

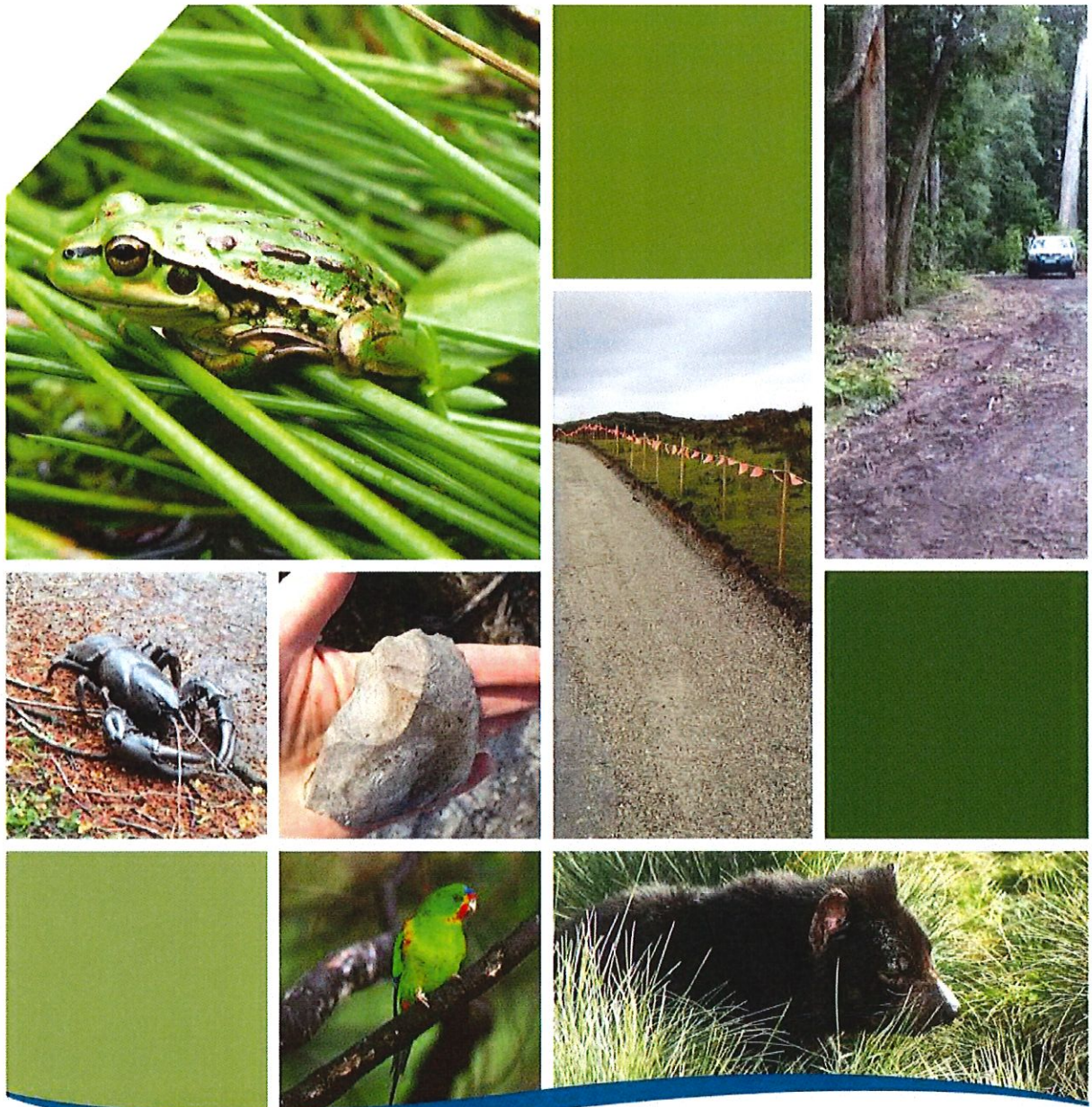
Annual Compliance Report
2017

EPBC 2011/6061

February 2018

Rokeby Main Road

Upgrade



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Glossary of Terms

The Approval – The approval granted under Sections 130(1) and 133 of the *EPBC Act: Rokeby Main Road Upgrade (EPBC 2011/6061)*

Bagdad offset site – This site is an offset site for swift parrot habitat proposed as an alternative to the Bicheno proposed offset site. It was first proposed to DotE on 6 November 2014 and was approved on 10 April 2015.

Bicheno proposed offset site – The site proposed as an offset for swift parrot habitat, as contained within the Preliminary Documentation (PD). This site is also referred to as *Appendix F* of the Approval (see Appendix A of this Report)

Blue ‘Roadside’ Wallaby Grass – the species formerly described as *Rytidosperma popinensis* (formerly *Austrodanthonia popinensis*), now widely accepted as common Wallaby Grass (*Rytidosperma fulvum*).

The Conditions – The conditions of approval, as per the approval granted under Sections 130(1) and 133 of the *EPBC Act: Rokeby Main Road Upgrade (EPBC 2011/6061)*

The Department – Tasmanian Department of State Growth (formerly the Department of Infrastructure, Energy and Resources)

DotE – Commonwealth Department of the Environment (formerly the Department of Sustainability, Environment, Water, Population and Communities)

DPIPWE – Tasmanian Department of Primary Industries, Parks, Water and the Environment

EPBC Act – *Environment Protection and Biodiversity Conservation Act 1999*

Mangalore proposed offset site – The site located at Mangalore, as identified within the PD. This site is also referred to as *Appendix D* of the Approval (see Appendix A of this Report)

The Minister – The Minister responsible for administering the *Environment Protection and Biodiversity Conservation Act 1999*

PD – Preliminary Documentation, submitted as part of the EPBC Referral

The Project – Rokeby Main Road Upgrade

The Report – Rokeby Main Road Upgrade Annual Compliance Report 2017

Swift Parrot Habitat – Those vegetation communities classified under TASVEG mapping as DOV (*Eucalyptus ovata* forest and woodland) and DGL (*Eucalyptus globulus* dry forest and woodland), being favoured for foraging and nesting by the swift parrot (*Lathamus discolor*)

TSSC – Threatened Species Scientific Committee

1. About

The *Rokeby Main Road Upgrade Annual Compliance Report 2017* is the fourth annual report (the Report) addressing compliance with approval EPBC 2011/6061 (the Approval). Condition 11 of the Approval states:

“Within three months of every 12 month anniversary of the commencement of construction of the action, annually until the expiry date of this approval, the person taking the action must publish a report on their website addressing compliance with each of the conditions of this approval, including implementation of any management plans as specified in the conditions. Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions of this approval must be notified to the department as soon as they occur.”

Construction on the Rokeby Main Road Upgrade commenced on 25th November 2013 and was formally completed on 25th September 2015. The Department of State Growth has been committed to ensuring that the upgrading of Rokeby Main Road would have minimal impacts on local populations of native animals, plants and the surrounding environment. The Department is committed to achieving the highest practicable environmental outcomes and takes its responsibilities seriously. The Report addresses each condition of the Approval specifically, outlining how compliance has been met. Some conditions have yet to be triggered, and thus compliance with these conditions will be addressed in future reports as appropriate. Similarly, the circumstances of some conditions has since changed (as detailed in Section 1.1 below), and statements addressing each of these changes have been provided.

Section 2 of this Report addresses compliance with the Approval and will re-state each condition of the Approval (*in bold and italics*) followed by statements of compliance. Where any of the Conditions of Approval refer to an attachment, this refers to those attachments as contained within the Approval itself. A copy of the Approval is provided in *Appendix E* of this Report.

1.1 Blue ‘Roadside’ Wallaby Grass

During the previous 12 months, Blue ‘Roadside’ Wallaby Grass was formally delisted and removed from Section 178 of the EPBC Act. Effective 16 September 2015, the Minister formally delisted Blue ‘Roadside’ Wallaby Grass on advice from the TSSC that the species was no longer eligible due to taxonomic changes. These changes included acknowledgement that this species should be considered synonymous with the common species *Rytidosperma fulvum*, and be regarded as ‘introduced’ to Tasmania. Given this recognition, ongoing preservation of an introduced species to Tasmania is an undesirable ecological outcome.

The Department wrote to DotE on 11 January 2016 requesting advice regarding further compliance activities under the Approval. A letter from DotE was received on the 17th June 2016, varying the conditions of approval. This involved removing conditions 5, 6, and 7 and Appendix B, C and D, which includes the removal for the requirement of the offset.

1.2 Key Dates

Activity	Date (Due)
Date of EPBC Act Approval	19 th August 2013
Construction commenced	25 th November 2013
Construction completed	25 th September 2015
New swift parrot offset secured	13 th October 2015
Fourth annual compliance report due	24 th February 2018
Expiry date of EPBC Act Approval	25 th June 2033

Table 1. Key dates relevant to this compliance report

2. Compliance

The Department of State Growth has endeavoured to fully comply with, and strictly adhere to, the Conditions of the Approval. Table 2 details the status of each of the Conditions of Approval.

Condition #	Conformed	Completed Yet to be	Non- Conformance	Not Triggered	Other
1	x				
2	x				
3				x	
4	x				
5					x
6					x
7					x
8	x				
9	x				
10	x				
11	x				
12				x	
13				x	

Table 2. Which conditions have been triggered, and how they have been managed.

Condition 1

1. For the better protection of the swift parrot, the person taking the action must:
 - a. not remove more than 86 *Eucalyptus ovata* trees and one *Eucalyptus globulus* tree from inside the development footprint as shown in Appendix A;
 - b. only clear the *Eucalyptus ovata* trees referred to in condition 1(a) above, between the months of March to July, to avoid disturbance to swift parrot individuals; and
 - c. immediately prior to undertaking tree removal works on the *Eucalyptus globulus* tree referred to in condition 1(a), engage a suitably qualified expert to ensure no swift parrot individuals are present.

The removal of these 87 trees of potential swift parrot habitat occurred at two separate times due to the schedule of works and the location of each of the trees. Details of this activity were provided in a previous reporting period. No other *Eucalyptus ovata* or *Eucalyptus globulus* trees were removed as part of construction activities.

Condition 2

2. To compensate for the residual loss of swift parrot foraging habitat, prior to the one (1) year anniversary of commencement of construction, the person taking the action must engage a suitably qualified expert to undertake ecological surveys and an assessment, during an optimal ecological time, of the Bicheno proposed offset site to determine:
 - a. the intensity and extent of impacts of the 2013 fire event on the Bicheno proposed offset site. These surveys must provide a discussion of the results in relation to:
 - i. the historical fire frequency and intensity at the site; and
 - ii. the ecological role of fire at the site.

- b. *prospects for recovery (including recovery milestones and estimated timing) of the Bicheno proposed offset site in terms of quality and extent of swift parrot foraging habitat;*
- c. *ongoing management measures (including methods, standards and schedules wherever relevant) required to maintain or improve swift parrot foraging habitat at this site.*

The results of the surveys and assessment must be provided to the department within three (3) months of completion of the surveys.

Investigations into the viability of the initially proposed Bicheno offset site for swift parrot habitat was re-assessed to determine the status of its recovery following the January 2013 Tasmanian bushfires. A report was produced on 16 December 2013 detailing the findings of these investigations. This report was provided to DotE via email correspondence on 16 December 2013. Details relating to this condition was provided in the *Annual Compliance Report 2014*. No further actions relating to this condition has since occurred.

Condition 3

3. *In the event that the surveys required in condition 2 above show that the Bicheno proposed offset site does not contain adequate swift parrot foraging habitat (as advised by the Minister), to compensate for the residual loss of swift parrot foraging habitat, prior to the three (3) year anniversary of the commencement of construction, the person taking the action must:*
 - a. *establish a reserve within the Bicheno proposed offset site, of no less than ten (10) hectares of swift parrot foraging habitat, using a legal mechanism appropriate to the long-term conservation of the site and approved in advance by the Minister;*
 - b. *commence implementation of the management measures, identified by the suitably qualified expert to maintain or improve swift parrot foraging habitat at this site under condition 2(c),*
 - c. *commence monitoring of the reserve, to be conducted by a suitably qualified expert during an optimal ecological time, annually until the expiry date of this approval, to determine:*
 - i. *the success of the management measures to maintain or improve the swift parrot foraging habitat against the baseline condition; and*
 - ii. *changes in the quality of the swift parrot foraging habitat in the reserve against the baseline condition.*
 - d. *commence reporting to the department, annually until the expiry date of this approval, on surveys conducted under c) above; and*
 - e. *outline any additional offsets or measures to maintain or enhance the swift parrot foraging habitat in the reserve against the baseline condition.*

As assessed under Condition 2 of this Approval – and stated in previous compliance reports – the originally-proposed Bicheno offset was deemed unsuitable for protection as an offset for suitable swift parrot habitat. Given this, Condition 3 is not triggered.

Condition 4

4. *In the event that the surveys required in condition 2 above show that the Bicheno proposed offset site does not contain adequate swift parrot foraging habitat (as advised by the minister), to compensate for the residual loss of swift parrot foraging habitat, prior to the three (3) year anniversary of this approval, the person taking the action must:*
 - a. *identify a reserve of swift parrot foraging habitat in eastern Tasmania, or a location of equivalent or greater conservation measure, as agreed to by the Minister, that complies with the department's offset policy;*
 - b. *secure the site identified under a) above using a legal mechanism appropriate to the long-term conservation of the site and approved in advance by the Minister;*
 - c. *commence ongoing management measures (including methods, standards and schedules wherever relevant) as determined by a suitably qualified expert, required to maintain or improve foraging habitat for the swift parrot within the reserve;*
 - d. *commence monitoring of the reserve, to be conducted by a suitably qualified expert during an optimal ecological time, annually until the expiry date of this approval, to determine:*
 - i. *the success of the management measures to maintain or improve the swift parrot foraging habitat against the baseline condition; and*
 - ii. *changes in the quality of the swift parrot foraging habitat on the reserve against the baseline condition.*
 - e. *commence reporting to the department, annually until the expiry date of this approval, on surveys conducted under d) above; and*
 - f. *outline additional offsets or measures to achieve the swift parrot foraging habitat against the baseline condition*

As assessed under Condition 2 of this Approval, the originally-proposed Bicheno offset was deemed unsuitable for protection as an offset for suitable swift parrot habitat. An alternative offset has now been secured. Advice was provided to DotE by email on 11 November 2015 confirming the establishment of a conservation covenant at Bagdad, Tasmania. The covenant was registered as secured-in-perpetuity on 13 October 2015. Associated documentation, including electronic shapefiles (see Condition 8 in this Approval), were also provided at this time. Monitoring of the site will commence effective 2016.

As per condition 4d), the first annual monitoring of the conservation covenant located at Bagdad was completed in October 2016 by a suitably qualified expert. The Report titled 'Monitoring Report-Swift Parrot Offset' (Appendix E) was completed by the Tasmanian Land Conservancy which found that the ecological values contained within the site provided suitable swift parrot habitat for foraging and breeding. The site displayed a number of dominant canopy species at various age classes, giving confidence that the long term outcome will be for continued suitability for swift parrots. There were no high threat weeds noted during the survey and no threats noted to the site's integrity.

Condition 5

5. *For the better protection of the blue (roadside) wallaby grass, the person taking the action must not remove more than 0.6 hectares of blue (roadside) wallaby grass from inside the development footprint as shown in Appendix B.*

As detailed in the letter from DotE of the 17th of June 2016, this condition was removed and therefore does not require reporting.

6. *For the better protection of the blue (roadside) wallaby grass, during construction, the person taking the action must:*
 - a. *implement construction exclusion zones of all blue (roadside) wallaby grass outside the development footprint as shown in Appendix 8 to prevent disturbance of the avoided populations. Construction exclusion zones must be:*
 - i. *identified on contractor drawings and provided to the department prior to construction; and*
 - ii. *marked with a flag line and signs during construction.*

As detailed in the letter from DotE of the 17th of June 2016, this condition was removed and therefore does not require reporting.

Condition 6

6. *For the better protection of the blue (roadside) wallaby grass, during construction, the person taking the action must:*

- a. *implement construction exclusion zones of all blue (roadside) wallaby grass outside the development footprint as shown in Appendix 8 to prevent disturbance of the avoided populations. Construction exclusion zones must be:*
 - i. *identified on contractor drawings and provided to the department prior to construction; and*
 - ii. *marked with a flag line and signs during construction.*

All impacts to Blue 'Roadside' Wallaby Grass were confined to within the permitted construction footprint, as identified in Appendix B of the Approval. To ensure this condition was met, construction exclusion zones were erected around all previously identified populations outside of the construction footprint. This was in the form of flagging tape tied to wooden stakes. These exclusion zones were demarcated clearly on construction drawings provided to contractors prior to the commencement of works. These drawings – and evidence of the erection of exclusion zones – were provided to DotE.

Condition 7

7. *To compensate for the loss of blue (roadside) wallaby grass, prior to the two (2) year anniversary of the commencement of construction, the person taking the action must:*
 - a. *establish a reserve at the Mangalore proposed offset site using a legal mechanism appropriate to the long-term conservation of the site and approved in advance by the Minister;*
 - b. *plant no fewer than 24,000 blue (roadside) wallaby grass plants on site at Rokeby as shown in Appendix C;*

- c. commence implementation of the management measures, identified by a suitably qualified expert, to ensure maintenance of the blue (roadside) wallaby grass population within both the reserve at the Mangalore proposed offset site, referred to in condition 6(a) above, and planted blue (roadside) wallaby grass plants at Rokeby, referred to in condition 6(c) above.
- d. commence monitoring of the reserve at the Mangalore proposed offset site and established blue (roadside) wallaby grass plants at Rokeby, to be conducted by a suitably qualified expert during an optimal ecological time, annually until the expiry date of this approval, to determine:
 - i. the success of the management measures to maintain no less than 7310 blue (roadside) wallaby grass plants at the Mangalore proposed offset site, referred to in condition 6(a) above, and to ensure establishment of no less than 75% of the planted blue (roadside) wallaby grass plants at Rokeby, referred to in condition 6(c) above.
- e. commence reporting to the department, annually until the expiry date of this approval, on surveys conducted under d) above; and
- f. outline any additional offsets or measures to maintain or enhance the blue (roadside) wallaby grass population within both the reserve at the Mangalore proposed offset site, referred to in condition 6(a) above, and planted blue (roadside) wallaby grass plants at Rokeby, referred to in condition 6(c) above.

As detailed in the letter from DotE of the 17th of June 2016, this condition was removed and therefore does not require reporting.

Condition 8

- 8. *The person taking the action must provide the department with offset attributes, shapefiles, textual descriptions and maps to clearly define the location and boundaries of the offsets required as a result of this approval. These must be provided within 30 days of the offsets being secured in perpetuity.*

Mangalore Offset Site

As per Condition 7, the Mangalore offset is an already-established conservation covenant, secured under EPBC 2009/4762 and EPBC 2009/4757. Half of this offset was allocated to EPBC 2009/4762 and EPBC 2009/4757, with the remainder secured for future use if needed. This remaining area was already approved by DotE as part of the referral process.

Bagdad Offset Site

As detailed in Condition 4 above, official documentation regarding the establishment of this conservation covenant was provided to DotE on 11 November 2015. The conservation covenant was formally registered with the Recorder of Titles on 13 October 2015.

Condition 9

- 9. *Within 30 days after the commencement of construction of the action, the person taking the action must advise the department in writing of the actual date of commencement.*

Construction works relating to Rokeby Main Road commenced on 25th November 2013. Further details relating to this condition have been provided in previous compliance reports.

Condition 10

- 10. *The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, and make them available upon request to the department. Such records may be subject to audit by the department or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the department's website. The results of audits may also be publicised through the general media.*

The Department has maintained accurate records substantiating all activities associated with the works and relevant conditions.

Condition 11

- 11. *Within three months of every 12 month anniversary of the commencement of construction of the action, annually until the expiry date of this approval, the person taking the action must publish a report on their website addressing compliance with each of the conditions of this approval, including implementation of any management plans as specified in the conditions. Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions of this approval must be notified to the department as soon as they occur.*

The purpose of this Report is to satisfy this condition. This report contains statements addressing compliance with each of the conditions of the Approval. Each of the conditions referring to the implementation of management plans or programs has already been addressed in the respective statements of compliance throughout this Report. Upon publishing this Report on the Department's website, evidence will be provided to DotE of this fact at the time of publishing.

Condition 12

- 12. Upon the direction of the Minister, the person taking the action must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the Minister. The independent auditor must be approved by the Minister prior to the commencement of the audit. Audit criteria must be agreed to by the Minister and the audit report must address the criteria to the satisfaction of the Minister.*

This condition has not been triggered.

Condition 13

- 13. If, at any time after three (3) years from the date of this approval, the person taking the action has not substantially commenced the action, then the person taking the action must not substantially commence the action without the written agreement of the Minister.*

Works on this project commenced on 25th November 2013. This condition can no longer be satisfied.

3. Conclusion

This Report is intended to meet the full requirements of condition 11 of the Approval. All statements made in the Report are true and evidence-based. Further information can be provided as required. This Report will be publicly available on the Department's website within the three month anniversary of the commencement of works.

Appendix F— Approval – Rokeby Main Road Upgrade EPBC 2011/6061



Australian Government

Department of Sustainability, Environment, Water, Population and Communities

Approval

Rokeby Main Road Upgrade, Howrah and Rokeby, Tasmania (EPBC 2011/6061)

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

Proposed action

person to whom the approval is granted Tasmanian Department of Infrastructure, Energy and Resources

proponent's ACN (if applicable) ABN: 363 889 805 63

proposed action Road upgrade to Rokeby Main Road from Oceana Drive in Howrah to Diosma Street in Rokeby, Tasmania [See EPBC Act referral 2011/6061]

Approval decision

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

conditions of approval

This approval is subject to the conditions specified below.

expiry date of approval

This approval has effect until 25 June 2033.

Decision-maker

name and position James Tregurtha
Assistant Secretary
South-Eastern Australia Environment Assessment Branch

signature

date of decision 19 August 2013



VARIATION TO CONDITIONS ATTACHED TO APPROVAL

Rokeby Main Road Upgrade, Howrah and Rokeby, Tasmania, (EPBC 2011/6061)

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

Approved action

Person to whom the approval is granted
Tasmanian Department of Infrastructure, Energy and Resources
(ABN: 363 889 805 63)

Approved action

Road upgrade to Rokeby Main Road from Oceana Drive in Howrah to Diosma Street in Rokeby, Tasmania [See EPBC Act referral 2011/6061]

Variation

Variation of conditions of approval
The variation is:
Delete condition 1 attached to the approval dated 19 August 2013 and substitute with the condition specified below.

Date of effect

This variation has effect on the date the instrument is signed

Person authorised to make decision

name and position
Mahani Taylor
A/g Assistant Secretary
South-Eastern Australia Environment Assessment Branch

Signature

Date of decision

25/11/13

Conditions for substitution:

1. For the better protection of the **swift parrot**, the person taking the action must:
 - a) not remove more than 86 *Eucalyptus ovata* trees and one *Eucalyptus globulus* tree from inside the development footprint as shown in Appendix A;
 - b) only clear the *Eucalyptus ovata* trees referred to in condition 1(a) above, between the months of March to July, to avoid disturbance to **swift parrot** individuals; and
 - c) immediately prior to undertaking tree removal works on the *Eucalyptus globulus* tree referred to in condition 1(a), engage a suitably qualified expert to ensure no **swift parrot** individuals are present.

Conditions attached to the approval

- 1) For the better protection of the **swift parrot**, the person taking the action must:
 - a) not remove more than 86 *Eucalyptus ovata* trees and one *Eucalyptus globulus* tree from inside the development footprint as shown in Appendix A; and
 - b) only clear the *Eucalyptus ovata* trees and *Eucalyptus globulus* tree, referred to in condition 1(a) above, between the months of March to July, to avoid disturbance to **swift parrot** individuals.

- 2) To compensate for the residual loss of **swift parrot foraging habitat**, prior to the one (1) year anniversary of **commencement of construction**, the person taking the action must engage a **suitably qualified expert** to undertake ecological surveys and an assessment, during an optimal ecological time, of the **Bicheno proposed offset site** to determine:
 - a) the intensity and extent of impacts of the 2013 fire event on the **Bicheno proposed offset site**. These surveys must provide a discussion of the results in relation to:
 - i) the historical fire frequency and intensity at the site; and
 - ii) the ecological role of fire at the site.
 - b) prospects for recovery (including recovery milestones and estimated timing) of the **Bicheno proposed offset site** in terms of quality and extent of **swift parrot foraging habitat**;
 - c) ongoing management measures (including methods, standards and schedules wherever relevant) required to maintain or improve **swift parrot foraging habitat** at this site.

The results of the surveys and assessment must be provided to the **department** within three (3) months of completion of the surveys.

- 3) In the event that the surveys required in condition 2 above show that the **Bicheno proposed offset site** does contain adequate **swift parrot foraging habitat** (as advised by the **Minister**), to compensate for the residual loss of **swift parrot foraging habitat**, prior to the three (3) year anniversary of the **commencement of construction**, the person taking the action must:
 - a) establish a reserve within the **Bicheno proposed offset site**, of no less than ten (10) hectares of **swift parrot foraging habitat**, using a legal mechanism appropriate to the long-term conservation of the site and approved in advance by the **Minister**;
 - b) commence implementation of the management measures, identified by the **suitably qualified expert** to maintain or improve **swift parrot foraging habitat** at this site under condition 2(c),
 - c) commence monitoring of the reserve, to be conducted by a **suitably qualified expert** during an optimal ecological time, annually until the expiry date of this approval, to determine:
 - i) the success of the management measures to maintain or improve the **swift parrot foraging habitat** against the **baseline condition**; and
 - ii) changes in the quality of the **swift parrot foraging habitat** in the reserve against the **baseline condition**.
 - d) commence reporting to the **department**, annually until the expiry date of this approval, on surveys conducted under c) above; and

- e) outline any additional offsets or measures to maintain or enhance the **swift parrot foraging habitat** in the reserve against the **baseline condition**.
- 4) In the event that the surveys required in condition 2 above show that the **Bicheno proposed offset site** does not contain adequate **swift parrot foraging habitat** (as advised by the **minister**), to compensate for the residual loss of **swift parrot foraging habitat**, prior to the three (3) year anniversary of this approval, the person taking the action must:
- a) identify a reserve of **swift parrot foraging habitat** in eastern Tasmania, or a location of equivalent or greater conservation measure, as agreed to by the **Minister**, that complies with the **department's offset policy**;
 - b) secure the site identified under a) above using a legal mechanism appropriate to the long-term conservation of the site and approved in advance by the **Minister**;
 - c) commence ongoing management measures (including methods, standards and schedules wherever relevant) as determined by a **suitably qualified expert**, required to maintain or improve **foraging habitat** for the **swift parrot** within the reserve;
 - d) commence monitoring of the reserve, to be conducted by a **suitably qualified expert** during an optimal ecological time, annually until the expiry date of this approval, to determine:
 - i) the success of the management measures to maintain or improve the **swift parrot foraging habitat** against the **baseline condition**; and
 - ii) changes in the quality of the **swift parrot foraging habitat** on the reserve against the **baseline condition**.
 - e) commence reporting to the **department**, annually until the expiry date of this approval, on surveys conducted under d) above; and
 - f) outline additional offsets or measures to achieve the **swift parrot foraging habitat** against the **baseline condition**
- 5) For the better protection of the **blue (roadside) wallaby grass**, the person taking the action must not remove more than 0.6 hectares of **blue (roadside) wallaby grass** from inside the development footprint as shown in Appendix B.
- 6) For the better protection of the **blue (roadside) wallaby grass**, during **construction**, the person taking the action must:
- a) implement construction exclusion zones of all **blue (roadside) wallaby grass** outside the development footprint as shown in Appendix B to prevent disturbance of the avoided populations. Construction exclusion zones must be:
 - i) identified on contractor drawings and provided to the **department** prior to **construction**; and
 - ii) marked with a flag line and signs during **construction**.
- 7) To compensate for the loss of **blue (roadside) wallaby grass**, prior to the two (2) year anniversary of the **commencement of construction**, the person taking the action must:
- a) establish a reserve at the **Mangalore proposed offset site** using a legal mechanism appropriate to the long-term conservation of the site and approved in advance by the **Minister**;
 - b) plant no fewer than 24,000 **blue (roadside) wallaby grass** plants on site at Rokeby as shown in Appendix C;

- c) commence implementation of the management measures, identified by a **suitably qualified expert**, to ensure maintenance of the **blue (roadside) wallaby grass** population within both the reserve at the **Mangalore proposed offset site**, referred to in condition 6(a) above, and planted **blue (roadside) wallaby grass** plants at Rokeby, referred to in condition 6(c) above.
 - d) commence monitoring of the reserve at the **Mangalore proposed offset site** and established **blue (roadside) wallaby grass** plants at Rokeby, to be conducted by a **suitably qualified expert** during an optimal ecological time, annually until the expiry date of this approval, to determine:
 - i) the success of the management measures to maintain no less than 7310 **blue (roadside) wallaby grass** plants at the **Mangalore proposed offset site**, referred to in condition 6(a) above, and to ensure establishment of no less than 75% of the planted **blue (roadside) wallaby grass** plants at Rokeby, referred to in condition 6(c) above.
 - e) commence reporting to the **department**, annually until the expiry date of this approval, on surveys conducted under d) above; and
 - f) outline any additional offsets or measures to maintain or enhance the **blue (roadside) wallaby grass** population within both the reserve at the **Mangalore proposed offset site**, referred to in condition 6(a) above, and planted **blue (roadside) wallaby grass** plants at Rokeby, referred to in condition 6(c) above.
- 8) The person taking the action must provide the **department** with **offset attributes**, **shapefiles**, textual descriptions and maps to clearly define the location and boundaries of the offsets required as a result of this approval. These must be provided within 30 days of the offsets being secured in perpetuity.
 - 9) Within 30 days after the **commencement of construction** of the action, the person taking the action must advise the **department** in writing of the actual date of commencement.
 - 10) The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, and make them available upon request to the **department**. Such records may be subject to audit by the **department** or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the **department's** website. The results of audits may also be publicised through the general media.
 - 11) Within three months of every 12 month anniversary of the **commencement of construction** of the action, annually until the expiry date of this approval, the person taking the action must publish a report on their website addressing compliance with each of the conditions of this approval, including implementation of any management plans as specified in the conditions. Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions of this approval must be notified to the **department** as soon as they occur.
 - 12) Upon the direction of the **Minister**, the person taking the action must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the **Minister**. The independent auditor must be approved by the **Minister** prior to the commencement of the audit. Audit criteria must be agreed to by the **Minister** and the audit report must address the criteria to the satisfaction of the **Minister**.

13) If, at any time after three (3) years from the date of this approval, the person taking the action has not **substantially commenced** the action, then the person taking the action must not **substantially commence** the action without the written agreement of the **Minister**.

Definitions

Baseline condition means the condition of the *Eucalyptus ovata* forest and woodland (Tasmanian vegetation mapping unit: DOV) at [Appendix F](#).

Bicheno proposed offset site means the site located on private land south of Bicheno on the east coast of Tasmania, and identified as 'Field survey extent' at [Appendix E](#).

Blue (roadside) wallaby grass means the **EPBC Act** endangered species *Rytidosperma popinensis* (previously known as *Austrodanthonia popinensis*).

Commencement of construction includes any preparatory works required to be undertaken including clearing vegetation, the erection of any onsite temporary structures, excluding fences and signage, and the use of heavy duty equipment for the purpose of breaking the ground for buildings or infrastructure excluding any signage or fences.

Department means the Australian Government Department administering the *Environment Protection and Biodiversity Conservation Act 1999*.

Department's offset policy means the *Environment Protection and Biodiversity Conservation Act 1999* Environmental Offsets Policy (October 2012).

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

Mangalore proposed offset site means the site located at Mangalore on private land north of the junction of Ballyhooly Road and the Midland Highway, and identified as 'Offset for: Rokeby Main Road, from Oceana Drive in Howrah to Disoma Street in Rokeby (EPBC 2011/6061)' at [Appendix D](#).

Minister means the Minister administering the *Environment Protection and Biodiversity Conservation Act 1999* and includes a delegate of the Minister.

Offset attributes mean an '.xls' file capturing relevant attributes of the Offset Area, including the EPBC reference ID number, the physical address of the offset site, coordinates of the boundary points in decimal degrees, the EPBC protected matters that the offset compensates for, any additional EPBC protected matters that are benefiting from the offset, and the size of the offset in hectares.

Shapefiles means an ESRI ArcGIS Shapefile, containing '.shp', '.shx.' and '.dbf' files and other files. Shapefiles must include appropriate metadata capturing attributes including but not limited to the EPBC reference number of the approved action and details of the EPBC protected matters present within the offset, covenant or legal protection details, including type and identification. The **department** prefers **shapefiles** using the Geocentric Datum of Australia (GDA) 94.

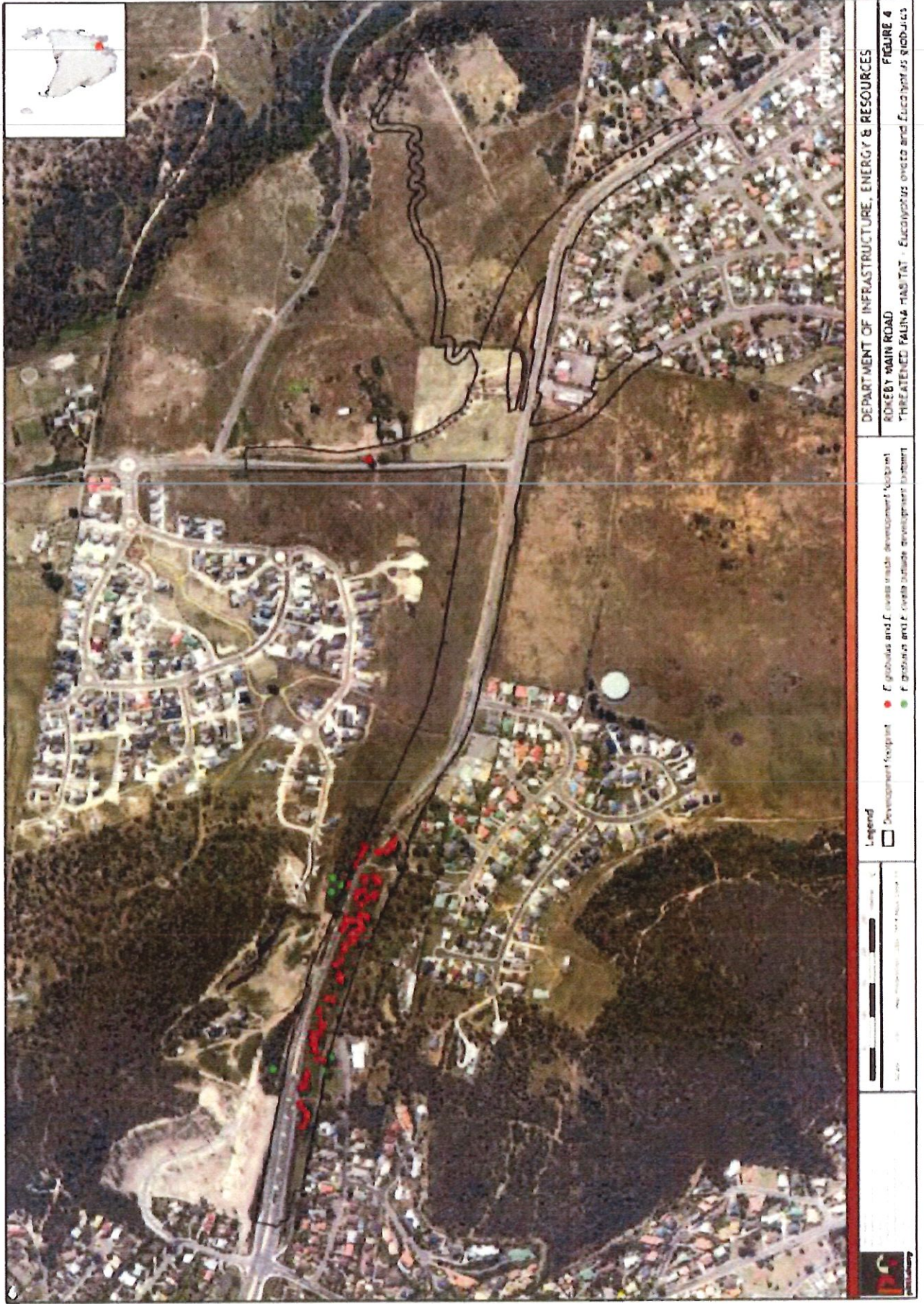
Substantially commence means the erection of any permanent infrastructure excluding signage and fences, associated with the action.

Suitably qualified expert means one or more botanists, ecologists, or environmental scientists with relevant valid qualifications and at least two years of demonstrated expertise in the surveying and management of **blue (roadside) wallaby grass** or **swift parrot**, and who is independent to the person taking the action.

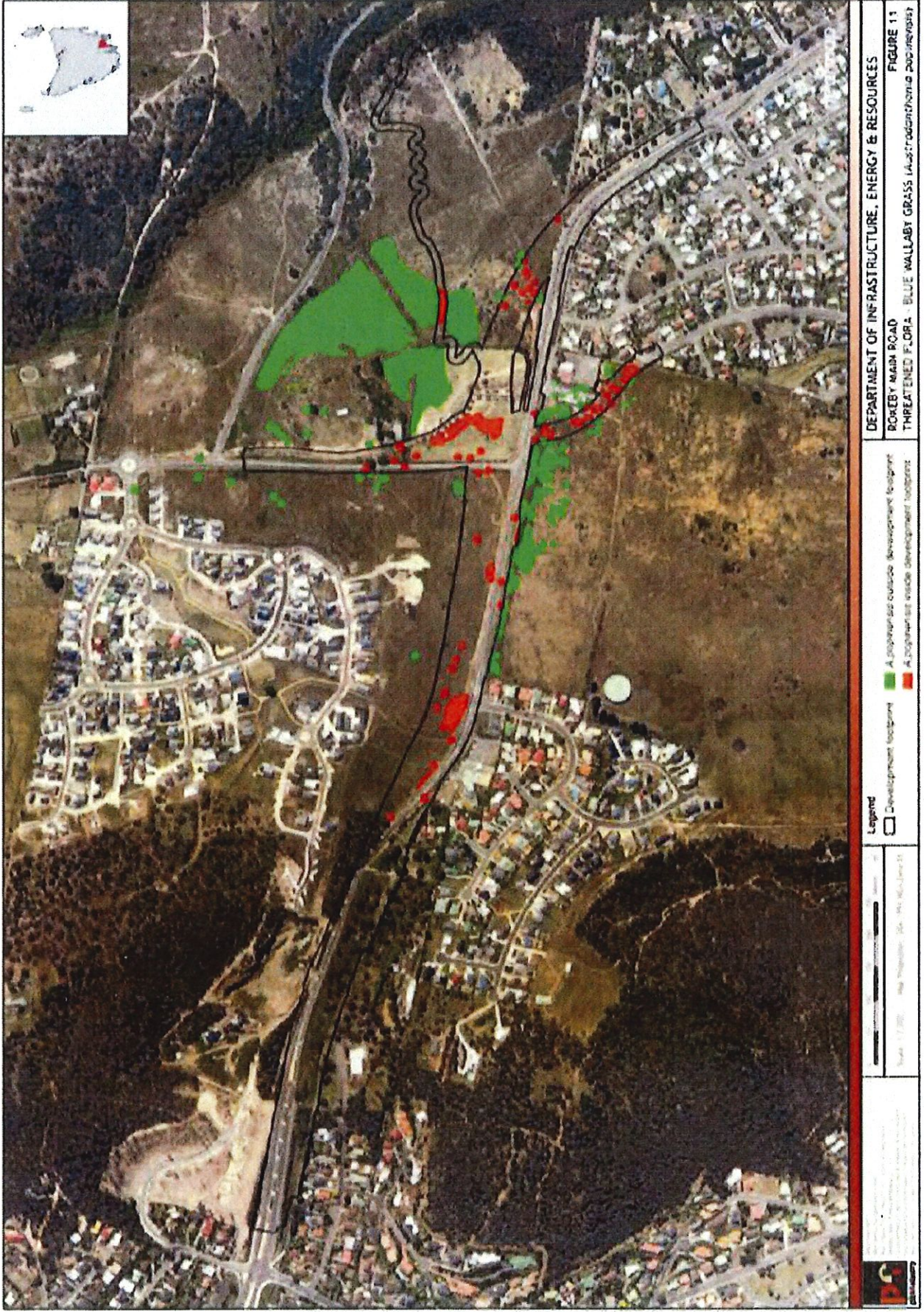
Swift parrot means the **EPBC Act** listed endangered species *Lathamus discolor*.

Swift parrot foraging habitat means grassy blue gum (*Eucalyptus globulus*) forest and/or grassy/shrubby swamp gum (*Eucalyptus ovata*) forest of a quality agreed with the department.

Appendix A:



Appendix B:





DC

Department of Infrastructure, Energy & Resources

Figure 15

ROMNEY MAIN ROAD

TREATED FLOA HABITAT ESTABLISHMENT AREA - BLUE WALLAEBY GRASS

- Legend**
- Blue outline - areas of proposed habitat establishment area
 - Yellow outline - areas of proposed habitat establishment area
 - Demarcation and boundary

DEPARTMENT OF INFRASTRUCTURE, ENERGY & RESOURCES

ROMNEY MAIN ROAD

TREATED FLOA HABITAT ESTABLISHMENT AREA - BLUE WALLAEBY GRASS

FIGURE 15

Appendix D:



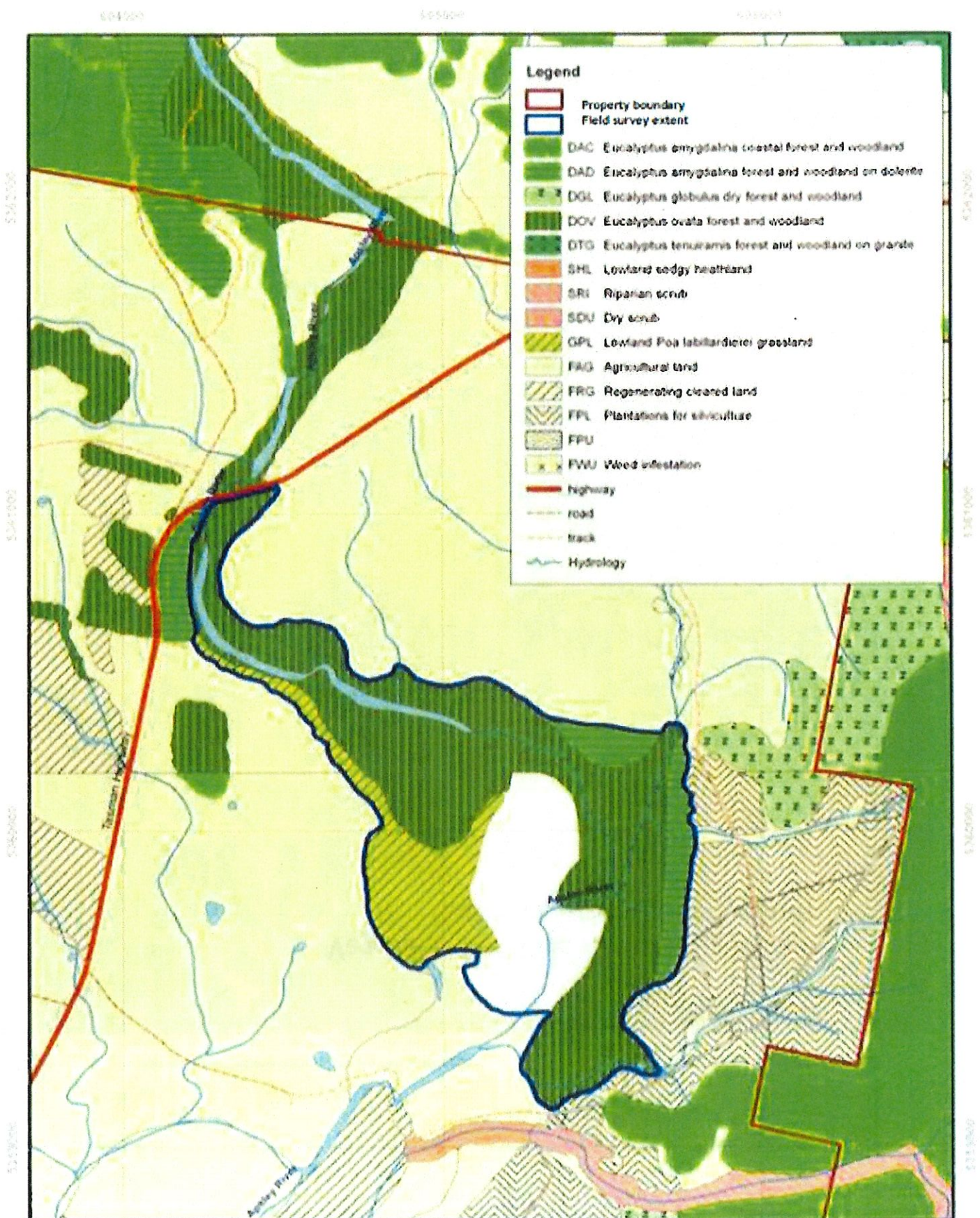
Developments To Be Offset	Offset Area (sq m)	Offset number of plants +/-
Rokeby Main Road, from Oceana Drive in Howrah to Diosma Street in Rokeby (EPBC 2011/6061)	1,366	8,140 830

604
 Heritage Photo/Map imagery date: 30/03/2011
 Datum: GDA94 AHD 1984 MGA Zone 56



northbarker
 CONSULTING SERVICES

Appendix E:



Appendix E
Vegetation Condition Assessment (VCA) -
Proposed swift parrot offset area

Appendix F:

FOREST VEGETATION
(including woodlands, rainforests and non-eucalypt forests)

Vegetation Condition Assessment Form V1.0

DATE: 14/08/2009 LOCATION: Apsley River East Coast MAP:
 SITE NAME: TASVEG VC CODE: 1 p0v ASSESSOR: GPS DATUM (circle one): WGS84 / **QDAS0** / ACD86
 ZONE no./name: 1 SIZE of zone (ha): 20ha COMMENTS: Areas of Eucalyptus ovata / Callitris oblonga forest

Site Condition Score

Large Trees Observed large trees 29/ha Benchmark DBH 20cm Benchmark 20/ha Score **10**

Category & Description	% Canopy Health*		
	>75%	50-75%	<50%
None present	0	0	0
>0 to 20% of the benchmark number of large trees/ha	3	2	1
>20% to 40% of the benchmark number of large trees/ha	4	3	2
>40% to 70% of the benchmark number of large trees/ha	6	5	4
>70% to 100% of the benchmark number of large trees/ha	8	7	6
≥ the benchmark number of large trees/ha	10	9	8

Large trees are defined by diameter at breast height (dbh) - see benchmarks *estimate proportion of an expected healthy canopy cover that is present (ie, not missing due to tree death or decline)

Tree Canopy Cover Benchmark 40% Observed cover 40% Score **5**

Category & Description	% Canopy Health*		
	>75%	50-75%	<50%
<10% of benchmark cover	0	0	0
<50% or >150% of benchmark cover	3	2	1
≥50% or ≤150% of benchmark cover	5	4	3

Tree canopy cover is defined as those canopy tree species reaching 20% of mature height - see benchmark description *estimate proportion of an expected healthy canopy cover that is present (ie not missing due to tree death or decline)

Lack of Weeds Observed weed cover 5% Observed high threat weeds 100% Score **11**

Category & Description	High threat weeds*		
	None	≤30%	>30%
>75% cover of weeds	0	0	0
25-75% cover of weeds	4	2	0
10-25% cover of weeds	7	6	4
5-10% cover of weeds	11	9	7
<5% cover of weeds**	15	13	11

*Proportion of weed cover due to high threat weeds High threat weed species are defined as introduced species (including non-indigenous natives) that achieve >5% cover in the zone or those weed species listed as high threat weeds in Tasmania A list of high threat weeds in Tasmania is provided in the TASVEG Vegetation Condition Assessment manual **% total weed cover is negligible (<1%) and high threat weed species are present then score 11 The Assessor should determine the threat posed by any weed in the zone listed (ie not

Understorey Life Forms Benchmark No. Life forms 9 Phytophthora abundance/symptoms (tick if observed)

LF code from benchmark	# spp observed/benchmark # spp	% cover observed/benchmark % cover	Present (tick)	Modified (tick)
IT	/ n/a	10/5	✓	
T	8/5	40/40	✓	
S	11/4	30/15	✓	
Total				
PS	/	/		
H	7/6	25/25	✓	
G	4/1	20/25	✓	
LSR	3/3	30/20	✓	
MSR	/	/		
GF	2/2	25/10	✓	✓
TF	/	/		
SCE	1/1	25/25	✓	
ML	/ n/a	5/5	✓	
SC	/	/		
Total			9	1

Present Life forms with benchmark cover of <10% are considered present if any spp. are observed Life forms with benchmark cover of ≥10% are considered present if the life form score is at least 10% of benchmark cover

Modified Life forms with benchmark cover of <10% are considered substantially modified if the life form has either <50% of benchmark species diversity, or no reproductive mature specimens are observed Life forms with benchmark cover of ≥10% are considered substantially modified if the life form has either <50% of benchmark cover, or <50% of benchmark species diversity

Understorey Summary Benchmark Life forms present 100% Score **20**

Category and Description	Score
All strata and life forms effectively absent	0
Up to 50% of life forms present	5
>50% to 90% of life forms present	10
of those present ≥50% substantially modified	15
of those present, <50% substantially modified	15
>90% of life forms present	15
of those present, ≥50% substantially modified	20
of those present, <50% substantially modified	25
of those present, none substantially modified	25

Vegetation Condition Assessment Form V1.0



Species Recruitment

Woody species recorded in habitat zone (5 and taller)	Adequate recruitment
Canopy trees (combined species)	✓
Acacia stricta	✓
Acacia verticillata	✓
Acacia dealbata	✓
Allocasuarina littoralis	✓
Callitris oblonga	✓
Callitris rhomboides	✓
Eucalyptus cyparissias (m)	✓
Tomadites affinis	✓
Leptospermum lanigerum	✓
Leptospermum scoparium	✓
Palokura ericifolia	✓
Total recruiting species	12 / 12

Treat multiple canopy species as a single species.
 Adequate recruitment of canopy species requires at least 2 cohorts to be present (seedlings < 2m and saplings > 2m tall) and where canopy cover is less than benchmark, sufficient recruitment to attain benchmark cover over time.
 Adequate recruitment of other woody species requires observed immature individuals to be at least 10% of number of mature individuals for each species.

Recruitment

Score **10**

Category & Description		High diversity*	Low diversity*
No evidence of a recruitment cohort**	within community not driven by episodic events	0	0
	within community driven by episodic events*	0	0
Evidence of at least one recruitment cohort in at least one life form	Proportion of native woody species present that have adequate recruitment*	< 30%	3
		30 - 70%	5
		> 70%	10

* cohort refers to a group of woody plants established in a single episode (can include suppressed canopy species individuals)
 ** refer to benchmarks for verification
 * high diversity defined as > 50% of benchmark woody species diversity

Organic Litter

Benchmark 20% Observed litter 50% Score **5**

Category & Description	Disturbed by native organic litter	Disturbed by non-native organic litter
< 10% of benchmark cover	0	0
< 50% of benchmark cover	3	2
≥ 50% of benchmark cover	5	4

Litter is defined as dead organic material detached from the parent plant, including plant debris, fallen leaves and twigs < 10cm

Logs

Benchmark log length 40 Observed length 22 Score **5**

Category & Description	Large logs present*	Large logs absent
< 10% of benchmark length	0	0
< 50% of benchmark length	3	2
≥ 50% of benchmark length	5	4

Large logs defined as those with diameter ≥ 3.5 of benchmark large tree DBH.
 * present if large log length ≥ 25% of benchmark log length
 * absent if large log length is < 25% of benchmark log length

Landscape Context Score

Patch Size Patch size 60ha Score **8**

Category & Description	Score
< 2 ha	1
Between 2 and 5 ha	2
Between 5 and 10 ha	4
Between 10 and 20 ha	6
≥ 20 ha, but 'significantly disturbed'	8
≥ 20 ha, but not 'significantly disturbed'	10

The patch is the area of native vegetation contiguous with the assessment area (rural), regardless of size, condition or land tenure. Includes adjoining wetlands.
 * significantly disturbed if activities such as grazing, timber harvesting, roading, fuel reduction burning or Phytophthora infestation have occurred. Effectively most patches within fragmented landscapes are significantly disturbed

Neighbourhood

Score **2**

Radius from site	% Native vegetation*	Weighting	Score
100 m	20	0.03	0.6
1 km	40	0.04	1.6
5 km	60	0.03	1.8
Subtract 2 if the neighbourhood is 'significantly disturbed'			-2
Add Values and 'round-off'			2

* to nearest 20%
 Multiply % native vegetation by weighting for each radius from the zone (eg) 40% = 0.03 x 1.2, then add values to obtain final Neighbourhood Value

Distance to Core Area

Score **4**

Distance	Core Area not significantly disturbed*	Core Area significantly disturbed*
> 5 km	0	0
1 to 5 km	2	1
< 1 km	4	3
contiguous	5	4

A 'core area' is native vegetation > 50 ha regardless of type, condition or tenure. Includes natural wetlands and lakes, estuaries and rivers.
 * significantly disturbed see definition under patch size.

FINAL HABITAT SCORE

Component	'Site Condition Score'					'Landscape Context Score'				TOTAL	
	Large Trees	Tree Canopy Cover	Lack of Weeds	Understorey Summary	Recruitment	Organic Litter	Logs	Patch Size	Neighbourhood		Distance to Core Area
Score	10	5	11	20	10	5	5	8	2	4	80

FOREST VEGETATION
(including woodlands, rainforests and non-eucalypt forests)

Vegetation Condition Assessment Form V1.0

DATE: 19/08/2009	LOCATION: Apsley River East Coast	MAP:
SITE NAME:	GRID REFERENCE (centre of zone):	
ZONE no./name: 2	ASSESSOR:	GPS DATUM (circle one): WGS84 / AUS94 / AUDB6
TASVEG VC CODE: DDV		
SIZE of zone (ha): 25		
COMMENTS: Swampy forest south of Apsley River. Partially burnt c. 2yrs ago.		

Site Condition Score

Large Trees Observed large trees 15/ha
Benchmark DBH: 20cm Benchmark 20/ha Score **7**

Category & Description	% Canopy Health*		
	>70%	50-70%	<50%
None present	0	0	0
>0 to 20% of the benchmark number of large trees/ha	3	2	1
>20% to 40% of the benchmark number of large trees/ha	4	3	2
>40% to 70% of the benchmark number of large trees/ha	6	5	4
>70% to 100% of the benchmark number of large trees/ha	8	7	6
> the benchmark number of large trees/ha	10	9	8

Large trees are defined by diameter at breast height (DBH) - see benchmark
*estimate proportion of an expected healthy canopy cover that is present (ie. not missing due to tree death or decline)

Tree Canopy Cover
Benchmark 40% Observed cover 25% Score **4**

Category & Description	% Canopy Health*		
	>70%	50-70%	<50%
<10% of benchmark cover	0	0	0
<50% or >150% of benchmark cover	3	2	1
>50% or <150% of benchmark cover	5	4	3

Tree canopy cover is defined as those canopy tree species reaching >50% of mature height - see benchmark description
*estimate proportion of an expected healthy canopy cover that is present (ie. not missing due to tree death or decline)

Lack of Weeds 5-10%
Observed weed cover 100%
Observed high threat weeds 100% Score **7**

Category & Description	High threat weeds**		
	None	<10%	>10%
> 75% cover of weeds	0	0	0
25-75% cover of weeds	4	2	0
10-25% cover of weeds	7	6	4
5-10% cover of weeds	11	9	7
<5% cover of weeds**	15	13	11

*Proportion of weed cover due to high threat weeds
High threat weed species are defined as introduced species (including non-indigenous 'natives') that achieve >5% cover in the zone or those weed species listed as high threat weeds in Tasmania
A list of high threat weeds in Tasmania is provided in the TASVEG Vegetation Condition Assessment Manual
**if total weed cover is negligible (<1%) and high threat weed species are present then score = 13
The Assessor should determine the threat posed by any weed in the zone (list) or not

Understorey Life Forms
Benchmark No. Life forms 9
Phytophthora dimarum symptoms (tick if observed)

LF code from benchmark	# spp observed/benchmark # spp	% cover observed/benchmark % cover	Present (tick)	Modified (tick)
IT	5 / 5	5 / 5	✓	
T	5 / 5	25 / 40	✓	
S	5 / 4	10 / 15	✓	
Total				
PS	1 / 1	1 / 1		
H	7 / 6	45 / 45	✓	
G	1 / 1	5 / 45	✓	
LSR	4 / 3	40 / 20	✓	
MSR	1 / 1	1 / 1		
GF	2 / 2	45 / 10	✓	✓
TF	1 / 1	1 / 1		
SCE	1 / 1	45 / 45	✓	
ML	1 / 1	10 / 5	✓	
SC	1 / 1	1 / 1		
Total				

Present: Life forms with benchmark cover of >10% are considered present if any specimens are observed
Life forms with benchmark cover of <10% are considered present if the life form occupies at least 10% of benchmark cover

Modified: Life forms with benchmark cover of <10% are considered substantially modified if the life form has either <50% of benchmark species diversity or no reproductively mature specimens are observed
Life forms with benchmark cover of >10% are considered substantially modified if the life form has either <50% of benchmark cover or <50% of benchmark species diversity

Understorey Summary
Benchmark Life forms present 100% Score **20**

Category and Description	Score
All strata and life forms effectively absent	0
Up to 50% of life forms present	5
>50% to 90% of life forms present	10
>90% of life forms present	15
of those present, >50% substantially modified	15
of those present, <50% substantially modified	20
of those present, none substantially modified	25

Vegetation Condition Assessment Form V1.0



Species Recruitment

Woody species recorded in habitat zone (5 and taller)	Adequate recruitment
Canopy trees (combined species)	10
<i>Acacia melanoxylon</i>	<<<<<<
<i>Acacia dealbata</i>	<<<<<<
<i>Bankia marginata</i>	<<<<<<
<i>Leptospermum laetum</i>	<<<<<<
<i>Melaleuca eucalypta</i>	<<<<<<
<i>Melaleuca quercina</i>	<<<<<<
<i>Glomera limicola</i>	<<<<<<
<i>Pomadouria aspera</i>	<<<<<<
Total recruiting species: 10 / 10	

Treat multiple canopy species as a single species.
 Adequate recruitment of canopy species requires at least 2 cohorts to be present (seedlings <2m and saplings >2m tall) and where canopy cover is less than benchmark, sufficient recruitment to attain benchmark cover over time.
 Adequate recruitment of other woody species requires observed immature individuals to be at least 10% of number of mature individuals for each species.

Recruitment

Score **10**

Category & Description		High diversity*	Low diversity*
No evidence of recruitment (but)	within community not driven by episodic events	0	0
	clear evidence of appropriate episodic event	0	0
Evidence of at least one recruitment cohort in at least one life form	within community driven by episodic events	5	5
	no clear evidence of appropriate episodic event	5	5
	Proportion of native woody species present that have adequate recruitment†	< 30% 30 - 70% > 70%	3 6 10

* cohort refers to a group of woody plants established in a single episode (can include suppressed canopy species individuals)
 † refer to benchmark for clarification
 *high diversity defined as 75% of benchmark woody species diversity

Organic Litter

Benchmark **80**% Observed litter **40**% Score **5**

Category & Description	Dominated by native organic litter	Dominated by non-native organic litter
< 10% of benchmark cover	0	0
< 50% of benchmark cover	3	2
≥ 50% of benchmark cover	5	4

Litter is defined as dead organic material detached from the parent plant including plant debris, fallen leaves and twigs <10cm.

Logs

Benchmark log length **40** Observed length **37** Score **5**

Category & Description	Large logs present*	Large logs absent†
< 10% of benchmark length	0	0
< 50% of benchmark length	3	2
≥ 50% of benchmark length	5	4

Large logs defined as those with diameter ≥ 0.5 of benchmark large tree DBH
 * present if large log length is ≥ 25% of benchmark log length
 † absent if large log length is < 25% of benchmark log length

Landscape Context Score

Patch Size Patch size **720ha** Score **8**

Category & Description	Score
< 2 ha	1
Between 2 and 5 ha	2
Between 5 and 10 ha	4
Between 10 and 20 ha	6
> 20 ha, but 'significantly disturbed'	8
≥ 20 ha, but not 'significantly disturbed'	10

The patch is the area of native vegetation continuous with the assessment site (zone), regardless of EVC, condition or land tenure. Includes adjoining wetlands.
 *'significantly disturbed' if activities such as grazing, timber harvesting, roading, fuel reduction burning or Phytophthora infestation have occurred. Effectively most patches within fragmented landscapes are significantly disturbed.

Neighbourhood

Score **2**

Radius from site	% Native vegetation*	Weighting	Score
100 m	20	0.03	0.6
1 km	40	0.04	1.6
5 km	60	0.03	1.8
Subtract 2 if the neighbourhood is 'significantly disturbed'			- 2
Add Values and 'round-off'			2

*to nearest 20%
 Multiply % native vegetation x weighting for each radius from the zone (eg 40% x 0.03 = 1.2), then add values to obtain final Neighbourhood Value

FINAL HABITAT SCORE

Component	'Site Condition Score'					'Landscape Context Score'				TOTAL	
	Large Trees	Tree Canopy Cover	Loss of Woods	Understorey Community	Root Rot	Organic Litter	Logs	Patch Size	Neighbourhood		Proximity to Core Area
Score	7	4	7	20	10	5	5	8	2	4	72

Distance to Core Area

Score **4**

Distance	Core Area not significantly disturbed*	Core Area significantly disturbed*
> 5 km	0	0
1 to 5 km	2	1
< 1 km	4	3
contiguous	5	4

A core area is native vegetation > 50 ha regardless of type, condition or tenure. Includes natural wetlands and lakes, estuaries and rivers.
 *'significantly disturbed' see definition under patch size

Appendix G – Monitoring Report-Swift Parrot Offset 2017

2017 MONITORING REPORT – SWIFT PARROT OFFSET

Location	466 EAST BAGDAD RD BAGDAD TAS 7030
Date	05/10/2017
Personnel	Matt Taylor, Sally Bryant

AIM

To evaluate whether swift parrot habitat has been maintained or improved over the past year

METHODS

Habitat condition	Fixed photo-points at four sites on the property were re-surveyed (see map). A photograph was taken of the ground layer, understorey and canopy at each site. Structural complexity was calculated as the number of vegetation strata observed at each site. Recruitment was calculated as the number of cohorts per site. Canopy cover was estimated as a percentage for each site.
Bird Diversity	Two 20 minute 2 ha bird surveys were conducted while walking between two pairs of sites, where birds were recorded as present if they were heard or sighted. This survey methodology follows that recommended by Birds Australia for the Atlas of Australian Birds project (www.birdsaustralia.com.au) for the two hectare search.

RESULTS

Both the fauna and vegetation values have been maintained or show slight improvement since the previous survey.

2017 Bird Diversity

In 2017, bird richness per site was 18-19 species with a total bird diversity of 26 species. This compares with 11 to 12 species per site and a diversity of 15 species in 2016. A total of 13 new bird species (highlighted in yellow, Table 1) were identified across the two survey zones in 2017. Bird diversity and richness was much improved since 2016 due in part to the spring rains and lushness of the vegetation, and secondly as the eucalypts age then more nesting sites are created. The bird fauna on this property is very good and typical of what is to be expected in dry forest and woodland interspersed with patches of grassland and watering sites. The few exotic bird species and lack of weeds at this site contribute to its ecological intactness which is further enhanced by the surrounding buffer of protected lands enabling contiguous corridors of undisturbed bush. No eucalypt flowering was observed during the site visit therefore honeyeater numbers were generally low, and no swift parrots were detected foraging on site. An abundance of mature and mixed aged trees on site provide, many with fire scars and wind damage, offer ample nesting sites for swift parrot during a good flowering year.

A species comparison over the two years is shown in Table 2. The uniformity and closeness of the monitoring sites suggests the bird fauna on the property would be consistent in both zones. As monitoring progresses it may be possible to detect differences however at this stage birds confined to only one of the survey sites consists of 12 species most of which were detected in 2017.

Figure 1 (a – d) shows the four vegetation monitoring sites in 2017 with the patches of open grassy woodland interspersed by mature eucalypts and good ground cover.

Taxon name E – endemic	Taxon scientific name	Site DGL1 & DGL2	Site DGL3 & DGL4
Sulphur Crested Cockatoo	<i>Cacatua galerita</i>	calling	calling
Tasmanian Green Rosella E	<i>Platycercus caledonicus caledonicus</i>	calling	calling
Tasmanian Superb Fairy-wren	<i>Malurus cyaneus cyaneus</i>	calling	calling
Spotted Pardalote	<i>Pardalotus punctatus</i>	calling	calling
Tasmanian Striated Pardalote	<i>Pardalotus striatus striatus</i>	calling	calling
Yellow-throated Honeyeater E	<i>Lichenostomus flavicollis</i>	calling	calling
Tasmanian Noisy Miner	<i>Manorina melanocephala leachi</i>	calling	
Tasmanian New Holland Honeyeater	<i>Phylidonyris novaehollandiae canescens</i>	calling	
Black-headed Honeyeater E	<i>Melithreptus affinis</i>	calling	calling
Tasmanian Black-faced Cuckoo-shrike	<i>Coracina novaehollandiae novaehollandiae</i>		calling
Tasmanian Grey Currawong	<i>Strepera versicolor arguta</i>	calling	
Tasmanian Grey Fantail	<i>Rhipidura fuliginosa albiscapa</i>	calling	
Southern Forest Raven	<i>Corvus tasmanicus tasmanicus</i>	calling	calling
Grey Shrike-thrush	<i>Colluricincla harmonica</i>	calling	
Australian Magpie	<i>Cracticus tibicen</i>	calling	
Grey Butcherbird	<i>Cracticus torquatus</i>	calling	
Dusky Woodswallow	<i>Artamus cyanopterus</i>	calling	seen
Strong-billed Honeyeater	<i>Melithreptus validirostris</i>	seen	calling
Scarlet Robin	<i>Petroica boodang</i>		calling
Laughing Kookaburra	<i>Dacelo novaeguineae</i>		calling
Yellow Wattlebird E	<i>Anthochaera paradoxa</i>		calling
Brown Quail	<i>Coturnix ypsilophora</i>		2 x flushed
Dusky Robin E	<i>Melanodryas vittata</i>		calling
Black Currawong E	<i>Strepera fuliginosa</i>		calling
Eastern Spinebill	<i>Acanthorhynchus tenuirostris</i>	calling	calling
Fan-tailed Cuckoo	<i>Cacomantis flabelliformis</i>		calling
Species Diversity 26 species	Species Richness per site	18 species	19 species

Taxon name E – endemic	2016 DGL1 - DGL2	2017 DGL1 - DGL2	2016 DGL3 - DGL4	2017 DGL3 - DGL4
Sulphur Crested Cockatoo <i>Cacatua galerita</i>	X	X	X	X
Tasmanian Green Rosella E <i>Platycercus caledonicus caledonicus</i>	X	X	X	X
Southern Forest Raven <i>Corvus tasmanicus tasmanicus</i>	X	X	X	X
Black-headed Honeyeater E <i>Melithreptus affinis</i>	X	X	X	X
Spotted Pardalote <i>Pardalotus punctatus</i>	X	X	X	X
Tasmanian Striated Pardalote	X	X	X	X

<i>Pardalotus striatus striatus</i>				
Yellow-throated Honeyeater E <i>Lichenostomus flavicollis</i>	X	X	X	X
Tasmanian New Holland Honeyeater <i>Phylidonyris novaehollandiae canescens</i>	X	X	X	
Tasmanian Black-faced Cuckoo-shrike <i>Coracina novaehollandiae novaehollandiae</i>	X		X	X
Tasmanian Grey Fantail <i>Rhipidura fuliginosa albiscapa</i>	X	X	X	
Tasmanian Superb Fairy-wren <i>Malurus cyaneus cyaneus</i>	X	X		X
Tasmanian Grey Currawong <i>Strepera versicolor arguta</i>		X	X	
Tasmanian Noisy Miner <i>Manorina melanocephala leachi</i>		X	X	
Eastern Spinebill <i>Acanthorhynchus tenuirostris</i>		X		X
Dusky Woodswallow <i>Artamus cyanopterus</i>		X		X
Strong-billed Honeyeater <i>Melithreptus validirostris</i>		X		X
Scarlet robin <i>Petroica boodang</i>				X
Laughing Kookaburra <i>Dacelo novaeguineae</i>				X
Yellow Wattlebird E <i>Anthochaera paradoxa</i>				X
Brown quail <i>Coturnix ypsilophora</i>				X
Dusky Robin E <i>Melanodryas vittata</i>				X
Black Currawong E <i>Strepera fuliginosa</i>				X
Fan-tailed Cuckoo <i>Cacomantis flabelliformis</i>				X
Shining Bronze-Cuckoo <i>Chalcites lucidus</i>	X			
Brown Goshawk <i>Accipiter fasciatus</i>	X			
Grey Shrike-thrush <i>Colluricincla harmonica</i>		X		
Australian Magpie <i>Cracticus tibicen</i>		X		
Grey Butcherbird <i>Cracticus torquatus</i>		X		
Species Diversity 28 sp				
White = - 4 sites	Green – 3 sites	Blue – 2 sites	Yellow – 1 site	



Fig Sites in 2017 - L to R Top DGL1, DGL2, Bottom DGL3, DGL4

2017 Habitat Condition

Habitat condition			
site	structural complexity (strata)	recruitment (cohorts)	canopy cover (%)
DGL1	6	3	30
DGL2	6	3	45
DGL3	6	4	60
DGL4	5	3	5
average	5.75 (increase 10%)	3.25 (no change)	35 (no change)

Vegetation Condition

Tall open forest dominated by *Eucalyptus globulus* continues to occupy the covenant area and provides excellent foraging and nesting habitat for swift parrot (*Lathamus discolor*). The understorey has changed little in the past year. It remains open, with a sparse layer of sub-canopy trees such as *Acacia dealbata* and shrubs such as *Bursaria spinosa*. The density of ground layer vegetation has increased since last year. It is still dominated by native grasses such as *Poa labillardierei*, but grass cover has noticeably increased. There is also an increased cover and richness of native herbs such as *Acaena novae-zeelandiae* and *Viola hederacea* *Hypericum japonicum* and *Geranium potentilloides*. The high number of mature trees with hollows have been maintained since the past survey. Recruitment on the property also remains excellent, with multiple age cohorts (trees, saplings and seedlings) present at all sites.

Photo Monitoring Sites

DGL1 (521092E 5282961S)



DGL2 (521200E 5282981N)



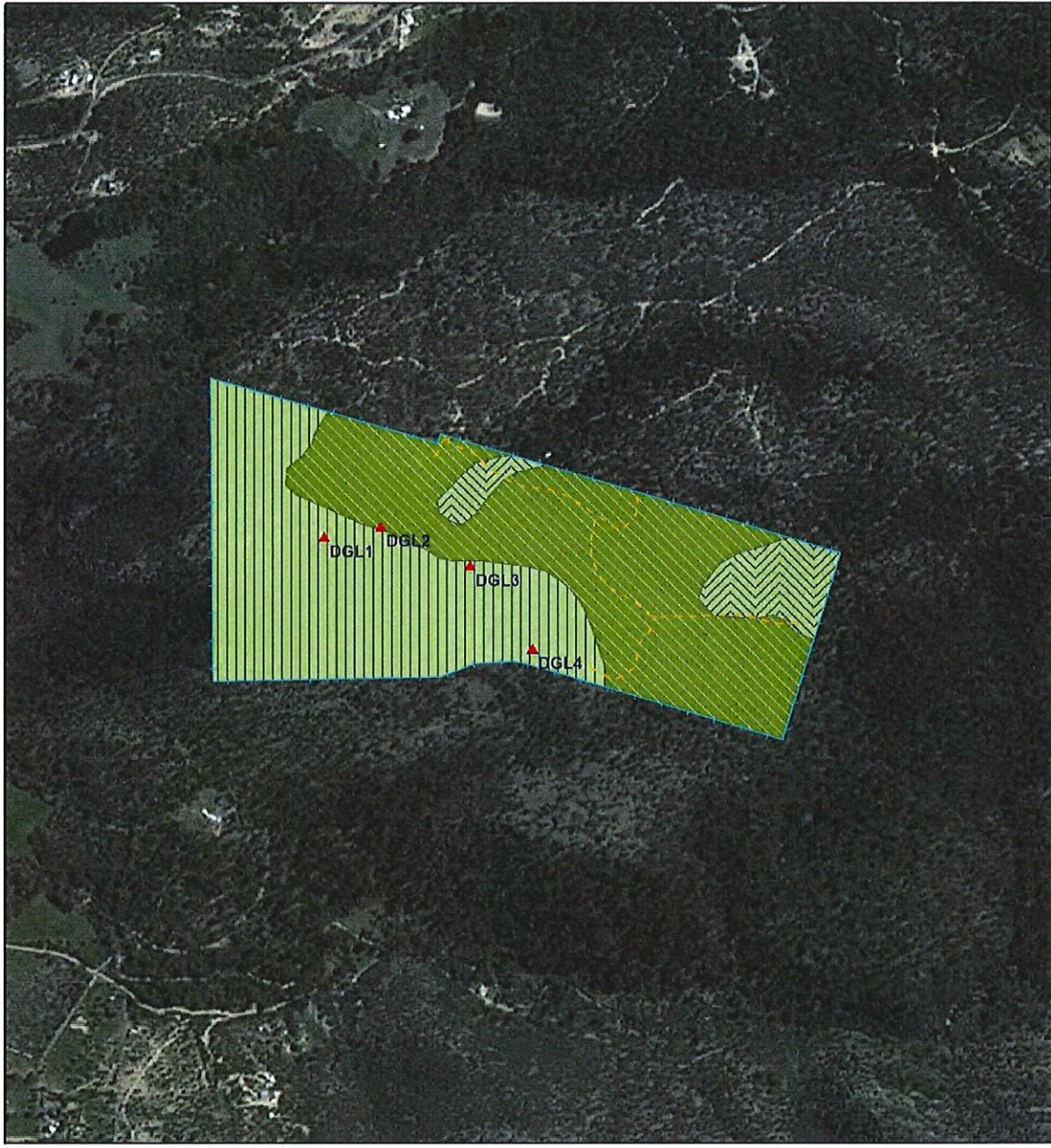
DGL3 (521371E 5282906N)



DGL4 (521491E 5292747N)



East Bagdad Rd - Swift Parrot Offset Monitoring



- ▲ Swift Parrot Monitoring Site
- ▨ Eucalyptus globulus dry forest (DGL)
- ▧ Eucalyptus obliqua dry forest (DOB)
- Eucalyptus pulchella forest (DPU)

Title Ref: 214709/1
 Data Sources: TLC, LIST, DPIPW
 Datum: GDA94
 Map Date: 20/10/2017
 Author: Matt Taylor

