narrow-leaved Red Gum
<i>Eucalyptus siderophloia</i>	Grey Ironbark
<i>Eucalyptus tereticornis</i>	Forest Red Gum
<i>Eustrephus latifolius</i>	Wombat Berry
<i>Ficus coronata</i>	Sandpaper Fig
<i>Ficus rubignosa</i>	Rock Fig
<i>Gahnia aspera</i>	Saw Sedge
<i>Glossocardia bidens</i>	Native Cobbler's Pegs
<i>Glycine microphylla</i>	Small-leaf Glycine
<i>Gomphocarpus physocarpus</i>	Balloon Cotton Bush
<i>Goodenia rotundifolia</i>	Star Goodenia
<i>Grewia latifolia</i>	Dog's Balls
<i>Hardenbergia violacea</i>	Native Sarsparilla
<i>Heliotropium amplexicaule</i>	Blue Heliotrope
<i>Heteropogon contortus</i>	Black Speargrass
<i>Hibbertia vestita</i>	Hairy Guinea Flower
<i>Hybanthus stellarioides</i>	Spade Flower
<i>Imperata cylindrica</i>	Blady Grass
<i>Ipomoea plebeia</i>	Bell Vine
<i>Jacksonia scoparia</i>	Dogwood
<i>Juncus usitatus</i>	Common Juncus
<i>Koelreuteria elegans</i>	Golden Rain Tree
<i>Lantana camara</i>	Lantana

Species	Common Name
<i>Lantana montevidensis</i>	Creeping Lantana
<i>Lepidosperma laterale</i>	Variable Swordsegde
<i>Lobelia inflata</i>	Indian Tobacco
<i>Lobelia purpurascens</i>	White Root
<i>Lomandra longifolia</i>	Mat Rush
<i>Lomandra multiflora</i>	Many Flowered Mat Rush
<i>Lophostemon confertus</i>	Brush Box
<i>Lophostemon suaveolens</i>	Swamp Box
<i>Lotus corniculatus</i>	Bird's-foot Trefoil
<i>Macroptilium lathyroides</i>	Phasey Bean
<i>Megathyrsus maximus</i>	Guinea Grass
<i>Melaleuca viminalis</i>	Weeping Bottlebrush
<i>Melichrus procumbens</i>	Jam Tarts
<i>Melinis repens</i>	Red Natal Grass
<i>Neonotonia wightii</i>	Green Glycine
<i>Nephrolepis cordifolia</i>	Fishbone Fern
<i>Nephrolepis exaltata</i>	Fishbone Fern
<i>Ochna serrulata</i>	Ochna
<i>Oplismenus aemulus</i>	Creeping Beard Grass
<i>Opuntia stricta</i>	Prickly Pear
<i>Opuntia tomentosa</i>	Velvet Tree Pear
<i>Ottochloa gracillima</i>	Graceful Grass
<i>Oxalis corniculata</i>	Creeping Oxalis
<i>Oxalis stricta</i>	Yellow Woodsorrel
<i>Panicum decompositum</i>	Native Millet
<i>Parsonsia straminea</i>	Monkey Rope
<i>Paspalum mandiocanum</i>	Broad-leaved Paspalum
<i>Passiflora suberosa</i>	Corky Passion Vine
<i>Pennisetum pureum</i>	Elephant Grass
<i>Persoonia cornifolia</i>	Geebung
<i>Petalostigma pubescens</i>	Quinine Bush
<i>Phragmites australis</i>	Common Reed

Species	Common Name
<i>Phyllanthus virgatus</i>	Creeping Phyllanthus
<i>Pimelea linifolia</i>	Rice Flower
<i>Plectranthus parviflorus</i>	Common Plectranthus
<i>Poa labillardieri</i>	Tussock Grass
<i>Polystichum proliferum</i>	Mother Shield Fern
<i>Pomax umbellata</i>	Pomax
<i>Prunus spinosa</i>	Black Thorn
<i>Pteridium esculentum</i>	Bracken
<i>Pultenaea euchila</i>	Orange Pultenaea
<i>Pultenaea flexilis</i>	Graceful Bush Pea
<i>Pultenaea villosa</i>	Hair Pea Bush
<i>Rubus parvifolius</i>	Pink Flowered Native Raspberry
<i>Schinus terebinthifolius</i>	Broadleaf Pepper Tree
<i>Senecio madagascariensis</i>	Fireweed
<i>Setaria sphacelata</i>	South African Pigeon Grass
<i>Sida acuta</i>	Common Wireweed
<i>Sida cordifolia</i>	Flannel Weed
<i>Sida rhombifolia</i>	Arrowleaf Sida
<i>Smilax australis</i>	Barbed Wire Vine
<i>Solanum aviculare</i>	Kangaroo Apple
<i>Solanum nigrum</i>	Blackberry Nightshade
<i>Sporobolus africanus</i>	Paramatta Grass
<i>Sporobolus caroli</i>	Fairy Grass
<i>Sporobolus pyramidalis</i>	Giant Rat's Tail Grass
<i>Stephania japonica</i>	Tape Vine
<i>Synedrella nodiflora</i>	Cinderella Weed
<i>Tagetes minuta</i>	Southern Cone Marigold
<i>Tephrosia glomeruliflora</i>	Pink Tephrosia
<i>Themeda triandra</i>	Kangaroo Grass
<i>Tipuana tipu</i>	Tipuana
<i>Tradescantia spathacea</i>	Sitaria
<i>Trema tomentosa</i>	Poison Peach

Species	Common Name
<i>Urochloa decumbens</i>	Signal Grass
<i>Wahlenbergia graniticola</i>	Bluebell
<i>Wahlenbergia stricta</i>	Australian Bluebell
<i>Westringia fruticosa</i>	Coastal Rosemary
<i>Xanthorrhoea johnsonii</i>	Forest Grass Tree
<i>Xanthorrhoea johnsonii</i>	Grass Tree

Woogaroo Heights

Environmental Pre-Start Checklist

Attachment 5

Coleus habrophyllus survey and sign-off by Environmental Coordinator

Our ref: 7927

15 September 2022

Attention: Ian Murray
Lendlease Communities (Australia) Limited
Via email: Ian.Murray@lendlease.com

Dear Ian

RE: WOOGAROO HEIGHTS: COLEUS HABROPHYLLUS PRE-CLEARANCE SURVEY

This letter provides confirmation that the Environmental Management Division of **Saunders Havill Group** was engaged by **Lendlease Communities** to undertake a pre-clearance survey for *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) threatened flora species *Coleus habrophyllus* within the proposed clearing extent for Woogaroo Heights.

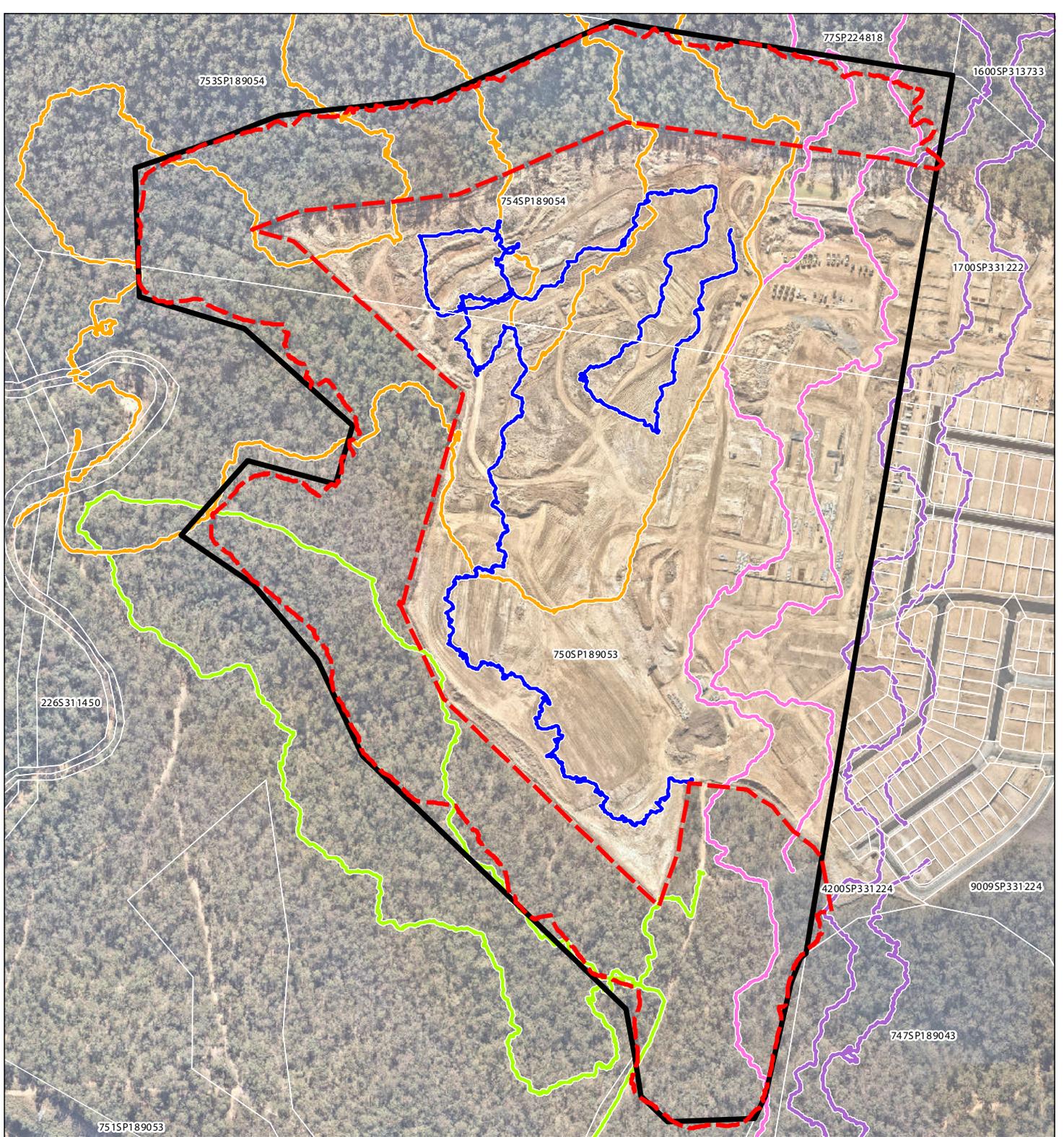
It is noted that *Coleus habrophyllus* populations were historically recorded in the adjacent Springfield Rise by Yurrah. A flora survey conducted by SHG in 2021 did not detect any *Coleus habrophyllus* specimens within the works extent or within 100 m of the clearing extent area. A protected plants clearing exemption was issued by DES (Ref: APP0075497). A contemporary survey of the Woogaroo Heights clearing area in the form of a meander survey was undertaken on 27 January and 13 July 2022 which further confirms no *C. habrophyllus* specimens are present (refer **Attachment 1**).

Yours sincerely

A handwritten signature in black ink, appearing to read 'Murray Saunders', written over a horizontal line.

Murray Saunders
Director - Saunders Havill Group

Attachment 1 –Contemporary *Coleus habrophyllus* meander survey (2021-2022)



Legend

- Woogaroo Heights
- Qld DCDB
- Vegetation Clearing Area

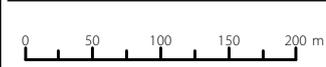
Plectranthus Meander Surveys

- C. habrophyllus meander survey 1 (April/May 2021)
- C. habrophyllus meander survey 2 (April/May 2021)
- C. habrophyllus meander survey 4 (April/May 2021)
- C. habrophyllus meander survey 5 (April/May 2021)
- C. habrophyllus meander survey (January 2022)

Plan 2

Woogaroo Heights
Coleus Habrophyllus Meander

File ref. 7927 VAR3 02 Plectranthus A
Date 16/09/2022
Project Springfield Rise Village 18 - Op-works



Scale (A4): 1:5,600 [GDA 1994 MGA Z56]



THESE PLANS HAVE BEEN PREPARED FOR THE EXCLUSIVE USE OF THE CLIENT SAUNDERS HAVILL GROUP CANNOT ACCEPT RESPONSIBILITY FOR ANY USE OF OR RELIANCE UPON THE CONTENTS OF THESE DRAWINGS BY ANY THIRD PARTY.

Woogaroo Heights

Environmental Pre-Start Checklist

Attachment 6

Pre-clearance survey and Wildlife Protection & Management Plan (WPMP) prepared by
Fauna Spotter Catcher



October
2022

Fauna Spotter Catcher Pre-clearance Survey and Wildlife Protection & Management Plan

Springfield Rise – Village 18
Springfield, Queensland
Report prepared for Shadforth Civil Pty Ltd



Report prepared by
QLD Fauna Consultancy Pty Ltd
Phone: (07) 3376 9780
Email: fauna@qfc.com.au

Date:	05/10/2022
Title:	Fauna Spotter Catcher Pre-clearance and Habitat Values Survey Springfield Rise - Village 18, Springfield, Queensland
Author/s:	Bryan Robinson, Jasmine Zeleny
Reviewed by:	Bryan Robinson
Field personnel:	Holly Morecroft
Status:	Final Report
Filed as:	QFC FHA WPMP Shadforth Springfield Rise Oct 2022.doc

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1. Introduction

1.1 Project Background

Queensland Fauna Consultancy Pty Ltd has been engaged by Shadforth Civil Pty Ltd to conduct a Fauna Spotter Catcher Pre-clearance and Habitat Values Survey and present a subsequent report for Village 18 of the Springfield Rise Estate at Springfield, Queensland. The site location is presented in Map 1.

The objective of this report is to summarise the existing fauna values present and assign mitigatory strategies applicable to probable species likely to be encountered during the clearing of identified habitats throughout or within specific localities of the site. Fauna species both common and of elevated conservation value have been considered within the parameters of onsite investigations and, where provided to QFC, include review of current fauna and floristic reports that may influence the assemblages expected to utilise the micro habitats evident within the site.

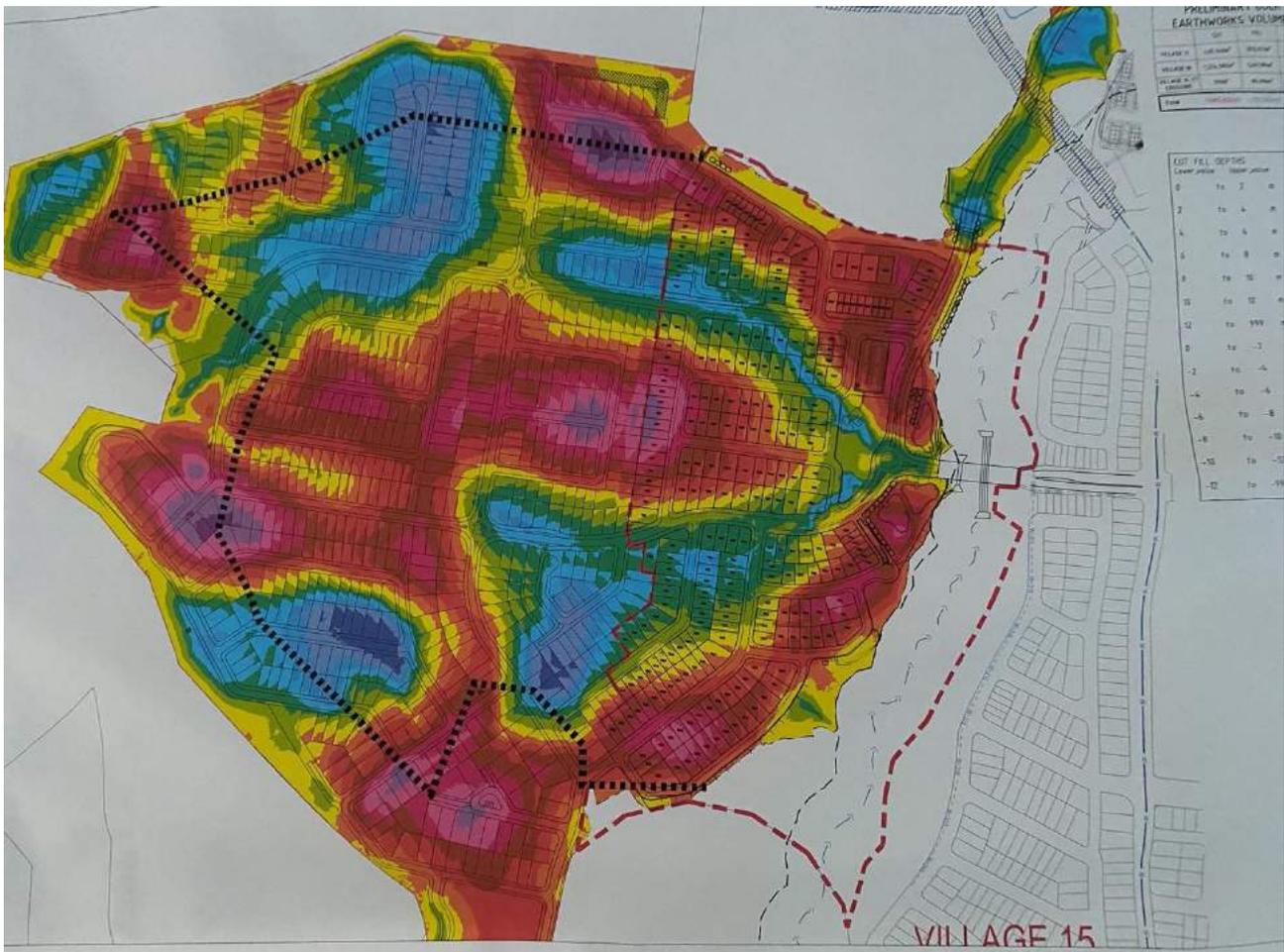
This review encompasses species identified under the provisions of the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* and the Queensland *Nature Conservation Act 1992*. Further consideration is given, where applicable, to species of iconic, cultural and/or regional significance identified under commonwealth, state or local planning instruments aimed at the persistence of biodiversity values within the area.

1.2 Project Location and Site Description

Springfield Rise is located at the end of London Avenue, Springfield, west of the Spring Mountain State School and south-west of Sinnathamby Boulevard.

Existing features exhibit a remnant woodland vegetative complex on undulating topography with gullies, creeks, and rock outcrops. Dominant trees species include *Acacia* species, *Eucalyptus tereticornis*, *E. siderophloia*, *E. crebra*, *E. acmenoides*, *Corymbia citriodora*, *C. intermedia*, *Angophora leiocarpa*, *Lophostemon confertus* and *L. suaveolens*. Understorey vegetation consists of grass, scattered shrubs, *Lomandra* species, and dense leaf litter.

Map 1: Project Location (clearing area outside of black dotted line)



(Village 18 Boundary Extents provided by Shadforth Civil, 2022)

1.3 Current Permits and Authorities

All activities conducted during the site investigations were implemented under the provisions of a number of permits issued to Queensland Fauna Consultancy Pty Ltd by the Department of Environment and Science (DES), formerly the Department of Environment and Heritage Protection (DEHP), and the Department of Employment, Economic Development and Innovation (DEEDI). These permits and additional authorities are listed in Table 1.

Table 1: Current Permits and authorities issued to QFC

Permit/Authorisation	Permit Number	Expiry Date
Damage Mitigation Permit	WA0018804	10 th November 2022
Rehabilitation Permit	WA0026789	16 th September 2023
Scientific Purposes Permit	WA0032325	3 rd March 2026
Scientific User Registration	Registration Number 589	27 th February 2025
Animal Ethics	CA 2022/01/1569	27 th February 2025
General Fisheries Permit	207015	16 th April 2023

These permits and approvals enable QFC to conduct the investigation, observation and relocation of protected animals exposed to disturbance due to infrastructure expansion resulting in the destruction of natural and artificial habitats.

2. Methodology

A site inspection was carried out on 18th July 2022 by Qld Fauna Consultancy. A standard set of observational techniques aimed at maximising the detection of fauna and the probable habitats they may occupy were employed to ascertain and identify the current fauna values throughout the project area. Where species of elevated conservation significance were foreseen as potentially present targeted searches were instigated to further evaluate individual species habitat.

Due to the habitat variability expressed across the development site the composition of investigations may include a range of features that entail specific components indicative of the presence of particular species or faunal groups. This may include where evident, observation of activity or signs of both historical and current use.

These may include but are not limited to the following:

- Identification of terrestrial microhabitats such as ground hollows, rock, burrows, leaf litter, stands of heavy vegetation, fallen branches and bark exfoliations;
- Identification of arboreal micro habitats including basal, trunk and limb hollows, tree fissures, bark exfoliates and arboreal termitaria;
- Identification of constructed arboreal micro habitats including bird nests and Ringtail Possum dreys;
- Artificial habitats including, but not limited to ornamental gardens, discarded rubbish, human dwellings and other infrastructure;
- Observation and investigation of aquatic habitats including dams, soaks, creeks, rivers and seasonally inundated vegetation communities. Artificial aquatic habitats may include constructed drains and culverts. Further components of interest include bank profiles and undercuts, submerged and/or exposed timber and rock, immediate aquatic and riparian vegetation, surfacing animals, nesting and/or feeding birds;
- Direct observation of active or exposed fauna within terrestrial, aquatic and arboreal habitats;
- Identification of scats, tracks and scratchings to determine fauna potentially present or to have historically utilised the site for either transient or longer-term life history purposes.

2.1 Specific methodology for Koalas *Phascolarctos cinereus*

Due to specific requirements and the cryptic nature of the Koala the following techniques were employed to assist in ascertaining the current and historical presence/absence status of the species at the site:

- Use of binoculars to inspect the crown, forks and trunk of trees for individuals currently occupying the site;
- '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.

3. Findings

The findings endeavor to demarcate the existing habitat profiles and the features present into three distinct groups: terrestrial, arboreal and aquatic. All habitat features present onsite are noted, however it is probable additional features will be present with these being accounted for during the Fauna Spotter Catcher process to be applied to all vegetation clearing across the site.

3.1 Terrestrial Habitat Features

The terrestrial fauna values of the site consist of different components and microhabitat features. This included an open low-level understorey consisting of grass, scattered shrubs, and *Lomandra* species (Figure 1 and Figure 2), with sections exhibiting dense cover provided by weed species such as Lantana *Lantana camara* (Figure 3 and Figure 4) and Blue Billygoat Weed *Ageratum houstonianum* (Figure 5). Dense leaf litter and basal bark exfoliations (Figure 6 and Figure 7) also feature on site, being present in abundance and at variable depths, providing refugial opportunities and microhabitat connectivity that can be exploited by many different native terrestrial vertebrate and invertebrate species.

The site is also exhibitive of scattered woody debris, timber stockpiles, hollow logs and stumps, scattered surface rock and small areas of rocky outcrops (Figure 8 to Figure 22), providing refugial and foraging opportunities, and a contributory factor to the provision of a variety of thermal and moisture gradients that can be exploited by a number of different native terrestrial vertebrate and invertebrate species.

Terrestrial termite mounds feature heavily onsite (Figure 23 and Figure 24), with numerous mounds displaying excavations typical of the Short-beaked Echidna *Tachyglossus aculeatus* (Figure 25 to Figure 27).

A single small burrow was also identified during the inspection; however, it did not appear to be occupied at the time of the inspection (Figure 28). Further inspections are recommended immediately prior to clearing commencement.

Mammal assemblages may comprise both native and introduced species. Macropod presence was indicated by scat observed across the site (Figure 29 and Figure 30). Macropod species likely to occur on site include the Eastern Grey Kangaroo *Macropus giganteus*, Red-necked Wallaby *Notamacropus rufogriseus* and Swamp Wallaby *Wallabia bicolor*. Northern Brown Bandicoot *Isodon macrourus* activity was also observed across the site in the form of characteristic diggings (Figure 31 and Figure 32).

These features collectively contribute to the potential presence of a variety of native fauna species utilising the area for refugial, foraging and other resources.

GPS coordinates for all indicative terrestrial habitat features are shown in Table 2. Localities for identified terrestrial habitat features are presented in Map 2. A comprehensive list of fauna species recorded in the region can be viewed in Appendix C.

Table 2: Localities for identified terrestrial habitat features

Number	Habitat Feature	GPS Coordinates	
		Latitude	Longitude
1	Burrow	-27.68473486	152.8779223
2	Hollow Log	-27.6898692	152.8825829
3	Hollow Log	-27.68409816	152.878034
4	Hollow Log	-27.68403593	152.878218
5	Hollow Log	-27.68351197	152.8790611
6	Hollow Stump	-27.68829592	152.883565
7	Hollow Stump	-27.68346624	152.879034
8	Hollow Stump	-27.68019896	152.8834713
9	Hollow Stump	-27.68040466	152.8838798
10	Rock Pile	-27.68957454	152.8830984
11	Rock Pile	-27.68917109	152.8819683
12	Rock Pile	-27.68801035	152.8809038
13	Rock Pile	-27.68239149	152.8774602
14	Rock Pile	-27.68068275	152.8788921
15	Terrestrial Termitaria	-27.6889769	152.8833173
16	Terrestrial Termitaria	-27.68927383	152.8832345
17	Terrestrial Termitaria	-27.68945137	152.8832366
18	Terrestrial Termitaria	-27.68979707	152.8824374
19	Terrestrial Termitaria	-27.68975459	152.8825131
20	Terrestrial Termitaria	-27.6900496	152.8824894
21	Terrestrial Termitaria	-27.68983459	152.8823384
22	Terrestrial Termitaria	-27.68840027	152.8814851
23	Terrestrial Termitaria	-27.68658643	152.8793989
24	Terrestrial Termitaria	-27.68026606	152.8831382
25	Terrestrial Termitaria	-27.68032837	152.8841872
26	Terrestrial Termitaria	-27.68056451	152.8848443

27	Timber Stockpile	-27.68538895	152.8785575
28	Timber Stockpile	-27.68334052	152.8790016
29	Woody Debris	-27.68886491	152.8819234
30	Woody Debris	-27.68228664	152.8772264
31	Woody Debris	-27.68229851	152.8769875
32	Woody Debris	-27.68005371	152.883072



Figure 1: Dense grass



Figure 2: *Lomandra sp.*



Figure 3: Lantana *Lantana camara*



Figure 4: Lantana *Lantana camara*



Figure 5: Blue Billygoat Weed *Ageratum houstonianum*



Figure 6: Dense leaf litter



Figure 7: Bark exfoliations



Figure 8: Woody debris



Figure 9: Woody debris



Figure 10: Woody debris



Figure 11: Timber stockpile



Figure 12: Timber stockpile



Figure 13: Hollow log



Figure 14: Hollow log



Figure 15: Hollow log



Figure 16: Hollow stump



Figure 17: Hollow stump



Figure 18: Hollow stump



Figure 19: Scattered surface rock



Figure 20: Scattered surface rock



Figure 21: Scattered surface rock



Figure 22: Rocky outcrop



Figure 23: Terrestrial termitaria



Figure 24: Terrestrial termitaria



Figure 25: Terrestrial termitaria with excavation

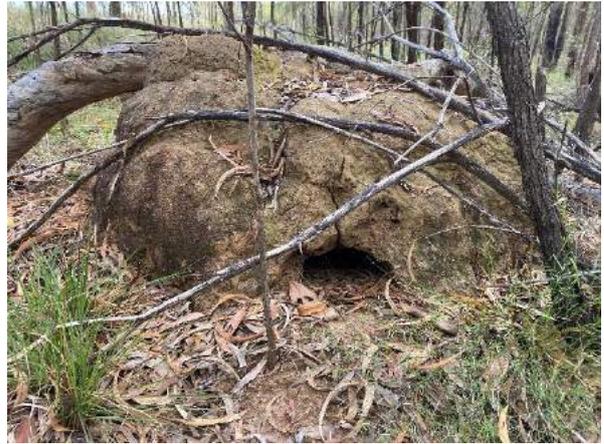


Figure 26: Terrestrial termitaria with excavation



Figure 27: Terrestrial termitaria with excavation



Figure 28: Burrow



Figure 29: Macropod scat



Figure 30: Macropod scat



Figure 31: Bandicoot digging



Figure 32: Bandicoot digging

Map 2: Localities for identified terrestrial habitat features

Identified Terrestrial Habitat Features

Springfield Rise V18

27°40'39"S 152°52'30"E

27°40'39"S 152°53'3"E



27°41'33"S 152°52'30"E

27°41'33"S 152°53'3"E

A product of
Queensland Globe



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Scale: 1:9569

Printed at: A4
Print date: 5/10/2022

Projection: Web Mercator EPSG 102100 (3857)

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Identified Terrestrial Habitat Features

Springfield Rise V18

Legend

POINT-Burrow.csv



POINT-Hollow Log.csv



POINT-Hollow Stump.csv



POINT-Rock Pile.csv



POINT-Terrestrial
Termitaria.csv



POINT-Timber Stockpile.csv



POINT-Woody Debris.csv



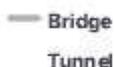
Cities and Towns



Railway



Road Crossing



Road



Attribution

Maxar

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3.2 Arboreal Habitat Features

The majority of the clearance area consists predominately of Eucalypt and Acacia woodland (Figure 33 to Figure 38) consisting of trees of varying height, species and density suitable for feeding and nesting resources. The intermittent contiguous canopy structure within the vegetation represented may be facilitative of arboreal progression for species such as Common Brushtail Possum *Trichosurus vulpecula*, Common Ringtail Possum *Pseudocheirus peregrinus*, and Squirrel Glider *Petaurus norfolcensis* (Figure 39).

Hollow-bearing trees, stag trees, and fissures (Figure 40 to Figure 46) identified within the clearance area may provide refugial resources for small mammal, reptile, and parrot species. A number of trees exhibited exfoliating bark, which may provide refugial opportunities for reptile species including skinks and geckos (Figure 47 and Figure 48).

Arboreal termite mounds of varying size and condition are present across the clearance site in high numbers (Figure 49 and Figure 50), with two mounds exhibiting excavations (Figure 51). A number of suitable mounds were located within the clearance area that have potential for use as egg deposition and incubation sites by species such as the Lace Monitor *Varanus varius*, Laughing Kookaburra *Dacelo novaeguineae*, and Sacred Kingfisher *Todiramphus sanctus*. Common Brushtail Possums have been known to also utilise these features for shelter where hollows are not readily available.

An active Paper Wasp *Ropalidia romandi* nest also identified during the inspection and will require mitigation during clearing activities (Figure 52).

One avian stick nest was located, however did not appear in use at the time of the survey (Figure 53). Further inspections are recommended immediately prior to clearing commencement. A number of avian species were observed utilising the site at the time of the inspection (foraging or perching) these species are presented in Table 4.

No possum dreys were identified in the clearing footprint, however the dense vegetation structure in some areas may have concealed visibility and further inspections are recommended immediately prior to clearing commencement. Possum activity within the clearing area was indicated in the form of scat and scratchings on several tree trunks (Figure 54 and Figure 55).

GPS coordinates for all indicative arboreal habitat features are shown in Table 3. Localities for identified arboreal habitat features are presented in Map 3.

Primary and secondary Koala food trees located in the clearance area and *Eucalyptus tereticornis*, *E. siderophloia*, *E. propinqua*, *E. crebra*, *E. acmenoides*, *E. carnea*, *E. moluccana*, *Corymbia citriodora*, *C. intermedia*, *C. tessellaris*, *Angophora leiocarpa*, *Lophostemon confertus* and *L. suaveolens*. No evidence of recent koala use was identified during the inspection. No scat was found during 'drip zone' searches, and characteristic scratchings were not identified during trunk investigations. A Koala habitat values map for the clearance area is presented in Appendix A.

Table 3: Localities for identified arboreal habitat features

Number	Habitat Feature	GPS Coordinates	
		Latitude	Longitude
1	Arboreal Termitaria	-27.6898814	152.8821613
2	Arboreal Termitaria	-27.68973486	152.8819604
3	Arboreal Termitaria	-27.68798449	152.8806946
4	Arboreal Termitaria	-27.68743526	152.8803695
5	Arboreal Termitaria	-27.68691086	152.8796016
6	Arboreal Termitaria	-27.68681649	152.8796031
7	Arboreal Termitaria	-27.68618779	152.8789183
8	Arboreal Termitaria	-27.68479686	152.8777587
9	Arboreal Termitaria	-27.68417397	152.8781948
10	Arboreal Termitaria	-27.68342358	152.8790362
11	Arboreal Termitaria	-27.68297171	152.878531
12	Arboreal Termitaria	-27.68298559	152.8784339
13	Arboreal Termitaria	-27.68275427	152.8782695
14	Arboreal Termitaria	-27.68247661	152.8779549
15	Arboreal Termitaria	-27.68118818	152.8775043
16	Arboreal Termitaria	-27.68080276	152.8785487
17	Arboreal Termitaria	-27.6806687	152.8793146
18	Arboreal Termitaria	-27.6807251	152.8795188
19	Arboreal Termitaria	-27.68055359	152.8798415
20	Arboreal Termitaria	-27.68074974	152.8799937
21	Arboreal Termitaria	-27.68049222	152.880403
22	Arboreal Termitaria	-27.68004927	152.8820513
23	Arboreal Termitaria	-27.68023972	152.8836545
24	Arboreal Termitaria	-27.68821546	152.8837289
25	Arboreal Termitaria	-27.68841803	152.8836143
26	Arboreal Termitaria	-27.68972778	152.8822336

27	Arboreal Termitaria (with excavation)	-27.68105045	152.8777421
28	Arboreal Termitaria (with excavation)	-27.68059882	152.879548
29	Bird Nest	-27.68603056	152.8789121
30	Dead Stag	-27.68841406	152.8835371
31	Dead Stag	-27.68879505	152.8833658
32	Dead Stag	-27.68885439	152.8833881
33	Dead Stag	-27.68915836	152.8832071
34	Dead Stag	-27.68917423	152.8832764
35	Dead Stag	-27.6893093	152.8833068
36	Dead Stag	-27.68940726	152.8832954
37	Dead Stag	-27.68956373	152.8831817
38	Dead Stag	-27.68964696	152.8831035
39	Dead Stag	-27.69006209	152.8828422
40	Dead Stag	-27.68969414	152.8823721
41	Dead Stag	-27.68982591	152.8820363
42	Dead Stag	-27.6885376	152.8814845
43	Dead Stag	-27.68783707	152.8807661
44	Dead Stag	-27.68777091	152.8806352
45	Dead Stag	-27.68717791	152.8800836
46	Dead Stag	-27.68424289	152.878465
47	Dead Stag	-27.68353085	152.8791458
48	Dead Stag	-27.68291974	152.8785944
49	Dead Stag	-27.68231417	152.8768784
50	Dead Stag	-27.68140491	152.8769816
51	Dead Stag	-27.68125199	152.8772858
52	Dead Stag	-27.6810395	152.8777357
53	Dead Stag	-27.68058106	152.8798423
54	Dead Stag	-27.6801393	152.8811368
55	Dead Stag	-27.68050763	152.8814912

56	Dead Stag	-27.67987841	152.8817412
57	Dead Stag	-27.68005195	152.8819389
58	Dead Stag	-27.67997048	152.8821151
59	Dead Stag	-27.68006271	152.882244
60	Dead Stag	-27.68011475	152.8824824
61	Dead Stag	-27.68018143	152.8830146
62	Exfoliating Bark (Arboreal)	-27.68860813	152.8834502
63	Exfoliating Bark (Arboreal)	-27.68704261	152.8798324
64	Exfoliating Bark (Arboreal)	-27.68299866	152.878604
65	Exfoliating Bark (Arboreal)	-27.68280029	152.8784028
66	Fissure	-27.68852903	152.8816101
67	Fissure	-27.68567439	152.8787334
68	Fissure	-27.68487549	152.8781466
69	Fissure	-27.68365479	152.8790395
70	Fissure	-27.68346623	152.8791032
71	Fissure	-27.68028567	152.8809595
72	Fissure	-27.68019656	152.8834848
73	Hollow Bearing Tree	-27.68825232	152.8837407
74	Hollow Bearing Tree	-27.68889131	152.8833042
75	Hollow Bearing Tree	-27.68974465	152.8829391
76	Hollow Bearing Tree	-27.68799107	152.8809505
77	Hollow Bearing Tree	-27.68493303	152.8781833
78	Hollow Bearing Tree	-27.68252326	152.8779901
79	Hollow Bearing Tree	-27.68011612	152.8813426
80	Hollow Bearing Tree	-27.6800787	152.8823809
81	Hollow Bearing Tree	-27.68030147	152.8838875
82	Hollow Bearing Tree	-27.68039295	152.8842776
83	Paper Wasp Nest	-27.6839562	152.8790092



Figure 33: Site overview



Figure 34: Site overview



Figure 35: Site overview



Figure 36: Site overview



Figure 37: Site overview



Figure 38: Site overview



Figure 39: Intermittently contiguous canopy structure



Figure 40: Hollow-bearing tree



Figure 41: Hollow-bearing tree



Figure 42: Hollow-bearing tree



Figure 43: Stag tree



Figure 44: Stag tree



Figure 45: Stag tree



Figure 46: Fissure



Figure 47: Exfoliating bark



Figure 48: Exfoliating bark



Figure 49: Arboreal termitaria



Figure 50: Arboreal termitaria



Figure 51: Arboreal termitaria with excavation



Figure 52: Active Paper Wasp *Ropalidia romandi* nest



Figure 53: Bird nest



Figure 54: Possum scat



Figure 55: Possum scratchings

Table 4: Arboreal Fauna Species Observed

Number	Common Name and <i>Scientific Name</i>
1	Magpie-lark <i>Grallina cyanoleuca</i>
2	Laughing Kookaburra <i>Dacelo novaeguineae</i>
3	Blue-faced Honeyeater <i>Entomyzon cyanotis</i>
4	Pale-headed Rosella <i>Platycercus adscitus</i>
5	Torresian Crow <i>Corvus orru</i>
6	Australian Magpie <i>Cracticus tibicen</i>
7	Black-faced Cuckooshrike <i>Coracina novaehollandiae</i>

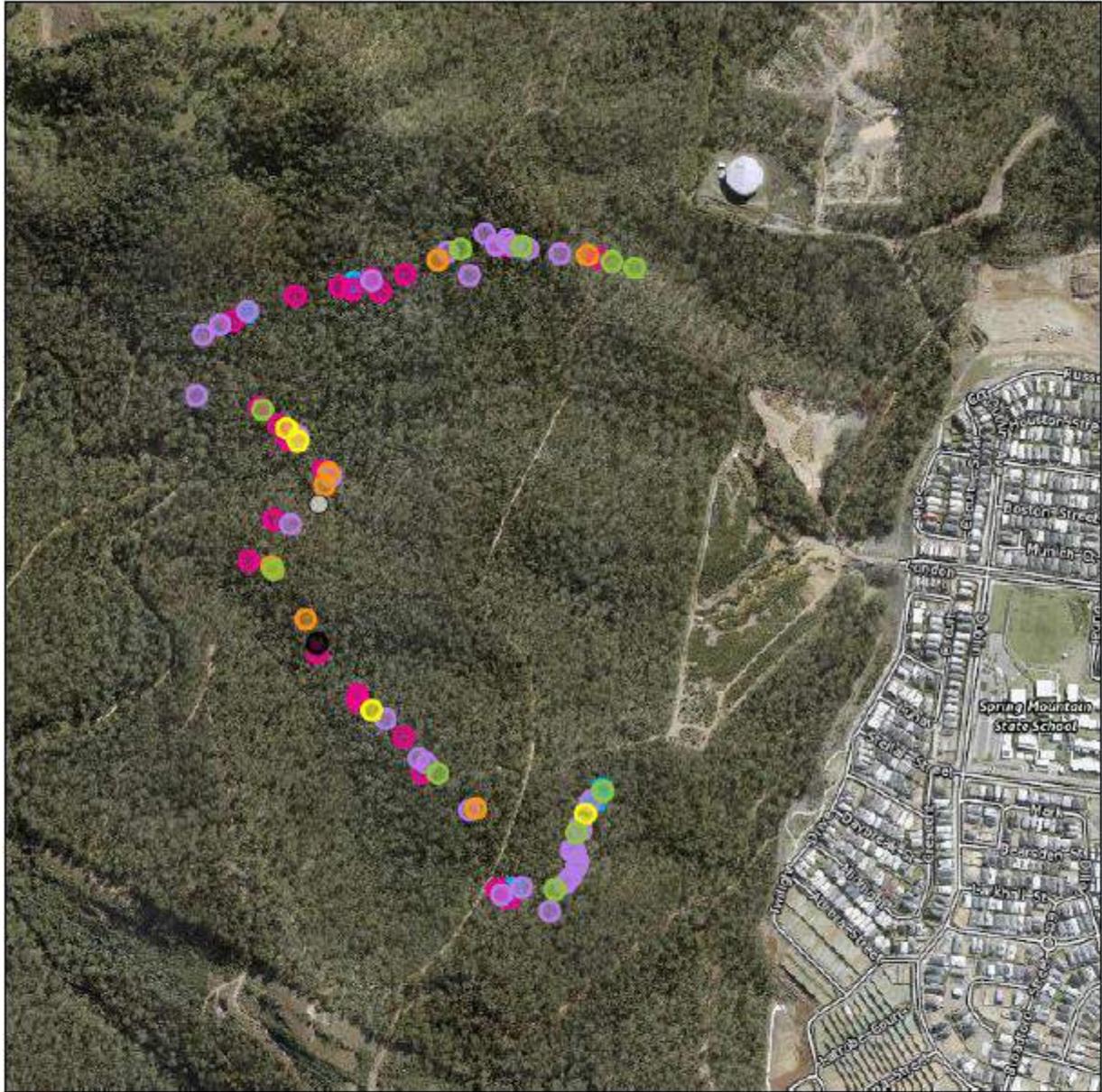
Map 3: Localities for identified arboreal habitat features

Identified Arboreal Habitat Features

Springfield Rise V18

27°40'35"S 152°52'25"E

27°40'35"S 152°53'32"E



27°41'34" S 152°52'25"E

27°41'34" S 152°53'32"E

A product of
Queensland Globe

Legend located on next page:



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Identified Arboreal Habitat Features

Springfield Rise V18

Legend

POINT-Aboreal Termitaria
(with excavation).csv



POINT-Aboreal Termitaria.csv



POINT-Bird Nest.csv



POINT-Dead Stag.csv



POINT-Exfoliating Bark
(Arboreal).csv



POINT-Fissure.csv



POINT-Hollow Bearing
Tree.csv



POINT-Paper Wasp Nest.csv



Railway



Cities and Towns



Road crossing

— Bridge

— Tunnel

Road

— Highway

— Main

— Local

— Private

Attribution

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3.3 Aquatic Habitat Features

Two creeks and a gully are present within the clearance area (Figure 56). These features were retaining varying levels of water at the time of the inspection. Native species may exploit the various microhabitats present by such environmental features, particularly during times of rainfall, including the Eastern Water Dragon *Intellagama lesueurii* (sighted during inspection), Rocket Frog *Litoria nasuta*, Striped Marsh Frog *Limnodynastes peronii*, Tusked Frog *Adelotus brevis*, Graceful Treefrog *Litoria gracilentata*, and various mammals and birds as a water resource.

GPS coordinates for all indicative aquatic habitat features are shown in Table 5. Localities for identified aquatic habitat features are presented in Map 4.

Table 5: Localities for identified aquatic habitat features

Number	Habitat Feature	GPS Coordinates	
		Latitude	Longitude
1	Creek	-27.68650192	152.8791855
2	Creek	-27.68070857	152.8784928
3	Gully	-27.68382705	152.8790654

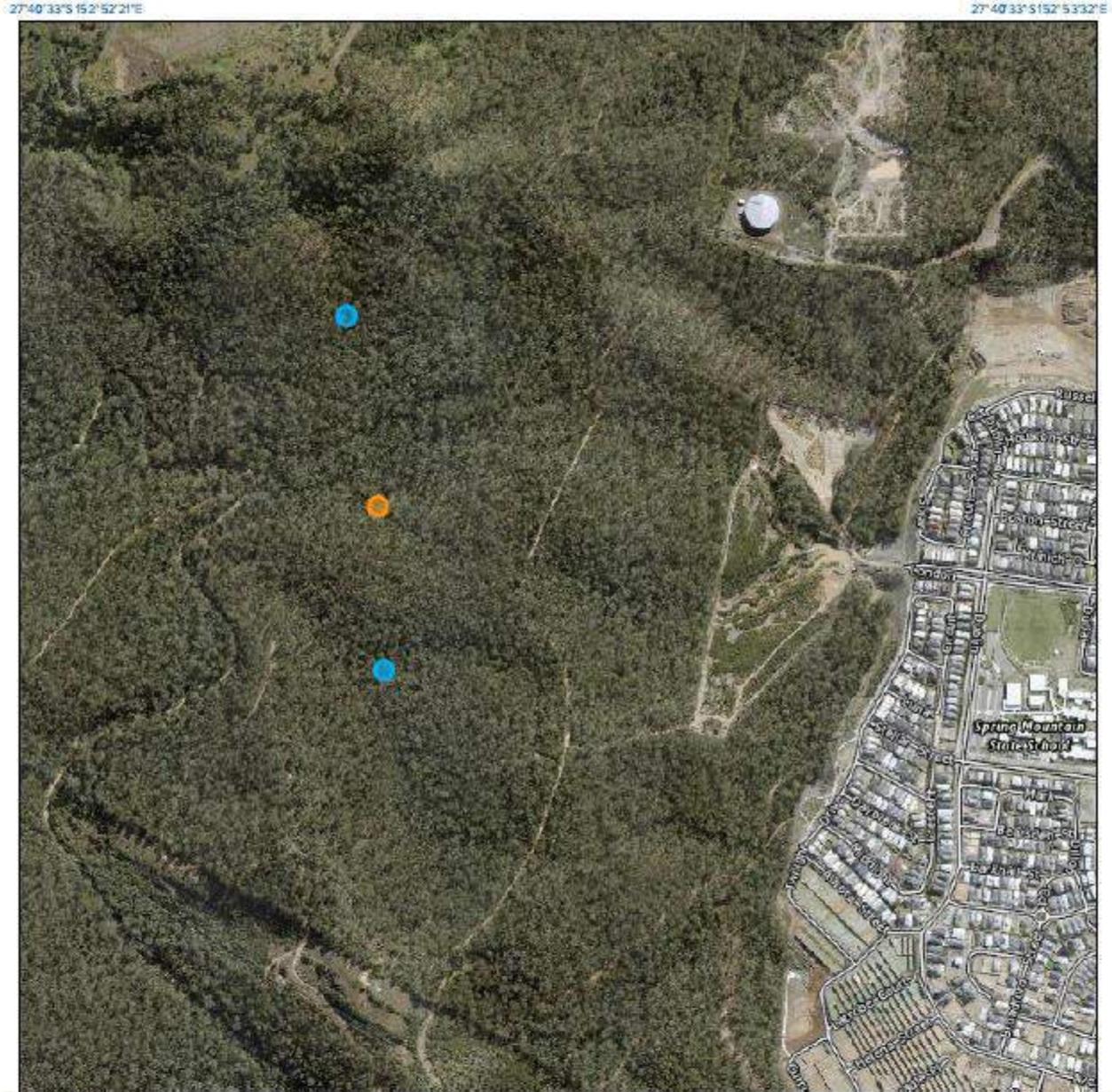


Figure 56: Creek

Map 4: Localities for identified aquatic habitat features

Identified Aquatic Habitat Features

Springfield Rise V18



27°41'36\"/>



Legend located on next page



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Identified Aquatic Habitat Features

Springfield Rise V18

Legend

POINT-Creek.csv



POINT-Gully.csv



Cities and Towns



Railway



Road Crossing

— Bridge

— Tunnel

Road

— Highway

— Main

— Local

— Private

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3.4 Endangered, Vulnerable and Near Threatened (EVNT) & Special Least Concern (SLC) Species

It is not envisaged that any EVNT or SLC fauna species will be detrimentally impacted by the proposed works. However, nine species identified within the Online EPBC Protected Matters Report (Appendix B) and the Queensland Government Wildlife Online Search Tool (Appendix C) were considered likely or possible to occur within the site and will require further mitigation during clearing activities.

Although no evidence of recent koala use was found during the inspection, the species has previously been recorded in the area, including on previous stages of the development. The site is located within a Koala Priority Area and contains habitat identified as Core Koala Habitat under the Koala Habitat in South East Queensland mapping sourced from the Queensland Globe online search tool (see Appendix A).

It is advised that dedicated methodologies be employed by a qualified Fauna Spotter specific to the detection of these species prior to vegetation clearing activities.

Table 4: Significant species deemed likely or possible to occur within the clearance survey area

Common Name Scientific Name	Species Information	Likelihood of Occurrence within the Clearance Survey area
Monotremes		
Short-beaked Echidna <i>Tachyglossus aculeatus</i> EPBC: Not Listed NCA: Special Least Concern	Inhabits a broad range of habitat types across Australia where there is a supply of ants or termites. Echidnas will shelter within hollow logs, under bushes and debris (Van Dyck & Strahan 2008).	Likely Suitable feeding resources occur onsite and evidence of diggings observed onsite.
Mammals		
Koala <i>Phascolarctos cinereus</i> EPBC: Endangered NCA: Endangered	Inhabits a range of open forest and woodland communities which may include any of the following noted food trees: <i>Eucalyptus</i> , <i>Corymbia</i> , <i>Melaleuca</i> , <i>Angophora</i> and <i>Lophostemon</i> .	Possible Known food trees for the transient Koala (<i>Phascolarctos cinereus</i>) occur on the clearance site and the species is well documented within the area (including on previous stages of the project).
Grey-headed Flying-fox <i>Pteropus poliocephalus</i> EPBC: Vulnerable NCA: Least Concern	The Grey-headed Flying-Fox roosts in aggregations of various sizes on exposed branches, commonly of emergent trees. Roost sites are typically located near water, such as lakes, rivers or the coast. Habitat includes open forests, woodlands, urban parks and gardens.	Possible Suitable vegetation communities containing both feeding and roosting resources occur on and adjacent to the clearance site.

<p>Spotted-tail Quoll (SE Mainland Population) <i>Dasyurus maculatus maculatus</i></p> <p>EPBC: Endangered NCA: Vulnerable</p>	<p>Currently known from the Granit Belt and Border Ranges though small numbers may occur from Gympie to the QLD border (Curtis <i>et al.</i> 2012). Inhabits vine-forest, wet and dry sclerophyll forests and woodlands containing boulder piles, fallen logs and hollow trees utilised as shelter sites (Curtis <i>et al.</i> 2012).</p>	<p>Possible Preferred habitat type and habitat features present and the species is documented within the area.</p>
<p>Southern Greater Glider <i>Petauroides volans volans</i></p> <p>EPBC: Vulnerable NCA: Least Concern</p>	<p>Largest of the gliders, the Great Glider is found along eastern Australia within a variety of eucalypt dominated forests and tall open woodlands (Lindenmayer 2002)</p>	<p>Possible Preferred habitat type present and the species is documented within the area.</p>
<p>Birds</p>		
<p>Rufous Fantail <i>Rhipidura rufifrons</i></p> <p>EPBC: Migratory and Marine NCA: Special Least Concern</p>	<p>The Rufous Fantail builds a small compact cup nest, of fine grasses bound with spider webs, that is suspended from a tree fork about 5m from the ground. The bottom of the nest is drawn out into a long stem. Both sexes share nest building, incubation and feeding of the young. One or two broods may be raised in a season (Serventy, 1982). Breeding occurs from about September to February with 81% of eggs laid in November-December (Higgins <i>et al.</i> 2001).</p>	<p>Possible Preferred habitat types present, and the species has been observed in adjacent sites during the inspections.</p>
<p>Rainbow Bee-eater <i>Merops ornatus</i></p> <p>EPBC: Migratory NCA: Special Least Concern</p>	<p>Breeds from August to January (Higgins 1999; Boland 2004). The nest is located in an enlarged chamber at the end of long burrow or tunnel (Comrie-Smith 1930; Morris 1977), in flat or sloping ground, in the banks of rivers, creeks or dams, in roadside cuttings, in the walls of gravel pits or quarries, in mounds of gravel, or in cliff faces (Forshaw and Cooper 1987; Lill 1993; Higgins 1999; Boland 2004).</p>	<p>Possible Habitat conducive to this species is found within the survey area.</p>
<p>Reptiles</p>		
<p>Collared Delma <i>Delma torquata</i></p> <p>EPBC: Vulnerable NCA: Vulnerable</p>	<p>Weathered loose rocks, flattish bedrock outcroppings, logs or mats of leaf litter, or in cracks and crevices among tussock grasses. Lays two eggs around December with hatching in February or March (Curtis <i>et al.</i> 2012)</p>	<p>Possible Preferred habitat type and habitat features present.</p>
<p>Amphibians</p>		
<p>Tusked Frog <i>Adelotus brevis</i></p> <p>EPBC: Not Listed NCA: Vulnerable</p>	<p>Inhabits permanent ponds and streams within rainforests, wet to dry forests and farmland areas (Anstis 2013). Nests are constructed under leaf litter, vegetation or logs at the edge of ponds or stream pools in concealed locations (Anstis 2013).</p>	<p>Possible Habitat conducive to this species is found within the survey area.</p>

4. Fauna Impacts

It is important to consider the existing and future residential developmental areas when investigation potential fauna impacts.

Impacts to fauna, as a result of vegetation clearance, will include the following:

- Loss of trees for foraging, roosting and nesting;
- Loss of hollow-bearing trees for nesting and refuge;
- Loss of habitat and foraging areas for terrestrial species;
- Loss of overall habitat;
- Potential loss of abundance of some local species.

Other impacts may include:

- Injury or death during felling of trees;
- Injury or death from machinery;
- Alteration of nesting, foraging and general activities due to disturbance.

5. Assessment and Conclusion

Overall the site contains high value refugial opportunities for arboreal and terrestrial fauna species (see Section 3.1 and 3.2). The species expected within the site are likely to primarily reflect common fauna assemblages for the region; however, provisions will be proposed directly for common fauna and species of conservation significance.

The connectivity to adjacent conservation land in the south, in conjunction with sequential clearing methodologies, will aid in the movement of medium to large size fauna such as Koala and Kangaroos. Specific methodologies for these species will be detailed within the Wildlife and Habitat Impact Mitigation Plan (WHIMP).

A number of conclusions and recommendations will be presented in the WHIMP, with the specific intention of providing a comprehensive management structure to facilitate minimal impact to fauna during the clearing of vegetation and subsequent disturbance of habitats.

It is advised that all identified fauna habitats onsite be inspected by a DES approved Fauna Spotter prior to vegetation clearing and all vegetation removal activities be supervised during the clearing process. Terrestrial load reduction activities will be conducted ahead of the clearing front where possible. Fauna captured will be relocated to adjacent habitat consistent with the life history requirements of the species requiring translocation. The directives given by Fauna Spotter Catchers should embrace a “best practice” approach which includes implementation of proven specific management techniques for identified habitat types and compliance with legislation relevant to the activity.

It is recommended that in the event any nests which contain chicks are identified during clearing be left until fledged, and those that are in a construction phase should be dismantled to prevent further nesting activity. Any fertile eggs recovered will require incubation and subsequent rearing for latter release.

6. References

Anstis, M (2013) *Tadpoles and Frogs of Australia*, New Holland Publishers, Sydney.

Beruldsen, G. (2003) *Australian Birds their Nests and Eggs*, Kenmore Hills: Self Published.

Curtis, LK, Dennis, AJ, McDonald, KR, Kyne, PM & Debus, SJS (2012), Queensland's Threatened Animals, CSIRO Publishing, Victoria.

Department of Agriculture, Water and the Environment (2021) *EPBC Act Protected Matters Report*, <https://www.environment.gov.au/epbc/protected-matters-search-tool> Date accessed 6th October 2022.

Department of Environment and Science (2021) *Queensland Globe – Koala Plan*. Queensland Government. <https://qldglobe.information.qld.gov.au/#> Date accessed 6th October 2022.

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

Department of Environment and Science (2021) *Plants and Animals – Species Lists*, <https://www.qld.gov.au/environment/plants-animals/species-information/species-list> Date accessed 6th October 2022.

Lindenmayer, D. (2002) *Gliders of Australia – A Natural History*, UNSW Press Ltd, Sydney

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

References for nomenclature

Cogger, H. (2014) *Reptiles & Amphibians of Australia*. 7th edition, Collingwood: CSIRO Publishing.

Leiper, G., Glazebrook, J., Cox, D. and Rathie, K. (2008) *Mangroves to Mountains: A Field Guide to the Native Plants of South-east Queensland*, Browns Plains: Logan River Branch Society for Growing Australian Plants.

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

Morcombe, M. (2003) *Field Guide to Australian Birds*. Archerfield: Steve Parish Publishing

Wilson, S. (2015) *A Field Guide to Reptiles of Queensland*. 2nd edn, Sydney: New Holland Publishers.

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

Simpson, K. and Day, N. (2004) *Field Guide to the Birds of Australia*, Camberwell: Penguin Group Australia.

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

Vanderduys, E. (2012) *Field Guide to the Frogs of Queensland*. Collingwood: CSIRO Publishing.

Wilson, S. (2015) *A Field Guide to Reptiles of Queensland*. 2nd edn, Sydney: New Holland Publishers.

7. Appendix A: Koala Habitat Values



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 Legend

 Attribution

Koala priority area



Core koala habitat area



Identified koala broad-
hectare area



Locally refined koala habitat
area



Road crossing

— Bridge
— Tunnel

Railway



Cities and Towns



Road

— Highway
— Main
— Local
— Private

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8. Appendix B: EPBC Act Protected Matters Report



Australian Government
Department of Agriculture,
Water and the Environment

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. Please see the caveat for interpretation of information provided here.

Report created: 06-Oct-2022

[Summary](#)

[Details](#)

[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)

Summary

Matters of National Environment 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 (Ramsar)	1
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	6
Listed Threatened Species:	46
Listed Migratory Species:	17

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

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 Lands:	5
Commonwealth Heritage Places:	1
Listed Marine Species:	22
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

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

State and Territory Reserves:	2
Regional Forest Agreements:	None
Nationally Important Wetlands:	1
EPBC Act Referrals:	31
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	1
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar Wetlands) [Resource Information]

Ramsar Site Name	Proximity	Buffer Status
Moreton bay	30 - 40km upstream from Ramsar site	In feature area

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.

Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text	Buffer Status
Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community	Endangered	Community may occur within area	In feature area
Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland	Endangered	Community likely to occur within area	In feature area
Grey box-grey gum wet forest of subtropical eastern Australia	Endangered	Community may occur within area	In feature area
Lowland Rainforest of Subtropical Australia	Critically Endangered	Community may occur within area	In feature area
Poplar Box Grassy Woodland on Alluvial Plains	Endangered	Community may occur within area	In feature area
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	Critically Endangered	Community likely to occur within area	In feature area

Listed Threatened Species [Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.

Number is the current name ID.

Scientific Name	Threatened Category	Presence Text	Buffer Status
BIRD			
Anthochaera phrygia			
Regent Honeyeater [82338]	Critically Endangered	Foraging, feeding or related behaviour may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat may occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
Calyptorhynchus lathami lathami South-eastern Glossy Black-Cockatoo [67036]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Cyclopsitta diophthalma coxeni Coxen's Fig-Parrot [59714]	Endangered	Species or species habitat may occur within area	In feature area
Erythrotriorchis radiatus Red Goshawk [942]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat known to occur within area	In feature area
Geophaps scripta scripta Squatter Pigeon (southern) [64440]	Vulnerable	Species or species habitat may occur within area	In feature area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat may occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat known to occur within area	In feature area
Turnix melanogaster Black-breasted Button-quail [923]	Vulnerable	Species or species habitat known to occur within area	In feature area
INSECT			
Argynnis hyperbius inconstans Australian Fritillary [88056]	Critically Endangered	Species or species habitat may occur within area	In feature area
Phyllodes imperialis smithersi Pink Underwing Moth [86084]	Endangered	Species or species habitat may occur within area	In buffer area only
MAMMAL			
Chalinolobus dwyeri Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat may occur within area	In feature area
Dasyurus hallucatus Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat may occur within area	In feature 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	In feature area
Macroderma gigas Ghost Bat [174]	Vulnerable	Species or species habitat may occur within area	In feature area
Petauroides volans Greater Glider (southern and central) [254]	Endangered	Species or species habitat known to occur within area	In feature area
Petaurus australis australis Yellow-bellied Glider (south-eastern) [87600]	Vulnerable	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Petrogale penicillata Brush-tailed Rock-wallaby [225]	Vulnerable	Species or species habitat may occur within area	In feature 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]	Endangered	Species or species habitat known to occur within area	In feature area
Potorous tridactylus tridactylus Long-nosed Potoroo (northern) [66645]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Pteropus poliocephalus Grey-headed Flying-fox [186]	Vulnerable	Roosting known to occur within area	In feature area
PLANT			
Arthraxon hispidus Hairy-joint Grass [9338]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Bosistoa transversa Three-leaved Bosistoa, Yellow Satinheart [16091]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Cryptostylis hunteriana Leafless Tongue-orchid [19533]	Vulnerable	Species or species habitat may occur within area	In feature area
Cupaniopsis shirleyana Wedge-leaf Tuckeroo [3205]	Vulnerable	Species or species habitat may occur within area	In feature area
Cupaniopsis tomentella Boonah Tuckeroo [3322]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Dichanthium setosum bluegrass [14159]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Fontainea venosa [24040]	Vulnerable	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
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	In feature 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	In feature area
Notelaea ipsviciensis Cooneana Olive [81858]	Critically Endangered	Species or species habitat may occur within area	In feature area
Notelaea lloydii Lloyd's Olive [15002]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Plectranthus habrophyllus [64589]	Endangered	Species or species habitat likely to occur within area	In feature area
Rhodamnia rubescens Scrub Turpentine, Brown Malletwood [15763]	Critically Endangered	Species or species habitat may occur within area	In feature area
Rhodomyrtus psidioides Native Guava [19162]	Critically Endangered	Species or species habitat may occur within area	In feature area
Samadera bidwillii Quassia [29708]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Thesium australe Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat may occur within area	In feature area
REPTILE			
Delma torquata Adomed Delma, Collared Delma [1656]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Furina dunmali Dunmall's Snake [59254]	Vulnerable	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Hemiaspis damelii Grey Snake [1179]	Endangered	Species or species habitat likely to occur within area	In feature area

Listed Migratory Species [Resource Information]

Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area

Migratory Terrestrial Species

Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area	In feature area
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Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
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Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area	In feature area
--	--	---	-----------------

Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area	In feature area
---	--	--	-----------------

Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area	In feature area
--	--	---	-----------------

Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area	In feature area
---	--	---	-----------------

Symposiachrus trivirgatus as Monarcha trivirgatus Spectacled Monarch [83946]		Species or species habitat may occur within area	In feature area
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Migratory Wetlands Species

Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
--	--	--	-----------------

Scientific Name	Threatened Category	Presence Text	Buffer Status
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area	In feature area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat known to occur within area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area	In buffer area only
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area	In feature area

Other Matters Protected by the EPBC Act

Commonwealth Lands [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.

Commonwealth Land Name	State	Buffer Status
Defence		
Defence - GREENBANK TRAINING AREA [31015]	QLD	In buffer area only
Defence - GREENBANK TRAINING AREA [31011]	QLD	In buffer area only
Defence - GREENBANK TRAINING AREA [31007]	QLD	In buffer area only

Commonwealth Land Name	State	Buffer Status
Defence - GREENBANK TRAINING AREA [31006]	QLD	In buffer area only
Defence - GREENBANK TRAINING AREA [31008]	QLD	In buffer area only

Commonwealth Heritage Places			[Resource Information]
Name	State	Status	Buffer Status
Natural			
Greenbank Military Training Area (part)	QLD	Listed place	In buffer area only

Listed Marine Species			[Resource Information]
Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird			
Actitis hypoleucos			
Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
Anseranas semipalmata			
Magpie Goose [978]		Species or species habitat may occur within area overfly marine area	In feature area
Apus pacificus			
Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area
Bubulcus ibis as Ardea ibis			
Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area
Calidris acuminata			
Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area	In feature area
Calidris ferruginea			
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area	In feature area
Calidris melanotos			
Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat known to occur within area overfly marine area	In feature area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area overfly marine area	In feature area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area overfly marine area	In feature area
Numenius madaqascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area	In buffer area only
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area overfly marine area	In feature area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat known to occur within area overfly marine area	In feature area
Symposiachrus trivirgatus as Monarcha trivirgatus Spectacled Monarch [83946]		Species or species habitat may occur within area overfly marine area	In feature area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area overfly marine area	In feature area

Extra Information

State and Territory Reserves			[Resource Information]
Protected Area Name	Reserve Type	State	Buffer Status
Stewartdale	Nature Refuge	QLD	In buffer area only
White Rock	Conservation Park	QLD	In feature area

Nationally Important Wetlands		[Resource Information]
Wetland Name	State	Buffer Status
Greenbank Army Training Area C	QLD	In buffer area only

EPBC Act Referrals					[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status	
Barrams Road Residential Development	2021/9005		Approval	In buffer area only	
Bellbird Park Primary School Development Project	2022/09296		Referral Decision	In buffer area only	
Ripley Valley PDA Providence East and South	2018/8347		Approval	In buffer area only	

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Controlled action				
Brentwood Residential Estate, Bellbird Park, Ipswich, QLD	2013/7074	Controlled Action	Post-Approval	In buffer area only
Casino Ipswich Pipeline	2007/3877	Controlled Action	Completed	In feature area
Cumner Road mixed use subdivision, Whiterock, Ripley Valley, Qld	2014/7388	Controlled Action	Post-Approval	In buffer area only
First Nine Master planned residential development, Brookwater, Qld	2016/7676	Controlled Action	Post-Approval	In buffer area only
Peninsula Precinct, Springfield, Queensland	2020/8629	Controlled Action	Further Information Request	In buffer area only
Residential subdivision, Lot 901 and 902 Eugene St, Bellbird Park, Qld	2018/8350	Controlled Action	Assessment Approach	In buffer area only
Scenic Precinct Residential Development	2020/8651	Controlled Action	Further Information Request	In buffer area only
Southern Regional Water Pipeline	2006/2593	Controlled Action	Post-Approval	In buffer area only
Springfield Residential Development	2019/8575	Controlled Action	Further Information Request	In buffer area only
Spring Mountain mixed use master planned community development, Springfield, Qld	2013/7057	Controlled Action	Post-Approval	In feature area
Springview Village One, Springfield, Ipswich City, QLD	2014/7306	Controlled Action	Post-Approval	In buffer area only
Vedanta Masterplanned Community, Springfield Lakes	2020/8802	Controlled Action	Further Information Request	In buffer area only
Woodlink Residential Community, 246-326 Collingwood Drive, Collingwood Park	2013/6866	Controlled Action	Post-Approval	In buffer area only
Woogaroo Heights master planned residential development, Springfield, Qld	2017/7875	Controlled Action	Post-Approval	In feature area
Not controlled action				
Bellbird Park State High School development, Redbank Plains, Qld	2014/7323	Not Controlled Action	Completed	In buffer area only

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Not controlled action				
BrisWest Holdings - Release 5 Operational Works	2021/9086	Not Controlled Action	Completed	In buffer area only
Fernbrooke Ridge residential estate development - Balance Land, Redbank Plains, Qld	2013/6818	Not Controlled Action	Completed	In buffer area only
Improving rabbit biocontrol: releasing another strain of RHDV, sthm two thirds of Australia	2015/7522	Not Controlled Action	Completed	In feature area
Inland Rail Gowrie to Kagaru Geotechnical Project, QLD	2018/8263	Not Controlled Action	Completed	In buffer area only
Northern Link Parallel Road Tunnels Project	2007/3824	Not Controlled Action	Completed	In buffer area only
REMONDIS Waste to Energy Facility	2020/8806	Not Controlled Action	Completed	In buffer area only
Removal of Grey-headed Flying-fox Habitat	2005/2137	Not Controlled Action	Completed	In buffer area only
South West Transport Corridor	2006/2547	Not Controlled Action	Completed	In feature area
Swanbank Waste Management Facility Stage 1B extension Area, Qld	2015/7581	Not Controlled Action	Completed	In buffer area only
Underground Bus and Train Project, Brisbane	2013/7106	Not Controlled Action	Completed	In buffer area only
Not controlled action (particular manner)				
Construction & Operation 275/330kV Transmission Line	2006/2820	Not Controlled Action (Particular Manner)	Post-Approval	In feature area
Cross River Rail	2010/5427	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
Springfield Transport Corridor Project	2007/3214	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
Bioregional Assessments				
SubRegion	BioRegion	Website	Buffer Status	
Clarence-Moreton	Clarence-Moreton	BA website	In feature area	

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Not controlled action				
BrisWest Holdings - Release 5 Operational Works	2021/9086	Not Controlled Action	Completed	In buffer area only
Fernbrooke Ridge residential estate development - Balance Land, Redbank Plains, Qld	2013/6818	Not Controlled Action	Completed	In buffer area only
Improving rabbit biocontrol: releasing another strain of RHDV, sthm two thirds of Australia	2015/7522	Not Controlled Action	Completed	In feature area
Inland Rail Gowrie to Kagaru Geotechnical Project, QLD	2018/8263	Not Controlled Action	Completed	In buffer area only
Northern Link Parallel Road Tunnels Project	2007/3824	Not Controlled Action	Completed	In buffer area only
REMONDIS Waste to Energy Facility	2020/8806	Not Controlled Action	Completed	In buffer area only
Removal of Grey-headed Flying-fox Habitat	2005/2137	Not Controlled Action	Completed	In buffer area only
South West Transport Corridor	2006/2547	Not Controlled Action	Completed	In feature area
Swanbank Waste Management Facility Stage 1B extension Area, Qld	2015/7581	Not Controlled Action	Completed	In buffer area only
Underground Bus and Train Project, Brisbane	2013/7106	Not Controlled Action	Completed	In buffer area only
Not controlled action (particular manner)				
Construction & Operation 275/330kV Transmission Line	2006/2820	Not Controlled Action (Particular Manner)	Post-Approval	In feature area
Cross River Rail	2010/5427	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
Springfield Transport Corridor Project	2007/3214	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
Bioregional Assessments				
SubRegion	BioRegion	Website	Buffer Status	
Clarence-Moreton	Clarence-Moreton	BA website	In feature area	

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](#)
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- [Australian Tropical Herbarium, Cairns](#)
- [eBird Australia](#)
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- [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.

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9. Appendix C: WildNet Species List



WildNet species list

Search Criteria: Species List for a Specified Point
Species: Animals
Type: Native
Queensland status: All
Records: All
Date: Since 1980
Latitude: -27.6839
Longitude: 152.8782
Distance: 5
Email: jasmine@qfc.com.au
Date submitted: Thursday 06 Oct 2022 12:07:35
Date extracted: Thursday 06 Oct 2022 12:10:21

The number of records retrieved = 309

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Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	amphibians	Hylidae	<i>Cyclorana alboguttata</i>	greenstripe frog		C		1
animals	amphibians	Hylidae	<i>Litoria balatus</i>	slender bleating tree frog		C		5
animals	amphibians	Hylidae	<i>Litoria brevipalmata</i>	green thighed frog		C		1
animals	amphibians	Hylidae	<i>Litoria caerulea</i>	common green treefrog		C		11
animals	amphibians	Hylidae	<i>Litoria fallax</i>	eastern sedgefrog		C		127
animals	amphibians	Hylidae	<i>Litoria gracilentia</i>	graceful treefrog		C		20
animals	amphibians	Hylidae	<i>Litoria latopalmata</i>	broad palmed rocketfrog		C		52
animals	amphibians	Hylidae	<i>Litoria nasuta</i>	striped rocketfrog		C		7
animals	amphibians	Hylidae	<i>Litoria peronii</i>	emerald spotted treefrog		C		3
animals	amphibians	Hylidae	<i>Litoria rubella</i>	ruddy treefrog		C		25
animals	amphibians	Hylidae	<i>Litoria wilcoxii</i>	eastern stony creek frog		C		6
animals	amphibians	Limnodynastidae	<i>Adelotus brevis</i>	tusked frog		V		5
animals	amphibians	Limnodynastidae	<i>Limnodynastes peronii</i>	striped marshfrog		C		80
animals	amphibians	Limnodynastidae	<i>Limnodynastes tasmaniensis</i>	spotted grassfrog		C		5
animals	amphibians	Limnodynastidae	<i>Limnodynastes terraereginae</i>	scarlet sided pobblebonk		C		22
animals	amphibians	Limnodynastidae	<i>Platyplectrum ornatum</i>	ornate burrowing frog		C		30
animals	amphibians	Myobatrachidae	<i>Crinia parinsignifera</i>	beeping froglet		C		71
animals	amphibians	Myobatrachidae	<i>Mixophyes fasciolatus</i>	great barred frog		C		11
animals	amphibians	Myobatrachidae	<i>Pseudophryne coriacea</i>	red backed broodfrog		C		3
animals	amphibians	Myobatrachidae	<i>Pseudophryne major</i>	great brown broodfrog		C		1
animals	amphibians	Myobatrachidae	<i>Pseudophryne raveni</i>	copper backed broodfrog		C		20
animals	amphibians	Myobatrachidae	<i>Uperoleia fusca</i>	dusky gungan		C		4
animals	amphibians	Myobatrachidae	<i>Uperoleia rugosa</i>	chubby gungan		C		2
animals	birds	Acanthizidae	<i>Acanthiza chrysorrhoa</i>	yellow-rumped thornbill		C		2
animals	birds	Acanthizidae	<i>Acanthiza lineata</i>	striated thornbill		C		9
animals	birds	Acanthizidae	<i>Acanthiza nana</i>	yellow thornbill		C		8
animals	birds	Acanthizidae	<i>Acanthiza pusilla</i>	brown thornbill		C		19
animals	birds	Acanthizidae	<i>Acanthiza reguloides</i>	buff-rumped thornbill		C		28
animals	birds	Acanthizidae	<i>Gerygone mouki</i>	brown gerygone		C		2
animals	birds	Acanthizidae	<i>Gerygone olivacea</i>	white-throated gerygone		C		50
animals	birds	Acanthizidae	<i>Pyrrholaemus sagittatus</i>	speckled warbler		C		20
animals	birds	Acanthizidae	<i>Sericornis frontalis</i>	white-browed scrubwren		C		40
animals	birds	Acanthizidae	<i>Smicromis brevirostris</i>	weebill		C		50
animals	birds	Accipitridae	<i>Accipiter cirrocephalus</i>	collared sparrowhawk		C		2
animals	birds	Accipitridae	<i>Accipiter fasciatus</i>	brown goshawk		C		15
animals	birds	Accipitridae	<i>Aquila audax</i>	wedge-tailed eagle		C		31
animals	birds	Accipitridae	<i>Aviceda subcristata</i>	Pacific baza		C		9
animals	birds	Accipitridae	<i>Elanus axillaris</i>	black-shouldered kite		C		10
animals	birds	Accipitridae	<i>Haliaeetus leucogaster</i>	white-bellied sea-eagle		C		3
animals	birds	Accipitridae	<i>Haliaeetus indus</i>	brahminy kite		C		1
animals	birds	Accipitridae	<i>Hieraetus morphnoides</i>	little eagle		C		1
animals	birds	Aegothelidae	<i>Aegotheles cristatus</i>	Australian owl-nightjar		C		15
animals	birds	Alcedinidae	<i>Ceyx azureus</i>	azure kingfisher		C		4
animals	birds	Anatidae	<i>Anas castanea</i>	chestnut teal		C		1
animals	birds	Anatidae	<i>Anas superciliosa</i>	Pacific black duck		C		19
animals	birds	Anatidae	<i>Chenonetta jubata</i>	Australian wood duck		C		22

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Anatidae	<i>Cygnus atratus</i>	black swan		C		2
animals	birds	Anhingidae	<i>Anhinga novaehollandiae</i>	Australasian darter		C		1
animals	birds	Apodidae	<i>Hirundapus caudacutus</i>	white-throated needletail		V	V	9
animals	birds	Ardeidae	<i>Ardea alba modesta</i>	eastern great egret		C		1
animals	birds	Ardeidae	<i>Ardea intermedia</i>	intermediate egret		C		3
animals	birds	Ardeidae	<i>Ardea pacifica</i>	white-necked heron		C		6
animals	birds	Ardeidae	<i>Bubulcus ibis</i>	cattle egret		C		16
animals	birds	Ardeidae	<i>Egretta novaehollandiae</i>	white-faced heron		C		21
animals	birds	Ardeidae	<i>Nycticorax caledonicus</i>	nankeen night-heron		C		3
animals	birds	Artamidae	<i>Artamus cyanopterus</i>	dusky woodswallow		C		10
animals	birds	Artamidae	<i>Artamus leucorhynchus</i>	white-breasted woodswallow		C		2
animals	birds	Artamidae	<i>Artamus superciliosus</i>	white-browed woodswallow		C		1
animals	birds	Artamidae	<i>Cracticus nigrogularis</i>	pied butcherbird		C		83
animals	birds	Artamidae	<i>Cracticus torquatus</i>	grey butcherbird		C		59
animals	birds	Artamidae	<i>Gymnorhina tibicen</i>	Australian magpie		C		76
animals	birds	Artamidae	<i>Strepera graculina</i>	pied currawong		C		65
animals	birds	Burhinidae	<i>Burhinus grallarius</i>	bush stone-curlew		C		1
animals	birds	Cacatuidae	<i>Cacatua galerita</i>	sulphur-crested cockatoo		C		50
animals	birds	Cacatuidae	<i>Cacatua sanguinea</i>	little corella		C		3
animals	birds	Cacatuidae	<i>Calyptorhynchus banksii</i>	red-tailed black-cockatoo		C		5
animals	birds	Cacatuidae	<i>Calyptorhynchus lathami lathami</i>	glossy black-cockatoo (eastern)		V	V	2
animals	birds	Cacatuidae	<i>Eolophus roseicapilla</i>	galah		C		40
animals	birds	Campephagidae	<i>Coracina novaehollandiae</i>	black-faced cuckoo-shrike		C		87
animals	birds	Campephagidae	<i>Coracina papuensis</i>	white-bellied cuckoo-shrike		C		10
animals	birds	Campephagidae	<i>Edolisoma tenuirostre</i>	common cicadabird		C		33
animals	birds	Campephagidae	<i>Lalage leucomela</i>	varied triller		C		11
animals	birds	Campephagidae	<i>Lalage tricolor</i>	white-winged triller		C		1
animals	birds	Charadriidae	<i>Vanellus miles</i>	masked lapwing		C		2
animals	birds	Charadriidae	<i>Vanellus miles novaehollandiae</i>	masked lapwing (southern subspecies)		C		23
animals	birds	Ciconiidae	<i>Ephippiorhynchus asiaticus</i>	black-necked stork		C		1
animals	birds	Cisticolidae	<i>Cisticola exilis</i>	golden-headed cisticola		C		24
animals	birds	Climacteridae	<i>Climacteris affinis</i>	white-browed treecreeper		C		1
animals	birds	Climacteridae	<i>Cormobates leucophaea</i>	white-throated treecreeper		C		6
animals	birds	Climacteridae	<i>Cormobates leucophaea metastasis</i>	white-throated treecreeper (southern)		C		52
animals	birds	Columbidae	<i>Chalcophaps longirostris</i>	Pacific emerald dove		C		6
animals	birds	Columbidae	<i>Geopelia humeralis</i>	bar-shouldered dove		C		43
animals	birds	Columbidae	<i>Geopelia placida</i>	peaceful dove		C		48
animals	birds	Columbidae	<i>Leucosarcia melanoleuca</i>	wonga pigeon		C		1
animals	birds	Columbidae	<i>Lopholaimus antarcticus</i>	topknot pigeon		C		8
animals	birds	Columbidae	<i>Macropygia amboinensis</i>	brown cuckoo-dove		C		19
animals	birds	Columbidae	<i>Ocyphaps lophotes</i>	crested pigeon		C		38
animals	birds	Columbidae	<i>Phaps chalcoptera</i>	common bronzewing		C		23
animals	birds	Coraciidae	<i>Eurystomus orientalis</i>	dollarbird		C		35
animals	birds	Corvidae	<i>Corvus coronoides</i>	Australian raven		C		2
animals	birds	Corvidae	<i>Corvus orru</i>	Torresian crow		C		145
animals	birds	Cuculidae	<i>Cacomantis flabelliformis</i>	fan-tailed cuckoo		C		31

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Cuculidae	<i>Cacomantis pallidus</i>	pallid cuckoo		C		2
animals	birds	Cuculidae	<i>Cacomantis variolosus</i>	brush cuckoo		C		16
animals	birds	Cuculidae	<i>Centropus phasianinus</i>	pheasant coucal		C		23
animals	birds	Cuculidae	<i>Chalcites basalus</i>	Horsfield's bronze-cuckoo		C		9
animals	birds	Cuculidae	<i>Chalcites lucidus</i>	shining bronze-cuckoo		C		13
animals	birds	Cuculidae	<i>Chalcites minutillus barnardi</i>	Eastern little bronze-cuckoo		C		1
animals	birds	Cuculidae	<i>Cuculus optatus</i>	oriental cuckoo		SL		5
animals	birds	Cuculidae	<i>Eudynamys orientalis</i>	eastern koel		C		25
animals	birds	Cuculidae	<i>Scythrops novaehollandiae</i>	channel-billed cuckoo		C		27
animals	birds	Dicruridae	<i>Dicrurus bracteatus</i>	spangled drongo		C		42
animals	birds	Dicruridae	<i>Dicrurus bracteatus bracteatus</i>	spangled drongo (eastern Australia)		C		1
animals	birds	Estrildidae	<i>Lonchura castaneothorax</i>	chestnut-breasted mannikin		C		9
animals	birds	Estrildidae	<i>Neochmia temporalis</i>	red-browed finch		C		54
animals	birds	Estrildidae	<i>Taeniopygia bichenovii</i>	double-barred finch		C		29
animals	birds	Eurostopodidae	<i>Eurostopodus mystacalis</i>	white-throated nightjar		C		15
animals	birds	Falconidae	<i>Falco cenchroides</i>	nankeen kestrel		C		15
animals	birds	Falconidae	<i>Falco longipennis</i>	Australian hobby		C		3
animals	birds	Falconidae	<i>Falco peregrinus</i>	peregrine falcon		C		13
animals	birds	Halcyonidae	<i>Dacelo novaeguineae</i>	laughing kookaburra		C		102
animals	birds	Halcyonidae	<i>Todiramphus macleayii</i>	forest kingfisher		C		13
animals	birds	Halcyonidae	<i>Todiramphus sanctus</i>	sacred kingfisher		C		34
animals	birds	Hirundinidae	<i>Cheramoeca leucosterna</i>	white-backed swallow		C		8
animals	birds	Hirundinidae	<i>Hirundo neoxena</i>	welcome swallow		C		30
animals	birds	Hirundinidae	<i>Petrochelidon ariel</i>	fairy martin		C		11
animals	birds	Hirundinidae	<i>Petrochelidon nigricans</i>	tree martin		C		14
animals	birds	Maluridae	<i>Malurus cyaneus</i>	superb fairy-wren		C		30
animals	birds	Maluridae	<i>Malurus lamberti</i>	variegated fairy-wren		C		57
animals	birds	Maluridae	<i>Malurus melanocephalus</i>	red-backed fairy-wren		C		78
animals	birds	Megaluridae	<i>Cincloramphus timoriensis</i>	tawny grassbird		C		10
animals	birds	Megapodiidae	<i>Alectura lathamii</i>	Australian brush-turkey		C		15
animals	birds	Meliphagidae	<i>Acanthorhynchus tenuirostris</i>	eastern spinebill		C		19
animals	birds	Meliphagidae	<i>Anthochaera chrysoptera</i>	little wattlebird		C		9
animals	birds	Meliphagidae	<i>Caligavis chrysops</i>	yellow-faced honeyeater		C		99
animals	birds	Meliphagidae	<i>Entomyzon cyanotis</i>	blue-faced honeyeater		C		21
animals	birds	Meliphagidae	<i>Lichenostomus melanops</i>	yellow-tufted honeyeater		C		11
animals	birds	Meliphagidae	<i>Lichmera indistincta</i>	brown honeyeater		C		53
animals	birds	Meliphagidae	<i>Manorina melanocephala</i>	noisy miner		C		83
animals	birds	Meliphagidae	<i>Meliphaga lewinii</i>	Lewin's honeyeater		C		50
animals	birds	Meliphagidae	<i>Melithreptus albogularis</i>	white-throated honeyeater		C		73
animals	birds	Meliphagidae	<i>Melithreptus gularis</i>	black-chinned honeyeater		C		6
animals	birds	Meliphagidae	<i>Melithreptus lunatus</i>	white-naped honeyeater		C		5
animals	birds	Meliphagidae	<i>Myzomela sanguinolenta</i>	scarlet honeyeater		C		92
animals	birds	Meliphagidae	<i>Philemon citreogularis</i>	little friarbird		C		17
animals	birds	Meliphagidae	<i>Philemon corniculatus</i>	noisy friarbird		C		110
animals	birds	Meliphagidae	<i>Plectorhyncha lanceolata</i>	striped honeyeater		C		18
animals	birds	Meliphagidae	<i>Ptilotula fusca</i>	fuscous honeyeater		C		14

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Meropidae	<i>Merops ornatus</i>	rainbow bee-eater		C		70
animals	birds	Monarchidae	<i>Grallina cyanoleuca</i>	magpie-lark		C		57
animals	birds	Monarchidae	<i>Monarcha melanopsis</i>	black-faced monarch		SL		16
animals	birds	Monarchidae	<i>Myiagra cyanoleuca</i>	satin flycatcher		SL		1
animals	birds	Monarchidae	<i>Myiagra inquieta</i>	restless flycatcher		C		5
animals	birds	Monarchidae	<i>Myiagra rubecula</i>	leaden flycatcher		C		40
animals	birds	Monarchidae	<i>Symphysichrus trivirgatus</i>	spectacled monarch		SL		8
animals	birds	Motacillidae	<i>Anthus novaeseelandiae</i>	Australasian pipit		C		4
animals	birds	Nectariniidae	<i>Dicaeum hirundinaceum</i>	mistletoebird		C		49
animals	birds	Neosittidae	<i>Daphoenositta chrysoptera</i>	varied sittella		C		37
animals	birds	Oriolidae	<i>Oriolus sagittatus</i>	olive-backed oriole		C		39
animals	birds	Oriolidae	<i>Sphecotheres vieilloti</i>	Australasian figbird		C		21
animals	birds	Pachycephalidae	<i>Colluricincla harmonica</i>	grey shrike-thrush		C		70
animals	birds	Pachycephalidae	<i>Colluricincla megarhyncha</i>	little shrike-thrush		C		12
animals	birds	Pachycephalidae	<i>Falcunculus frontatus</i>	crested shrike-tit		C		1
animals	birds	Pachycephalidae	<i>Pachycephala pectoralis</i>	golden whistler		C		47
animals	birds	Pachycephalidae	<i>Pachycephala rufiventris</i>	rufous whistler		C		73
animals	birds	Pardalotidae	<i>Pardalotus punctatus</i>	spotted pardalote		C		41
animals	birds	Pardalotidae	<i>Pardalotus striatus</i>	striated pardalote		C		108
animals	birds	Pelecanidae	<i>Pelecanus conspicillatus</i>	Australian pelican		C		1
animals	birds	Petroicidae	<i>Eopsaltria australis</i>	eastern yellow robin		C		60
animals	birds	Petroicidae	<i>Microeca fascians</i>	jacky winter		C		22
animals	birds	Petroicidae	<i>Petroica rosea</i>	rose robin		C		28
animals	birds	Phalacrocoracidae	<i>Microcarbo melanoleucos</i>	little pied cormorant		C		8
animals	birds	Phalacrocoracidae	<i>Phalacrocorax sulcirostris</i>	little black cormorant		C		2
animals	birds	Phasianidae	<i>Synoicus ypsilophorus</i>	brown quail		C		18
animals	birds	Podargidae	<i>Tadargus strigoides</i>	tawny frogmouth		C		33
animals	birds	Podicipedidae	<i>Tachybaptus novaehollandiae</i>	Australasian grebe		C		3
animals	birds	Pomatostomidae	<i>Pomatostomus temporalis</i>	grey-crowned babbler		C		11
animals	birds	Psittacidae	<i>Alisterus scapularis</i>	Australian king-parrot		C		23
animals	birds	Psittacidae	<i>Barnardius zonarius</i>	Australian ringneck		C		2
animals	birds	Psittacidae	<i>Lathamus discolor</i>	swift parrot		E	CE	1
animals	birds	Psittacidae	<i>Parvipsitta pusilla</i>	little lorikeet		C		52
animals	birds	Psittacidae	<i>Platycercus adscitus</i>	pale-headed rosella		C		52
animals	birds	Psittacidae	<i>Platycercus adscitus palliceps</i>	pale-headed rosella (southern form)		C		2
animals	birds	Psittacidae	<i>Platycercus eximius</i>	eastern rosella		C		18
animals	birds	Psittacidae	<i>Trichoglossus chlorolepidotus</i>	scaly-breasted lorikeet		C		70
animals	birds	Psittacidae	<i>Trichoglossus moluccanus</i>	rainbow lorikeet		C		85
animals	birds	Psophodidae	<i>Cinclosoma punctatum</i>	spotted quail-thrush		C		13
animals	birds	Psophodidae	<i>Psophodes olivaceus</i>	eastern whipbird		C		54
animals	birds	Ptilonorhynchidae	<i>Chlamydera maculata</i>	spotted bowerbird		C		1
animals	birds	Ptilonorhynchidae	<i>Sericulus chrysocephalus</i>	regent bowerbird		C		1
animals	birds	Rallidae	<i>Fulica atra</i>	Eurasian coot		C		1
animals	birds	Rallidae	<i>Gallinula tenebrosa</i>	dusky moorhen		C		10
animals	birds	Rallidae	<i>Porphyrio melanotus</i>	purple swamphen		C		3
animals	birds	Recurvirostridae	<i>Himantopus himantopus</i>	black-winged stilt		C		2

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Rhipiduridae	<i>Rhipidura albiscapa</i>	grey fantail		C		78
animals	birds	Rhipiduridae	<i>Rhipidura leucophrys</i>	willie wagtail		C		53
animals	birds	Rhipiduridae	<i>Rhipidura leucophrys leucophrys</i>	willie wagtail (southern)		C		1
animals	birds	Rhipiduridae	<i>Rhipidura rufifrons</i>	rufous fantail		SL		29
animals	birds	Strigidae	<i>Ninox boobook</i>	southern boobook		C		51
animals	birds	Strigidae	<i>Ninox strenua</i>	powerful owl		V		22
animals	birds	Threskiornithidae	<i>Platalea regia</i>	royal spoonbill		C		1
animals	birds	Threskiornithidae	<i>Threskiornis molucca</i>	Australian white ibis		C		6
animals	birds	Threskiornithidae	<i>Threskiornis spinicollis</i>	straw-necked ibis		C		9
animals	birds	Timaliidae	<i>Zosterops lateralis</i>	silveryeye		C		77
animals	birds	Timaliidae	<i>Zosterops lateralis cornwalli</i>	silveryeye (eastern)		C		1
animals	birds	Tumicidae	<i>Tumix pyrrhorthorax</i>	red-chested button-quail		C		1
animals	birds	Tumicidae	<i>Tumix varius</i>	painted button-quail		C		15
animals	birds	Tytonidae	<i>Tyto novaehollandiae novaehollandiae</i>	masked owl (southern subspecies)		C		1
animals	insects	Hesperiidae	<i>Neohesperilla xanthomera</i>	yellow grass-skipper				1
animals	insects	Lycaenidae	<i>Acrodipsas brisbanensis</i>	bronze ant-blue				2
animals	insects	Lycaenidae	<i>Candalides cyprotus pallescens</i>	copper pencilled-blue				1
animals	insects	Lycaenidae	<i>Ogyris oroetes oroetes</i>	silky azure				1
animals	insects	Lycaenidae	<i>Ogyris zosine zosine</i>	northern purple azure (southern subspecies)				1
animals	insects	Nymphalidae	<i>Acraea andromacha andromacha</i>	glasswing				8
animals	insects	Nymphalidae	<i>Charaxes sempronius sempronius</i>	tailed emperor				1
animals	insects	Nymphalidae	<i>Danaus petilia</i>	lesser wanderer				6
animals	insects	Nymphalidae	<i>Euploea corinna</i>	common crow				5
animals	insects	Nymphalidae	<i>Junonia villida villida</i>	meadow argus				1
animals	insects	Nymphalidae	<i>Melanitis leda bankia</i>	evening brown				3
animals	insects	Nymphalidae	<i>Tirumala hamata hamata</i>	blue tiger				1
animals	insects	Nymphalidae	<i>Vanessa kershawi</i>	Australian painted lady				2
animals	insects	Papilionidae	<i>Graphium choredon</i>	blue triangle				3
animals	insects	Pieridae	<i>Belenois java teutonia</i>	caper white				1
animals	insects	Pieridae	<i>Catopsilia pomona</i>	lemon migrant				1
animals	insects	Pieridae	<i>Delias nigrina</i>	black jezebel				2
animals	insects	Pieridae	<i>Eurema brigitta australis</i>	no-brand grass-yellow				1
animals	insects	Pieridae	<i>Eurema hecabe</i>	large grass-yellow				4
animals	insects	Pieridae	<i>Eurema smilax</i>	small grass-yellow				1
animals	mammals	Canidae	<i>Canis familiaris (dingo)</i>	dingo				6
animals	mammals	Dasyuridae	<i>Antechinus flavipes flavipes</i>	yellow-footed antechinus (south-east Queensland)		C		7
animals	mammals	Dasyuridae	<i>Phascogale tapoatafa tapoatafa</i>	brush-tailed phascogale		C		2
animals	mammals	Dasyuridae	<i>Planigale maculata</i>	common planigale		C		1
animals	mammals	Dasyuridae	<i>Sminthopsis murina</i>	common dunnart		C		2
animals	mammals	Macropodidae	<i>Macropus giganteus</i>	eastern grey kangaroo		C		21
animals	mammals	Macropodidae	<i>Notamacropus dorsalis</i>	black-striped wallaby		C		2
animals	mammals	Macropodidae	<i>Notamacropus parryi</i>	whiptail wallaby		C		4
animals	mammals	Macropodidae	<i>Notamacropus rufogriseus</i>	red-necked wallaby		C		24
animals	mammals	Macropodidae	<i>Osphranter robustus</i>	common wallaroo		C		1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	mammals	Macropodidae	<i>Wallabia bicolor</i>	swamp wallaby		C		14/1
animals	mammals	Miniopteridae	<i>Miniopterus schreibersii oceanensis</i>	eastern bent-wing bat		C		1
animals	mammals	Molossidae	<i>Austronomus australis</i>	white-striped freetail bat		C		12
animals	mammals	Molossidae	<i>Mormopterus lumsdenae</i>	northern free-tailed bat		C		1
animals	mammals	Molossidae	<i>Mormopterus ridei</i>	eastern free-tailed bat		C		1
animals	mammals	Molossidae	<i>Mormopterus sp.</i>			C		2
animals	mammals	Muridae	<i>Rattus fuscipes</i>	bush rat		C		2
animals	mammals	Muridae	<i>Rattus tunneyi</i>	pale field-rat		C		4
animals	mammals	Ornithorhynchidae	<i>Ornithorhynchus anatinus</i>	platypus		SL		1
animals	mammals	Peramelidae	<i>Isodon macrourus</i>	northern brown bandicoot		C		9
animals	mammals	Petauridae	<i>Petaurus australis australis</i>	yellow-bellied glider (southern subspecies)		V	V	1
animals	mammals	Petauridae	<i>Petaurus breviceps sensu lato</i>	sugar glider		C		7
animals	mammals	Petauridae	<i>Petaurus norfolcensis</i>	squirrel glider		C		32
animals	mammals	Phalangeridae	<i>Trichosurus vulpecula</i>	common brushtail possum		C		43
animals	mammals	Phascolarctidae	<i>Phascolarctos cinereus</i>	koala		E	E	68
animals	mammals	Potoroidae	<i>Aepyprymnus rufescens</i>	rufous bettong		C		1
animals	mammals	Pseudocheiridae	<i>Petauroides armillatus</i>	central greater glider		E	E	18
animals	mammals	Pseudocheiridae	<i>Pseudocheirus peregrinus</i>	common ringtail possum		C		5
animals	mammals	Pteropodidae	<i>Pteropus alecto</i>	black flying-fox		C		1
animals	mammals	Pteropodidae	<i>Pteropus poliocephalus</i>	grey-headed flying-fox		C	V	9
animals	mammals	Pteropodidae	<i>Pteropus scapulatus</i>	little red flying-fox		C		9
animals	mammals	Pteropodidae	<i>Pteropus sp.</i>			C		2
animals	mammals	Tachyglossidae	<i>Tachyglossus aculeatus</i>	short-beaked echidna		SL		6
animals	mammals	Vespertilionidae	<i>Chalinolobus gouldii</i>	Gould's wattled bat		C		2
animals	mammals	Vespertilionidae	<i>Nyctophilus gouldi</i>	Gould's long-eared bat		C		2
animals	mammals	Vespertilionidae	<i>Nyctophilus sp.</i>			C		1
animals	mammals	Vespertilionidae	<i>Scoteanax rueppellii</i>	greater broad-nosed bat		C		1
animals	mammals	Vespertilionidae	<i>Scotorepens greyii</i>	little broad-nosed bat		C		3
animals	mammals	Vespertilionidae	<i>Scotorepens orion</i>	south-eastern broad-nosed bat		C		3
animals	mammals	Vespertilionidae	<i>Scotorepens sp.</i>			C		3
animals	ray-finned fishes	Ambassidae	<i>Ambassis agassizii</i>	Agassiz's glassfish				1
animals	ray-finned fishes	Anguillidae	<i>Anguilla reinhardtii</i>	longfin eel				3
animals	ray-finned fishes	Eleotridae	<i>Hypseleotris compressa</i>	empire gudgeon				1
animals	ray-finned fishes	Eleotridae	<i>Hypseleotris sp.</i>					1
animals	ray-finned fishes	Plotosidae	<i>Tandanus tandanus</i>	freshwater catfish				2
animals	reptiles	Agamidae	<i>Diporiphora australis</i>	tommy roundhead		C		6
animals	reptiles	Agamidae	<i>Diporiphora nobbi</i>	nobbi		C		1
animals	reptiles	Agamidae	<i>Intelligama lesueurii</i>	eastern water dragon		C		15
animals	reptiles	Agamidae	<i>Pogona barbata</i>	bearded dragon		C		28
animals	reptiles	Boidae	<i>Morelia spilota</i>	carpet python		C		4
animals	reptiles	Chelidae	<i>Emydura macquarii macquarii</i>	Murray turtle		C		1
animals	reptiles	Colubridae	<i>Boiga irregularis</i>	brown tree snake		C		1
animals	reptiles	Colubridae	<i>Dendrelaphis punctulatus</i>	green tree snake		C		5
animals	reptiles	Colubridae	<i>Tropidonophis mairii</i>	freshwater snake		C		1
animals	reptiles	Diplodactylidae	<i>Diplodactylus vittatus</i>	wood gecko		C		5

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	reptiles	Diplodactylidae	<i>Nebulifera robusta</i>	robust velvet gecko		C		1
animals	reptiles	Diplodactylidae	<i>Oedura tryoni</i>	southern spotted velvet gecko		C		7
animals	reptiles	Elapidae	<i>Brachyurophis australis</i>	coral snake		C		2
animals	reptiles	Elapidae	<i>Cryptophis nigrescens</i>	eastern small-eyed snake		C		6
animals	reptiles	Elapidae	<i>Demansia psammophis</i>	yellow-faced whipsnake		C		12
animals	reptiles	Elapidae	<i>Furina diadema</i>	red-naped snake		C		3
animals	reptiles	Elapidae	<i>Pseudechis guttatus</i>	spotted black snake		C		2
animals	reptiles	Elapidae	<i>Pseudechis porphyriacus</i>	red-bellied black snake		C		7
animals	reptiles	Elapidae	<i>Pseudonaja textilis</i>	eastern brown snake		C		5
animals	reptiles	Elapidae	<i>Vernicella annulata</i>	bandy-bandy		C		1
animals	reptiles	Gekkonidae	<i>Gehyra dubia</i>	dubious dtella		C		6
animals	reptiles	Pygopodidae	<i>Lialis burtonis</i>	Burton's legless lizard		C		6
animals	reptiles	Scincidae	<i>Anomalopus verreauxii</i>	three-clawed worm-skink		C		3
animals	reptiles	Scincidae	<i>Calyptotis lepidorostrum</i>	cone-eared calyptotis		C		1
animals	reptiles	Scincidae	<i>Calyptotis scutirostrum</i>	scute-snouted calyptotis		C		5
animals	reptiles	Scincidae	<i>Carlia munda</i>	shaded-litter rainbow-skink		C		1
animals	reptiles	Scincidae	<i>Carlia pectoralis</i>	open-litter rainbow skink		C		1
animals	reptiles	Scincidae	<i>Carlia pectoralis sensu lato</i>			C		3
animals	reptiles	Scincidae	<i>Carlia schmeltzii</i>	robust rainbow-skink		C		3
animals	reptiles	Scincidae	<i>Carlia sp.</i>			C		1
animals	reptiles	Scincidae	<i>Carlia vivax</i>	tussock rainbow-skink		C		21
animals	reptiles	Scincidae	<i>Concinnia martini</i>	dark bar-sided skink		C		1
animals	reptiles	Scincidae	<i>Concinnia tenuis</i>	bar-sided skink		C		1
animals	reptiles	Scincidae	<i>Cryptoblepharus pulcher pulcher</i>	elegant snake-eyed skink		C		31
animals	reptiles	Scincidae	<i>Ctenotus arcanus</i>	arcane ctenotus		C		1
animals	reptiles	Scincidae	<i>Ctenotus spaldingi</i>	straight-browed ctenotus		C		4
animals	reptiles	Scincidae	<i>Ctenotus taeniolatus</i>	copper-tailed skink		C		3
animals	reptiles	Scincidae	<i>Karma murrayi</i>	Murray's skink		C		1
animals	reptiles	Scincidae	<i>Lampropholis amicula</i>	friendly sunskink		C		2
animals	reptiles	Scincidae	<i>Lampropholis delicata</i>	dark-flecked garden sunskink		C		17
animals	reptiles	Scincidae	<i>Lygisaurus foliorum</i>	tree-base litter-skink		C		8
animals	reptiles	Scincidae	<i>Menetia greyii</i>	common dwarf skink		C		1
animals	reptiles	Scincidae	<i>Morethia taeniopleura</i>	fire-tailed skink		C		1
animals	reptiles	Scincidae	<i>Ophioscincus ophioscincus</i>	yolk-bellied snake-skink		C		2
animals	reptiles	Scincidae	<i>Tiliqua scincoides</i>	eastern blue-tongued lizard		C		1
animals	reptiles	Varanidae	<i>Varanus varius</i>	lace monitor		C		13

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 (EX), Extinct in the Wild (PE), Critically Endangered (CR), Endangered (E), Vulnerable (V), Near Threatened (NT), Special Least Concern (SL) and Least Concern (C).

A - Indicates the Australian conservation status of each taxon under the *Environment Protection and Biodiversity Conservation Act 1999*.

The values of EPBC are Extinct (EX), Extinct in the Wild (XW), Critically Endangered (CE), Endangered (E), Vulnerable (V) and Conservation Dependent (CD).

Records - The first number indicates the total number of records of the taxon (wildlife records and species listings for selected areas).

This number is output as 99999 if it equals or exceeds this value. A second number located after a / indicates the number of specimen records for the taxon.

This number is output as 999 if it equals or exceeds this value.

Woogaroo Heights

Environmental Pre-Start Checklist

Attachment 7

Wildlife and Habitat Impact Mitigation Plan (WHIMP) prepared by Fauna Spotter Catcher



Oct 2022

Fauna Spotter Catcher Wildlife and Habitat Impact Mitigation Plan

Springfield Rise – Village 18
Springfield, Queensland
Report prepared for Shadforth Civil Pty Ltd



Report prepared by
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Date:	05/10/2022
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Author/s:	Bryan Robinson, Camille Palmer, Jasmine Zeleny
Reviewed by:	Bryan Robinson
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1. Introduction

1.1 Project Background

Queensland Fauna Consultancy Pty Ltd has been engaged by Shadforth Civil Pty Ltd to prepare a Fauna Spotter Catcher Wildlife and Habitat Impact Mitigation Plan for Village 18 of the Springfield Rise Estate at Springfield, Queensland. The site location is presented in Map 1.

The objective of this report is to summarise the existing fauna values presented in the Fauna Spotter Catcher Pre-Clearance Survey and Wildlife Protection and Management Plan (WPMP) and assign mitigatory strategies applicable to probable species likely to be encountered during the clearing of identified habitats throughout or within specific localities of the site. Fauna species both common and of elevated conservation value have been considered within the parameters of onsite investigations and, where provided to QFC, include review of current fauna and floristic reports that may influence the assemblages expected to utilise the microhabitats evident within the site.

This review encompasses species identified under the provisions of the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* and the Queensland *Nature Conservation Act 1992*. Further consideration is given, where applicable, to species of iconic, cultural and/or regional significance identified under commonwealth, state or local planning instruments aimed at the persistence of biodiversity values within the area.

1.2 Project Location and Site Description

Springfield Rise is located at the end of London Avenue, Springfield, west of the Spring Mountain State School and south-west of Sinnathamby Boulevard.

Existing features exhibit a remnant woodland vegetative complex on undulating topography with gullies, creeks, and rock outcrops. Dominant trees species include *Acacia* species, *Eucalyptus tereticornis*, *E. siderophloia*, *E. crebra*, *E. acmenoides*, *Corymbia citriodora*, *C. intermedia*, *Angophora leiocarpa*, *Lophostemon confertus* and *L. suaveolens*. Understorey vegetation consists of grass, scattered shrubs, *Lomandra* species, and dense leaf litter.

1.3 Current Permits and Authorities

All activities conducted during the site investigations were implemented under the provisions of a number of permits issued to Queensland Fauna Consultancy Pty Ltd by the Department of Environment and Science (DES), formerly the Department of Environment and Heritage Protection (DEHP), and the Department of Employment, Economic Development and Innovation (DEEDI). These permits and additional authorities are listed in *Table 1*.

Table 1: Current Permits and authorities issued to QFC

Permit/Authorisation	Permit Number	Expiry Date
Damage Mitigation Permit	WA0018804	10 th November 2022
Rehabilitation Permit	WA0026789	16 th September 2023
Scientific Purposes Permit	WA0032325	3 rd March 2026
Scientific User Registration	Registration Number 589	27 th February 2025
Animal Ethics	CA 2022/01/1569	27 th February 2025
General Fisheries Permit	207015	16 th April 2023

These permits and approvals enable QFC to conduct the investigation, observation and relocation of protected animals exposed to disturbance due to infrastructure expansion resulting in the destruction of natural and artificial habitats.

2. Mitigation Strategies

2.1 Fauna Spotter

It is advised that all identified fauna habitats onsite be inspected by a licensed Fauna Spotter prior to vegetation clearing, and all vegetation removal activities be supervised during the clearing process.

2.2 Clearing Methodologies

In accordance to the *Nature Conservation (Koala) Conservation Plan 2017* the following sequential clearing conditions are required to be adhered to:

- Clearing of trees is carried out in a way that ensures koalas living in or near the area being cleared (the clearing site) have enough time to move out of the clearing site without human intervention, including in particular, for a clearing site with an area of more than 6ha, by:
 - Carrying out the clearing in stages; and
 - Ensuring not more than the following is cleared in any one stage:
 - for a clearing site with an area of 6 ha or less—50 percent of the site's area;
 - for a clearing site with an area of more than 6ha—3ha or 3 percent of the site's area, whichever is the greater; and
 - Ensuring that between each stage there is at least one period of 12 hours that starts at 6 p.m. on a day and ends at 6 a.m. on the following day, during which no trees are cleared on the site;

In addition to these measures it is recommended that clearing activities be undertaken in a directional manner specified by the fauna spotter/catcher. This is done to reduce the likelihood of negative interactions between fauna and potential hazards e.g. roads and traffic, prevent isolation of fauna through habitat fragmentation, and to ensure that natural dispersal of wildlife away from clearing activities is not impeded.

A plan detailing the recommended clearing direction can be viewed in Appendix A.

2.3 Fauna Fencing

Due to the location of the clearing footprint, the installation of temporary fencing in conjunction with existing residential fencing may aid in minimizing the movement of large fauna, including highly mobile macropods into adjacent estates and nearby roadways.

The addition of further fauna fencing may be required if site conditions change and fauna considerations are presented by the fauna spotter catcher.

2.4 Felling Procedures

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

All identified microhabitats will be inspected via ground based observation and the direction of felling will be determined considering the safety of personnel, machinery and potentially occupant fauna. Felling procedures will see implementation of a soft felling technique specifically constructed by QFC to achieve minimal deceleration and impact upon felling. This will be achieved under direction of the Fauna Spotter present directly communicating with the plant operator(s).

2.5 Macropods

Macropod movement throughout the site was identified by the presence of scats during the fauna survey.

The area of proposed clearing activities exhibits direct connectivity to notable habitat values to the west and north-west. Therefore if clearing commences in a directional and incremental fashion any macropods potentially encountered on site may move on of their own volition. In this event, it is recommended that clearing proceed as already recommended with continual reassessment by the onsite fauna spotters.

2.6 Aquatic Fauna

In the event aquatic dewatering activities will be required within the proposed clearing area; pooled water and drainage features will be inspected during terrestrial load reduction activities ahead of the clearing front. The following recommendations are made to mitigate impacts to potentially occupant fauna:

- Inspection of banks, peripheral vegetation and other immediate terrestrial microhabitats;
- Identification of potential fauna values including: logs, rocks, artificial structures, discarded rubbish and burrows;
- Targeted searched for frog egg deposition sites on debris, bank edges, water surface and vegetation.

2.7 General Terrestrial and Arboreal Fauna

Overall, the site contains high value refugial opportunities for arboreal and terrestrial fauna species. The species expected within the site are likely to primarily reflect common fauna assemblages for the region however provisions are proposed directly for common fauna and species of conservation significance.

It is advised that all identified fauna habitats onsite be inspected by a DES approved Fauna Spotter prior to vegetation clearing and all vegetation removal activities be supervised during the clearing process. Terrestrial load reduction activities will be conducted ahead of the clearing front where possible. Fauna captured will be relocated to adjacent habitat consistent with the life history requirements of the species requiring translocation.

2.8 EVNT & SLC Fauna

It is not envisaged that any species, listed under the provisions of the *Environment Protection and Biodiversity Conservation Act 1999* or the *Nature Conservation Act 1992*, other than those listed in the WPMP, will require specific management during vegetation clearing activities.

However, specific management for those identified EVNT & SLC species will include targeted investigations immediately prior to vegetation removal activities on each day of clearing and subsequently whilst clearing takes place. Preliminary investigations will be supported by additional monitoring applied during clearing activities with a designated fauna spotter operating with each machine actively involved in vegetation or identified habitat disturbance. These should include the following:

Short-beaked Echidna

Although no individuals were observed during the survey, evidence of echidna use throughout the site was observed during the inspection by QFC and would see probability for the Short-beaked Echidna to be encountered during clearing activities.

The following recommendations are made for management of potentially occurring Short-beaked Echidna:

- Daily inspection of areas to be cleared for transient individuals;
- Inspection daily for potential burrow sites;
- Monitored dismantling of identified microhabitats by fauna spotters with machinery assistance

Koala:

As favoured Koala food trees on site exceed a diameter of 100mm at 1.3 metres from the ground, requirements under the Koala Plan's 'Koala Habitat Area' provisions trigger the need for inspection and monitoring during vegetation clearing by a qualified Fauna Spotter.

Historically known to occur within the area the Koala will feature highly in daily search efforts with a dedicated and detailed methodology employed as follows:

- Pre-clearing (preliminary) investigations to be conducted specifically for Koala detection by one experienced fauna spotter a minimum half hour prior to works each day. The investigation will embrace all designated clearing zones identified for that day inclusive of a 25-metre buffer around that zone;
- Once clearing commences a fauna spotter will accompany each machine providing continuous verification of habitat values and potential identification of undetected koalas ahead of operating plant. This will also account for potentially transient Koalas that may enter the site after preliminary investigations are complete.

Direct observational methodology will include the following components

- Use of binoculars to inspect the crown, forks and trunk of trees for individuals currently occupying the site;
- '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;
- Repeat observations made of single trees from numerous angles at repeated times throughout the clearing activities by the assigned fauna spotter.

In the event a Koala is detected, the Fauna Spotter will determine the appropriate course of action with exclusion zones implemented and alterations to the clearing plan discussed with the Site Supervisor. Once defined, these directions will be communicated to the plant operators and clearing will proceed in accordance with the recommendations made.

Changes to Koala management strategies highlighted in the *Nature Conservation (Koala) Conservation Plan 2017* have resulted in particular conditions placed on vegetation clearance involving the removal of Koala food trees. These provisions entail an increased responsibility by developers and land clearance operators alike to ensure the welfare of potentially present Koalas in areas identified as having significance for the persistence of this species.

Where significance under planning instruments is assigned provisions may include the restriction of all clearance that directly interferes with any tree a Koala is residing in or surrounding trees that, when felled, may impact on the crown of the host tree. Koalas are to leave via their own volition through a corridor designated by the Fauna Spotter to the closest remaining suitable habitat.

Throughout this time the Koala may not be interfered with by any means unless special dispensation has been sought through the appropriate government body or where the Koala is evidently in a state of compromised health. Only when Koalas have vacated a tree can clearance operations include the identified host tree and surrounding vegetation which composes the established exclusion zone. Recommendations made by the Fauna Spotter on site will embrace these provisions.

Response to Diseased/Injured Koalas

In the event the Fauna Spotter Catcher detects a koala showing signs of disease or injury the following procedure is to be implemented immediately after establishing the machinery exclusion zone:

- Photograph the animal and where possible the specific issue observed (i.e. dirty rump, emaciation);
- Contact Bryan Robinson, Principal Ecologist at QFC, to provide further assessment of the Koala via the images taken;
- Bryan to contact the Ipswich Koala Protection Society (IKPS) President Ruth Lewis for further opinion and collaboratively decide on the relevant response and timing;
- Where deemed to require veterinary assistance a Koala trap will be acquired from IKPS and installed by QFC;
- Bryan to ensure DES are immediately notified of the intended take of the animal;
- All Koalas will be taken to Moggill Koala Hospital for veterinary examination upon capture.

Employed Koala Trapping Technique

A dedicated Koala trap will be utilised in the event a Koala is deemed to require veterinary assistance. The trap used (Figure 1 and Figure 2) will be supplied by IKPS and consists of the following components:

- 1200mm high Core flute wall;
- Steel bracing pins/star pickets;
- Zip ties;
- Purpose built Koala trapping box with guillotine/footpad style closing mechanism.

The core flute wall is placed around the tree the koala is in to form a solid barrier, subsequently channelling the animal to the trapping box when it descends from the tree. Checks are conducted on the trap periodically between 6pm and 6am to check if the Koala has entered the trap. Once captured the Koala is transported within the trapping box to minimise handling and undue stress or interference. Notification is given immediately to Bryan Robinson who will provide transportation and inform IKPS of the pending arrival of the Koala to Moggill Koala Hospital.



Figure 1: Koala trap exterior



Figure 2: Koala trap interior

Grey-headed Flying Fox:

Although no Flying Fox camps or roosts were noted during the site survey, the transient nature of this species and the abundance of available feeding resources would see probability for the species to intermittently utilise the site.

The following recommendations are made for management of potentially occurring Grey-headed Flying Fox:

- Daily Inspection of trees assigned for removal be conducted to detect potential roosting Flying Foxes;
- Trees found to contain roosting Flying Foxes to be left standing and re assessed at the end of each days clearing. Being a transient species, the disturbance associated by the surrounding clearing is likely to see individuals fly off via its own volition come nightfall and not return the following morning, thus negating the need for direct disturbance.

Spotted-tail Quoll:

Although no dens or further evidence of Spotted-tail Quoll activity was detected during the survey, the species is known to occur historically in low densities in proximity to the site. Geomorphic structure and topography are considered favourable resulting in the following recommendations for further mitigation during the clearing activity:

- Inspection daily of identified geomorphic structure such as large boulders and rock accumulates, large hollow ground logs and log stock piles;
- Monitored dismantling of identified microhabitats by fauna spotters with machinery assistance.

Greater Glider:

The site contains hollow-bearing trees with the potential to support den localities for the Greater Glider. Suitable feeding resources are highly available given the availability of *Eucalyptus* leaves; on which the Greater Glider almost exclusively feeds on. The following recommendations are made for management of potentially occurring Greater Glider;

- Basal and drip zone searches for scats indicative of the presence of Greater Glider;
- Inspection daily of trees assigned for removal in areas of likely occurrence to detect Great Glider;
- Implementation of a soft felling technique where trees are determined to have potential for occupancy.

Rufous Fantail:

The site contains preferred habitat types with the potential to support nesting localities for the Rufous Fantail.

The following recommendations are made for management of potentially occurring Rufous Fantail:

- Inspection daily of trees assigned for removal in areas of likely occurrence to detect potentially roosting birds;
- Observation of mature birds to ensure individuals are out of immediate felling zones;
- Implementation of a soft felling technique where trees are determined to have potential nests.

Rainbow Bee-eater:

The site contains preferred habitat types with the potential to support nesting localities for the Rainbow Bee-eater.

The following recommendations are made for management of potentially occurring Rainbow Bee-eater:

- Inspection daily of trees assigned for removal in areas of likely occurrence to detect potentially roosting birds;
- Observation of mature birds to ensure individuals are out of immediate felling zones;
- Inspection of potential burrows for nesting activity

Collared Delma:

The presence of rocky habitat combined with *Eucalyptus* dominated woodlands presents known favorable habitat for the Collared Delma. The following recommendations are made for mitigation during clearing activity:

- Inspection daily of identified geomorphic structures including rocky outcrops, surface rock, leaf litter and bark exfoliates;
- Monitored dismantling of identified microhabitats by fauna spotters with machinery assistance.

Tusked Frog:

Habitats conducive to the presence of these amphibians are noted at several localities throughout the site. Subsequently, it is recommended that inspection of these microhabitats be conducted prior to the disturbance of microhabitat to detect potentially occupant frogs.

3. Wildlife Capture & Removal Plan

Relocation of native fauna is a strategy that may be required during the course of developmental works to adhere to the project's required nature conservation, animal welfare and human safety objectives.

In all circumstance where native fauna is required to be relocated it must be done so, or under the direct supervision of, a suitably licensed fauna spotter/catcher. A summary of the fauna capture, handling and relocations strategies to be implemented by the fauna spotter/catcher for fauna groups deemed likely, or possible, to occur on site are presented in *Table 2*.

Table 2: Fauna capture, handling and relocation strategy table

Animal Group	Capture and handling	Relocation
Lizards Geckoes Dragons Monitors	<ul style="list-style-type: none"> • Place one hand behind the head at the base of the quadrates and the other at the base of the tail behind the hind limbs; • Be cautious when handling smaller skinks and legless lizards as they may discard their tail; • Lizards and geckoes can be placed inside suitably sized calico bags • In the case of large monitor lizards keep the animal's ventral surface directly away from the body with the tail between the upper arm and torso. • Dragons and small monitors can be placed in suitably sized calico bags. Larger monitors to be placed in suitably sized crate 	<ul style="list-style-type: none"> • Place the lizard head first into a suitable holding crate for later release. <ul style="list-style-type: none"> ○ Dragons & monitors– release up trees or into heavy vegetation; ○ Water dragons – in the vicinity of riparian areas; ○ Skinks, Geckoes, Legless lizards – around creek margins.
Snakes	<ul style="list-style-type: none"> • Due to their mobile nature, large snakes generally do not require to be handled or relocated, with the exception of slow moving species (i.e. pythons) or smaller species; • Snakes should be identified and only moved if competent and safe to do so (see SOP006 Handling Venomous Snakes Procedure); • Do not attempt to catch a snake if you're not competent; • Injured snakes should be handled with suitable equipment. 	<ul style="list-style-type: none"> • Release in suitable habitat e.g. along creek lines for python and tree snakes • If feasible take them well away from clearance site to a suitable release location • Release discreetly away from high density suburban areas
Small Mammals	<ul style="list-style-type: none"> • Place a gloved hand around the whole animal in the case of small mammals (melomys or rats), • Do not handle rodents by the tail as this will cause damage to the tail sheath • Place the animal in calico bag in a cool place for later relocation. • Minimise holding time to avoid animal gnawing through bags and escaping 	<ul style="list-style-type: none"> • Release animal into area suitable to its habitat requirements. Ensure plenty of cover is available.

Animal Group	Capture and handling	Relocation
<p>Glider Family</p>	<ul style="list-style-type: none"> Place gloved hands around the animal at initial capture; Place the glider(s) into a calico bag or suitable animal crate ensuring family groups are kept together for all-inclusive release; Place in a cool dry area during the day. When using calico bags ensure the bag is hung and well ventilated Where possible contain gliders within hollow by plugging openings with a towel or calico bag 	<ul style="list-style-type: none"> Release glider into habitat with natural hollows and canopy cover; When releasing a family group with more than one furred young (being carried on the back) either: <ul style="list-style-type: none"> Divide young between parents as a mother is unlikely to carry more than one young, Place young in elevated hollow with parents and allow them to move away in their own time. Place animal in bag at the base of the selected tree, opening the bag wide and allowing the animal to leave the bag when it is ready. Relocate hollow (with gliders inside) to suitable habitat and cover lightly with foliage so that the gliders can move away of their own accord and are protected from predators.
<p>Amphibians</p>	<ul style="list-style-type: none"> Amphibians should be handled only when necessary and handling times should be kept to a minimum to help prevent: <ul style="list-style-type: none"> Removal of the protective mucous layer covering the skin of amphibians; To prevent handling stress induced by changes in their body temperature; Risk of spreading pathogens and parasites. Amphibians from different sites need to be kept isolated from each other, and need to be kept in different containers or bags; Any dead or sick amphibians need to be quarantined from other amphibians. <p>Amphibians can be handled utilising one of the following methodologies:</p> <ul style="list-style-type: none"> Bare handed – ensure hands are sterilized before handling and free from lotions, sunscreen etc. Gloves – disposable gloves desirable or disinfect gloves between handling different animals; Plastic bags – Single use lightweight plastic bags can be used to pick up and handle frogs; again, plastic bags should be disposed of before handling amphibians from a different site. All staff should be knowledgeable and familiar with the <i>Interim Hygiene Protocol for Handling Amphibians – Technical Manual (DEHP)</i> 	<ul style="list-style-type: none"> Always ensure that amphibians are kept moist until release. This can include storing in a designated container with moist soil or toweling or in a wet calico bag; Release into suitable adjacent vegetation that is typical of the species requirements; Suitable release locations include riparian vegetation, low-lying wetlands, alongside creek lines, hollow logs, dams and ponds; Amphibians from different sites need to be released in separate locations; Disinfection procedures in relation to amphibians need to be followed.

Animal Group	Capture and handling	Relocation
Macropods	<ul style="list-style-type: none"> Capture and restraint of macropods carries a high risk of injury and fatal hyperthermia/myopathy syndrome, and must not be performed by inexperienced personnel, or without appropriate equipment and sedation. Capture and restraint of healthy macropods (other than pouch young) must be performed using sedation or anaesthesia due to the high risk of developmental myopathy, and other capture and restraint-associated conditions. Sedative and anaesthetic drugs may only be used under direct supervision of a registered veterinarian, or by appropriately licensed persons (Hanger & Nottidge, 2009). 	<ul style="list-style-type: none"> Release animal into suitable to its habitat requirements. Ensure plenty of cover is available. Macropods are to be released within the range of normal movement from their place of origin. E.g. a Kangaroo can be released within 100 km of its origin, based on its capacity to travel long distances. Monitor animals to ensure adequate recovery if sedated.
Microbats	<ul style="list-style-type: none"> Only vaccinated persons are to handle bats If possible, plug the hollow opening with a bag or towel and ask the operator to cut the hollow from the tree; Always wear gloves when handling bats. If not contained within a hollow, place bats inside a calico bag and hang upright in a cool place 	<ul style="list-style-type: none"> Relocate hollow (with bats inside) to suitable habitat and cover lightly with foliage so that the bats can move away of their own accord and are protected from predators. Bats not contained within a hollow should be released as late as possible at the end of the day.
Possums	<ul style="list-style-type: none"> Use thick elbow length gloves when handling possums; Try to grip the animal behind the head near the shoulder blades and around the tail so that you have control of the animal; Keep fingers away from the mouth of the animal; Keep the animal's body facing away at all times; Transfer into a thick calico bag and then into a kitty crate. Place in a safe and shady place until you can relocate the animal. 	<ul style="list-style-type: none"> Release the possum into habitat with adequate hollows and cover; Place animal in bag at the base of a select tree, opening the bag and allow the animal to leave the bag when it is ready; When releasing a Ringtail Possum mother with more than one furred young (being carried on her back) it is unlikely that she will carry both young if highly stressed; <ul style="list-style-type: none"> Choose a smaller shrubby tree with vines or heavy foliage (so the adult can construct a drey easily) Watch the adult ascend the tree, it is possible she will only carry one young and so any additional young may be pushed from her back It may be necessary to take one or more of the young to a wildlife carer If possible place mother and young in a suspended hollow, cover lightly with foliage and allow the animals to move on their own accord. This way the mother can ferry young one at a time to a more suitable location.

Animal Group	Capture and handling	Relocation
Birds	<ul style="list-style-type: none"> • Use gloves when handling larger birds • Use a towel to cover the bird and simultaneously restrain the bird and transfer into calico bag • With larger parrots and raptors, restrain head and legs and transfer into a kitty crate • Wrap chicks loosely in a towel and transfer to kitty crate, keep in a warm location. 	<ul style="list-style-type: none"> • Relocate adult birds in suitable habitat • Chicks should be referred to wildlife carer
Koalas	<p>Movement of Koalas is heavily legislated in South East Queensland. Koalas are not to be captured or relocated without the prior consent of Department of Environment and Science (DES). Koalas should be left to move away of their own volition and trees are not to be felled while a Koala remains in occupancy. See SOP003 Koala Management Procedure for further information.</p>	

4. Wildlife Contingency Plan

In the event sick, injured or orphaned protected animals are encountered during the course of the project they shall be administered to in accordance with the *Code of Practice Care of Sick, Injured or Orphaned Protected Animals in Queensland* under the *Nature Conservation Act 1992*.

The stages in which injuries or illness are described under the code are as follows:

Critical: Injuries or illnesses that are life-threatening; for example, an animal that has been struck by a car and has serious head injuries.

Serious: Injuries or illnesses that might reasonably be expected to cause moderate pain (but are not immediately life-threatening), and the animal is not showing obvious signs of distress or pain, or significantly reduced mental activity; for example, an animal with a closed fracture but no other apparent injuries and that is alert and responsive.

Mild: The injuries or illness of an animal appear to cause little discomfort, pain or function loss and are not life-threatening (even without immediate vet treatment); for example, superficial cuts, superficial bruising or orphaned animals suffering from mild dehydration.

4.1 Basic Wildlife Care

If wildlife requiring care are encountered by the fauna spotter/catcher, they will be attended to in the manner set out by the guidelines provided in *Table 4*. Supplementary advice will be sought from a wildlife carer and/or veterinarian where required. QFC have previously utilised experienced local carer groups and vets. These are listed in *Table 3*.

Table 3: List of Local Vets & Wildlife Carer Groups

Vets			
Name	Location	Contact Number	Comments
RSPCA Wildlife Hospital	139 Wacol Station Road, Wacol	07 3426 9999	24 Hours/7days
Carers			
Name	Location	Contact Number	Comments
RSPCA Wildlife Hospital	139 Wacol Station Road, Wacol	07 3426 9999	24 Hours/7days
Ipswich Koala Protection Society	Ipswich	Ruth: [REDACTED] [REDACTED] Helen: [REDACTED] [REDACTED]	Specialize in koalas however rescue all wildlife
Ann De Jong	Gailes	[REDACTED]	Most fauna, particularly birds
Jessica	Park Ridge South	[REDACTED]	Birds
Natalie Scotcher	Goodna	[REDACTED]	Marsupials, macropods, birds
Ivan	Woodend	[REDACTED]	Most fauna, particularly birds

Table 4: Basic Wildlife Care

Birds	Reptiles & Amphibians	Mammals
<p>Egg</p> <p>Viable eggs must be kept warm until transferred to a suitable wildlife carer. It is necessary that the orientation of the eggs be maintained as fixed embryos may be lost. Keep wrapped in a pouch and on a heat source (where available). An ideal temperature is between 25-27° (DEHP 2013); where possible attempt to identify the species so the carer can be informed as the management of eggs can vary in accordance with species and stage of development.</p>	<p>Egg</p> <p>Viable eggs must be kept warm and stable until transferred to a wildlife carer. It is necessary that the orientation of the eggs be maintained as fixed embryos may be lost. Keep wrapped in pouch or towel and place into an animal crate in a safe location.</p>	<p>Neonate</p> <p>Unfurred animals need to be kept warm until transferred to a carer. Place into a pouch and onto a heat pad. Ideal temperature is between 31-34°. 25-27° is appropriate in most other cases (DEHP 2013). Regularly check the animal to ensure it is not overheating by observing for obvious signs of distress (i.e. panting, very warm to the touch, red blotched skin). Adjust the temperature where required. Seek further advice from the carer if you are unsure.</p>
<p>Chick</p> <p>Make sure the animal is correctly identified as different species often have very different requirements. Place chicks into a pouch/towel onto a heat source maintained around 31-34° (only if they have not fledged) and keep in an animal crate until transferred to a carer.</p>	<p>Juvenile</p> <p>Place animals in a suitable lined crate and keep covered in a dark quiet place. Refer to the wildlife contact list in your QFC Folder for a carer who specialises in reptiles.</p>	<p>Juvenile</p> <p>Place into a lined crate and keep covered in a dark and quiet location.</p>
<p>Adult</p> <p>Keep adult birds in a lined animal crate or cage and covered in a quiet area.</p>	<p>Adult</p> <p>Place animals in a suitable lined crate and keep covered in a dark quiet place. Refer to the wildlife contact list in your QFC Folder for a carer who specialises in reptiles.</p>	<p>Adult</p> <p>Place into a lined crate and keep covered in a dark and quiet location.</p>
<p>Feeding</p> <p>Providing food and water is generally not required during short periods (2-3 hrs) though this should be reconsidered if animals need to be held longer. Consult the vet and/or carer for further advice on how to proceed.</p>	<p>Feeding</p> <p>Newly hatched reptiles may require feeding if kept overnight. Consult with QFC for further advice. Snakes and turtles will not require feeding but water should be made available.</p>	<p>Feeding</p> <p>Providing food and water is generally not required during short periods (2-3 hrs) though this should be reconsidered if animals need to be held longer. Consult the carer for further advice on how to proceed.</p>

4.2 First Aid

Animals suffering from serious injuries or illness encountered on the project should be passed on to veterinary care as soon as possible. In the interim a licensed fauna spotter/catcher can provide first aid for the animal and organise suitable transportation.

If a seriously sick or injured animal is encountered the fauna spotter/catcher should:

1. Keep the animal calm by placing into an animal crate and keeping it covered in a dark and quiet location. Isolate any nearby threats such as domestic animals or predators.
2. Quickly and thoroughly inspect the animal for trauma. If the injuries are not serious enough to require euthanasia administer the basic first aid as a minimum (but only if capable to do so)

Representative first aid that may be administered by a fauna spotter/catcher is provided in *Table 5*.

Table 5: Wildlife First Aid

Ailment	First Aid
Bleeding	Using material that is clean and sanitary, apply direct pressure to the affected area. Bandages can be used to hold material in place until vet treatment can be sought. Veterinarian treatment should be sought for further assistance as soon as possible.
Broken limbs	House the animal in a suitably sized animal crate with towels under the animal for comfort. Keep the crate covered and in a quiet location. Proceed to a veterinarian for further assistance as soon as possible.
Injured tails	House the animal in a suitably sized animal crate with towels under the animal for comfort. Keep the crate covered and in a quiet location. Proceed to a veterinarian for further assistance as soon as possible.
Concussions	House the animal in a suitably sized animal crate with towels under the animal for comfort. Keep the crate covered and in a quiet location. Proceed to a veterinarian for further assistance as soon as possible.

4.3 Euthanasia

Section 12 of the code details how to determine when euthanasia is required and how to euthanise animals ethically. The following standards as listed under the code are to be followed when assessing whether euthanasia is required:

- The euthanasia of wildlife where required is to be provided for by all wildlife rehabilitators;
- Euthanasia without exception is to be carried out when:
 - Significant pain or suffering is to be alleviated where it is not able to be managed by a vet;
 - Further treatment is **not** practical, or recovery is **not** expected in a way in which the animal can be successfully rehabilitated back to the wild;
 - Resources are not available to provide appropriate care or an acceptable quality of life throughout the likely rehabilitation period.
- Animals that are suffering and have a poor prognosis for survival must be euthanised rather than left to die from the injury or illness. Failure to undertake appropriate action is a breach of the *Animal Care and Protection Act 2001*.
- Unless permission has been granted by the Department of Environment and Heritage Protection for the animal to enter the Queensland Species Management Plan (QSMP) or otherwise advised by the DEHP Wildlife Management Director, animals must be euthanised when:
 - An orphaned animal is not viable or likely to be rehabilitated;
 - No suitable release locations are available;
 - The ability for an animal to reproduce is lost due to an injury, disease or surgical procedure;
 - The ability to move freely or normally (i.e. run, climb, crawl, hop, fly or swim) is permanently impaired. Examples are: a missing or impaired limb, wing, foot or tail that would significantly impair the animal's ability to survive in the wild;
 - The ability to sense environment (i.e. see, smell, feel, taste or hear) is permanently impaired. For example: missing or injured organ such as an eye, ear or nose that would significantly impair the animal's ability to survive in the wild;
 - The ability to catch, find or handle food is permanently impaired;
 - Its advanced age renders it unlikely to survive in the wild.

5. Wildlife Storage & Housing Plan

For wildlife requiring storage, temporary housing and transportation to release sites and/or to a wildlife carer or veterinarian, guidelines set out in the Code of Practice and QFC's Animal Ethics Permit will be followed.

Dependent on the species of animal and condition of the animal, temporary storage and housing of animals will be as follows:

Calico bags: Calico bags will be used to temporarily house fauna such as snakes, lizards and small mammals (including microbats), Bags will range in size from 200mm x 200mm to 600mm x 1800mm. Bag selection will vary according to the size of animals to be placed in them. In the case of snakes, a "hoop bag" may be used to facilitate capture. The hoop is approximately 500mm in diameter attached to a handle. The bag is placed around the hoop ensuring a greater area in which to pass the snake through into the bag.

Plastic holding tubs/containers/animal crate: Plastic holding tubs/containers/crates will be used to temporarily house fauna such as snakes, lizards, frogs, small mammals and birds (Plastic holding tubs/containers/crates will range in size from 150mm x 150mm x 120mm to 500mm x 400mm x

400mm. Plastic holding tubs/containers/crates selection will vary according to the size and number of animals to be placed in them.

In addition to this, material is used to line the tub/crate to ensure the animals won't lose its footing. This may include folded towels on the bottom of the crate or a fitted pad. These items are washed between each use to reduce the spread of disease/parasites.

Section 9 of the Code relates to how transportation of wildlife should be undertaken. The following will be adhered to when transporting wildlife to the vet and/or carer:

- Additional pain or distress of the animal is to be avoided;
- Wildlife should only be transported when necessary;
- Transport containers must be appropriate for the species (size, strength and behaviour of species being moved);
- Transport containers must be designed and maintained in a way as to:
 - Prevent injury;
 - Prevent escape;
 - Prevent rolling/tipping during transit;
 - Prevent damage to plumage (feathers);
 - Be hygienic;
 - Minimise stress and
 - Be suitably ventilated.

- Non-compatible species must not be transported in a manner which allows for visual or physical contact;
- Containers must be secured to prevent movement and provide protection from direct sunlight, wind and rain;

Venomous, dangerous or potentially disease transmitting animals must be clearly marked with warning labels (i.e. Caution – ‘venomous snake’ or ‘live bat’) and be locked and secured.

6. Wildlife Release & Disposal Plan

Retained bushland lies to the west and south of the clearing area and contains similar habitat types suitable for species likely to be encountered when clearing.

With the exception of highly mobile species such as birds and macropods where natural relocation may occur, it will be necessary for the fauna spotter/catcher to translocate the majority of fauna found into suitable habitat within these areas. A map of the intended release site can be viewed in Appendix B.

In regard to all fauna capture and disposal activities conducted on the project the following records will be made:

- a. species;
- b. identification name or number;
- c. sex (M, F, or unknown);
- d. approximate age or age class (neonate, juvenile, sub-adult, adult);
- e. time and date of capture;
- f. method of capture;
- g. exact point of capture (GPS point);
- h. state of health;
- i. incidents associated with capture likely to affect the animal;
- j. veterinary intervention or treatments;
- k. time held in captivity;
- l. disposal (euthanasia, re-release, translocation etc);
- m. date and time of disposal;
- n. details of disposal (if released, exact point of release GPS);
- o. for released animals: distance in metres from point of capture to point of release.

7. Post Works Impact Minimisation

As the project area will be cleared of all vegetation, post works impact monitoring and/or impact minimisation is deemed not necessary.

In the event that fauna is found on site post-works, it is recommended personnel contact QFC and a licensed and experienced wildlife consultant can be dispatched to remove and relocate the animal should it be necessary. QFC wildlife consultants are available 24/7 for fauna related call-outs in relation to this project.

It is recommended that if any fauna, such as Kangaroos and Wallabies, are noted in the wider area and appear distressed post-works that QFC be contacted to further assess the situation.

8. Assessment, Conclusion and Fauna Management Recommendations

A number of conclusions and recommendations are presented, with the specific intention of providing a comprehensive management structure to facilitate minimal impact to fauna during the clearing of vegetation and subsequent disturbance of habitats. The directives given by Fauna Spotter Catchers should embrace a “best practice” approach which includes implementation of proven specific management techniques for identified habitat types and compliance with legislation relevant to the activity.

Fauna management is presented here specific to EVNT & SLC fauna, general terrestrial and arboreal fauna and aquatic fauna. Although each is treated separately, overlap does occur within target techniques providing a comprehensive approach for target species of all conservation significance.

9. References

Curtis, LK, Dennis, AJ, McDonald, KR, Kyne, PM & Debus, SJS (2012), *Queensland's Threatened Animals*, CSIRO Publishing, Victoria.

Department of Environment & Heritage Protection, *Interim Hygiene Protocol for Handling Amphibians*, Technical Manual

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

Hanger, J & Nottidge B (2009), *Draft Queensland Code of Practice for the Welfare of Wild Animals Affected by Land-Clearing and other Habitat Impacts and Wildlife Spotter/Catchers*, Australian Wildlife Hospital, Australia Zoo, Beerwah.

Queensland Fauna Consultancy (2022) *Fauna Spotter Catcher Pre-clearance and Survey and Wildlife Protection & Management Plan, Springfield Rise – Village 18, Springfield, Queensland*, (QFC FHA WPMP Shadforth Springfield Rise July 2022.doc).

References for nomenclature

Cogger, H. (2014) *Reptiles & Amphibians of Australia*. 7th edition, Collingwood: CSIRO Publishing.

Leiper, G., Glazebrook, J., Cox, D. and Rathie, K. (2008) *Mangroves to Mountains: A Field Guide to the Native Plants of South-east Queensland*, Browns Plains: Logan River Branch Society for Growing Australian Plants.

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

Morcombe, M. (2003) *Field Guide to Australian Birds*. Archerfield: Steve Parish Publishing

Wilson, S. (2015) *A Field Guide to Reptiles of Queensland*. 2nd edn, Sydney: New Holland Publishers.

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

Simpson, K. and Day, N. (2004) *Field Guide to the Birds of Australia*, Camberwell: Penguin Group Australia.

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

Vanderduys, E. (2012) *Field Guide to the Frogs of Queensland*. Collingwood: CSIRO Publishing.

Wilson, S. (2015) *A Field Guide to Reptiles of Queensland*. 2nd edn, Sydney: New Holland Publishers.

10. Appendix A: Intended Direction of Clearing



11. Appendix B: Intended Release Sites for Wildlife



Woogaroo Heights

Environmental Pre-Start Checklist

Attachment 8

Contractor Environmental Awareness Acknowledgement Notice

Woogaroo Heights

ENVIRONMENTAL AWARENESS

CONTRACTOR ACKNOWLEDGEMENT

I, **Tony Hooper**, the Contractor (or the Contractor Representative), appointed by Lendlease Communities, acknowledge receipt and acceptance of the Lendlease Communities rules and policies pertaining to undertaking clearing work only in approved areas as outlined in the **V18 Environmental Pre-clearance Checklist** and attachments. By signing below, I acknowledge that there are mechanisms in place to ensure all material provided relating to approved works extents will be read and understood by all site contractors and sub-contractors prior to commencing works on site.

Shadforth

Company Name (Please print)

Signature (Contractor / Contractor Representative)

Tony Hooper

Name (Please print)

Construction Manager

Title / Position

28/10/2021

Date

Woogaroo Heights

Environmental Pre-Start Checklist

Attachment 9

Pre-start evidence

Jordan Bachmann

From: Nicholas Gill <[REDACTED]>
Sent: Thursday, 6 October 2022 3:54 PM
To: Stephen Oddo; Duffy, Tom; Jordan Bachmann; Philip Tian; Karen Roberts
Cc: BN182372 - SR V17 & 18; Graham Coles; Brenden Adams; Rebekah Wilhelmi; Tony Hooper; Grant Ziarno; Cullen, Katie; Tony Luck
Subject: Springfield Rise V18 BEW OPW Pre-Start 7530/2022/OW
Attachments: QFC FHA WHIMP Shadforth Springfield Rise Oct 2022.pdf; QFC FHA WPMP Shadforth Springfield Rise Oct 2022.pdf; IMG_7572.jpg; IMG_7573.jpg; IMG_7574.jpg; BN182372-J2-M049 V18 BEW Pre-Start.pdf

Hi All,

Please find attached meeting minutes from yesterday's pre-start, please let me know whether there is anything you want added to the minutes.

I have also attached the QFC pre-clearance fauna report, as well as a few photos of the tree protection signs as requested. ESC plans are still being reviewed.

I will shortly send an invite for an inspection on the biobasin outlet pipes for Wednesday 19th October, which should give time to clear and survey the location of outlets, rock protection and koala fence alignment. Could everyone forward on to who would be required to attend that inspection (Arborist, Council's Environment team, I will forward to Engeny for geomorphology input).

One thing that wasn't discussed was the condition 8b) which requires signoff from ICC's property branch for works in the white rock conservation estate. [@Karen Roberts/@Philip Tian](#) could you please confirm the best contact to close out this condition?

Regards,

Nick Gill

Senior Civil Engineer

Northrop Consulting Engineers

T [REDACTED] M [REDACTED]
Level 9, 200 Mary Street Brisbane QLD 4000
www.northrop.com.au





SITE INSPECTION MEMO: M049

Job No: BN182372 **Job Name:** Spring Mountain V18 7530/2022/OW **Date:** 5/10/2022

To	Copy	Company	Attended
✓		Shadforth	Stephen, Grant
✓		Lendlease	Tom
✓		Council	Philip Tian, Karen Roberts
✓		Saunders Havill	Jordan

Reason For Visit: V18 BEW Pre-Start **Inspected:** Nick Gill, Brenden Adams

Item No.	Notes	Action
M049.1	Pre Clearance Fauna report will be through night of 5/10/22, shads to chase up	Shadforth
M049.2	Signage photos to be sent through for reference	Shadforth
M049.3	Outlets from biobasin not to be cleared until inspected by Council, Engeny and Saunders in roughly 2 weeks time	All
M049.4	Delap survey from biobasin to creek to be undertaken by Shadforths	Shadforth
M049.5	Trees marked to be removed but that close to edge of clearing to be inspected and determined if they can be retained, Shads to coord arborist and QFC	Shadforth
M049.6	Boulder wall form 15 to be updated to reference all stages correctly	Shadforth
M049.7	trees that were habitat trees that are marked to be removed to be inspected and felled carefully to re-use as habitat locations in the bush, Arborist to supervise, SH to review	Shad/SH
M049.8	Post Clearing report to be provided within 5 days of completion of clearing	Shadforth
M049.9	Clearing will occur clockwise around the site	
M049.10	ESC Issues - 1. concerns on the Stage 42 area heading north, catchment marked as "no sediment basin, this will need to be taken into the ESC control system 2. Shouldn't allow V17 basins to be used as ESC, has to be treated before being let into pipeworks in P1, P2 and P3 Shads to get Chris Hutton to review and Northrop send to Philip ASAP	Shads/Nrop
M049.11	Civil approval will supersede BEW but might need an On-Maintenance inspection of the works outside of 1-4a pending approvals and completion of BEW	Note
M049.12	4a RFI has been received, to be reviewed by Northrop	Nrop
M049.13	Fauna photo monitoring locations can be amended at On-Maintenance, Saunders Havill to propose locations prior to On-Maintenance	SH/Council
M049.14	External rock chute needs to be inspected by Council's Environmental team who will discuss with Engeny after clearing, Stephen confirmed that 2 weeks likely until trees are down and pipe locations are pegged. Organise meeting now	Shads/Nrop

Site safety remains the responsibility of the contractor. Any inspection carried out by Northrop Consulting Engineers Pty Ltd does not relieve the Contractor of their responsibility to construct the works in accordance with the drawings and specifications. Statements set out here do not relieve the Contractor of his obligations to obtain approvals from authorities having jurisdiction over the works. This does not constitute authorisation for a contract variation unless stated in the instruction. No claim will be accepted unless approval of variation is

Appendix C

Fauna spotter catcher post-works report
– October 2022

Fauna Management and Spotter/Catcher Services Report

Springfield Rise (Village 18)
London Avenue, Spring Mountain
Report prepared for Shadforth Civil Pty Ltd



Date:	24/10/2022
Title:	Fauna Management and Spotter/Catcher Services Report Springfield Rise (Village 18) – London Avenue, Spring Mountain
Author/s:	Bryan Robinson, Jasmine Zeleny
Reviewed by:	Bryan Robinson
Field personnel:	Holly Morecroft
Status:	Final Report
Filed as:	QFC FMR Shadforth Springfield Rise V18 Oct 2022.doc

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1 Introduction

Qld Fauna Consultancy Pty Ltd has been engaged by Shadforth Civil Pty Ltd to conduct Fauna Spotter/Catcher and Fauna Management activities for works at Springfield Rise (Village 18) – London Avenue, Spring Mountain.

All activities were conducted under the provisions of Rehabilitation Permit (WA0026789) issued to Queensland Fauna Consultancy Pty Ltd by the Department of Environment and Science (DES), approving the observation and relocation of protected animals.

This report covers clearance activities undertaken in October 2022.

2 Methodology

2.1 Clearance Investigations

A standard set of observational and active searching techniques were employed each day of 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 2017* 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 10th October 2022

- Pre-clearance activities carried out (refer to Methodology) at Springfield Rise Village 18 – London Avenue, Spring Mountain
- Vegetation clearance carried out at Springfield Rise Village 18 – London Avenue, Spring Mountain
- 1 tree flagged
- One personnel in attendance

Arboreal Microhabitats: No. flagged tree/s felled: 6

Nest (N) Y N Hollows (H) Y N Arboreal termitaria (ATM) Y N

Other: Exfoliating bark, fissure

No. & size of hollow/s (mm): 0-49: 1, 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, terrestrial termitaria

Aquatic habitat/s: Dam Y N Creek Y N Wetland Y N

No Fauna Found

Tuesday 11th October 2022

- Pre-clearance activities carried out (refer to Methodology) at Springfield Rise Village 18 – London Avenue, Spring Mountain
- Vegetation clearance carried out at Springfield Rise Village 18 – London Avenue, Spring Mountain
- 0 trees flagged
- One personnel in attendance

Arboreal Microhabitats: No. flagged tree/s felled: 3

Nest – inactive (N) Y N Hollows (H) Y N Arboreal termitaria (ATM) Y N

Other: Exfoliating bark, fissure

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, timber stockpile, terrestrial termitaria

Aquatic habitat/s: Dam Y N Creek Y N Wetland Y N Other: Gully

No Fauna Found

Wednesday 12th October 2022

- Pre-clearance activities carried out (refer to Methodology) at Springfield Rise Village 18 – London Avenue, Spring Mountain
- Vegetation clearance carried out at Springfield Rise Village 18 – London Avenue, Spring Mountain
- Refer to **Fauna Register** for fauna found
- 1 tree flagged
- One personnel in attendance

Arboreal Microhabitats: No. flagged tree/s felled: 4

Nest – inactive (N) Y N Hollows (H) Y N Arboreal termitaria (ATM) Y N

Other: Exfoliating bark, fissure

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, terrestrial termitaria, timber stockpiles

Aquatic habitat/s: Dam Y N Creek Y N Wetland Y N Other: Gully

Thursday 13th October 2022

- Pre-clearance activities carried out (refer to Methodology) at Springfield Rise Village 18 – London Avenue, Spring Mountain
- Vegetation clearance carried out at Springfield Rise Village 18 – London Avenue, Spring Mountain
- Refer to **Fauna Register** for fauna found
- 1 tree flagged
- One personnel in attendance

Arboreal Microhabitats: No. flagged tree/s felled: 5

Nest – inactive (N) Y N Hollows (H) Y N Arboreal termitaria (ATM) Y N

Other: Exfoliating bark, fissure

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

Aquatic habitat/s: Dam Y N Creek Y N Wetland Y N Other: Gully

Friday 14th October 2022

- Pre-clearance activities carried out (refer to Methodology) at Springfield Rise Village 18 – London Avenue, Spring Mountain
- Vegetation clearance carried out at Springfield Rise Village 18 – London Avenue, Spring Mountain
- Refer to **Fauna Register** for fauna found
- 0 trees flagged
- One personnel in attendance

Arboreal Microhabitats: No. flagged tree/s felled: 6

Nest (N) Y N Hollows (H) Y N Arboreal termitaria (ATM) Y N

Other: Exfoliating bark, fissure

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, timber stockpiles

Aquatic habitat/s: Dam Y N Creek Y N Wetland Y N Other: Gully

Saturday 15th October 2022

- Pre-clearance activities carried out (refer to Methodology) at Springfield Rise Village 18 – London Avenue, Spring Mountain
- Vegetation clearance carried out at Springfield Rise Village 18 – London Avenue, Spring Mountain
- 1 tree flagged
- One personnel in attendance

Arboreal Microhabitats: No. flagged tree/s felled: 5

Nest - inactive (N) Y N Hollows (H) Y N Arboreal termitaria (ATM) Y N

Other: Exfoliating bark, fissure

No. & size of hollow/s (mm): 50-99: 1, 100-149: 1

Terrestrial Microhabitats:

Hollow logs Y N Woody debris Y N Rock piles Y N Burrows Y N

Other: Dense leaf litter, bark exfoliations, terrestrial termitaria

Aquatic habitat/s: Dam Y N Creek Y N Wetland Y N Other: Gully

No Fauna Found

Monday 17th October 2022

- Pre-clearance activities carried out (refer to Methodology) at Springfield Rise Village 18 – London Avenue, Spring Mountain
- Vegetation clearance carried out at Springfield Rise Village 18 – London Avenue, Spring Mountain
- Refer to **Fauna Register** for fauna found
- 2 trees flagged
- One personnel in attendance

Arboreal Microhabitats: No. flagged tree/s felled: 8

Nest - inactive (N) Y N Hollows (H) Y N Arboreal termitaria (ATM) Y N

Other: Exfoliating bark, fissure

No. & size of hollow/s (mm): 50-99: 2, 100-149: 1, 200-249: 1

Terrestrial Microhabitats:

Hollow logs Y N Woody debris Y N Rock piles Y N Burrows Y N

Other: Dense leaf litter, bark exfoliations, terrestrial termitaria

Aquatic habitat/s: Dam Y N Creek Y N Wetland Y N Other: Gully

Tuesday 18th October 2022

- Pre-clearance activities carried out (refer to Methodology) at Springfield Rise Village 18 – London Avenue, Spring Mountain
- Vegetation clearance carried out at Springfield Rise Village 18 – London Avenue, Spring Mountain
- 0 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: Exfoliating bark, fissure

No. & size of hollow/s (mm): 0-49: 1, 100-149: 1

Terrestrial Microhabitats:

Hollow logs Y N Woody debris Y N Rock piles Y N Burrows Y N

Other: Dense leaf litter, terrestrial termitaria

Aquatic habitat/s: Dam Y N Creek Y N Wetland Y N

No Fauna Found

4 Fauna Register

Collectors Name	Date	Time	Capture Location	Capture Location		Count Type	Status	Common Name - Scientific Name	Count	Release Details			Actions				Release Location Description	Comments
				Latitude	Longitude					Date	Latitude	Longitude	R1	R2	D	I		
Holly Morecroft	12/10/2022	15:53	Springfield Rise (V18) London Avenue, Spring Mountain	-27.6854	152.8802	Alive	Least Concern	Common Brushtail Possum <i>Trichosurus vulpecula</i>	1	12/10/2022	NA	NA		C				Found in 50-99mm Hollow. Juvenile animal - taken to carer
Holly Morecroft	13/10/2022	07:49	Springfield Rise (V18) London Avenue, Spring Mountain	-27.6854	152.8802	Alive	Least Concern	Lace Monitor <i>Varanus varius</i>	1	13/10/2022	NA	NA	X					Self-relocated to vegetation outside of clearing area
Holly Morecroft	14/10/2022	09:00	Springfield Rise (V18) London Avenue, Spring Mountain	-27.6831	152.8787	Alive	Least Concern	Eastern Water Dragon <i>Intellagama lesueurii</i>	2	14/10/2022	NA	NA	X					Self-relocated to vegetation outside of clearing area
Holly Morecroft	14/10/2022	09:37	Springfield Rise (V18) London Avenue, Spring Mountain	-27.6828	152.8782	Alive	Least Concern	Graceful Tree Frog <i>Litoria gracilentia</i>	1	14/10/2022	-27.6831	152.8785	X					Into vegetation near creek line

Holly Morecroft	14/10/2022	11:38	Springfield Rise (V18) London Avenue, Spring Mountain	-27.6825	152.8781	Alive	Least Concern	Graceful Tree Frog <i>Litoria gracilentia</i>	1	14/10/2022	-27.6834	152.8785	X					Into vegetation near creek line
Holly Morecroft	14/10/2022	14:22	Springfield Rise (V18) London Avenue, Spring Mountain	-27.6821	152.8769	Alive	Least Concern	Northern Brown Bandicoot <i>Isoodon macrourus</i>	1	14/10/2022	NA	NA	X					Self-relocated to vegetation outside of clearing area
Holly Morecroft	14/10/2022	15:49	Springfield Rise (V18) London Avenue, Spring Mountain	-27.6818	152.8768	Deceased	Least Concern	Yolk-bellied Snake-skink <i>Ophioscincus ophioscincus</i>	1	NA	NA	NA			X			Killed instantly by excavator
Holly Morecroft	17/10/2022	14:57	Springfield Rise (V18) London Avenue, Spring Mountain	-27.6800	152.8813	Alive	Endangered	Koala <i>Phascolarctos cinereus</i>	1	13/10/2022	NA	NA					X	Exclusion zone was established and flagged off, and operators alerted to its presence. Koala was monitored for signs of disturbance and was left overnight for self-relocation.

5 Conclusion

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

One Koala was observed during clearance. An exclusion zone was established, and the Koala was left to self-relocate via its own volition before clearing activities were resumed in that area of the site. Other fauna found during clearance works were relocated (or self-relocated) to adjacent localities comprising suitable refugia and feeding resources consistent with individual species requirements. Young were taken to a certified wildlife carer or veterinary clinic.

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

Anstis, M. (2013) *Tadpoles and Frogs of Australia*, Sydney: New Holland Publishers.

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.

Vanderduys, E. (2012) *Field Guide to the Frogs of Queensland*. Collingwood: CSIRO Publishing.

Wilson, S. (2015) *A Field Guide to Reptiles of Queensland*. 2nd edn, Sydney: New Holland Publishers.

7 Appendix A: Fauna Photos



Common Brushtail Possum
Trichosurus vulpecula



Graceful Tree Frog
Litoria gracilentia



Koala
Phascolarctos cinereus

Appendix D

The Meads offset site summary of activities Year 2



25 MAY 2023

Via email: 9 Thompson St Bowen Hills Q 4006

MEADS OFFSET SITE ANNUAL ACTIONS SUMMARY 2022-2023 (YEAR 2)

Dear Jordan

This briefing report outlines the key management actions and initiatives undertaken by New Ground Conservation Pty Ltd over the portion of Lot 18 CA31640 ('Meads offset site') being delivered as an environmental offset on behalf of Lendlease Communities (Springfield) Pty Ltd during the 2022-2023 reporting period (29/3/2022 – 28/3/2023).

The Meads offset is being delivered pursuant to the Notice of Approval for Woogaroo Heights master planned residential development, Springfield, Queensland (EPBC 2017/7875) under Sections 130(1) and 133(1) of the Environmental Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) ('the Approval') (**Attachment 1**). Consistent with condition 3a of the Approval, the Meads offset is concerned with provision of koala (*Phascolarctus cinereus*) and grey headed flying-fox (*Pteropus poliocephalus*) habitat offsets over the 132 ha portion of the subject site that has been legally secured as a Category A area via a Voluntary Declaration made under the Vegetation Management Act 1999 (Qld) (**Attachment 2**).

Key management considerations, actions and outcomes for the reporting period are summarised in **Table 1** below.

TABLE 1: MANAGEMENT CONSIDERATIONS, ACTIONS AND OUTCOMES SUMMARY REPORTING PERIOD 2022-2023

CATEGORY	REPORTING PERIOD ACTIVITIES SUMMARY
Vegetation Management	<p>Unusually high rainfall over the year made the site inaccessible for much of the year owing to ongoing boggy tracks. Conditions led to a difficult management year as conditions favoured weed growth and heavily limited weed control (and pest animal) management efforts while damaging site infrastructure.</p> <p>Several efforts were made between New Ground and vegetation management contractor LRB Pty Ltd between 30 March 2022- 15 September 2022 to organise a site meeting to plan for broadscale autumn and spring weed management works. However, rain events prevented execution of these weed management campaigns.</p> <p>Targeted weed management work was undertaken during the reporting period using a combination of spray rig and tractor. Works were concentrated in areas of rapid <i>Lantana camara</i> growth through the preceding wet period at areas accessible under the conditions (generally in vicinity of the main site track network).</p> <p>New Ground engaged a new vegetation management contractor (Total Environmental Concepts Pty Ltd) on 2 November 2022 to undertake weed management works incorporating tracked bobcats with custom-built lantana mulching attachments + spray crews. Works were booked for 30 January 2023 and were postponed due to poor weather. Re-booked for March April 2023.</p>
Site Management	<p>The rain events of 2022 resulted in washout/damage to tracks and at times overtopping of the weir at the offset site's entrance. Track repair works were undertaken during the reporting period; with significant track repair/improvement works undertaken Nov 2022-January 2023. These track works allowed for re-instatement of key site management tracks in readiness for broadscale weed management works and supplementary track site weed management works.</p>
Vermin Management	<p>Vermin management works were also hampered by conditions, with hunters unable to drive on the site during the reporting period. Rather, hunters walked/biked over the site. The inability to drive over the site proved a disadvantage to hunters during the period.</p> <p>Three (3) vermin hunters (2 x equipped with bows + 1 equipped with a rifle) worked the site with wild dogs and deer the target. Hunting was undertaken in three (3) events as follows:</p> <p>Event 1 – 25th and 26th March (1 x bow hunter)</p> <p>Event 1- 9th and 10th April 2022 (2 x bow hunters)</p> <p>Event 2 - 19th, 20th and 21st April 2022 (2 x bow hunters)</p> <p>Event 3 - 23rd and 24th April 2022 (2 x hunters) No kills were made.</p>



MEADS OFFSET SITE ANNUAL ACTIONS SUMMARY 2022-2023 (YEAR 2)

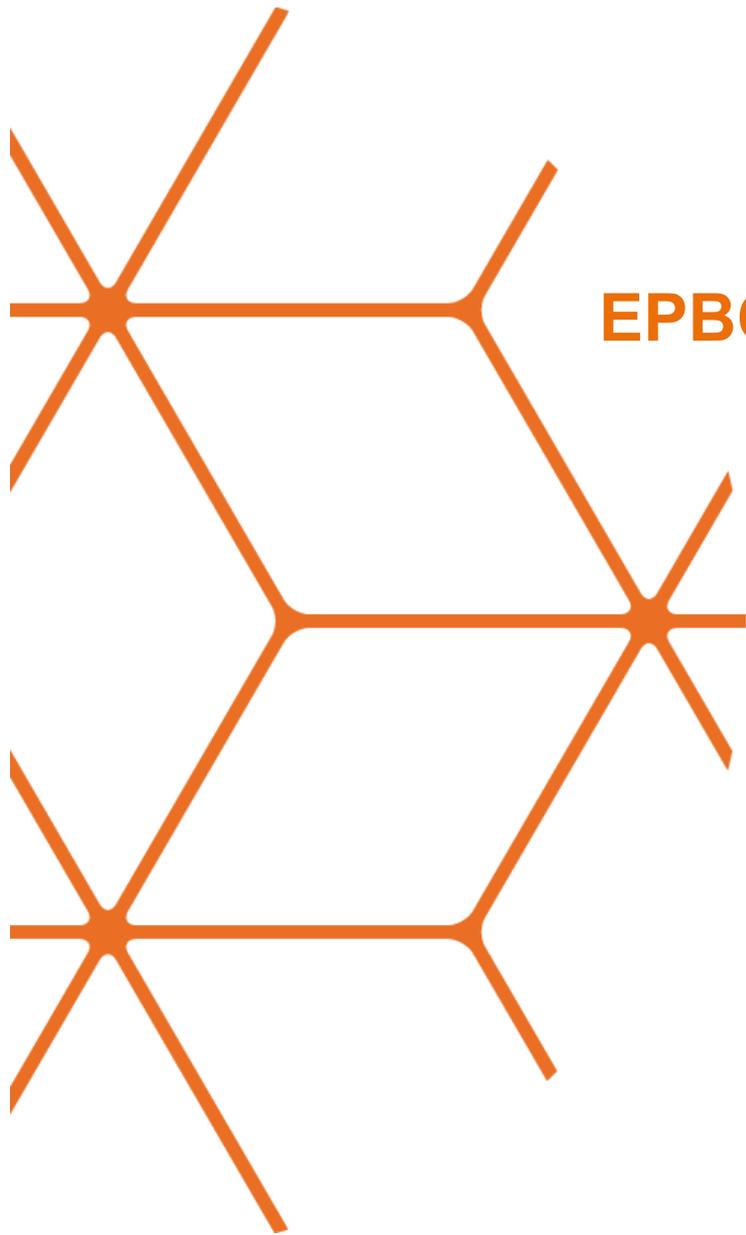
NGID-42-19 Version 0.21

Please do not hesitate to contact the undersigned should further information be required with respect to this report.

Kind Regards
New Ground

Nelson Wills
Director

No. of Attachments – 2: EPBC Act Approval Notice, VDec Notice (Category A (offset) Area



ATTACHMENT 1
EPBC Act Approval Notice



APPROVAL

**Woogaroo Heights master planned residential development, Springfield, Queensland
 (EPBC 2017/7875)**

This decision is made under sections 130(1) and 133(1) of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth). Note that section 134(1A) of the **EPBC Act** applies to this approval, which provides in general terms that if the approval holder authorises another person to undertake any part of the action, the approval holder must take all reasonable steps to ensure that the other person is informed of any conditions attached to this approval, and that the other person complies with any such condition.

Details

Person to whom the approval is granted (approval holder)	Lendlease Communities (Springfield) Pty Limited
ACN or ABN of approval holder	19 087 876 864
Action	To develop the Woogaroo Heights residential development located within the Greater Springfield Master Planned Development Area, approximately 10 kilometres east of the Ipswich Central Business District, Queensland [See EPBC Act referral 2017/7875].

Approval decision

My decision on whether or not to approve the taking of the action for the purposes of the controlling provision for the action is as follows.

Controlling Provisions

Listed Threatened Species and Communities	
Section 18	Approve
Section 18A	Approve

Period for which the approval has effect

This approval has effect until 2033.

Decision-maker

Name and position	Kim Farrant Assistant Secretary, Environment Approvals Queensland and Sea Dumping Branch Department of Agriculture, Water and the Environment
Signature	
Date of decision	30 November 2020

Conditions of approval

This approval is subject to the conditions under the EPBC Act as set out in ANNEXURE A.

ANNEXURE A – CONDITIONS OF APPROVAL

Part A – Conditions specific to the action

Development area

1. For the protection of the **Koala** and the **Grey-headed Flying-fox**, the approval holder must not **clear** more than 57.03 hectares of **Koala habitat** and **Grey-headed Flying-fox foraging habitat**. The approval holder must only **clear** within the **development area**.
2. For the protection of the **Koala** and the **Grey-headed Flying-fox** at the **development area**, the approval holder must:
 - a. Ensure that a **fauna spotter/catcher** is present during all **clearing** and **construction** activities and given sufficient authority to ensure that such activities do not cause injury or death of **Koalas**;
 - b. **Clear** in accordance with the *Nature Conservation (Koala) Conservation Plan 2017* under the *Nature Conservation Act 1992 (Qld)* to allow **Koalas** to safely move out of **clearing** areas and into connected areas of **Koala habitat**, and implement all provisions for **sequential clearing**;
 - c. Install temporary **Koala exclusion fencing** around any area of **construction** work, immediately after **clearing** and prior to the commencement of **construction** in that area, so as to prevent **Koalas** entering any area where **construction** is taking place. The **Koala exclusion fencing** around any **construction** area must remain in place until all **construction** activities within that fenced **construction** area are completed;
 - d. Implement measures to prevent dogs from entering the **development area** during **clearing** and **construction** to minimise the risk to **Koalas** of predation by domestic dogs at the **development area** and **adjacent conservation areas**. Such measures must include (but are not limited to) prohibition of workers bringing animals in to the **development area**;
 - e. Implement traffic calming measures and ensure that the speed of all vehicles on construction roads in the **development area** is no greater than 40 km/h at any time (except an emergency) so as to minimise the risk to **Koalas** of vehicle strike;
 - f. Construct roads consistent with Queensland's **fauna sensitive road design guidelines** to minimise the risk to **Koalas** of vehicle strike. In particular, on roads flanking **adjacent conservation areas** or waterways, or which cross waterways, vehicle speeds must be limited to 50 km/h, and **safe fauna movement solutions**, **fauna exclusion/koala proof fencing** and **local traffic management measures** must be implemented; and
 - g. Install prominent **Koala awareness signage** consistent with Queensland's **wildlife signing guidelines** prior to opening to motorists, any road where the presence of animals along the road path is well-known or expected, such as on roads flanking **adjacent conservation areas** or adjacent to **fauna movement solutions**.

Environmental Offset Requirements

3. To compensate for the **clearing** of 57.03 hectares of **Koala habitat** and **Grey-headed Flying-fox foraging habitat**, the approval holder must:
 - a. **Legally secure** a minimum of 132 hectares at **The Meads offset site** prior to undertaking any **clearing** at the **development area**;
 - b. Within 20 **business days** of **legally securing** **The Meads offset site**, provide the **Department** with written evidence demonstrating that **The Meads offset site** has been **legally secured** (e.g. **legal security documentation**), and the **shapefiles** of the **offset attributes**;

- c. Limit uses and permissible activities at **The Meads offset site** such that the value of **The Meads offset site** as **Koala habitat** and **Grey-Headed Flying-fox foraging habitat** cannot lawfully be reduced.
4. Within 6 months from the date of this approval, the approval holder must complete baseline surveys of the entire area at **The Meads offset site**. The baseline surveys must be conducted by a **suitably qualified field ecologist** in accordance with a scientifically valid, robust, and repeatable methodology and include details of the:
 - a. **Vegetation condition attributes** for each **Regional Ecosystem**;
 - b. Number and condition of **Grey-Headed Flying-fox** foraging species in each quarter (25%) of **The Meads offset site**;
 - c. **Extent of weed cover**;
 - d. Number of **non-native predators** and **non-native herbivores**; and
 - e. Rate of **Koala** mortalities attributable to **non-native predators**.
5. Within 3 months of completion of the baseline surveys required under condition 4, the approval holder must publish on the **website** and provide to the **Department** a report detailing the results of the baseline surveys required under condition 4 (including survey methodology and dates).
6. For the protection of the **Koala** (and **Koala habitat**) and the **Grey-headed Flying-fox** (and **Grey-headed Flying-fox foraging habitat**), the approval holder must achieve the following outcomes at **The Meads offset site** by the end of year 1:
 - a. Repair and maintain the existing perimeter fencing to exclude all livestock from **The Meads offset site**;
 - b. Remove all barbed-wire fencing at **The Meads offset site**, excluding existing **perimeter barbed-wire fencing**; and
 - c. Increase the visibility to fauna of **perimeter barbed-wire fencing**, including by affixing visibility tags at every 30 cm interval along the top strand of **perimeter barbed-wire fencing**.
7. For the protection of the **Koala** (and **Koala habitat**) and the **Grey-headed Flying-fox** (and **Grey-headed Flying-fox foraging habitat**), the approval holder must achieve the following outcomes at **The Meads offset site** by the end of year 8:
 - a. Restore vegetation condition to the 'BioCondition Benchmarks to be achieved' for each **Regional Ecosystem**, as specified at Attachment A;
 - b. Ensure that at least 6 different **Grey-Headed Flying-fox foraging species** (which in combination must provide annual winter and spring foraging resources for the **Grey-headed Flying-fox**) occurs within each quarter (25%) of **The Meads offset site**;
 - c. Ensure that the **extent of weed cover** across the whole of **The Meads offset site** is less than 5%;
 - d. A reduction in the numbers of **non-native predators** and **non-native herbivores** by 90%, relative to the numbers identified during baseline surveys; and
 - e. A reduction in the rate of **Koala** mortalities attributable to **non-native predators** by 90%, relative to the numbers identified during baseline surveys.
8. Once achieved, environmental outcomes specified under conditions 6 and 7 must be maintained for the remainder of the period of effect of the approval.
9. For the protection of the **Spotted-tail Quoll** present at **The Meads offset site**, the approval holder must ensure that any use of 1080 baits at **The Meads offset site** is undertaken in accordance with the **Administrative Guidelines on the use of 1080**.

10. The approval holder must engage a **suitably qualified independent expert** to undertake an assessment of **The Meads offset site** at the end of **year 4** to assess whether the outcomes required in conditions 6, 7 and 8 have been, or are likely to be, achieved. The findings of the assessment must be **published** within 6 months of the end of **year 4** and be provided to the **Department** within **5 business days** of being published.
11. If, at any time during the period of effect of the approval, the **Minister** is not satisfied that any of the requirements or outcomes required under conditions 6, 7 and 8 have been or are likely to be achieved or maintained, the **Minister** may require the approval holder to submit a corrective action plan for **The Meads offset site** for the **Minister's** approval, or to monitor, manage, avoid, mitigate, offset, record and/or report on, impacts to the **Koala**, the **Grey-headed Flying-fox**, or the **Spotted-tail Quoll**.
 - a. The **Minister** may set a timeframe in which the corrective action plan must be submitted, and may specify that the corrective action plan must be prepared or reviewed by an **independent suitably qualified field ecologist**.
 - b. If the **Minister** approves the corrective action plan, the approval holder must implement the approved corrective action plan.

Part B – Standard administrative conditions

Notification of date of commencement of the action

12. The approval holder must notify the **Department** in writing of:
 - a. the date of commencement of the action within **5 business days** after the date of commencement of the action;
 - b. the date of commencement of clearing within **5 business days** after the date of commencement of clearing; and
 - c. the date of commencement of construction within **5 business days** after the date of commencement of construction.
13. If the commencement of the action does not occur within 5 years from the date of this approval, then the approval holder must not undertake commencement of the action without the prior written agreement of the **Minister**.

Compliance records

14. The approval holder must maintain accurate and complete **compliance records**.
15. If the **Department** makes a request in writing, the approval holder must provide electronic copies of **compliance records** to the **Department** within the timeframe specified in the request.

Note: Compliance records may be subject to audit by the **Department** or an independent auditor in accordance with section 458 of the **EPBC Act**, and or used to verify compliance with the conditions. Summaries of the result of an audit may be published on the **Department's** website or through the general media.

Annual compliance reporting

16. The approval holder must prepare a **compliance report** for each 12 month period following the date of commencement of the action, or otherwise in accordance with an annual date that has been agreed to in writing by the **Minister**. The approval holder must:
 - a. publish each **compliance report** on the **website** within **60 business days** following the relevant 12 month period;
 - b. notify the **Department** by email that a **compliance report** has been published on the **website** and provide the weblink for the **compliance report** within **5 business days** of the date of publication;
 - c. keep all **compliance reports** publicly available on the **website** until this approval expires;

- d. exclude or redact **sensitive ecological data** from **compliance reports** published on the **website**; and
- e. where any **sensitive ecological data** has been excluded from the version published, submit the full **compliance report** to the **Department** within **5 business days** of publication.

Note: Compliance reports may be published on the **Department's** website.

Reporting non-compliance

- 17. The approval holder must notify the **Department** in writing of any: **incident**; or non-compliance with the conditions. The notification must be given as soon as practicable, and no later than **2 business days** after becoming aware of the **incident** or non-compliance. The notification must specify:
 - a. any condition which is or may be in breach;
 - b. a short description of the **incident** and/or non-compliance; and
 - c. the location (including co-ordinates), date, and time of the **incident** and/or non-compliance. In the event the exact information cannot be provided, provide the best information available.
- 18. The approval holder must provide to the **Department** the details of any **incident** or non-compliance with the conditions as soon as practicable and no later than **10 business days** after becoming aware of the **incident** or non-compliance, specifying:
 - a. any corrective action or investigation which the approval holder has already taken or intends to take in the immediate future;
 - b. the potential impacts of the **incident** or non-compliance; and
 - c. the method and timing of any remedial action that will be undertaken by the approval holder.

Independent audit

- 19. The approval holder must ensure that **independent audits** of compliance with the conditions are conducted as requested in writing by the **Minister**.
- 20. For each **independent audit**, the approval holder must:
 - a. provide the name and qualifications of the independent auditor and the draft audit criteria to the **Department**;
 - b. only commence the **independent audit** once the audit criteria have been approved in writing by the **Department**; and
 - c. submit an audit report to the **Department** within the timeframe specified in the approved audit criteria.
- 21. The approval holder must publish the audit report on the **website** within **10 business days** of receiving the **Department's** approval of the audit report and keep the audit report **published** on the **website** until the end date of this approval.

Completion of the action

- 22. Within 30 days after the **completion of the action**, the approval holder must notify the **Department** in writing and provide **completion data**.

Part C - Definitions

In these conditions, except where contrary intention is expressed, the following definitions are used:

Adjacent conservation area/s means areas adjacent to the **development area**, which have been designated for conservation purposes under the Springfield Structure Plan, and the White Rock-Spring Mountain Conservation Estate.

Administrative Guidelines on the use of 1080 means Department of the Environment and Heritage 2004, *Administrative Guidelines on Significance: Supplement for the Tiger Quoll (southeastern mainland population) and the use of 1080*, Commonwealth of Australia, or subsequent published revision.

Business day means a day that is not a Saturday, a Sunday or a public holiday in the state or territory of the action.

Clear/Clearing means the cutting down, felling, thinning, logging, removing, killing, destroying, poisoning, ringbarking, uprooting or burning of vegetation (but not including weeds – see the *Australian weeds strategy 2017 to 2027* for further guidance). **Clearing** does not include any relevant prescribed burns or actions undertaken for bushfire management, where required.

Commencement of the action means the first instance of any specified activity associated with the action including **clearing, construction and/or management activities at The Meads offset site.**

Commencement of the action does not include minor physical disturbance necessary to:

- i. undertake pre-clearance surveys or monitoring programs;
- ii. install signage and /or temporary fencing to prevent unapproved use of the project area so long as these are located where it will have no impact on the **protected matters**;
- iii. protect environmental and property assets from fire, weeds and feral animals, including use of existing surface access tracks;
- iv. install temporary site facilities for persons undertaking pre-commencement activities so long as these are located where they have no impact on the **protected matters**; and
- v. undertake soil sampling or geotechnical investigations provided these cause only minor physical disturbance and are required in advance of formal commencement of site works.

Completion data means an environmental report and spatial data clearly detailing how the conditions of this approval have been met. The **Department's** preferred spatial data format is **shapefile**.

Completion of the action means the time at which all approval conditions (except condition 22) have been fully met.

Compliance records means all documentation or other material in whatever form required to demonstrate compliance with the conditions of approval in the approval holder's possession or that are within the approval holder's power to obtain lawfully.

Compliance reports means written reports:

- i. providing accurate and complete details of compliance, **incidents**, and non-compliance with the conditions;
- ii. consistent with the **Department's Annual Compliance Report Guidelines (2014)**; and
- iii. include a **shapefile** of any clearance of any **protected matters**, or their habitat, undertaken within the relevant 12 month period.

Construction means the erection of a building or structure that is or is to be fixed to the ground and wholly or partially fabricated on-site; the alteration, maintenance, repair or demolition of any building or structure; preliminary site preparation work which involves breaking of the ground (including pile driving); the laying of pipes and other prefabricated materials in the ground, and any associated excavation work; but excluding the installation of temporary fences and signage.

Department means the Australian Government agency responsible for administering the EPBC Act.

Development area means the area designated as 'Referral Area' on the map at [Attachment B](#) and enclosed by a thick black border.

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

Extent of weed cover means the proportion (expressed as a percentage) of the total land area in which any square metre contains a non-native plant species known to restrict the movement of **Koala** and/or degrade the quality of **Koala habitat** and/or habitat for **Grey-headed Flying-fox**, or its ability to regenerate. Such non-native plant species include *Lantana camera* and *Ligustrum lucidum*.

Fauna exclusion/koala proof fencing means fencing to guide **Koalas** away from roads and/or guide them towards safe fauna movement structures (such as underpasses) as described in *Fauna Sensitive Road Design: Volume 2 – Preferred Practices* (Queensland Department of Main Roads 2010).

Fauna spotter/catcher means a person licenced under the *Queensland Nature Conservation Act 1992* to detect, capture, care for, assess, and release wildlife disturbed by vegetation clearance activities.

Grey-Headed Flying-fox means the Grey-Headed Flying-fox (*Pteropus poliocephalus*) listed as a threatened species under the **EPBC Act**.

Grey-Headed Flying-fox foraging habitat means areas of vegetation that contain **Grey-headed Flying-fox** foraging trees, including winter and spring flowering species.

Incident means any event which has the potential to, or does, impact on one or more **protected matter(s)**.

Independent means does not have any individual, or by employment or family affiliation, conflicting or competing interests with the approval holder; the approval holder's staff, representatives or associated persons; or the project, including any personal, financial, business or employment relationship, other than receiving payment for undertaking the role for which the condition requires and independent person.

Independent audit means an audit conducted by an **independent** and suitably qualified person as detailed in the *Environment Protection and Biodiversity Conservation Act 1999 Independent Audit and Audit Report Guidelines* (2019).

Koala means the 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 exclusion fencing means fencing which prevents the movement of koalas from one area to another. Suitable examples are found in *Koala Sensitive Design Guideline: A guide to koala sensitive designed measures for planning and development activities*, (Queensland Department of Environment and Heritage Protection, 2012) and in the **Koala referral guidelines**.

Koala food trees means a species of tree of genus *Angophora*, *Corymbia*, *Eucalyptus*, *Lophostemon* or *Melaleuca*, with a height of more than 4 metres or with a trunk circumference more than 31.5 centimetres at 1.3 metres above the ground, the leaves of which are known to be consumed by the **Koala**.

Koala habitat means any forest or woodland containing species that are known **Koala food trees**, or shrubland with emergent food trees (as defined in the **Koala referral guidelines**).

Koala referral guidelines means the **Department's EPBC Act referral guidelines for the vulnerable Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory)**, Commonwealth of Australia, 2014.

Legally secure/ed/ing means to provide ongoing conservation protection on the title of the land, under a voluntary declaration under the *Vegetation Management Act 1999* (Qld).

Legal security documentation means any documentation associated with **legally securing the Meads offset site**, including (but not limited to) associated management plans (for example, the Declared

Area Management Plan to support the voluntary declaration under the *Vegetation Management Act 1999* (Qld)). **Legal security documentation** must include (at a minimum) the following:

- i. Details of the **management activities** to be undertaken to achieve the outcomes prescribed under conditions 6 and 7; and
- ii. A commitment to achieve and maintain the outcomes prescribed under conditions 6 and 7 for the duration of the impact.

Local traffic management measures means devices that reduce the speed and/or volume of traffic, for example, road closures, chicanes, crosswalks, lighting, signage and rumble strips, as described in **Queensland's fauna sensitive road design guidelines**.

Management activities means activities to be undertaken at **The Meads offset site**, including (but not limited to):

- i. Baseline surveys to inform development and implementation of management measures to achieve outcomes;
- ii. Perimeter fencing repairs and maintenance;
- iii. Barbed-wire fencing removal and modification;
- iv. Weed management; or
- v. Non-native predator and/or non-native herbivore management.

Minister means the Australian Government Minister administering the **EPBC Act** including any delegate thereof.

Non-native predators means any non-native animals known to predate on the Koala.

Non-native herbivores means any non-native animals known to degrade the quality of **Koala habitat** and/or **Grey-headed Flying-fox foraging habitat** and/or prevent its ability to regenerate.

Offset attributes means an '.xls' file capturing relevant attributes of **The Meads offset site**, including:

- i. **EPBC Act** reference number
- ii. Physical address of **The Meads offset site**;
- iii. Coordinates of the boundary points in decimal degrees;
- iv. **Protected matters** that the offset compensates for;
- v. Any additional **EPBC Act** listed threatened species and communities that are benefiting from the offset; and
- vi. Size of **The Meads offset site** in hectares.

Perimeter barbed-wire fencing means existing barbed-wire along the north, east and south perimeter of **The Meads offset site** erected to manage livestock.

Protected matter means a matter protected under a controlling provision in Part 3 of the **EPBC Act** for which this approval has effect.

Publish means make publicly available on the **website** for the duration of this approval.

Queensland's fauna sensitive road design guidelines means Queensland Department of Main Roads 2010, *Fauna Sensitive Road Design. Volume 2 – Preferred Practices*, or subsequent published revision.

Queensland's wildlife signing guidelines means Queensland Department of Transport and Main Roads 2019, *Traffic and Road Use Management, Transport and Main Roads Volume 3 – Signing and Pavement Marking, Part 8: Wildlife Signing Guidelines*, or subsequent published revision.

Regional Ecosystem means a vegetation community in a bioregion that is consistently associated with a particular combination of geology, landform and soil as classified by the Queensland Government under the *Vegetation Management Act 1999* (Qld). **Regional Ecosystems at The Meads offset site** include RE 12.3.7, RE 12.8.14, RE 12.9-10.17c, RE 12.9-10.14b, RE 12.12.2 and RE 12.12.23, located as shown on the map at [Attachment D](#).

Safe fauna movement solutions means measures to minimise the risk of injury or deaths of Koalas during construction and subsequently, such as **fauna exclusion/koala proof fencing**, fauna underpasses or overpasses, and/or bridges as described in *Queensland's fauna sensitive road design guidelines*.

Sensitive ecological data means data as defined in the Australian Government Department of the Environment (2016) *Sensitive Ecological Data – Access and Management Policy V1.0*.

Sequential clearing means the conditions for *Sequential clearing in Koala district A or B* under the *Nature Conservation (Koala) Conservation Plan 2017* under the *Nature Conservation Act 1992* (Qld). The conditions include provisions for the amount of area which may be cleared in any one stage, periods of non-clearing between stages, maintaining habitat links and restrictions on clearing trees containing Koalas.

Shapefile means location and attribute information of the action provided in an ESRI shapefile format. Shapefiles must contain '.shp', '.shx', '.dbf' files and a '.prj' file that specifies the projection/geographic coordinate system used. Shapefiles must also include an '.xml' metadata file that describes the shapefile for discovery and identification purposes.

Spotted-tail Quoll means the Spotted-tail Quoll (*Dasyurus maculatus maculatus*) (southeastern mainland population) listed as a threatened species under the **EPBC Act**.

Suitably qualified field ecologist means a person who has professional qualifications and at least 3 years' work experience designing and implementing flora and fauna surveys and management plans for the Koala and/or the **Grey-headed Flying-fox** using relevant protocols, standards, methods and/or literature.

Suitably qualified independent expert means an **independent** person who has professional qualifications, training, skills and at least 5 years' experience in the nominated subject matter 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.

The Meads offset site means the area to be managed as an offset for the impacts on the **Koala habitat** and **Grey-headed Flying-fox foraging habitat**, situated at Lot 18 on CA31460 at Pipeclay Dip Road, Ravensbourne, Queensland, and shown as 'Offset Area' and shaded in yellow on the map at [Attachment C](#).

Vegetation condition attributes means attributes that indicate vegetation functions for biodiversity, as defined in the most recent officially released version of *Queensland's BioCondition Assessment Manual*.

Website means a set of related web pages located under a single domain name attributed to the approval holder and available to the public.

Year 1 means the period within 1 year from the date of this approval.

Year 4 means the period within 4 years from the date this of approval.

Year 8 means the period within 8 years from the date of this approval.

BioCondition Benchmarks for Regional Ecosystems at the Meads offset site

BioCondition Benchmarks to be achieved	Regional Ecosystem					
	RE 12.3.7	RE 12.8.14	RE 12.9-10.14b	RE 12.9-10.17c	RE 12.12.2	RE 12.12.23
Tree canopy median height (m)	16	22	32	24	33	25
Tree canopy cover (%)	30	60	55	57	59	56
Tree sub-canopy median height (m)	11	11	17	11	13	12
Tree sub-canopy cover (%)	30	15	25	33	10	10

Map – Development area – aerial



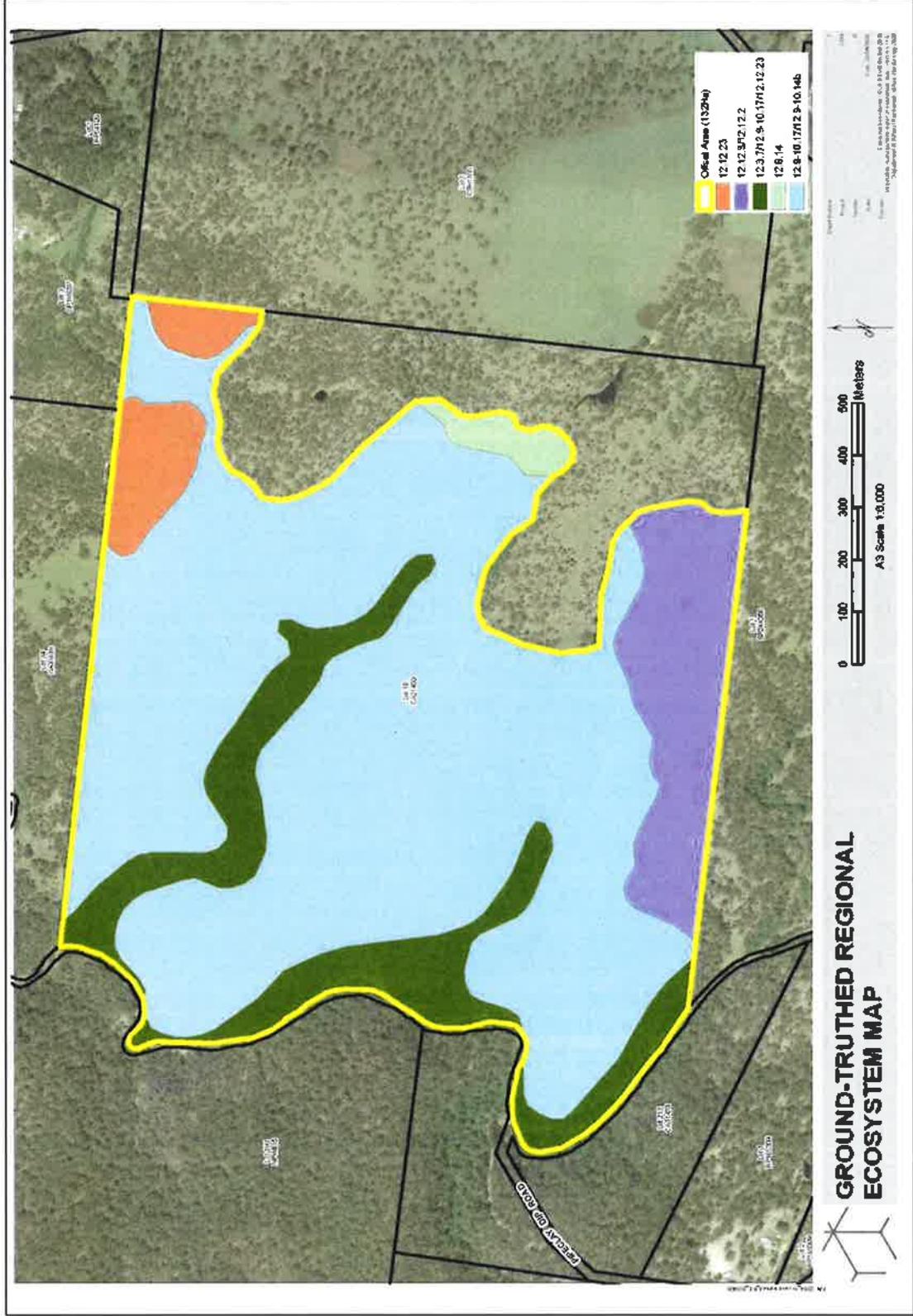
<p>Legend</p> <p> Referral area</p> <p> Qld DCCB</p>	<p>Woogaroo Heights Referral Area (Aerial)</p> <hr/> <p>File ref. 7927 E Figure 2 Site Aerial B Date 6/11/2016 Project Woogaroo Heights, Springfield</p> <hr/> <p>0 50 100 200 300 m</p> <p>Scale (A4): 1:7,000 (GDA 1994 MGA Z56)</p>	<p></p> <p><small>© 2016 SH saunders havill group. All rights reserved. This document is the property of SH saunders havill group and is to be used only for the purposes for which it is provided. No part of this document may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of SH saunders havill group.</small></p>
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Layer Sources: DCD 8 (D11A) 20 (B), Accis) Dk armap 2016

Map – The Meads offset site – aerial

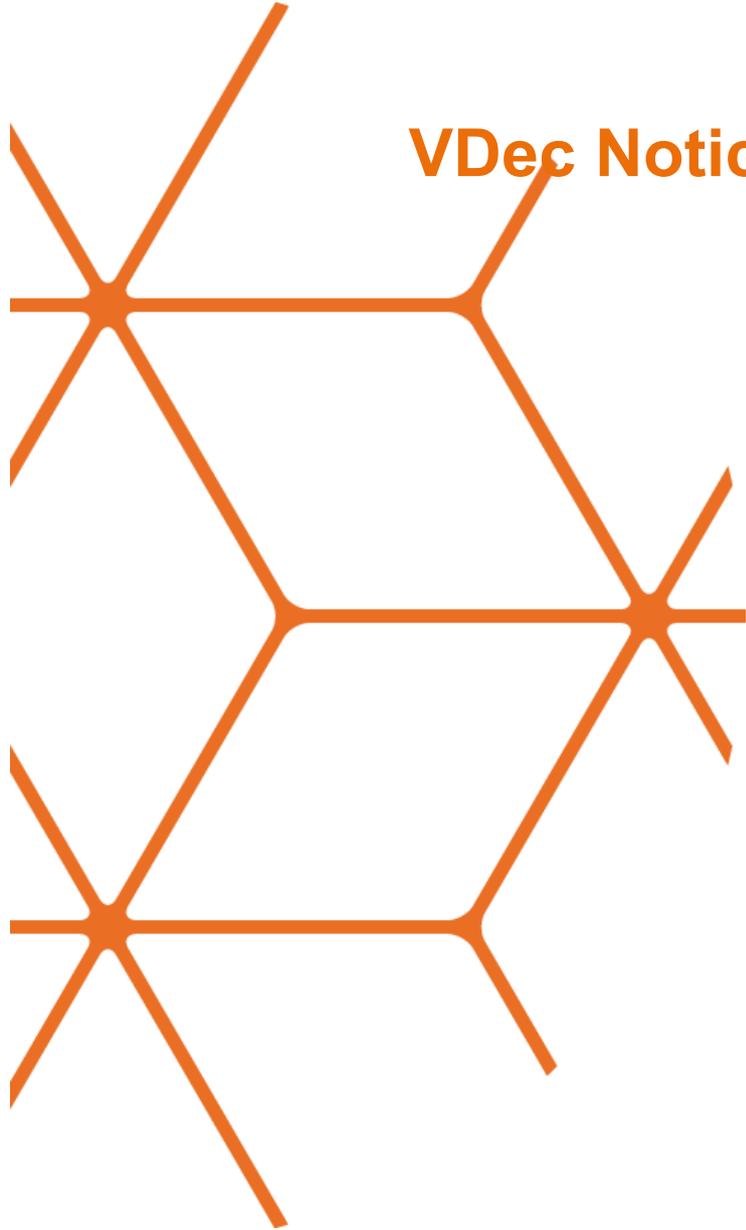


Map – The Meads offset site – Regional Ecosystems



ATTACHMENT 2

**VDec Notice (Category A (offset)
Area)**



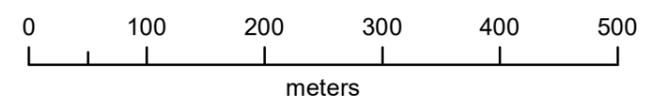


Declared Area Map

DAM 2020/014171

LOT on PLAN
18CA31460

Sheet 1 of 2



Scale: 1:6000
(original size A3)

LEGEND

- 8 Derived Reference Points
- Subject Lot
- Declared Area (A1)

This plan must be read in conjunction with Voluntary Declaration Notice 2020/014171

Notes:

Property boundary provided by Department of Resources. The property boundaries shown on this plan are approximate only. They are not an accurate representation of the legal boundaries.

Map Information:
Horizontal Datum: GDA 2020
Projection: Universal Transverse Mercator - Zone 56

Digital Imagery: seq_regional_2019_20cm_mosaic_1_a.ecw
Imagery Date: 18/09/2019 and 05/10/2019
Imagery Type: Digital Ortho-rectified

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Map Preparation Date: 20/01/2020
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