



13 January 2025

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### **EPBC Act Compliance Report for EPBC 2017/8007 - Saint Elmo Vanadium Project - October 2023 - October 2024**

This compliance report has been compiled by Epic Environmental (Epic) for the Saint Elmo Vanadium Project (the Project), approved under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (EPBC 2017/8007) on 29 March 2021 and being delivered by Multicom Resources Pty Ltd (Multicom). In accordance with **condition 16** of the approval of the action:

- *“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.”*

Approval condition 16a states the approval holder must:

- *“publish each compliance report on the website within 60 business days following the relevant 12 month period.”*

On behalf of Multicom, Epic sent a notification letter (31 October 2023) informing the Department of Climate Change, Energy, the Environment and Water (DCCEEW) that the project officially commenced on 30 October 2023. As such, a compliance report of the project activities relevant to the requirements of the approval conditions will cover the period up until 30 October 2024 and is required to be published on the project’s website by the 30 January 2025.

The project Offset Strategy has been active for more than two years. Epic have thus far compiled two previous compliance letters (prior to the official commencement of the action) due to interest from the post approvals team at DCCEEW. These were sent in June 2022 and July 2023 in order to demonstrate Multicom’s commitment to the implementation of the Offset Strategy. An additional compliance letter was sent to DCCEEW in November 2023 describing the results of pre-clearance surveys carried out for the project at the time.

This report outlines Multicom’s compliance against all approval conditions described in **Annexure A** of the final EPBC Act approval of the Project.

## Defined roles associated with the Project and offsets program (as described in Part C – Definitions)

The following personnel fulfil the project roles described in Part C – Definitions of the project EPBC Act approval:

- Independent suitably qualified expert
  - Greg Mifsud is engaged as the independent suitably qualified expert
- Suitably qualified field ecologist
  - Terry Reis, Brett Taylor and Maria Mahon are suitably qualified field ecologists
- Suitably qualified researcher
  - Dr Andrew Baker of Queensland University of Technology (QUT) is the suitably qualified researcher
- Suitably qualified environmental manager
  - Mr Geoff Penton of Southern Gulf NRM was the suitably qualified environmental manager until October 2023
  - Lyndy Skea of Southern Gulf NRM is the suitably qualified environmental manager from October 2023 and ongoing

## Compliance report findings

The Project formally commenced on 30 October 2023 and is progressing through the initial construction phase for processing infrastructure. The Project's Offset Strategy activities have been ongoing since 2022. The assessment of the Project compliance with the EPBC Act approval conditions is detailed in **Table 1**. The Project is considered to comply with 14 of the approval conditions. The remaining eight approval conditions are not considered applicable to the Project at this stage.

Epic (on behalf of Multicom) is happy to discuss any of the items outlined in this compliance report.

Kind regards,

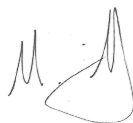


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**MULTICOM**  
RESOURCES

**Table 1. Assessment of Project compliance with EPBC Act approval conditions (EPBC 2017/8007)**

Condition number	Condition	Status 30 October 2023 – 30 October 2024	Compliance
<b>Maximum clearance limits</b>			
1	To limit the impacts of the action on the Julia Creek Dunnart ( <i>Sminthopsis douglasi</i> ), the approval holder must not clear more than 7,419 hectares (ha) of Julia Creek Dunnart habitat within the project area.	Clearing for the Project has thus far been minimal and restricted to a small area associated with lands for mining processing infrastructure and track access. No mining has taken place as yet although initial works are expected to commence in early 2025. Clearing has occurred within the designated approved boundary of the project area	Complies
2	The approval holder must not clear outside the project area.	Clearing has only occurred within the designated approved boundary of the project area	Complies
<b>Pre-clearance surveys and relocation program</b>			
3	To minimise the impacts of the action on Julia Creek Dunnarts, the approval holder must undertake pre-clearance surveys of all Julia Creek Dunnart habitat within the project area. Preclearance surveys must be undertaken within one month prior to clearing any area of Julia Creek Dunnart habitat and undertaken by a suitably qualified field ecologist in accordance with the Survey Guidelines for Australia's threatened mammals or in accordance with methodology endorsed by an independent suitably qualified expert in writing.	<p>The first pre-clearance survey was undertaken in May/June 2023 within the project area in advance (within one month) of initial disturbance works for establishment of project infrastructure. Two Julia Creek Dunnarts (<i>Sminthopsis douglasi</i>) were recorded during the survey. The June 2023 preclearance survey report provided as <b>Attachment A</b>. This report was provided to DCCEE as an attachment to a previous compliance letter submitted to Post Approvals Section in July 2023.</p> <p>The survey timing was based on the proposed timing for ground disturbance works provided by Multicom at the time. Subsequent on-ground conditions and delays caused by construction/ logistical considerations delayed the proposed initiation of works until late October 2023. A second pre-clearance survey was carried out from 4-9 October 2023 and covered a much smaller area as based on a refined footprint. No Julia Creek Dunnarts were recorded. The October 2023 preclearance survey report is also provided in <b>Attachment A</b>.</p> <p>Both pre-clearance surveys were carried out by a suitably qualified field ecologist in accordance with a methodology described in the Project's Significant Species Management Plan V4 as endorsed by the Project's independent suitably qualified expert. The October 2023 survey occurred within 30 days of vegetation clearing occurring on the site.</p> <p>Further pre-clearing surveys are expected to occur in early 2025.</p>	Complies
4	The approval holder must ensure that all clearing of Julia Creek Dunnart habitat within the project area is supervised by a fauna	Vegetation clearing for initial works occurred on 30 October 2023. A fauna spotter-catcher conducted pre-clearing inspection on the two	Complies

Condition number	Condition	Status 30 October 2023 – 30 October 2024	Compliance
	spotter catcher with sufficient authority to ensure that clearing activities do not cause injury or death of Julia Creek Dunnarts.	preceding days (including use of a thermal camera) and was present during the clearing. No injured wildlife was recorded.	
5	The approval holder must take all reasonable steps to capture all Julia Creek Dunnarts identified during pre-clearance surveys and/or clearing and release all captured Julia Creek Dunnarts within the relocation site. All capture and release of Julia Creek Dunnarts must be conducted by a fauna spotter catcher or suitably qualified field ecologist.	Two Julia Creek Dunnarts were recorded during the initial pre-clearance survey in May 2023 and relocated to an area designated as a 'non-mining area' within the project Offset Strategy. A preclearance survey report, including reference to the requirements of this condition (including the area of release) is provided as <b>Attachment A</b> .  The pre-clearance survey and relocation of Julia Creek Dunnarts were carried out by a suitably qualified field ecologist.	Complies
6	The approval holder must report the survey effort for pre-clearance surveys and all capture and release of Julia Creek Dunnarts in the next annual compliance report and upload all sighting records to the Atlas of Living Australia.	Preclearance survey reporting is provided as <b>Attachment A</b> of this compliance report. The species location records were uploaded onto the Atlas of Living Australia website in September 2023.	Complies
<b>Environmental offsets</b>			
7	To compensate for the clearance of Julia Creek Dunnart habitat identified in condition 1, the approval holder must fully implement the Saint Elmo Vanadium Project Offset Strategy.	Multicom has continued implementation of the Offset Strategy as per <b>Condition 8</b> of approval. Activities regarding implementation of the Offset Strategy have been agreed upon in close consultation with the independent suitably qualified expert, suitably qualified researcher and suitably qualified environment manager. These activities have included a range of desktop and ongoing field and laboratory-based works that are directly associated with the Offset Strategy and have been costed and contracted accordingly.  A summary of works carried out thus far by QUT for the Offset Strategy (as overseen by Dr Andrew Baker) is provided as Attachment B in the complete compliance report provided to DCCEEW.  A summary of works carried out thus far by SGNRM for the Offset Strategy (as overseen by Geoff Penton and Lyndy Skea) is provided as Attachment C in the complete compliance report provided to DCCEEW.  The project has implemented and continues to fund the Saint Elmo Vanadium Project Offset Strategy.	Complies
8	The approval holder must not commence the action until:		
a)	Contracts have been signed and exchanged between a suitably qualified researcher and the approval holder committing both parties to the research program	Multicom provided initial funding to QUT for initial research works carried out in 2022. Multicom subsequently entered into a direct contractual arrangement with QUT in October 2022 committing to the next three years of activities associated with the research program. This occurred one year prior to the project commencement.	Complies

Condition number	Condition	Status 30 October 2023 – 30 October 2024	Compliance
b)	Contracts have been signed and exchanged between a suitably qualified environmental manager and the approval holder committing both parties to the threat abatement program	Multicom provided initial funding to SGNRM for initial research works carried out in 2022. On behalf of Multicom, Epic Environmental signed a subcontractual agreement with Southern Gulf NRM in April 2023 committing to the next two years of activities associated with the threat abatement program. This occurred five months prior to the project commencement.	Complies
c)	Funding for at least the first full year of the research program has been agreed upon between a suitably qualified researcher and the approval holder in line with the milestones outlined in the Saint Elmo Vanadium Project Offset Strategy and provided to the suitably qualified researcher by the approval holder	Multicom entered into a direct contractual arrangement with QUT in October 2022 committing to the next three years of activities associated with the research program. The funding associated with the research program will extend to \$1.28 million at the conclusion of the current contract. Since the contract signed with QUT in October 2022, Multicom has been paying monthly invoices to QUT for continued implementation of the research program following the first phase works carried out in 2022.	Complies
d)	Funding for at least the first full year of the threat abatement program has been agreed upon between a suitably qualified environmental manager and the approval holder in line with the milestones outlined in the Saint Elmo Vanadium Project Offset Strategy and provided to the suitably qualified environmental manager by the approval holder	On behalf of Multicom, Epic Environmental signed a subcontractual agreement with Southern Gulf NRM in April 2023 committing to the next two years of activities associated with the threat abatement program. The funding associated with the threat abatement program will extend to \$517,000 at the conclusion of the current contract. Since the new contract signed with SGNRM in April 2023, Multicom has been paying invoices to SGNRM for continued implementation of the research program following the first phase works carried out in 2022.	Complies
e)	Evidence that conditions 8(a) to 8(d) have been complied with is provided to the department in writing.	This memo and the summaries of works carried out so far (as provided in the complete compliance report provided to DCCEEW – Attachment B and Attachment C) are considered evidence that Conditions 8a to 8d have been complied with. The evidence described for all subsection of Condition 8 identified were also submitted as evidence in a previous compliance letter provided to the Post Approval Section of DCCEEW in July 2023.	Complies
9	The approval holder must ensure all research results from the Saint Elmo Vanadium Project Offset Strategy are published in research articles in a gold open access peer-reviewed journal relevant to the scientific discipline and location of the project.	The first two research articles associated with the Offset Strategy research program have been published in open access journals in 2024: <ul style="list-style-type: none"> <li>• Bakker, AH, Patterson, CR, Mifsud, G, Fuller, S and Baker AM 2024, 'Density of a cryptic Australian small mammal: the threatened Julia Creek Dunnart (<i>Sminthopsis douglasi</i>)' as published in <i>Ecology and Evolution</i> (Wiley Online Library). The article was accepted on 18 June 2024 and is publicly available from <a href="https://onlinelibrary.wiley.com/doi/pdf/10.1002/ece3.11674">https://onlinelibrary.wiley.com/doi/pdf/10.1002/ece3.11674</a></li> </ul>	Complies

Condition number	Condition	Status 30 October 2023 – 30 October 2024	Compliance
		<ul style="list-style-type: none"> <li>Bakker, AH, Schoenfuss, P, Mifsud, G, Reside, AE, Fuller, S and Baker AM 2024, 'Comparing methods of detecting an elusive Dasyurid marsupial: the threatened Julia Creek Dunnart (<i>Sminthopsis douglasi</i>), in central western Queensland, Australia' as published in <i>Ecology and Evolution</i> (Wiley Online Library). The article was accepted on 10 October 2024 and is publicly available from <a href="https://onlinelibrary.wiley.com/doi/pdf/10.1002/ece3.70507">https://onlinelibrary.wiley.com/doi/pdf/10.1002/ece3.70507</a></li> </ul> Two more articles associated with the research program have been submitted and are awaiting review by the publisher.	
10	The approval holder must provide annual reports to the department on progress towards the objectives of the Saint Elmo Vanadium Project Offset Strategy within 60 business days of each anniversary of the commencement of the action or an alternative date agreed to by the department.	The summaries of works carried out so far (as provided in the complete compliance report provided to DCCEEW – Attachment B and Attachment C) are considered evidence that Condition 10 has been complied with. Summary reports of Offset Strategy activities were also submitted as part of a previous compliance letter provided to the Post Approval Section of DCCEEW in July 2023.	Complies
11	The approval holder must publish the Saint Elmo Vanadium Project Offset Strategy on the website prior to commencement of the action and keep the Saint Elmo Vanadium Project Offset Strategy published on the website until the end date of this approval.	The Saint Elmo Vanadium Project Offset Strategy is currently and will remain available on the project website: <a href="https://saintelmoproject.com.au/offset-strategy-2/">https://saintelmoproject.com.au/offset-strategy-2/</a> The Offset Strategy was published on the project website in 2022.	Complies
<b>Commencement of the action</b>			
12	The approval holder must notify the department in writing of the date of commencement of the action within 10 business days after the date of commencement of the action	On behalf of Multicom, Epic sent a notification letter (31 October 2023) informing the Post Approvals Section of DCCEEW that the project officially commenced on 30 October 2023.	Complies
13	If, at any time after five 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 commence the action without the written agreement of the Minister.	The project has commenced within five years of the date of approval (21 March 2021).	Not applicable
<b>Compliance records</b>			
14	The approval holder must maintain accurate and complete compliance records.	To Epic's knowledge, Multicom (as the approval holder) has been maintaining accurate and complete compliance records with regard to relevant Project activities.	Complies
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.	Not relevant at this stage	Not applicable
<b>Annual compliance reporting</b>			
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:		

Condition number	Condition	Status 30 October 2023 – 30 October 2024	Compliance
a)	Publish each compliance report on the website within 60 business days following the relevant 12 month period	This 2023-2024 compliance report was uploaded to the Project website before 30 January 2025. The report was required to be published by 30 January 2025. The report is currently and will remain available on the project website: <a href="https://saintelmoproject.com.au">https://saintelmoproject.com.au</a>	Complies
b)	Notify the department by email that a compliance report has been published on the website and provide the weblink for the compliance report and documentary evidence showing the date of publication within five business days of the date of publication	This 2023 2024 compliance report has been submitted to the Post Approvals section of the DCCEEW before 30 January 2025 as documentary evidence.	Complies
c)	Keep all compliance reports publicly available on the website until this approval expires	The report is currently and will remain available on the project website: <a href="https://saintelmoproject.com.au">https://saintelmoproject.com.au</a>	Complies
d)	Exclude or redact sensitive ecological data from compliance reports published on the website	The summary reporting of Offset Strategy activities carried out so far has been redacted from the version of the compliance report published on the website due to confidentiality concerns.	Complies
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	The summary reporting of works carried out so far has been provided in Attachment B and Attachment C as submitted to the DCCEEW in the complete version of the compliance report.	Complies
<b>Reporting non-compliance</b>			
17	The approval holder must notify the department in writing of any: incident; non-compliance with the conditions; or non-compliance with the commitments made in plans. The notification must be given as soon as practicable, and no later than two business days after becoming aware of the incident or non-compliance. The notification must specify:	No incident and/or non-compliance with conditions or commitments has occurred as a result of the Projects operations	Not applicable
a)	Any condition which is or may be in breach		
b)	A short description of the incident and/or non-compliance		
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 or commitments made in plans as soon as practicable and no later than 10 business days after becoming aware of the incident or non-compliance, specifying:	No incident and/or non-compliance with conditions or commitments has occurred as a result of the Projects operations	Not applicable
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		

Condition number	Condition	Status 30 October 2023 – 30 October 2024	Compliance
c)	The method and timing of any remedial action that will be undertaken by the approval holder.		
<b>Independent audit</b>			
19	The approval holder must ensure that independent audits of compliance with the conditions are conducted when requested in writing by the Minister.	No audit has been requested for the Project.	Not applicable
20	For each independent audit, the approval holder must:	No audit has been requested for the Project.	Not applicable
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		
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.	No audit has been requested for the Project.	Not applicable
<b>Completion of the action</b>			
22	Within 20 business days after the completion of the action, the approval holder must notify the department in writing and provide completion data.	Not relevant at this stage of the Project	Not applicable





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## Attachment A

Julia Creek Dunnart Preclearance survey results

June 2023 and October 2023

# technical memo

<b>Date:</b>	13 June 2023
<b>To:</b>	Andrew Napier, Multicom Resources
<b>From:</b>	Brett Taylor, Epic Environmental
<b>Client name:</b>	Multicom Pty Ltd
<b>Project name:</b>	Saint Elmo Vanadium Project
<b>Project number:</b>	BE210138.01
<b>Subject:</b>	Julia Creek Dunnart preclearance survey results - June 2023

Epic Environmental Pty Ltd (Epic) was engaged by Multicom Resources Pty Ltd (Multicom) to carry out pre-clearance surveys targeting Julia Creek Dunnart (*Sminthopsis douglasi*) on the Saint Elmo Mine (project) site. The proposed clearing is for the first stage of disturbance works proposed for the Project.

Pre-clearance surveys are required as part of the conditions of approval for the project (EPBC 2017/8007) under the Commonwealth's *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Julia Creek Dunnart is listed as Vulnerable under the EPBC Act and was considered to be subject to significant impacts as a result of the project activities. The final approval of the project was granted by the Department of Agriculture, Water and Environment (now the Department of Climate Change, Energy, Environment and Water (DCCEEW)) on 29<sup>th</sup> March 2021. Specifically, the pre-clearance survey was carried out with regard to the following EPBC Act approval conditions:

- 3. To minimise the impacts of the action on Julia Creek Dunnarts, the approval holder must undertake pre-clearance surveys of all Julia Creek Dunnart habitat within the project area. Preclearance surveys must be undertaken within one month prior to clearing any area of Julia Creek Dunnart habitat and undertaken by a **suitably qualified field ecologist** in accordance with the Survey Guidelines for Australia's threatened mammals or in accordance with methodology endorsed by an **independent suitably qualified expert** in writing.*
- 5. The approval holder must take all reasonable steps to capture all Julia Creek Dunnarts identified during pre-clearance surveys and/or clearing and release all captured Julia Creek Dunnarts within the relocation site. All capture and release of Julia Creek Dunnarts must be conducted by a fauna spotter catcher or suitably qualified field ecologist.*
- 6. The approval holder must report the survey effort for pre-clearance surveys and all capture and release of Julia Creek Dunnarts in the next annual compliance report and upload all sighting records to the Atlas of Living Australia.*

This technical memo has been compiled to report on the results of the pre-clearance survey and accompany the 2023 annual compliance report to fulfil **approval condition 6**.

## Pre-clearance survey – compliance with Condition 3

As identified in the previous compliance letter submitted to the DCCEEW on 14<sup>th</sup> June 2022 Greg Mifsud is the engaged **independent suitably qualified expert** for the project with regard to actions associated with Julia Creek Dunnart (including the project Offset Strategy). The survey methodology for the species described in the *Survey guidelines for Australia's threatened mammals* (DSEWPC 2011) requires 400-500 trap nights per 5 ha area and is impractical to carry out where large areas are required to be surveyed. A detailed pre-clearance survey program was developed in discussions with Greg Mifsud as part of the *Significant Species Management*

Plan (SSMP) for the project (last updated in May 2023). The agreed pre-clearance survey method is described in Section 6.1 of the SSMP, an excerpt of which is attached as **Appendix A** to this memo.

The May-June 2023 pre-clearance survey was supervised and carried out by Terence Reis. Terence has over 20 years of experience carrying out fauna surveys as part of his roles in environmental consulting, research institutes and government departments. Terence has planned and carried out surveys specifically targeting Julia Creek Dunnart or other dasyurid species for projects over many years. His curriculum vitae is provided in **Appendix B** and he is considered a **suitably qualified field ecologist** as defined in the EPBC Act approval conditions for the project.

## Pre-clearance survey method

### Timing

The survey was carried out over seven nights from 31 May to 7 June 2023. During the survey period, minimum temperatures at Julia Creek ranged from as low as 5.3 to 16.6°C and maximum temperatures from 28.0 to 33.4°C (BoM 2023). Cooler temperatures were experienced at the beginning of the survey, with a general increasing of temperatures as the survey progressed. Prior to the field survey, 250 mm of rain was recorded at Julia Creek over several days in March, with the majority (170 mm) recorded on a single day. This led to localised flooding at the time and evidently led to very good growing conditions on the ground.

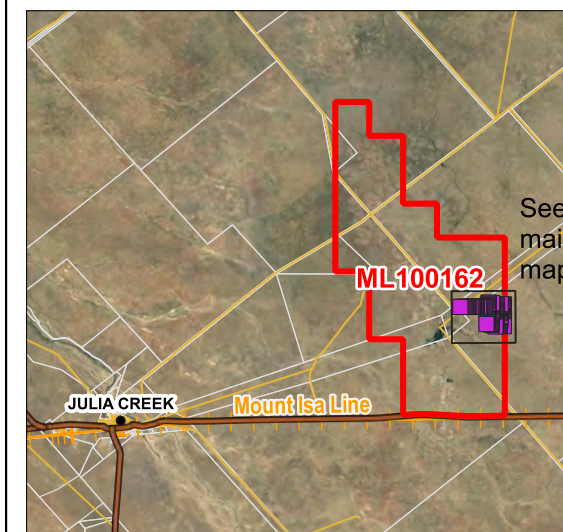
### Survey area

The proposed area requiring pre-clearance survey effort covered a block of lands approximately 248 ha in extent and a narrow alignment required for a site access track (refer **Figure 1**). These areas are located within the eastern boundary of the project Mine Lease.

### Survey method

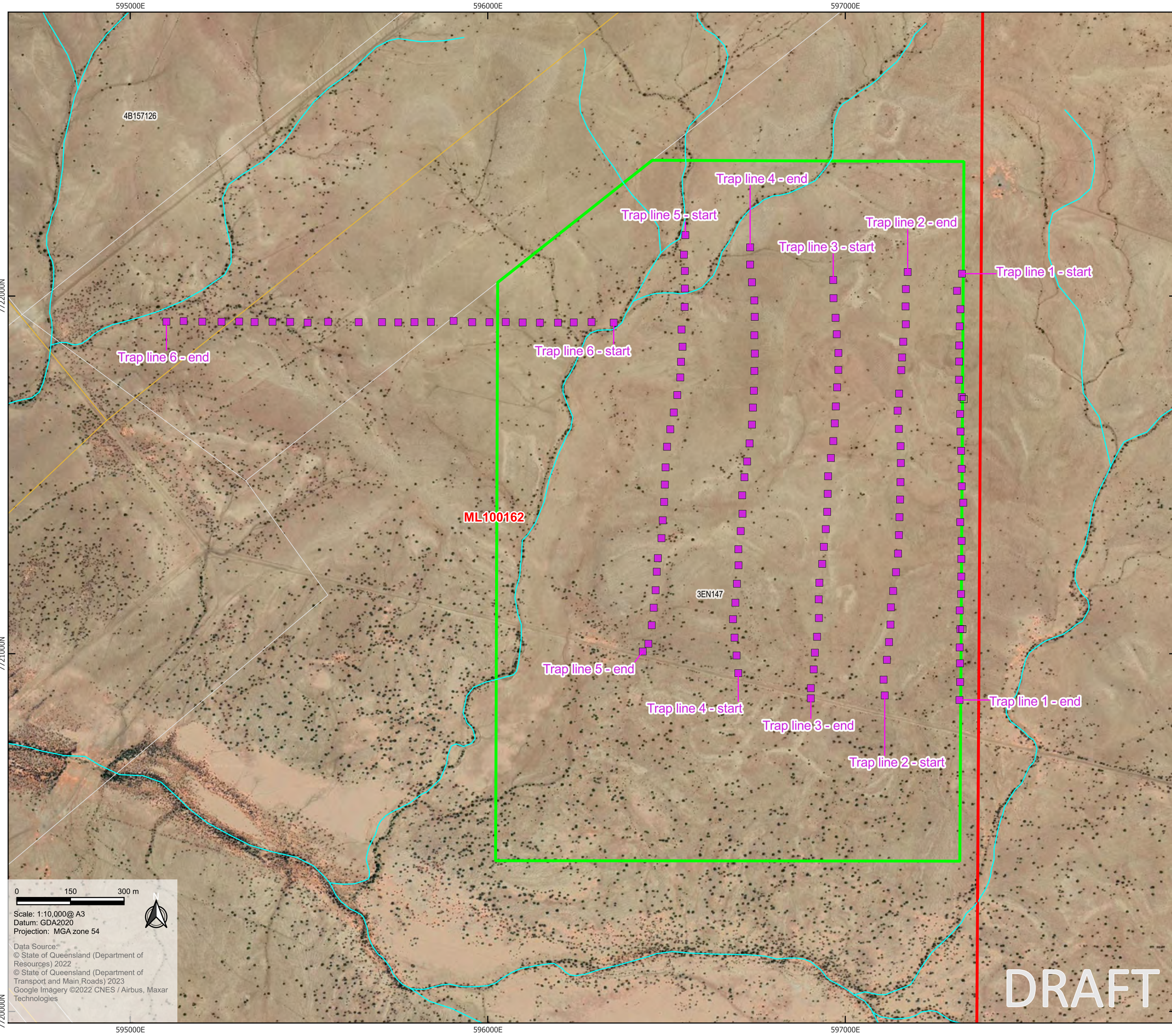
The survey was carried out as per the method described in **Appendix A** and as follows:

- Five trap lines were arranged within the large block. Traps were located to the north of an existing access track in order to avoid areas with a more common cover of Prickly Acacia (*Vachellia nilotica*) within the south of the block. A sixth trap line extended at a 90° angle from the westernmost transect and along the proposed access track.
- Each trap line comprised 25 traps placed along an approximately straight transect. Traps were placed 50 m apart along the transect (approximate length of 1.2 km).
- Trap lines located within the large block were placed between 200 m and 250 m apart providing an effective trapping area of approximately 1 km<sup>2</sup>.
- Traps were baited with a mixture of oats, peanut butter, oil, and bacon
- Traps were checked in the early morning and closed for the day in order to prevent animals (such as reptiles) entering the traps during the day. In the late afternoon they were opened and rebaited (where necessary).
- Trapping was initially to be carried out over a five-night period. Upon catching a Julia Creek Dunnart the trap period was extended for a further two day (seven night period in total) as per the current described trapping method. This allowed for an overall trapping effort of 1,050 trap nights.



**Legend**

- Mining lease
- Pre-clearance survey area
- Cadastre (DCDB)
- State controlled roads
- Roads and tracks
- Railways
- Watercourses**
- Minor
- Trap lines



0 150 300 m

Scale: 1:10,000@ A3  
 Datum: GDA2020  
 Projection: MGA zone 54

Data Source:  
 © State of Queensland (Department of Resources) 2022  
 © State of Queensland (Department of Transport and Main Roads) 2023  
 Google Imagery ©2022 CNES / Airbus, Maxar Technologies

**DRAFT**

**St Elmo  
 Julia Creek  
 St Elmo pre-clearance survey  
 May-June 2023 – technical memo**

Figure 1  
 Proposed pre-clearance survey area and trap layout

### Site conditions

Habitat assessments were carried out along each trap line to identify relevant habitat characteristics including ground cover, soil cracks and presence of Prickly Acacia (considered to a potential threat to Julia Creek Dunnart habitat). The habitat was relatively uniform across the entire survey area. This is unsurprising given the landscape. General habitat observations include:

- The area had a relatively uniform ground cover varying between 50-70% in extent and approximately 50 cm in height. Mitchell grasses (*Astrebla* and *Iseilema* species) were present, although *Sida trichopoda* (a herb) was far more prevalent at the time.
- Large soil cracks (>5 cm in width) were present throughout but ranged from sparse to moderately abundant
- Prickly Acacia was only present only as scattered individuals
- There was little evidence of grazing impact at the time and cattle were not observed as present.

An example habitat photo is provided in **Plate 1** and site photos along each trap line is provided in **Appendix C**.



**Plate 1. Habitat photo of Trap line 1 and site of Julia Creek Dunnart capture**

### Survey results

Two Julia Creek Dunnarts were captured across the entirety of the seven day survey on day one (1<sup>st</sup> June) and day four (4<sup>th</sup> June). Both individuals were captured on Trap line 1 (refer **Plate 1** and **Figure 2** for locations). Capture locations have been uploaded to the Atlas of Living Australia database as per **approval condition 6**. Both individuals were adults weighing in at 43 grams and 54 grams respectively (**Plate 2** and **Plate 3**). As per the requirements of **approval condition 5** individuals were relocated on the day of capture to a site within the north-west of the Saint Elmo Mine Lease (**Figure 2**) which has been designated as a ‘non-mining’ area as part of the project Offset Strategy (Multicom Resources 2021). Release site photographs are provided in **Appendix C**.



**Plate 2. Julia Creek Dunnart captured on day 1**



**Plate 3. Julia Creek Dunnart captured on day 4**

The survey was evidently carried out during an irruption of the Long-haired Rat (*Rattus villosissimus*). This is a native species that is known to occur in plague proportions when conditions are suitable (Van dyck et al. 2013). A total of 668 Long-haired Rats were captured across the survey period with capture success rates ranging from 64% (96 individuals) along Trap line 3 to 85% (127 individuals) along Trap line 5.

## REFERENCES

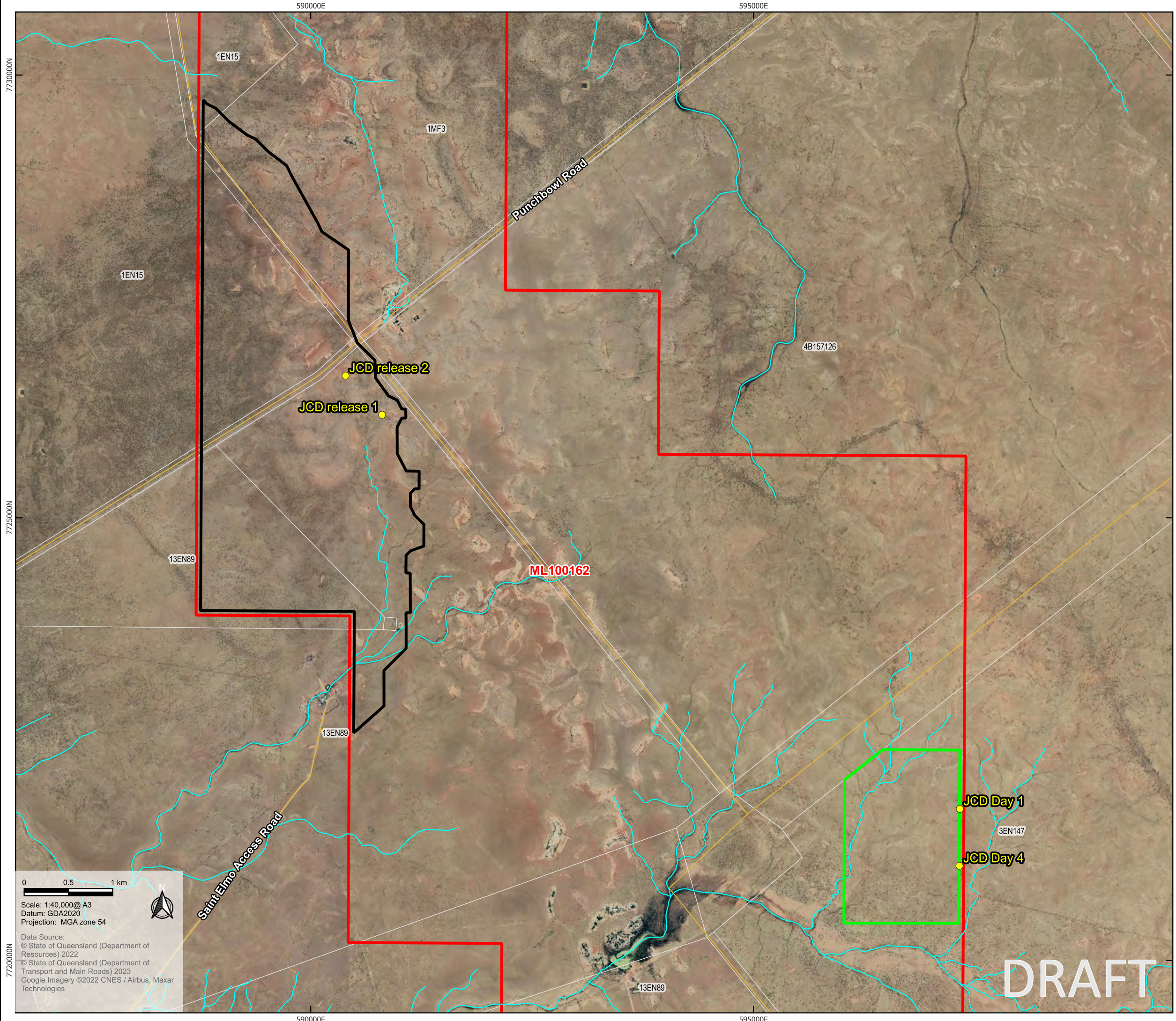
Bureau of Meteorology (BoM) 2023, *Daily weather observations for Queensland*, Bureau of Meteorology, Australian Government, Canberra. Available at: <http://www.bom.gov.au/climate/dwo/IDCJDW0405.shtml>

Department of Sustainability, Environment, Water, Populations and Communities (DSEWPC), *Survey guidelines for Australia's threatened mammals*, Department of Sustainability, Environment, Water, Populations and Communities, Australian Government, Canberra.

Van Dyck, S, Gynther, I & Baker, A 2013, *Field companion to the mammals of Australia*, New Holland Publishers, Chatswood.

**Legend**

- Mining lease
- Unmined Area
- Cadastre (DCDB)
- Roads and tracks
- Watercourses**
- Minor
- Waypoints



0 0.5 1 km

Scale: 1:40,000@ A3  
 Datum: GDA2020  
 Projection: MGA zone 54

Data Source:  
 © State of Queensland (Department of Resources) 2022  
 © State of Queensland (Department of Transport and Main Roads) 2023  
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**St Elmo  
 Julia Creek  
 St Elmo pre-clearance survey  
 May-June 2023 – technical memo**

Figure 2  
 Julia Creek Dunnart capture locations and release sites

**APPENDIX A SAINT ELMO MINE – SECTION 6.1 OF SIGNIFICANT SPECIES MANAGEMENT PLAN**



- Earthworks for establishment of:
  - Water management infrastructure including levees, the OWSF, and associated pipelines
  - Mining Infrastructure Area (MIA) including sewage treatment plant and effluent disposal area, administration offices, amenities, processing facilities, flammable and combustible liquid storage, waste storage area, power station, carpark, vehicle manoeuvre areas, plant / equipment workshop, laboratory and washdown facilities

Site preparation works will be undertaken in accordance with the Project's CEMP. Site preparation works will be staged to minimise the extent of habitat to be cleared at any one time.

Mining for the Project site includes, but is not limited to excavation of shallow open cut pits whereby topsoil and subsoil will be removed and stockpiled for future re-use during rehabilitation works and on the final landform and removal / stockpiling of overburden.

## 6.1 Pre-clearance Surveys

Pre-clearance surveys for Julia Creek Dunnart provide the most substantial mitigation measure for vegetation clearing activities and are required under the EPBC Act approval conditions for the Project and the DES's assessment of the EIS.

Approval condition 3 of the final decision notice issued by DAWE (29 March 2021) states the following:

*"the approval holder must undertake pre-clearance surveys of all Julia Creek Dunnart habitat within the project area. Preclearance surveys must be undertaken within one month prior to clearing any area of Julia Creek Dunnart habitat and undertaken by a suitably qualified field ecologist in accordance with the Survey Guidelines for Australia's threatened mammals or in accordance with methodology endorsed by an independent suitably qualified expert in writing."*

Multicom have engaged an 'independent suitably qualified expert' and advisor for Project activities associated with the Julia Creek Dunnart, including the Multicom Offset Strategy.

The survey method described in the *Survey Guidelines for Australia's threatened mammals* (DEWHA 2011) requires 400-500 trap nights for a 5 ha area. This is impractical given the extent of the Project. The following detailed approach to the pre-clearance survey program has been developed in discussions with an independent suitably qualified expert, the methods will be implemented whenever such surveys are conducted (as per **Table 3**).

### 6.1.1 Site Habitat Quality Assessment

Disturbance of land for the mine will be sequential (i.e. lands will be disturbed progressively over the life of the mine). Habitat within the Project area is currently subject to varying levels of suitability for Julia Creek Dunnart due to substantial infestations of Prickly Acacia (a known threat to the species).

The pre-clearance survey approach adopts the following assessment of lands designated for vegetation clearing in order to assess the required survey effort for each area. Lands designated for clearing will be initially assessed for the presence of Prickly Acacia via indicative mapping associated with the Project Weed and Pest Management Plan (refer **Appendix B**). Areas identified as subject to moderate to high density infestation of Prickly Acacia will be designated as 'low quality' habitat for Julia Creek Dunnart. All other areas will be designated 'moderate / high quality' habitat for the species.

### 6.1.2 Survey Effort

The lands designated for clearing will be assessed for pre-clearance survey effort as per the following approach based on the progressive nature of clearing activities for the Project:

- Two survey sites (covering approx. 100 ha each) for every 500 ha block of lands designated for clearing of moderate/high quality habitat for Julia Creek Dunnart (i.e. if 1,000 ha is proposed for clearing then four survey sites will be required)
- One survey site for every 500 ha (or less) block of lands designated for clearing of low quality habitat for Julia Creek Dunnart
- One survey site for blocks that comprise 100-300 ha of lands designated for clearing of moderate/high quality habitat for Julia Creek Dunnart
- Where clearing is for less than 100 ha then the number of transects comprising one survey site will be decreased commensurate with the area being cleared (as described in **Section 6.1.3**)
- The number of survey sites may be increased where proposed disturbance blocks are not contiguous e.g. where proposed disturbance expansion areas are split up by existing works then additional sites can account for this

### 6.1.3 Survey Method

Pre-clearance surveys will be carried out as per the following method:

- Surveys will be undertaken with the presence of a suitably qualified field ecologist as defined in the Project EPBC Act approval conditions:
  - at least three years of work experience designing and implementing surveys for the Julia Creek Dunnart, or
  - at least five years of work experience designing and implementing surveys for other Dasyurid mammal species
- Surveys will be carried out within 30 days of the beginning of vegetation clearing / disturbance in each block of lands designated for clearing (as described in **Section 6.1.2**)
- Where the clearing pertains to blocks of lands a survey site will consist of the following:
  - On larger blocks (>100 ha) - five transects consisting of 25 baited box-type (generic Elliott A) small mammal traps
  - On smaller blocks (<100 ha) – number of transects will be commensurate with the extent of proposed clearing (i.e. if proposed clearing is 80 ha in size then the survey site will comprise four transects, if 60 ha in size the site will comprise three transects and so on)
  - Traps will be located 50 m apart along a straight transect (1.2 km long transect)
  - Transects will be a minimum of 200 m apart within each site (approximate area of trapping coverage per survey site = 100 ha)
  - On smaller blocks it may not be possible to locate the transect lines within the confines of the designated clearing area. In this case the surveyor will decide whether to extend the transect lines beyond the clearing area, or reduce the distance between traps along the transect (<50 m apart) and/or reduce the minimum distance between transects (<200 m apart). The approach taken will be on a case-by-case basis depending on site restrictions at the time (i.e. trapping may not be able to extend beyond the designated clearing area at the time).
- Where the proposed clearing is linear (narrow) in nature transects will be arranged to suit area (i.e. transects may be located along a central line within the clearance area)
- Traps will be left open for five nights
- Where a Julia Creek Dunnart is trapped during the pre-clearance survey:

- Relevant characteristics will be recorded (e.g. head-body and tail length, weight), the individual will be photographed and scats collected where possible
- The individual will be relocated to a predetermined location within the Project area denoted as 'retained remnant habitat' as identified within the Project Offset Strategy (refer **Appendix A**) or other agreed designated relocation area (e.g. Julia Creek Aerodrome)
- Traps at the site will be left open for an additional two nights (seven nights in total) to provide further opportunity for any other individuals potentially in the area to be trapped

## 6.1.4 Review of Survey Method

The Project's Offset Strategy has been developed to compensate for potential significant impacts to Julia Creek Dunnart as a result of the Project (**Appendix A**). The Offset Strategy features a substantial research program based on locating and monitoring populations of the species. This will include research in improving techniques to locate and survey for the species. As such, the pre-clearance survey method will be subject to annual reviews in order to ensure the most reliable method is being employed to locate the species during the Project pre-clearance surveys. Any change of method will need to be endorsed by the Project's '*independent suitably qualified expert*'.

## APPENDIX B TERENCE REIS – CURRICULUM VITAE

## CURRICULUM VITAE

### Terry Reis Fauna Ecologist

- Qualifications:**
- Bachelor of Science with 1st Class Honours in Australian Environmental Studies  
Thesis: *Biogeographical concordance in Old World rainforests at transcontinental and local scales*  
Griffith University, Nathan, 2003–2004
  - Bachelor of Science in Australian Environmental Studies  
Griffith University, Nathan, 1995–1997
- Expertise:**
- Description of ecological values
  - Baseline fauna survey
  - Species-specific fauna survey
  - Fauna habitat value assessment
  - Likelihood of occurrence assessment
  - Environmental impact assessment
  - *Environment Protection and Biodiversity Conservation Act 1999* (MNES) referrals
  - Technical review
  - Mentoring
- Committees & Recovery Teams:**
- Records Appraisal Committee of Birds Queensland (Queensland Ornithological Society Inc.)
  - Queensland Threatened Species Prioritisation Framework
  - Squatter Pigeon Recovery Team (Commonwealth Government)
  - Brigalow Belt Reptile Recovery Team (Queensland Government & WWF)
- Certifications**
- Research Permit under (Queensland) *Nature Conservation (Animals) Regulation 2020* - (State-wide permit for non-protected areas)
  - Department of Agriculture and Fisheries Animal Ethics Committee approval for Queensland & Northern Territory
  - Registered as a Scientific User - (Queensland) Department of Agriculture and Fisheries
  - BioCondition v2.1: Application, Assessment and Scoring (Queensland Herbarium)
  - Applied First Aid
  - RIISS00034 Surface Coal Mine Safety Skill Set
  - 30215QLD - Course in General Safety Induction (Construction Industry)
  - (Queensland) Firearms Licence
  - 4WD defensive driving; 4WD recovery; operate a light vehicle; operate and maintain a 4WD; drive a 4WD in difficult terrain; perform complex 4x4 operations.

<http://www.reisecology.com/>

## PROFESSIONAL EXPERIENCE

### ***Reis Ecology & Interpretative Services December 2012 – present***

Providing expert environmental advice to industry, government and non-government organisations in Australia and Papua New Guinea. Identifying ecological values, conducting fauna surveys and faunal habitat assessments, assessing and reporting environmental impacts and reviewing environmental reports. Acting occasionally as a wildlife guide in Brazil, Malaysia, Japan, Papua New Guinea and China.

### ***Principal Ecologist – NRA Environmental Consultants, Cairns 2010 – 2012***

Provided environmental advice to government, industry and non-government organisations with regard to various sites in Queensland and Papua New Guinea, as above.

### ***Principal Ecologist – Biodiversity Assessment and Management, Cleveland 2006 – 2010***

As above.

### ***Centre for Riverine Landscapes – Griffith University, Nathan, Brisbane 2006***

Reviewed literature on the effects of climate change on freshwater ecosystems.

### ***Technical and Scientific Advisory Committee – Central Eastern Rainforest Reserves of Australia (CERRA) World Heritage Property 2004 – 2005***

Compiled an annotated bibliography pertaining to the CERRA properties. Undertook gap analysis of research with recommendations for future actions.

### ***Centre for Riverine Landscapes, Griffith University, Nathan, Brisbane 2003***

Collected data and identified aquatic macro-invertebrates for the Ecosystem Health Monitoring Program (EHMP) in south-east Queensland.

### ***Rainforest Co-Operative Research Centre, Griffith University 2000 – 2003***

Collected bird, reptile, invertebrate and structural data at 104 study sites in far north Queensland, south-east Queensland and north-east New South Wales; aided in project design; managed database; analyzed data; prepared reports and manuscripts for the project *Biodiversity values and landscape context in reforestation*.

### ***Centre for Coastal Management, Griffith University, Gold Coast 1999 – 2000***

Scoping study into water quality issues in south-east Queensland.

### ***Forest Assessment Unit, Environmental Protection Agency, Brisbane 1998 – 1999***

Developed survey methodology; conducted systematic fauna surveys (mammals, birds, reptiles and frogs); conducted faunal habitat assessments; reviewed literature, reported; created and maintained database; analyzed data and provided specimens to the Queensland Museum for the project *Terrestrial vertebrate fauna of the Brigalow Belt South Bioregion: assessment and analysis for conservation planning*.

### ***Ninox Environmental, Brisbane 1997 – 1998***

Conducted faunal habitat assessments and terrestrial vertebrate fauna surveys, and reported on a variety of projects in south-east and central Queensland.

## SELECTED DESKTOP PROJECTS

- Queensland Threatened Species Prioritisation Framework, Department of Environment and Science. Provision of expert technical advice on *Ctenotus rawlinsoni*.
- Workshop for the development of EPBC Act referral guidelines for Squatter Pigeon (southern subspecies) *Geophaps scripta scripta* for the Department of Sustainability, Environment, Water, Population and Communities, Toowoomba 2011. Provision of expert technical advice.
- *Southern Brigalow Belt Reptile Recovery Plan*, Toowoomba 2001. WWF workshop. Provision of expert technical advice.
- *Torres Strait Islands Terrestrial Biodiversity Management Workshop*. Expert advice: identification and review of fauna values; management of habitat for fauna values. Torres Strait Regional Authority, Cairns, 25-27 October 2010.
- *Torres Strait Terrestrial Ecosystems* workshop. Presentation of two seminars and provision of expert technical advice on terrestrial vertebrates. Torres Strait Regional Authority, Cairns, 26-27 June 2018.
- *Birds for Biodiversity: Mount Lofty Ranges*, Brisbane 2003. Rainforest CRC and Birds for Biodiversity MLR. Provision of technical advice.
- *Process and practices in rainforest landscapes*, Brisbane 2001. Rainforest CRC research workshop. Provision of technical advice.
- *Torres Strait Biodiversity Management Project - Terrestrial vertebrate fauna*. Prepared for 3D Environmental on behalf of the Torres Strait Regional Authority (TSRA).
- Fauna components of the *Profiles for management of the habitats and related ecological and cultural resource values of Boigu Island, Erub Island, Iama Island and Mua Island*. (four reports) Prepared for 3D Environmental on behalf of the TSRA Land & Sea Management Unit.
- Significant species management plan Julia Creek Dunnart *Sminthopsis douglasi* for Epic Environmental.
- Technical review of *DevEx West Arnhem Project MMP* – Response to the (Northern Territory's) Department of Industry, Tourism and Trade request for additional information. Conducted for COOE P/L.
- Review of the Carpentarian Pseudantechinus *Pseudantechinus mimulus*: life history, distribution and habitat use. Prepared for NRA Environmental P/L.
- Assessment of potential impacts of tailings storage facilities on birds at Dalgarranga Gold Mine. Prepared for COOE.
- Assessment of ecological values and potential for advanced environmental offset, Japoonvale. Prepared for 3D Environmental.
- Technical review of *Camooweal 2D Seismic Survey Environmental Management Plan Mapped Flora and Fauna Values* for COOE.
- Technical review of *Pioneer North Queensland Edmonton Quarry Expansion: Ecological Review* for COOE.
- Technical reviews of the *Banana Range Wind Farm Ecological Assessment Report*, *Wambo Wind Farm Ecological Assessment Report*, *Karara Wind Farm Ecological Assessment Report* and *MacIntyre Wind Farm Ecological Assessment Report* for Epic Environmental on behalf of the Development Assessment Division, Planning Group, Queensland Treasury. (four reviews)
- *Plants & Animals of Badu*, a book and DVD by TSRA. Provision of expert technical advice and photographs of fauna.
- Audit and Review *Conservation Action Statements for Significant Fauna*. Prepared for BAAM.
- Environmental assessment report appraisal – *Mount Emerald Wind Farm* development application. Prepared for NRA Environmental on behalf of Tablelands

- Regional Council, Atherton.
- Referral of proposed action under Part 3 of the EPBC Act for Anthill MLA for Endangered and Vulnerable fauna species including Gouldian Finch *Erythrura gouldiae* and Carpentarian Pseudantechinus *Pseudantechinus mimulus*, Mount Isa region. Prepared for NRA Environmental.
- *Scenic Rim Trail – Mt Mistake to Spicers Peak Nature Refuge* Environmental Management Plan. Prepared for BAAM.
- Technical review of *Ecological Assessment of Potential Rock Climbing Sites* for Epic Environmental on behalf of Ipswich City Council.

## SELECTED PROJECTS WITH A FIELD COMPONENT

### Queensland bioregions

#### *Torres Strait*

- Fauna surveys, including Indigenous Land and Sea Ranger training, on **Badu, Gebar, Mua Peak** (Mua Island), **Dauan, Saibai** and **Boigu**. Conducted for David Fell Environmental on behalf of TSRA.

#### *Cape York Peninsula*

- Desktop and field evaluations of Golden-shouldered Parrot *Psephotus chrysopterygius* and Buff-breasted Button-quail *Turnix olivii*, Artemis Station, Musgrave. Conducted for NRA Environmental.
- Palm Cockatoo *Probosciger aterrimus macgillivrayi* and Bare-rumped Sheath-tail Bat *Saccolaimus saccolaimus nudichuniatus* targeted survey, Cape Urquhart Bauxite Project. Conducted for Epic Environmental.
- Ecological assessment including wet and dry season fauna surveys, Cape Flattery. Conducted for Epic Environmental.

#### *Wet Tropics*

- Ecological assessment of Yarrabah Mandingalbay Yidinji\_Gungandji Trustee Area. Conducted for 3D Environmental.
- Bird, reptile and invertebrate surveys at 50 sites for the project *Biodiversity values and landscape context in reforestation*, Rainforest Co-Operative Research Centre.
- Bird and frog surveys, Aquis Great Barrier Reef Resort Project, Yorkeys Knob, Cairns. Conducted for Biotropica Australia. Provision of data only.
- Terrestrial vertebrate ecological assessment, Ella Bay Resort and Access Road, Innisfail. Conducted for BAAM.
- Frog survey and habitat assessment, proposed water extraction expansion site Mossman. Conducted for COOE P/L on behalf of Douglas Shire Council.
- Bird surveys at Robson Creek (State Forest), Atherton Tablelands, for Earthwatch and the CRC for Tropical Rainforest Ecology & Management. Provision of data only.
- Seabird survey at Michaelmas Cay for Queensland Parks & Wildlife Service (QPWS). Provision of data only.

#### *Northwest Highlands*

- Fauna survey targeting Carpentarian Grasswren *Amytornis dorotheae* and Gouldian Finch *Erythrura gouldiae*, Paradise South and Paradise North. Conducted for Epic Environmental. Provision of data only.
- Carpentarian Pseudantechinus *Pseudantechinus mimulus* survey, Mount Isa. Conducted for BAAM.
- Anthill flora and fauna baseline assessment, Mount Isa region. Conducted for BAAM.
- Terrestrial vertebrate habitat assessment and Purple-necked Rock-wallaby *Petrogale purpureicollis* survey, Rocklands Copper Project, Cloncurry. Conducted for NRA Environmental.
- Baseline terrestrial ecological assessment and preliminary impact assessment, Paradise North, Mount Isa region. Conducted for BAAM.



- Condition assessment of terrestrial riparian vertebrates, Lady Annie Copper Mine Dam Discharge, Mount Isa region. Conducted for BAAM.
- Monitoring of terrestrial riparian vertebrates, Lady Annie Copper Mine Dam Discharge, Mount Isa region. Conducted for BAAM.
- Lady Loretta Mine Powerline flora and fauna assessment, Mount Isa region. Conducted for NRA Environmental.
- Baseline terrestrial ecological assessment and preliminary impact assessment, Georgina Basin Phosphate Project, Mount Isa region. Conducted for BAAM.
- Terrestrial ecology and impact assessment – Paradise South Phosphate Project EIS, Mount Isa region. Conducted for BAAM.

### ***Gulf Plains***

- St Elmo Offsite Water Storage Facility and associated infrastructure fauna surveys, pre-wet and post-wet, Flinders River. Included targeted surveys for Julia Creek Dunnart. Conducted for Epic Environmental.
- Etta Plains seasonal fauna surveys including surveys for Julia Creek Dunnart, Julia Creek region. Conducted for Epic Environmental.
- Fauna survey targeting Julia Creek Dunnart, Lyrian Station. Conducted for Epic Environmental.
- Croydon Gold Mine fauna habitat assessment. Conducted for Epic Environmental.

### ***Mitchell Grass Downs***

- Julia Creek Dunnart survey, Julia Creek. Conducted for BAAM.
- St Elmo post-wet season fauna and flora survey including surveys for Julia Creek Dunnart, Julia Creek. Conducted for Epic Environmental.
- St Elmo targeted Star Finch *Neochmia ruficauda ruficauda* survey, Julia Creek. Conducted for Epic Environmental.
- Fauna survey targeting Julia Creek Dunnart and bird surveys, Julia Creek. Conducted for Epic Environmental.

### ***Einasleigh Uplands***

- Fanning River Station fauna survey, Charters Towers. Conducted for NRA Environmental on behalf of the Australian Defence Force. Provision of data only.
- Fauna survey, targeting reptiles and small mammals, Yourka Reserve, Innot Hot Springs (2014). Conducted for Bush Heritage Australia. Provision of data only.
- Seasonal fauna surveys, Yourka Reserve, Innot Hot Springs (May & October 2017). Conducted for Bush Heritage Australia. Provision of data only.
- Northern Quoll *Dasyurus hallucatus* and rock-wallaby survey, Yourka Reserve, Innot Hot Springs. Conducted for Bush Heritage Australia. Provision of data only.
- Faunal habitat assessment and MNES referral, Carpentaria Gold, Ravenswood. Conducted and prepared for Epic Environmental.
- St Ronans fauna survey and habitat assessment, Forty Mile Scrub. Conducted for Epic Environmental.
- Ecological assessment White Mountains Project, including wet and dry seasons fauna surveys, Hughenden. Conducted for NRA Environmental.
- Terrestrial faunal survey and habitat assessment, Jubilee Plunger, Georgetown. Conducted for NRA Environmental.
- King Vol Power Line Corridor dry season fauna assessment, Chillagoe. Conducted for NRA Environmental.
- Terrestrial fauna assessment of the Raw Water Dam and proposed Tailings Storage Facility, Mungana Mine, Chillagoe. Conducted for NRA Environmental.
- Routh Quarry EPBC fauna assessment, Georgetown. Conducted for NRA Environmental.

### ***Central Queensland Coast***

- EPBC Act-listed targeted fauna survey program – Terminal T0 Project, Abbot Point. Conducted for CDM Smith. Provision of data only.
- Terrestrial vertebrate baseline study, McFarlane Shales to Liquid Project, Proserpine. Conducted for BAAM.
- Gregory Quarry, Airlie Beach, due diligence – terrestrial ecology. Conducted for BAAM.
- Bird surveys at Eungella National Park, for Earthwatch and the CRC for Tropical Rainforest Ecology & Management. Provision of data only.

### ***Brigalow Belt***

- Baseline fauna assessment - Moranbah Gas Project. Conducted for NRA Environmental.
- Terrestrial and riparian vertebrate assessment, Connors River Dam and Pipeline Alignment. Conducted for BAAM.
- Baseline flora and terrestrial fauna assessment and impact assessment, Caval Ridge Coal Mine Project, Moranbah. Conducted for BAAM
- Glebe Weir environmental assessment Nathan Dam EIS Project: flora and terrestrial fauna. Conducted for BAAM.
- Ecological assessment, including targeted conservation significant fauna survey ASLAT Solar Project, Chinchilla area. Conducted for Epic Environmental.
- Arrow- Surat Gas Project (Supplementary EIS) fauna assessment. Conducted for Ecosmart.
- Arrow- Surat Gas Project fauna survey (Miles & Dalby), dry and post-wet season surveys. Conducted for Ecosmart. Provision of data only.
- Ecological assessment targeting Spotted-tailed Quoll *Dasyurus maculatus*, Aspinall Mine, Elbow Valley. Conducted for Epic Environmental.
- Terrestrial ecology and impact assessment, Walloons Gas Fields. Conducted for BAAM.
- Fauna surveys of **Wondul Range National Park (NP)**, **Southwood NP**, **Kakamundi** and **Salvator Rosa** sections of Carnarvon NP, **Isla Gorge NP** and **Alton NP** with the Environmental Protection Agency (EPA).
- Fauna survey of Erringibba National Park with QPWS. Provision of data only.
- Fauna survey of Carnarvon Station Reserve for Bush Heritage Australia. Provision of data only.

### ***Mulga Lands***

- Flora and fauna assessment, Art Gallery and Tourist Accommodation, Quilpie Town Common. Conducted for BAAM.

### ***Channel Country***

- Fauna survey, Ethabuka Reserve. Conducted for Bush Heritage Australia. Provision of data only.
- Fauna survey, Pilungah (Cravens Peak) Reserve. Conducted for Bush Heritage Australia. Provision of data only.

### ***Southeast Queensland***

- Survey of the critically endangered Yellow Chat *Epthianura crocea macgregori* Curtis Island with the University of Central Queensland and QPWS. Provision of data only.
- Survey for Black-breasted Button-quail *Turnix melanogaster* and fauna habitat assessment, Yarraman Waste Facility for 3D Environmental.
- Paradise Dam Lowering – Terrestrial Ecological Assessment. Conducted for Epic Environmental.
- Bird and microbat surveys on Fraser Island for the Zoology Department, University of Queensland. Provision of data only.
- Wader surveys, Curtis Island. Conducted for BAAM. Provision of data only.

- Biodiversity values assessment, Queensland Citrus, Mundubbera/Gayndah. Conducted for Epic Environmental.
- Fauna survey and habitat assessment, Nambour to Landsborough Rail Corridor. Conducted for BAAM.
- Terrestrial flora and fauna impact assessment, Wyaralong Dam, Beaudesert. Conducted for BAAM.
- Terrestrial vertebrate assessment, Mungarra Reserve, Petrie. Conducted for BAAM.
- Terrestrial vertebrate fauna survey at Capalaba with NatureSearch, Department of Environment and Heritage. Provision of data only.
- Bird, reptile and invertebrate surveys at more than 25 sites for the project *Biodiversity values and landscape context in reforestation*, Rainforest Co-Operative Research Centre.
- Bird surveys at Lamington National Park, for Earthwatch and the CRC for Tropical Rainforest Ecology & Management. Provision of data only.

#### ***New England Tableland***

- Terrestrial vertebrate impact assessment, Emu Swamp Dam, Stanthorpe. Conducted for BAAM.
- Fauna survey of Girraween National Park with QPWS. Provision of data only.

#### ***Multiple bioregions***

- Terrestrial ecology and impact assessment report – CopperString Project EIS, Einasleigh Uplands, Desert Uplands, Mitchell Grass Downs, Northwest Highlands, Queensland. Included targeted surveys for Carpentarian Pseudantechinus and Julia Creek Dunnart. Conducted for BAAM.
- Fauna surveys northeast of Julia Creek, Mitchell Grass Downs and Gulf Plains, November 2019 & March 2020, targeting Julia Creek Dunnart *Sminthopsis douglasi*. Conducted for Epic Environmental.
- Ecological assessment Burdekin Falls Dam, including fauna surveys in Einasleigh Uplands and Brigalow Belt bioregions. Conducted for Epic Environmental.
- Bird surveys Chalumbin project, Wet Tropics and Einasleigh Uplands. Conducted for Attexó Group P/L. Provision of data only.
- Faunal habitat assessment Sunrise Bauxite Project, Bundaberg and Gayndah, Southeast Queensland and Brigalow Belt. Conducted for Epic Environmental.
- Fauna survey targeting Julia Creek Dunnart *Sminthopsis douglasi*, Dalgonally Station Gulf Plains and Mitchell Grass Downs. Conducted for Epic Environmental.

#### ***Northern Territory***

- Fauna survey, dry season, Eldo Plateau Project, Nhulunbuy. Conducted for Ecosmart.
- Bird survey targeting Gouldian Finch *Erythrura gouldiae* in Yinberrie Hills, Northern Territory, for Biliton Gold Mine.
- Gouldian Finch *Erythrura gouldiae* and Crested Shrike-tit (northern subspecies) *Falcunculus frontatus whitei* survey, Delamere Air Weapons Range. Conducted for AECOM on behalf of the Department of Defence.
- Gouldian Finch *Erythrura gouldiae* and Partridge Pigeon *Geophaps smithii* survey, Mount Bundy Training Area. Conducted for AECOM on behalf of the Department of Defence.
- Threatened fauna pre-clearance habitat assessments Nabarlek Mine, West Arnhem Land, June, July and September 2022. Conducted for COOE.
- Fauna pre-clearance assessment Ichthys Project, Blaydin Point, Darwin. Conducted for CDM Smith.

#### ***New South Wales***

- Bird, reptile and invertebrate surveys at more than 25 sites in north-eastern NSW for the project *Biodiversity values and landscape context in reforestation*, Rainforest Co-Operative Research Centre.

### South Australia

- Fauna survey, Peculiar Knob, south of Coober Pedy. Conducted for COOE.

### Extralimital

#### Papua New Guinea

- Ecological assessment *Wafi-Golpu Mine Project*, Morobe Province. Conducted for BAAM.
- Ecological assessment *Yandera Copper-Molybdenum Project*, Madang Province. Prepared for 3D Environmental.
- Ecological assessment, Lassul Bay, East New Britain Province. Prepared for 3D Environmental.

### Asia

- Vertebrate ecologist for the 2nd year Environmental Science subject *Studies of an Asian Rainforest* (Griffith University) at Danum Valley Field Centre, Sabah, Malaysia, 2004, 2005 & 2006.
- Vertebrate ecologist for the 2nd year Environmental Science subject *Studies of an Asian Rainforest* (Griffith University) at Batu Apoi Forest Reserve, Brunei Darussalam, 2002 & 2003.
- Bird surveys for Earthwatch and the CRC for Tropical Rainforest Ecology & Management at Batu Apoi Forest Reserve, Brunei Darussalam.

## PUBLICATIONS

- Catterall, CP, Kanowski, J, Wardell-Johnson, G, Proctor, H, **Reis, T**, Harrison, D & Tucker, NIJ (2004) 'Quantifying the biodiversity values of reforestation: perspectives, design issues and outcomes in Australian rainforest landscapes,' in D Lunney (ed), *Conservation of Australia's forest fauna*. Second edition, Royal Zoological Society of New South Wales, Mosman, pp. 359-393.
- Hitchcock, G, Conaty, SD, Fell, DG, Gordon, G, Ingram, MS, **Reis, TM**, Stanton, DJ & Wigness, JN (2014). Range extension of the short-beaked echidna *Tachyglossus aculeatus* (Monotremata: Tachyglossidae) and northern brown bandicoot *Isodon macrourus* (Marsupialis: Peramelidae) in Queensland: Mua (Moa Island), Torres Strait. *Memoirs of the Queensland Museum – Nature*, **59**: 1-7.
- Kanowski, J, Catterall, CP, Proctor, H, **Reis, T**, Tucker, NIJ & Wardell-Johnson, GW (2005). 'Biodiversity values of timber plantations and restoration plantings for rainforest fauna in tropical and subtropical Australia,' in D Erskine, D Lamb & M Bristow (eds), *Reforestation in the tropics and subtropics of Australia using rainforest tree species*. RIRDC Publication No 05/087. P. Rural Industries Research and Development Corporation, Canberra, pp. 183-205.
- Kanowski, J, Catterall, CP, **Reis, T** & Wardell-Johnson, G (2004). 'Animal-plant interactions in rainforest restoration in tropical and subtropical Australia,' in J Kanowski, CP Catterall, AJ Dennis & DA Westcott (eds), *Animal-plant interactions in conservation and restoration*. Cooperative Research Centre for Tropical Rainforest Ecology and Management, Cairns, pp. 20-24.
- Kanowski, J, Catterall, CP, Wardell-Johnson, GW, Proctor, H & **Reis, T** (2003). Development of forest structure on cleared rainforest land in eastern Australia under different styles of reforestation. *Forest Ecology and Management*, **183**: 265-280.
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- Leigh, C, **Reis, TM** & Sheldon, F (2013). High potential subsidy of dry-season aquatic fauna to consumers in riparian zones of wet-dry tropical rivers. *Inland Waters*, **3**: 411-420.
- Lloyd, P, Sanders, M, **Reis, T** & Abbott, A (2013). Targeted trapping surveys shed new light on the distribution and habitat characteristics of the Carpentarian

pseudantechinus (*Pseudantechinus mimulus*), a threatened dasyurid marsupial. *Australian Mammalogy*, <http://dx.doi.org/10.1071/AM12027>.

- Proctor, H, Kanowski, J, Catterall, CP, Wardell-Johnson, G & **Reis, T** (2011). Rainforest-restoration success as judged by assemblages of soil- and litter-dwelling mites (Arachnida: Acari). (pp. 234-254 in *Acarology XIII: Proceedings of the International Congress*). *Zoosymposia*, **6**: 1-304.
- Proctor, HC, Kanowski, J, Wardell-Johnson, G, **Reis, T** & Catterall, CP (2003). Does diversity beget diversity? A comparison between plant and leaf-litter invertebrate richness from pasture to rainforest. *Records of the South Australian Museum Monograph, Series No. 7*: 267-274.
- **Reis, T** (2005). *Central Eastern Rainforest Reserves of Australia (World Heritage) bibliography: incorporating information assessment and development of a research strategy*. Department of Environment and Conservation NSW, Sydney.
- **Reis, T** (2010). 'The reptiles,' in R Kitching, R Braithwaite & J Cavanaugh (eds), *Remnants of Gondwana: a natural and social history of the Gondwanan rainforests of Australia*, Surrey Beatty, Sydney, pp. 173-184.
- **Reis, T** (2012). 'Squatter pigeon (southern subspecies) *Geopelia scripta scripta* (Temminck, 1821),' in LK Curtis, AJ Dennis, KR McDonald, PK Kyne & SJS Debus (eds), *Queensland's threatened animals*, CSIRO Publishing, Collingwood, pp. 254-255.
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- McFarland, D, Haseler, M, Venz, M, **Reis, T**, Ford, G & Hines, B (1999). *Fauna survey methodology - regional stratification, site selection, field techniques and data audit*. Queensland Environmental Protection Agency, Brisbane.
- McFarland, D, Venz, M & **Reis, T** (1999). *Priority species summaries. An attachment to the report: terrestrial vertebrate fauna of the Brigalow Belt South Bioregion: assessment and analysis for conservation planning*. Queensland Environmental Protection Agency, Brisbane.

#### SEMINARS AND CONFERENCE PRESENTATIONS



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- Reis, T, Catterall, CP, Kanowski, J, Scambler, E, Wardell-Johnson, G & Proctor, H (2002). Occupation of replanted rainforest patches by birds: does latitude make a difference? *3rd International Canopy Conference*, Cairns, June.
- Reis T, Catterall, CP, Kanowski, J, Wardell-Johnson, G & Proctor, H (2002). What is the value of weedy regrowth to rainforest birds? *THECA 2002 Forum: Weeds: Identifying Issues and Seeking Solutions in Bush Regeneration*, Brisbane, September.

## APPENDIX C SITE PHOTO EXAMPLES

Site	Representative photo
Trap line 1	
Trap line 2	
Trap line 3	

Site	Representative photo
Trap line 4	
Trap line 5	
Trap line 6	



Site	Representative photo
Release site 1	
Release site 2	

# technical memo

<b>Date:</b>	6 November 2023
<b>To:</b>	Andrew Napier, Multicom Resources
<b>From:</b>	Brett Taylor, Epic Environmental
<b>Client name:</b>	Multicom Pty Ltd
<b>Project name:</b>	Saint Elmo Vanadium Project
<b>Project number:</b>	BE210138.01
<b>Subject:</b>	Julia Creek Dunnart preclearance survey results - October 2023

Epic Environmental Pty Ltd (Epic) was engaged by Multicom Resources Pty Ltd (Multicom) to carry out pre-clearance surveys targeting Julia Creek Dunnart (*Sminthopsis douglasi*) on the Saint Elmo Mine (project) site. The proposed clearing is for the first stage of disturbance works proposed for the Project.

Pre-clearance surveys are required as part of the conditions of approval for the project (EPBC 2017/8007) under the Commonwealth's *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Julia Creek Dunnart is listed as Vulnerable under the EPBC Act and was considered to be subject to significant impacts as a result of the project activities. The final approval of the project was granted by the Department of Agriculture, Water and Environment (now the Department of Climate Change, Energy, Environment and Water (DCCEEW)) on 29<sup>th</sup> March 2021. Specifically, the pre-clearance survey was carried out with regard to the following EPBC Act approval conditions:

- 3. To minimise the impacts of the action on Julia Creek Dunnarts, the approval holder must undertake pre-clearance surveys of all Julia Creek Dunnart habitat within the project area. Preclearance surveys must be undertaken within one month prior to clearing any area of Julia Creek Dunnart habitat and undertaken by a **suitably qualified field ecologist** in accordance with the Survey Guidelines for Australia's threatened mammals or in accordance with methodology endorsed by an **independent suitably qualified expert** in writing.*
- 5. The approval holder must take all reasonable steps to capture all Julia Creek Dunnarts identified during pre-clearance surveys and/or clearing and release all captured Julia Creek Dunnarts within the relocation site. All capture and release of Julia Creek Dunnarts must be conducted by a fauna spotter catcher or suitably qualified field ecologist.*
- 6. The approval holder must report the survey effort for pre-clearance surveys and all capture and release of Julia Creek Dunnarts in the next annual compliance report and upload all sighting records to the Atlas of Living Australia.*

This technical memo has been compiled to report on the results of the pre-clearance survey and accompany the 2023 annual compliance report (sent to the department on 28 July 2023) to fulfil **approval condition 6**.

## Pre-clearance survey – compliance with Condition 3

As identified in the previous compliance letter submitted to the DCCEEW on 14<sup>th</sup> June 2022 Greg Mifsud is the engaged **independent suitably qualified expert** for the project with regard to actions associated with Julia Creek Dunnart (including the project Offset Strategy). The survey methodology for the species described in the *Survey guidelines for Australia's threatened mammals* (DSEWPC 2011) requires 400-500 trap nights per 5 ha area and is impractical to carry out where large areas are required to be surveyed. A detailed pre-clearance survey program was developed in discussions with Greg Mifsud as part of the *Significant Species Management*

*Plan* (SSMP) for the project (last updated in May 2023). The agreed pre-clearance survey method is described in Section 6.1 of the SSMP, an excerpt of which is attached as **Appendix A** to this memo.

The October 2023 pre-clearance survey was supervised and carried out by Terence Reis. Terence has over 20 years of experience carrying out fauna surveys as part of his roles in environmental consulting, research institutes and government departments. Terence has planned and carried out surveys specifically targeting Julia Creek Dunnart or other dasyurid species for projects over many years. His curriculum vitae is provided in **Appendix B** and he is considered a **suitably qualified field ecologist** as defined in the EPBC Act approval conditions for the project.

## Pre-clearance survey method

### Timing

The survey was carried out over five nights from 4-9 October 2023. During the survey period, minimum temperatures at Julia Creek ranged from as low as 9.7 to 22.9°C and maximum temperatures from 31.7 to 36.8°C. Dry conditions prevailed at the time with no rainfall recorded in the three months prior to the field survey (BoM 2023).

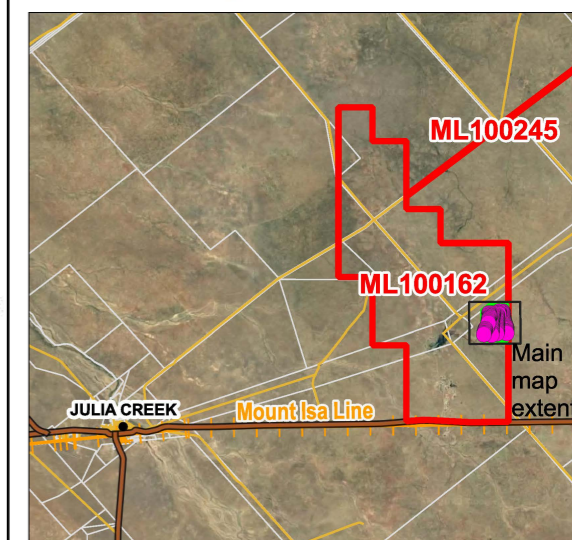
### Survey area

The two proposed areas requiring pre-clearance survey effort were small covering less than 1 ha in extent. By necessity the pre-clearance survey effort extended well beyond the boundary of the proposed disturbance areas (refer **Figure 1**). These areas are located within the eastern boundary of the project Mine Lease.

### Survey method

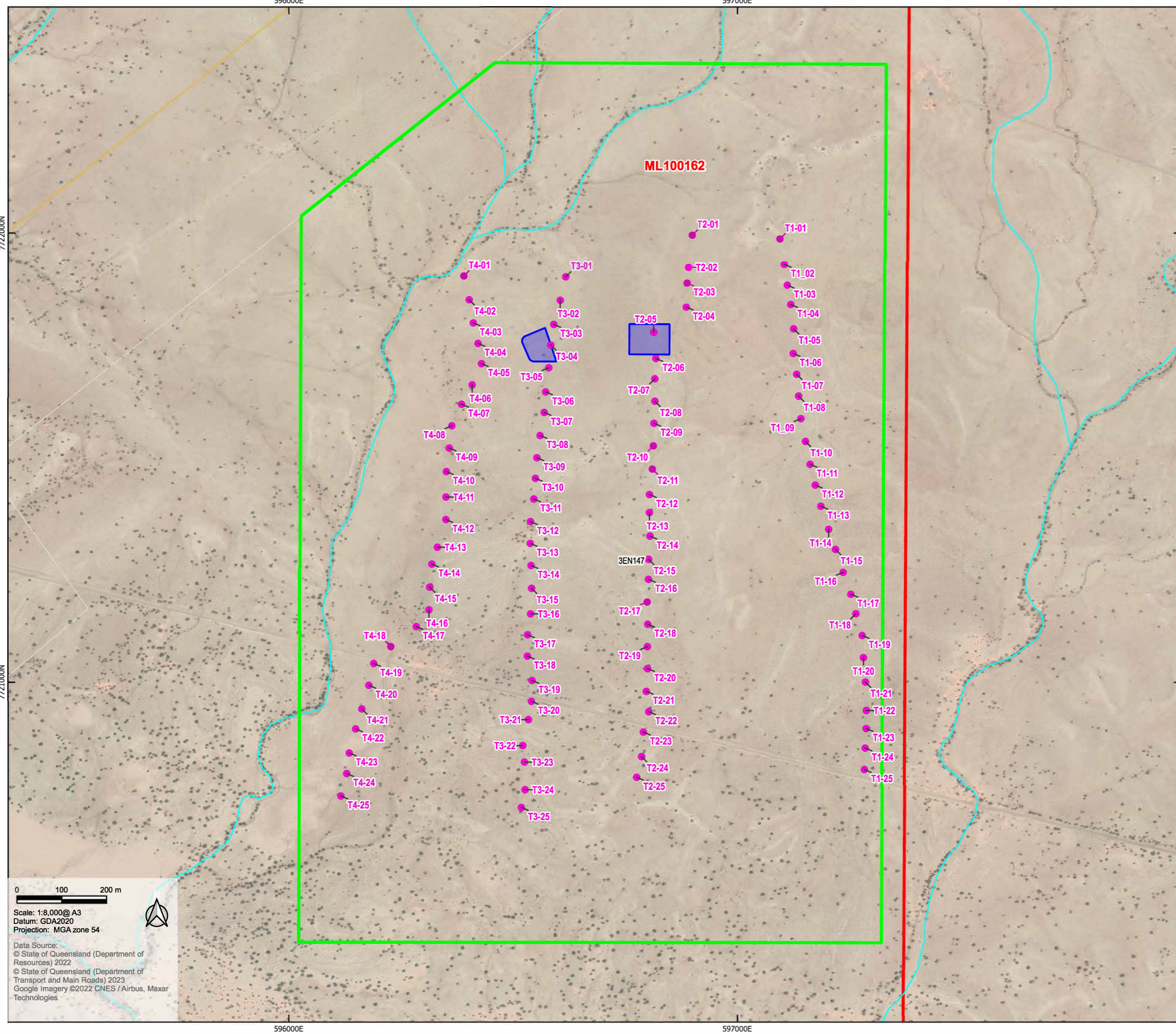
The survey was carried out as per the method described in **Appendix A** and as follows:

- Four trap lines were arranged to encompass the proposed disturbance areas and surrounds.
- Each trap line comprised 25 traps placed along an approximately straight transect. Traps were placed 50 m apart along the transect (approximate length of 1.2 km).
- Trap lines were placed between 150 m and 250 m apart providing an effective trapping area of approximately 1 km<sup>2</sup>.
- Traps were baited with a mixture of oats, peanut butter, oil, and bacon
- Traps were checked in the early morning and closed for the day in order to prevent animals (such as reptiles) entering the traps during the day. In the late afternoon they were opened and rebaited (where necessary).
- Trapping was carried out over a five-night period.



**Legend**

- Overall survey area
- Mining lease
- Proposed disturbance areas
- Cadastre (DCDB)
- State controlled roads
- Railways
- Roads and tracks
- Watercourses**
- Minor
- Trap locations



0 100 200 m

Scale: 1:8,000@ A3  
 Datum: GDA2020  
 Projection: MGA zone 54

Data Source:  
 © State of Queensland (Department of Resources) 2022  
 © State of Queensland (Department of Transport and Main Roads) 2023  
 Google Imagery ©2022 CNES / Airbus, Maxar Technologies

**Multicom  
 St Elmo, Julia Creek  
 Pre-clearance survey memo**

Figure 1  
 Pre-clearance survey area and trap layout

### Site conditions

Habitat assessments were carried out along each trap line to identify relevant habitat characteristics including ground cover, soil cracks and presence of Prickly Acacia (considered to a potential threat to Julia Creek Dunnart habitat). The habitat was relatively uniform across the entire survey area. This is unsurprising given the landscape. General habitat observations include:

- The area had a relatively uniform ground cover varying between 50-70% in extent and approximately 50 cm in height. Mitchell grasses (*Astrebla* and *Iseilema* species) comprised between 25-50% of the available ground cover present.
- Larger soil cracks (>5 cm in width) were only common along the two eastern trap lines (T1 and T2)
- Prickly Acacia was generally present only as scattered individuals throughout much of the surveyed area although was more common in the south
- There was little evidence of grazing impact at the time and cattle were not observed as present.

Example habitat photos are provided below.



Plate 1. Habitat photo of Trap line 3



Plate 2. Habitat photo of Trap line 1

### Survey results

No Julia Creek Dunnarts were captured across the entirety of the five day survey. The survey was evidently carried out during an irruption of the Long-haired Rat (*Rattus villosissimus*). This is a native species that is known to occur in plague proportions when conditions are suitable (Van dyck et al. 2013). A total of 282 Long-haired Rats were captured across the survey period (comprising a total of 500 trap nights) providing a trap capture success rate of 56% across the survey period.

### REFERENCES

Bureau of Meteorology (BoM) 2023, *Daily weather observations for Queensland*, Bureau of Meteorology, Australian Government, Canberra. Available at: <http://www.bom.gov.au/climate/dwo/IDCJDW0405.shtml>

Department of Sustainability, Environment, Water, Populations and Communities (DSEWPC), *Survey guidelines for Australia's threatened mammals*, Department of Sustainability, Environment, Water, Populations and Communities, Australian Government, Canberra.

Van Dyck, S, Gynther, I & Baker, A 2013, *Field companion to the mammals of Australia*, New Holland Publishers, Chatswood.

**APPENDIX A SAINT ELMO MINE – SECTION 6.1 OF SIGNIFICANT SPECIES MANAGEMENT PLAN**

- Earthworks for establishment of:
  - Water management infrastructure including levees, the OWSF, and associated pipelines
  - Mining Infrastructure Area (MIA) including sewage treatment plant and effluent disposal area, administration offices, amenities, processing facilities, flammable and combustible liquid storage, waste storage area, power station, carpark, vehicle manoeuvre areas, plant / equipment workshop, laboratory and washdown facilities

Site preparation works will be undertaken in accordance with the Project's CEMP. Site preparation works will be staged to minimise the extent of habitat to be cleared at any one time.

Mining for the Project site includes, but is not limited to excavation of shallow open cut pits whereby topsoil and subsoil will be removed and stockpiled for future re-use during rehabilitation works and on the final landform and removal / stockpiling of overburden.

## 6.1 Pre-clearance Surveys

Pre-clearance surveys for Julia Creek Dunnart provide the most substantial mitigation measure for vegetation clearing activities and are required under the EPBC Act approval conditions for the Project and the DES's assessment of the EIS.

Approval condition 3 of the final decision notice issued by DAWE (29 March 2021) states the following:

*"the approval holder must undertake pre-clearance surveys of all Julia Creek Dunnart habitat within the project area. Preclearance surveys must be undertaken within one month prior to clearing any area of Julia Creek Dunnart habitat and undertaken by a suitably qualified field ecologist in accordance with the Survey Guidelines for Australia's threatened mammals or in accordance with methodology endorsed by an independent suitably qualified expert in writing."*

Multicom have engaged an 'independent suitably qualified expert' and advisor for Project activities associated with the Julia Creek Dunnart, including the Multicom Offset Strategy.

The survey method described in the *Survey Guidelines for Australia's threatened mammals* (DEWHA 2011) requires 400-500 trap nights for a 5 ha area. This is impractical given the extent of the Project. The following detailed approach to the pre-clearance survey program has been developed in discussions with an independent suitably qualified expert, the methods will be implemented whenever such surveys are conducted (as per **Table 3**).

### 6.1.1 Site Habitat Quality Assessment

Disturbance of land for the mine will be sequential (i.e. lands will be disturbed progressively over the life of the mine). Habitat within the Project area is currently subject to varying levels of suitability for Julia Creek Dunnart due to substantial infestations of Prickly Acacia (a known threat to the species).

The pre-clearance survey approach adopts the following assessment of lands designated for vegetation clearing in order to assess the required survey effort for each area. Lands designated for clearing will be initially assessed for the presence of Prickly Acacia via indicative mapping associated with the Project Weed and Pest Management Plan (refer **Appendix B**). Areas identified as subject to moderate to high density infestation of Prickly Acacia will be designated as 'low quality' habitat for Julia Creek Dunnart. All other areas will be designated 'moderate / high quality' habitat for the species.

### 6.1.2 Survey Effort

The lands designated for clearing will be assessed for pre-clearance survey effort as per the following approach based on the progressive nature of clearing activities for the Project:

- Two survey sites (covering approx. 100 ha each) for every 500 ha block of lands designated for clearing of moderate/high quality habitat for Julia Creek Dunnart (i.e. if 1,000 ha is proposed for clearing then four survey sites will be required)
- One survey site for every 500 ha (or less) block of lands designated for clearing of low quality habitat for Julia Creek Dunnart
- One survey site for blocks that comprise 100-300 ha of lands designated for clearing of moderate/high quality habitat for Julia Creek Dunnart
- Where clearing is for less than 100 ha then the number of transects comprising one survey site will be decreased commensurate with the area being cleared (as described in **Section 6.1.3**)
- The number of survey sites may be increased where proposed disturbance blocks are not contiguous e.g. where proposed disturbance expansion areas are split up by existing works then additional sites can account for this

### 6.1.3 Survey Method

Pre-clearance surveys will be carried out as per the following method:

- Surveys will be undertaken with the presence of a suitably qualified field ecologist as defined in the Project EPBC Act approval conditions:
  - at least three years of work experience designing and implementing surveys for the Julia Creek Dunnart, or
  - at least five years of work experience designing and implementing surveys for other Dasyurid mammal species
- Surveys will be carried out within 30 days of the beginning of vegetation clearing / disturbance in each block of lands designated for clearing (as described in **Section 6.1.2**)
- Where the clearing pertains to blocks of lands a survey site will consist of the following:
  - On larger blocks (>100 ha) - five transects consisting of 25 baited box-type (generic Elliott A) small mammal traps
  - On smaller blocks (<100 ha) – number of transects will be commensurate with the extent of proposed clearing (i.e. if proposed clearing is 80 ha in size then the survey site will comprise four transects, if 60 ha in size the site will comprise three transects and so on)
  - Traps will be located 50 m apart along a straight transect (1.2 km long transect)
  - Transects will be a minimum of 200 m apart within each site (approximate area of trapping coverage per survey site = 100 ha)
  - On smaller blocks it may not be possible to locate the transect lines within the confines of the designated clearing area. In this case the surveyor will decide whether to extend the transect lines beyond the clearing area, or reduce the distance between traps along the transect (<50 m apart) and/or reduce the minimum distance between transects (<200 m apart). The approach taken will be on a case-by-case basis depending on site restrictions at the time (i.e. trapping may not be able to extend beyond the designated clearing area at the time).
- Where the proposed clearing is linear (narrow) in nature transects will be arranged to suit area (i.e. transects may be located along a central line within the clearance area)
- Traps will be left open for five nights
- Where a Julia Creek Dunnart is trapped during the pre-clearance survey:



- Relevant characteristics will be recorded (e.g. head-body and tail length, weight), the individual will be photographed and scats collected where possible
- The individual will be relocated to a predetermined location within the Project area denoted as 'retained remnant habitat' as identified within the Project Offset Strategy (refer **Appendix A**) or other agreed designated relocation area (e.g. Julia Creek Aerodrome)
- Traps at the site will be left open for an additional two nights (seven nights in total) to provide further opportunity for any other individuals potentially in the area to be trapped

## 6.1.4 Review of Survey Method

The Project's Offset Strategy has been developed to compensate for potential significant impacts to Julia Creek Dunnart as a result of the Project (**Appendix A**). The Offset Strategy features a substantial research program based on locating and monitoring populations of the species. This will include research in improving techniques to locate and survey for the species. As such, the pre-clearance survey method will be subject to annual reviews in order to ensure the most reliable method is being employed to locate the species during the Project pre-clearance surveys. Any change of method will need to be endorsed by the Project's '*independent suitably qualified expert*'.

## APPENDIX B TERENCE REIS – CURRICULUM VITAE

## CURRICULUM VITAE

### Terry Reis Fauna Ecologist

- Qualifications:**
- Bachelor of Science with 1st Class Honours in Australian Environmental Studies  
Thesis: *Biogeographical concordance in Old World rainforests at transcontinental and local scales*  
Griffith University, Nathan, 2003–2004
  - Bachelor of Science in Australian Environmental Studies  
Griffith University, Nathan, 1995–1997
- Expertise:**
- Description of ecological values
  - Baseline fauna survey
  - Species-specific fauna survey
  - Fauna habitat value assessment
  - Likelihood of occurrence assessment
  - Environmental impact assessment
  - *Environment Protection and Biodiversity Conservation Act 1999* (MNES) referrals
  - Technical review
  - Mentoring
- Committees & Recovery Teams:**
- Records Appraisal Committee of Birds Queensland (Queensland Ornithological Society Inc.)
  - Queensland Threatened Species Prioritisation Framework
  - Squatter Pigeon Recovery Team (Commonwealth Government)
  - Brigalow Belt Reptile Recovery Team (Queensland Government & WWF)
- Certifications**
- Research Permit under (Queensland) *Nature Conservation (Animals) Regulation 2020* - (State-wide permit for non-protected areas)
  - Department of Agriculture and Fisheries Animal Ethics Committee approval for Queensland & Northern Territory
  - Registered as a Scientific User - (Queensland) Department of Agriculture and Fisheries
  - BioCondition v2.1: Application, Assessment and Scoring (Queensland Herbarium)
  - Applied First Aid
  - RIISS00034 Surface Coal Mine Safety Skill Set
  - 30215QLD - Course in General Safety Induction (Construction Industry)
  - (Queensland) Firearms Licence
  - 4WD defensive driving; 4WD recovery; operate a light vehicle; operate and maintain a 4WD; drive a 4WD in difficult terrain; perform complex 4x4 operations.

<http://www.reisecology.com/>

**PROFESSIONAL EXPERIENCE*****Reis Ecology & Interpretative Services December 2012 – present***

Providing expert environmental advice to industry, government and non-government organisations in Australia and Papua New Guinea. Identifying ecological values, conducting fauna surveys and faunal habitat assessments, assessing and reporting environmental impacts and reviewing environmental reports. Acting occasionally as a wildlife guide in Brazil, Malaysia, Japan, Papua New Guinea and China.

***Principal Ecologist – NRA Environmental Consultants, Cairns 2010 – 2012***

Provided environmental advice to government, industry and non-government organisations with regard to various sites in Queensland and Papua New Guinea, as above.

***Principal Ecologist – Biodiversity Assessment and Management, Cleveland 2006 – 2010***

As above.

***Centre for Riverine Landscapes – Griffith University, Nathan, Brisbane 2006***

Reviewed literature on the effects of climate change on freshwater ecosystems.

***Technical and Scientific Advisory Committee – Central Eastern Rainforest Reserves of Australia (CERRA) World Heritage Property 2004 – 2005***

Compiled an annotated bibliography pertaining to the CERRA properties. Undertook gap analysis of research with recommendations for future actions.

***Centre for Riverine Landscapes, Griffith University, Nathan, Brisbane 2003***

Collected data and identified aquatic macro-invertebrates for the Ecosystem Health Monitoring Program (EHMP) in south-east Queensland.

***Rainforest Co-Operative Research Centre, Griffith University 2000 – 2003***

Collected bird, reptile, invertebrate and structural data at 104 study sites in far north Queensland, south-east Queensland and north-east New South Wales; aided in project design; managed database; analyzed data; prepared reports and manuscripts for the project *Biodiversity values and landscape context in reforestation*.

***Centre for Coastal Management, Griffith University, Gold Coast 1999 – 2000***

Scoping study into water quality issues in south-east Queensland.

***Forest Assessment Unit, Environmental Protection Agency, Brisbane 1998 – 1999***

Developed survey methodology; conducted systematic fauna surveys (mammals, birds, reptiles and frogs); conducted faunal habitat assessments; reviewed literature, reported; created and maintained database; analyzed data and provided specimens to the Queensland Museum for the project *Terrestrial vertebrate fauna of the Brigalow Belt South Bioregion: assessment and analysis for conservation planning*.

***Ninox Environmental, Brisbane 1997 – 1998***

Conducted faunal habitat assessments and terrestrial vertebrate fauna surveys, and reported on a variety of projects in south-east and central Queensland.

## SELECTED DESKTOP PROJECTS

- Queensland Threatened Species Prioritisation Framework, Department of Environment and Science. Provision of expert technical advice on *Ctenotus rawlinsoni*.
- Workshop for the development of EPBC Act referral guidelines for Squatter Pigeon (southern subspecies) *Geophaps scripta scripta* for the Department of Sustainability, Environment, Water, Population and Communities, Toowoomba 2011. Provision of expert technical advice.
- *Southern Brigalow Belt Reptile Recovery Plan*, Toowoomba 2001. WWF workshop. Provision of expert technical advice.
- *Torres Strait Islands Terrestrial Biodiversity Management Workshop*. Expert advice: identification and review of fauna values; management of habitat for fauna values. Torres Strait Regional Authority, Cairns, 25-27 October 2010.
- *Torres Strait Terrestrial Ecosystems* workshop. Presentation of two seminars and provision of expert technical advice on terrestrial vertebrates. Torres Strait Regional Authority, Cairns, 26-27 June 2018.
- *Birds for Biodiversity: Mount Lofty Ranges*, Brisbane 2003. Rainforest CRC and Birds for Biodiversity MLR. Provision of technical advice.
- *Process and practices in rainforest landscapes*, Brisbane 2001. Rainforest CRC research workshop. Provision of technical advice.
- *Torres Strait Biodiversity Management Project - Terrestrial vertebrate fauna*. Prepared for 3D Environmental on behalf of the Torres Strait Regional Authority (TSRA).
- Fauna components of the *Profiles for management of the habitats and related ecological and cultural resource values of Boigu Island, Erub Island, Iama Island and Mua Island*. (four reports) Prepared for 3D Environmental on behalf of the TSRA Land & Sea Management Unit.
- Significant species management plan Julia Creek Dunnart *Sminthopsis douglasi* for Epic Environmental.
- Technical review of *DevEx West Arnhem Project MMP* – Response to the (Northern Territory's) Department of Industry, Tourism and Trade request for additional information. Conducted for COOE P/L.
- Review of the Carpentarian Pseudantechinus *Pseudantechinus mimulus*: life history, distribution and habitat use. Prepared for NRA Environmental P/L.
- Assessment of potential impacts of tailings storage facilities on birds at Dalgarranga Gold Mine. Prepared for COOE.
- Assessment of ecological values and potential for advanced environmental offset, Japoonvale. Prepared for 3D Environmental.
- Technical review of *Camooweal 2D Seismic Survey Environmental Management Plan Mapped Flora and Fauna Values* for COOE.
- Technical review of *Pioneer North Queensland Edmonton Quarry Expansion: Ecological Review* for COOE.
- Technical reviews of the *Banana Range Wind Farm Ecological Assessment Report*, *Wambo Wind Farm Ecological Assessment Report*, *Karara Wind Farm Ecological Assessment Report* and *MacIntyre Wind Farm Ecological Assessment Report* for Epic Environmental on behalf of the Development Assessment Division, Planning Group, Queensland Treasury. (four reviews)
- *Plants & Animals of Badu*, a book and DVD by TSRA. Provision of expert technical advice and photographs of fauna.
- Audit and Review *Conservation Action Statements for Significant Fauna*. Prepared for BAAM.
- Environmental assessment report appraisal – *Mount Emerald Wind Farm* development application. Prepared for NRA Environmental on behalf of Tablelands

- Regional Council, Atherton.
- Referral of proposed action under Part 3 of the EPBC Act for Anthill MLA for Endangered and Vulnerable fauna species including Gouldian Finch *Erythrura gouldiae* and Carpentarian Pseudantechinus *Pseudantechinus mimulus*, Mount Isa region. Prepared for NRA Environmental.
- *Scenic Rim Trail – Mt Mistake to Spicers Peak Nature Refuge* Environmental Management Plan. Prepared for BAAM.
- Technical review of *Ecological Assessment of Potential Rock Climbing Sites* for Epic Environmental on behalf of Ipswich City Council.

## SELECTED PROJECTS WITH A FIELD COMPONENT

### Queensland bioregions

#### *Torres Strait*

- Fauna surveys, including Indigenous Land and Sea Ranger training, on **Badu, Gebar, Mua Peak** (Mua Island), **Dauan, Saibai** and **Boigu**. Conducted for David Fell Environmental on behalf of TSRA.

#### *Cape York Peninsula*

- Desktop and field evaluations of Golden-shouldered Parrot *Psephotus chrysopterygius* and Buff-breasted Button-quail *Turnix olivii*, Artemis Station, Musgrave. Conducted for NRA Environmental.
- Palm Cockatoo *Probosciger aterrimus macgillivrayi* and Bare-rumped Sheath-tail Bat *Saccolaimus saccolaimus nudicluniatius* targeted survey, Cape Urquhart Bauxite Project. Conducted for Epic Environmental.
- Ecological assessment including wet and dry season fauna surveys, Cape Flattery. Conducted for Epic Environmental.

#### *Wet Tropics*

- Ecological assessment of Yarrabah Mandingalbay Yidinji\_Gungandji Trustee Area. Conducted for 3D Environmental.
- Bird, reptile and invertebrate surveys at 50 sites for the project *Biodiversity values and landscape context in reforestation*, Rainforest Co-Operative Research Centre.
- Bird and frog surveys, Aquis Great Barrier Reef Resort Project, Yorkeys Knob, Cairns. Conducted for Biotropica Australia. Provision of data only.
- Terrestrial vertebrate ecological assessment, Ella Bay Resort and Access Road, Innisfail. Conducted for BAAM.
- Frog survey and habitat assessment, proposed water extraction expansion site Mossman. Conducted for COOE P/L on behalf of Douglas Shire Council.
- Bird surveys at Robson Creek (State Forest), Atherton Tablelands, for Earthwatch and the CRC for Tropical Rainforest Ecology & Management. Provision of data only.
- Seabird survey at Michaelmas Cay for Queensland Parks & Wildlife Service (QPWS). Provision of data only.

#### *Northwest Highlands*

- Fauna survey targeting Carpentarian Grasswren *Amytornis dorotheae* and Gouldian Finch *Erythrura gouldiae*, Paradise South and Paradise North. Conducted for Epic Environmental. Provision of data only.
- Carpentarian Pseudantechinus *Pseudantechinus mimulus* survey, Mount Isa. Conducted for BAAM.
- Anthill flora and fauna baseline assessment, Mount Isa region. Conducted for BAAM.
- Terrestrial vertebrate habitat assessment and Purple-necked Rock-wallaby *Petrogale purpureicollis* survey, Rocklands Copper Project, Cloncurry. Conducted for NRA Environmental.
- Baseline terrestrial ecological assessment and preliminary impact assessment, Paradise North, Mount Isa region. Conducted for BAAM.

- Condition assessment of terrestrial riparian vertebrates, Lady Annie Copper Mine Dam Discharge, Mount Isa region. Conducted for BAAM.
- Monitoring of terrestrial riparian vertebrates, Lady Annie Copper Mine Dam Discharge, Mount Isa region. Conducted for BAAM.
- Lady Loretta Mine Powerline flora and fauna assessment, Mount Isa region. Conducted for NRA Environmental.
- Baseline terrestrial ecological assessment and preliminary impact assessment, Georgina Basin Phosphate Project, Mount Isa region. Conducted for BAAM.
- Terrestrial ecology and impact assessment – Paradise South Phosphate Project EIS, Mount Isa region. Conducted for BAAM.

### ***Gulf Plains***

- St Elmo Offsite Water Storage Facility and associated infrastructure fauna surveys, pre-wet and post-wet, Flinders River. Included targeted surveys for Julia Creek Dunnart. Conducted for Epic Environmental.
- Etta Plains seasonal fauna surveys including surveys for Julia Creek Dunnart, Julia Creek region. Conducted for Epic Environmental.
- Fauna survey targeting Julia Creek Dunnart, Lyrian Station. Conducted for Epic Environmental.
- Croydon Gold Mine fauna habitat assessment. Conducted for Epic Environmental.

### ***Mitchell Grass Downs***

- Julia Creek Dunnart survey, Julia Creek. Conducted for BAAM.
- St Elmo post-wet season fauna and flora survey including surveys for Julia Creek Dunnart, Julia Creek. Conducted for Epic Environmental.
- St Elmo targeted Star Finch *Neochmia ruficauda ruficauda* survey, Julia Creek. Conducted for Epic Environmental.
- Fauna survey targeting Julia Creek Dunnart and bird surveys, Julia Creek. Conducted for Epic Environmental.

### ***Einasleigh Uplands***

- Fanning River Station fauna survey, Charters Towers. Conducted for NRA Environmental on behalf of the Australian Defence Force. Provision of data only.
- Fauna survey, targeting reptiles and small mammals, Yourka Reserve, Innot Hot Springs (2014). Conducted for Bush Heritage Australia. Provision of data only.
- Seasonal fauna surveys, Yourka Reserve, Innot Hot Springs (May & October 2017). Conducted for Bush Heritage Australia. Provision of data only.
- Northern Quoll *Dasyurus hallucatus* and rock-wallaby survey, Yourka Reserve, Innot Hot Springs. Conducted for Bush Heritage Australia. Provision of data only.
- Faunal habitat assessment and MNES referral, Carpentaria Gold, Ravenswood. Conducted and prepared for Epic Environmental.
- St Ronans fauna survey and habitat assessment, Forty Mile Scrub. Conducted for Epic Environmental.
- Ecological assessment White Mountains Project, including wet and dry seasons fauna surveys, Hughenden. Conducted for NRA Environmental.
- Terrestrial faunal survey and habitat assessment, Jubilee Plunger, Georgetown. Conducted for NRA Environmental.
- King Vol Power Line Corridor dry season fauna assessment, Chillagoe. Conducted for NRA Environmental.
- Terrestrial fauna assessment of the Raw Water Dam and proposed Tailings Storage Facility, Mungana Mine, Chillagoe. Conducted for NRA Environmental.
- Routh Quarry EPBC fauna assessment, Georgetown. Conducted for NRA Environmental.

### ***Central Queensland Coast***

- EPBC Act-listed targeted fauna survey program – Terminal T0 Project, Abbot Point. Conducted for CDM Smith. Provision of data only.
- Terrestrial vertebrate baseline study, McFarlane Shales to Liquid Project, Proserpine. Conducted for BAAM.
- Gregory Quarry, Airlie Beach, due diligence – terrestrial ecology. Conducted for BAAM.
- Bird surveys at Eungella National Park, for Earthwatch and the CRC for Tropical Rainforest Ecology & Management. Provision of data only.

### ***Brigalow Belt***

- Baseline fauna assessment - Moranbah Gas Project. Conducted for NRA Environmental.
- Terrestrial and riparian vertebrate assessment, Connors River Dam and Pipeline Alignment. Conducted for BAAM.
- Baseline flora and terrestrial fauna assessment and impact assessment, Caval Ridge Coal Mine Project, Moranbah. Conducted for BAAM
- Glebe Weir environmental assessment Nathan Dam EIS Project: flora and terrestrial fauna. Conducted for BAAM.
- Ecological assessment, including targeted conservation significant fauna survey ASLAT Solar Project, Chinchilla area. Conducted for Epic Environmental.
- Arrow- Surat Gas Project (Supplementary EIS) fauna assessment. Conducted for Ecosmart.
- Arrow- Surat Gas Project fauna survey (Miles & Dalby), dry and post-wet season surveys. Conducted for Ecosmart. Provision of data only.
- Ecological assessment targeting Spotted-tailed Quoll *Dasyurus maculatus*, Aspinall Mine, Elbow Valley. Conducted for Epic Environmental.
- Terrestrial ecology and impact assessment, Walloons Gas Fields. Conducted for BAAM.
- Fauna surveys of **Wondul Range National Park (NP)**, **Southwood NP**, **Kakamundi** and **Salvator Rosa** sections of Carnarvon NP, **Isla Gorge NP** and **Alton NP** with the Environmental Protection Agency (EPA).
- Fauna survey of Erringibba National Park with QPWS. Provision of data only.
- Fauna survey of Carnarvon Station Reserve for Bush Heritage Australia. Provision of data only.

### ***Mulga Lands***

- Flora and fauna assessment, Art Gallery and Tourist Accommodation, Quilpie Town Common. Conducted for BAAM.

### ***Channel Country***

- Fauna survey, Ethabuka Reserve. Conducted for Bush Heritage Australia. Provision of data only.
- Fauna survey, Pilungah (Cravens Peak) Reserve. Conducted for Bush Heritage Australia. Provision of data only.

### ***Southeast Queensland***

- Survey of the critically endangered Yellow Chat *Epthianura crocea macgregori* Curtis Island with the University of Central Queensland and QPWS. Provision of data only.
- Survey for Black-breasted Button-quail *Turnix melanogaster* and fauna habitat assessment, Yarraman Waste Facility for 3D Environmental.
- Paradise Dam Lowering – Terrestrial Ecological Assessment. Conducted for Epic Environmental.
- Bird and microbat surveys on Fraser Island for the Zoology Department, University of Queensland. Provision of data only.
- Wader surveys, Curtis Island. Conducted for BAAM. Provision of data only.



- Biodiversity values assessment, Queensland Citrus, Mundubbera/Gayndah. Conducted for Epic Environmental.
- Fauna survey and habitat assessment, Nambour to Landsborough Rail Corridor. Conducted for BAAM.
- Terrestrial flora and fauna impact assessment, Wyaralong Dam, Beaudesert. Conducted for BAAM.
- Terrestrial vertebrate assessment, Mungarra Reserve, Petrie. Conducted for BAAM.
- Terrestrial vertebrate fauna survey at Capalaba with NatureSearch, Department of Environment and Heritage. Provision of data only.
- Bird, reptile and invertebrate surveys at more than 25 sites for the project *Biodiversity values and landscape context in reforestation*, Rainforest Co-Operative Research Centre.
- Bird surveys at Lamington National Park, for Earthwatch and the CRC for Tropical Rainforest Ecology & Management. Provision of data only.

#### ***New England Tableland***

- Terrestrial vertebrate impact assessment, Emu Swamp Dam, Stanthorpe. Conducted for BAAM.
- Fauna survey of Girraween National Park with QPWS. Provision of data only.

#### ***Multiple bioregions***

- Terrestrial ecology and impact assessment report – CopperString Project EIS, Einasleigh Uplands, Desert Uplands, Mitchell Grass Downs, Northwest Highlands, Queensland. Included targeted surveys for Carpentarian Pseudantechinus and Julia Creek Dunnart. Conducted for BAAM.
- Fauna surveys northeast of Julia Creek, Mitchell Grass Downs and Gulf Plains, November 2019 & March 2020, targeting Julia Creek Dunnart *Sminthopsis douglasi*. Conducted for Epic Environmental.
- Ecological assessment Burdekin Falls Dam, including fauna surveys in Einasleigh Uplands and Brigalow Belt bioregions. Conducted for Epic Environmental.
- Bird surveys Chalumbin project, Wet Tropics and Einasleigh Uplands. Conducted for Attexó Group P/L. Provision of data only.
- Faunal habitat assessment Sunrise Bauxite Project, Bundaberg and Gayndah, Southeast Queensland and Brigalow Belt. Conducted for Epic Environmental.
- Fauna survey targeting Julia Creek Dunnart *Sminthopsis douglasi*, Dalgongally Station Gulf Plains and Mitchell Grass Downs. Conducted for Epic Environmental.

#### ***Northern Territory***

- Fauna survey, dry season, Eldo Plateau Project, Nhulunbuy. Conducted for Ecosmart.
- Bird survey targeting Gouldian Finch *Erythrura gouldiae* in Yinberrie Hills, Northern Territory, for Biliton Gold Mine.
- Gouldian Finch *Erythrura gouldiae* and Crested Shrike-tit (northern subspecies) *Falcunculus frontatus whitei* survey, Delamere Air Weapons Range. Conducted for AECOM on behalf of the Department of Defence.
- Gouldian Finch *Erythrura gouldiae* and Partridge Pigeon *Geophaps smithii* survey, Mount Bundy Training Area. Conducted for AECOM on behalf of the Department of Defence.
- Threatened fauna pre-clearance habitat assessments Nabarlek Mine, West Arnhem Land, June, July and September 2022. Conducted for COOE.
- Fauna pre-clearance assessment Ichthys Project, Blaydin Point, Darwin. Conducted for CDM Smith.

#### ***New South Wales***

- Bird, reptile and invertebrate surveys at more than 25 sites in north-eastern NSW for the project *Biodiversity values and landscape context in reforestation*, Rainforest Co-Operative Research Centre.

### South Australia

- Fauna survey, Peculiar Knob, south of Coober Pedy. Conducted for COOE.

### Extralimital

#### Papua New Guinea

- Ecological assessment *Wafi-Golpu Mine Project*, Morobe Province. Conducted for BAAM.
- Ecological assessment *Yandera Copper-Molybdenum Project*, Madang Province. Prepared for 3D Environmental.
- Ecological assessment, Lassul Bay, East New Britain Province. Prepared for 3D Environmental.

### Asia

- Vertebrate ecologist for the 2nd year Environmental Science subject *Studies of an Asian Rainforest* (Griffith University) at Danum Valley Field Centre, Sabah, Malaysia, 2004, 2005 & 2006.
- Vertebrate ecologist for the 2nd year Environmental Science subject *Studies of an Asian Rainforest* (Griffith University) at Batu Apoi Forest Reserve, Brunei Darussalam, 2002 & 2003.
- Bird surveys for Earthwatch and the CRC for Tropical Rainforest Ecology & Management at Batu Apoi Forest Reserve, Brunei Darussalam.

## PUBLICATIONS

- Catterall, CP, Kanowski, J, Wardell-Johnson, G, Proctor, H, **Reis, T**, Harrison, D & Tucker, NIJ (2004) 'Quantifying the biodiversity values of reforestation: perspectives, design issues and outcomes in Australian rainforest landscapes,' in D Lunney (ed), *Conservation of Australia's forest fauna*. Second edition, Royal Zoological Society of New South Wales, Mosman, pp. 359-393.
- Hitchcock, G, Conaty, SD, Fell, DG, Gordon, G, Ingram, MS, **Reis, TM**, Stanton, DJ & Wigness, JN (2014). Range extension of the short-beaked echidna *Tachyglossus aculeatus* (Monotremata: Tachyglossidae) and northern brown bandicoot *Isodon macrourus* (Marsupialis: Peramelidae) in Queensland: Mua (Moa Island), Torres Strait. *Memoirs of the Queensland Museum – Nature*, **59**: 1-7.
- Kanowski, J, Catterall, CP, Proctor, H, **Reis, T**, Tucker, NIJ & Wardell-Johnson, GW (2005). 'Biodiversity values of timber plantations and restoration plantings for rainforest fauna in tropical and subtropical Australia,' in D Erskine, D Lamb & M Bristow (eds), *Reforestation in the tropics and subtropics of Australia using rainforest tree species*. RIRDC Publication No 05/087. P. Rural Industries Research and Development Corporation, Canberra, pp. 183-205.
- Kanowski, J, Catterall, CP, **Reis, T** & Wardell-Johnson, G (2004). 'Animal-plant interactions in rainforest restoration in tropical and subtropical Australia,' in J Kanowski, CP Catterall, AJ Dennis & DA Westcott (eds), *Animal-plant interactions in conservation and restoration*. Cooperative Research Centre for Tropical Rainforest Ecology and Management, Cairns, pp. 20-24.
- Kanowski, J, Catterall, CP, Wardell-Johnson, GW, Proctor, H & **Reis, T** (2003). Development of forest structure on cleared rainforest land in eastern Australia under different styles of reforestation. *Forest Ecology and Management*, **183**: 265-280.
- Kanowski, J, **Reis, T**, Catterall, CP & Piper, SD (2006). Factors affecting the use of reforested sites by reptiles in cleared rainforest landscapes in tropical and subtropical Australia. *Restoration Ecology*, **14**: 67-76.
- Leigh, C, **Reis, TM** & Sheldon, F (2013). High potential subsidy of dry-season aquatic fauna to consumers in riparian zones of wet-dry tropical rivers. *Inland Waters*, **3**: 411-420.
- Lloyd, P, Sanders, M, **Reis, T** & Abbott, A (2013). Targeted trapping surveys shed new light on the distribution and habitat characteristics of the Carpentarian

pseudantechinus (*Pseudantechinus mimulus*), a threatened dasyurid marsupial. *Australian Mammalogy*, <http://dx.doi.org/10.1071/AM12027>.

- Proctor, H, Kanowski, J, Catterall, CP, Wardell-Johnson, G & **Reis, T** (2011). Rainforest-restoration success as judged by assemblages of soil- and litter-dwelling mites (Arachnida: Acari). (pp. 234-254 in *Acarology XIII: Proceedings of the International Congress*). *Zoosymposia*, **6**: 1-304.
- Proctor, HC, Kanowski, J, Wardell-Johnson, G, **Reis, T** & Catterall, CP (2003). Does diversity beget diversity? A comparison between plant and leaf-litter invertebrate richness from pasture to rainforest. *Records of the South Australian Museum Monograph, Series No. 7*: 267-274.
- **Reis, T** (2005). *Central Eastern Rainforest Reserves of Australia (World Heritage) bibliography: incorporating information assessment and development of a research strategy*. Department of Environment and Conservation NSW, Sydney.
- **Reis, T** (2010). 'The reptiles,' in R Kitching, R Braithwaite & J Cavanaugh (eds), *Remnants of Gondwana: a natural and social history of the Gondwanan rainforests of Australia*, Surrey Beatty, Sydney, pp. 173-184.
- **Reis, T** (2012). 'Squatter pigeon (southern subspecies) *Geopelia scripta scripta* (Temminck, 1821),' in LK Curtis, AJ Dennis, KR McDonald, PK Kyne & SJS Debus (eds), *Queensland's threatened animals*, CSIRO Publishing, Collingwood, pp. 254-255.
- **Reis, T** (2013). To be a natural historian. *Wildlife Australia*, **50**: 36-37.
- **Reis, T** (2014). Why my safety threatens the safety of wildlife. *Wildlife Australia*, **51**: 40-41.
- Wardell-Johnson, W, Kanowski, J, Catterall, CP, Proctor, H & **Reis, T** (2001). 'Measuring the restoration of rainforest biodiversity: a case study in research design, and its implications for establishing monitoring frameworks,' in B Boyes (ed), *Biodiversity - the big picture*, Proceedings of the Southern Queensland Biodiversity Recovery Conference. Lake Perseverance: Southern Queensland Biodiversity Network, pp. 72-81.

#### SELECTED UNPUBLISHED REPORTS (QUEENSLAND GOVERNMENT)

- McFarland, D, Haseler, M, Venz, M, **Reis, T** & Ford, G (1999). *Terrestrial vertebrate fauna of the Brigalow Belt South Bioregion: assessment and analysis for conservation planning*. Queensland Environment Protection Agency, Brisbane.
- McFarland, D, Haseler, M, Venz, M, **Reis, T**, Ford, G & Hines, B (1999). *Fauna survey methodology - regional stratification, site selection, field techniques and data audit*. Queensland Environmental Protection Agency, Brisbane.
- McFarland, D, Venz, M & **Reis, T** (1999). *Priority species summaries. An attachment to the report: terrestrial vertebrate fauna of the Brigalow Belt South Bioregion: assessment and analysis for conservation planning*. Queensland Environmental Protection Agency, Brisbane.

#### SEMINARS AND CONFERENCE PRESENTATIONS

- Reis, T (2010). The EIS process: terrestrial vertebrates. *Achieving Real Biodiversity Outcomes through the EIS Process Forum*, Environment Institute of Australia and New Zealand, Brisbane, April.
- Reis, T, Catterall, CP, Kanowski, J, Scambler, E, Wardell-Johnson, G & Proctor, H (2002). Occupation of replanted rainforest patches by birds: does latitude make a difference? *3rd International Canopy Conference*, Cairns, June.
- Reis T, Catterall, CP, Kanowski, J, Wardell-Johnson, G & Proctor, H (2002). What is the value of weedy regrowth to rainforest birds? *THECA 2002 Forum: Weeds: Identifying Issues and Seeking Solutions in Bush Regeneration*, Brisbane, September.