

Department of Defence
Annual Environmental Compliance Report 2022

EPBC Act Approval 2011/5896
Defence Training Facilities, Greenbank Training Area, QLD

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A. Vertebrate Monitoring Program Summary 2022

Document Version Control

Version	Date	Approved by	Details / Reason for Change
1		Kate Smith	Prepare draft report with proponents updates for delegate signature

Declaration of Accuracy

In making this declaration, I am aware that sections 490 and 491 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) make it an offence in certain circumstances to knowingly provide false or misleading information or documents. The offence is punishable on conviction by imprisonment or a fine, or both. I declare that all the information and documentation supporting this compliance report is true and correct in every particular. I am authorised to bind the approval holder to this declaration and that I have no knowledge of that authorisation being revoked at the time of making this declaration.

Signed	
Full name (please print)	Lloyd Woodford
Position (please print)	Director Defence Environmental Planning, Protection and Assessment
Organisation (please print including ABN/ACN if applicable)	Department of Defence ABN: 68706814312
Date	14 July 2022

1. Description of Activities

The approved action involved the construction of additional Defence training facilities at Defence's Greenbank Training Area (GBTA) located at Greenbank, approximately 20 km south southwest of Brisbane and 17 km east of Ipswich in Queensland. GBTA has an area of approximately 4,665 ha. The total footprint for the new Defence training facilities was less than some 69 ha spread across areas of cleared, regrowth and remnant vegetation on the property.

Under the Enhanced Land Force project, Defence proposed to increase the capacity for training at GBTA through the introduction of new training and camp facilities. The facilities at GBTA comprised:

- An upgrade to and extension of, an existing Battle Shooting Range (BSR) to a Marksmanship Training Range-Type B (MTR-B)
- A new Safe Driver Training Area (SDTA) in a previously cleared area
- A new access point from Goodna Road on the southern side of GBTA
- A new Range Control compound near the new entry
- A new 250 Person Camp at Accommodation Area L
- New 25/49 RQR working accommodation near the new Range Control; and
- A new Sewage treatment Plant (STP) to treat wastewater from the Camp, 25/49 RQR, and Range Control and the existing Accommodation Block H.

The action was approved under the EPBC Act subject to conditions on 17 January 2012.

On 10 December 2018, the Environment delegate approved an extension of the period of effect for EPBC approval 2011/5896 to 1 June 2029. The extension was to accommodate the Greenbank Training Area Environment Offset Strategy delivery period and reporting requirements under the approval.

Condition 3 requires the annual submission of an Environment Performance Report against the Offset Strategy (as required in condition 2). This performance report for the preceding 12 months was submitted on 10 May 2022.

Condition 9 of the EPBC approval 2011/5896 requires publication of an annual compliance report by 15 July of each year. This Annual Report will be concurrently published with this report, on the Defence Environmental Compliance website at: <https://www.defence.gov.au/id/environmental.asp>.

2. Conditions of approval

Table 1 – Compliance Table

	Condition	Is the project compliant with this condition?	Evidence / Comment
1	To protect habitat for listed threatened species, the person taking the action must not clear more than 69 hectares of vegetation on the site.	Compliant	Less than 69 ha of vegetation was cleared for the project.
2	The person taking the action must prepare and submit for approval an Environment Offset Strategy to the Minister. The Environment Offset Strategy must be submitted and approved by the Minister within 6 months of the date of this approval. The Environment Offset Strategy must provide for: the enhancement and protection of native vegetation; the riparian zone of water courses; and habitat for threatened species within the Greenbank Training Area. The Environment Offset Strategy must include the following: - A commitment to rehabilitate and protect no less than 350 ha of remnant vegetation or regrowth within the Greenbank Training Area. The area identified can comprise either one single, or a number of individual areas, provided those areas are greater than 50 ha in size. Information on the offset areas to be rehabilitated and protected must include (but not be limited to) the following: - The location and boundaries of the area(s) through maps and textual descriptions as well as an accompanying shapefile(s); - A description of the regional ecosystem classification contained within the area(s) identified for remediation and protection. Information must also include records of high conservation value fauna and fauna species known from/likely to utilise these areas; - Detailed measures for controlling and managing invasive weeds in those areas identified for protection; - Information on how the remediation and protection of the area(s) will improve habitat connectivity for threatened species with the Greenbank/Karawatha Wildlife Corridor; and	Compliant	The Defence Training Facilities, Greenbank Training Area, Environmental Offset Strategy was submitted to Environment Department on 31 October 2018 and approved by the delegate on 10 December 2018. The delegate approved an extension of the period of effect of the approval period (from 17 January 2010) to 1 June 2029. The extension accommodates the life of the offset delivery period and reporting requirements under the approval. The offset strategy is being implemented over a ten year period from January 2019 to December 2028. The monitoring program as specified by condition 2(b) has been significantly hampered by COVID 19 and repeated flooding incidents have limited site access. The Offset Strategy is available on the Defence Environmental Compliance Reporting webpage: http://www.defence.gov.au/id/Environmental.asp Annex A to this report provides details and an overview of the vertebrate monitoring program and addresses the ongoing requirements of condition 2.

	Condition	Is the project compliant with this condition?	Evidence / Comment
	v. Key performance indicators and indicative timeframes for undertaking the rehabilitation and protection. The key performance indicators must be sufficient to confirm whether any remediation actions have resulted in a net environmental gain to the environmental values of the Greenbank Training area. b. Details of ongoing vertebrate surveys at Greenbank Training Area (excluding the range impact area). The monitoring must be of a design that will detect any great changes to the numbers of threatened species within the Greenbank Training Area; c. Details of and a commitment to undertake landscape planting within the facilities. Plantings used must be naturally occurring within the Greenbank Training Area; d. Details of and a commitment to undertake the decommissioning, remediation and revegetation within the footprint of the existing sewage treatment plant; e. A commitment to undertake remediation actions that will halt soil erosion and increase bank stability from selected areas within Greenbank Training Area currently affected by soil erosion; and f. A description of how the environmental management systems of the Department of Defence will provide for the permanent protection of areas described in 2(a) from inappropriate activities or actions that are not consistent with the maintenance of the conservation values of the Greenbank Training Area. The Environment Offset Strategy must clearly state the legal person or persons responsible for implementation. If the Minister approves the Environment Offset Strategy then the approved Environment Offset Strategy must be implemented. <i>Note: It is not the intention that all training activities are excluded from the 350 ha area which is required to be protected under this condition. Activities that allow vegetation condition and habitat for the Spot-tailed Quoll and Koala to be maintained or enhanced will still be permissible.</i>		

	Condition	Is the project compliant with this condition?	Evidence / Comment
3	The person taking the action must prepare an annual Environment Performance Report and submit this to the department for approval within three (3) months of each anniversary of the date of commencement of construction. The Environment Performance Report must include detailed information on the following: - Provide a progress report on all activities and results from all works required in condition 2. The results must be sufficient to demonstrate progress with achieving any key performance indicators and timeframes identified in the Environment Offset Strategy; - Provide the results of ongoing monitoring by providing the records of individual animals and an annual population estimate of Spot-tailed Quolls and Koalas within the Greenbank Training Area; and - Provide the results of monitoring as required in condition 2(b). The results of the monitoring must include a comparison of inter-annual variation and document any significant changes to the numbers of the Spot-tailed Quolls and Koalas within the Greenbank Training Area. The Environmental Performance Report must be published, maintained and be made publicly available on the person taking the action's websites for the life of the action. The first Environment Performance Report must be submitted to the department 15 months from the date of approval of the Environmental Offset Strategy, with each subsequent report submitted 12 months from the date of the previous Environmental Performance Report.	Compliant	Environmental Performance Reporting against the Greenbank Training Area Environmental Offset Strategy (condition 2) was required to commence 15 months after the date of approval of the strategy (approved 10 December 2018). The first performance report - <i>Environmental Offset Strategy Performance Report May 2020, Greenbank Training Area EPBC 2011/5896 (the performance report)</i> was submitted to the Environment Department on 10 May 2020. The second performance report was submitted to the Environment Department on 10 May 2021. The third performance report was submitted to the Environment Department on 10 May 2022. Copies of all the performance reports are published on the Defence Environmental compliance Reporting webpage at: http://www.defence.gov.au/id/Environmental.asp <i>Defence notes:</i> <i>Delivery of offset requirements was significantly impacted by COVID-19 during the reporting period, compounded by significant flood events that limited site access. Site priorities have focussed on restoring physical access and security, a process which is not yet complete. These factors have caused delays to monitoring programs, weed management and the ability to stand up a research program.</i> <i>Weed management programs will be intensified during</i>

	Condition	Is the project compliant with this condition?	Evidence / Comment
			2022 to compensate for the delays in the 2021-22 period, and to ensure gains made during intensive works undertaken during 2021-21 are not lost. Autumn is the focal period chosen for routine vertebrate monitoring programs. Sound recorders and cameras are currently deployed across the offset area. In normal circumstances these would be collected with preliminary results available prior to May, but late deployment to avoid flood conditions means that results will not be analysed until mid-2022. However, some additional species have been recorded for the first time on the site and surrounds during non-routine surveys. The commencement of a research partnership has not been possible during the uncertainty of COVID. Lack of certainty around site access and capacity to access university research facilities and services during 2021 has been that the engagement with a University partner had to be postponed until 2022. The revised scope of this engagement was agreed in February 2022, and details of the contractual arrangements are currently being finalised. Flood events caused major upstream progression of erosion along Oxley Creek and deposition of significant sediment. Defence continues to collaborate in regional programs to address this catchment-level issue. Major weed infestations along the creek continued to be targeted by weed programs to assist in improvement of overall system health. A cool ecological burn was conducted in TA1b in mid-2021. Longer-term bushfire management planning was also undertaken through integration of the offset area into the update process for the training area Bushfire Management Plan.

	Condition	Is the project compliant with this condition?	Evidence / Comment
			<i>The establishment of 250 nest boxes were installed in the offset area and immediate surroundings in early 2021.</i> <i>Annex A describes the methodology and findings of the 2022 monitoring program. Table 1 of Annex A maps the monitoring locations. Table 2 of Annex A provides a list of the various species detected as part of the 2022 monitoring. The sound recorders will increase this data set once analysed. The cameras detected 27 vertebrate species, including birds, mammals and reptiles.</i> <i>Currently the results do not show enough 'explanatory power' from the data to comment on changes to vertebrate populations for endangered species where detection rates are very low (koala, greater glider and yellow-bellied glider) or consistently high (grey headed flying fox).</i> <i>A key outcome from the vertebrate Monitoring Program was the first detection of koala presence in and around the offset area since 2016 (a single koala was photographed nearby). Sound recorders will provide an additional means of tracking the distribution of koalas across the training area.</i> <i>This year is the first year that the northern brown and long-nosed bandicoots were detected within the offset area (they had previously been detected in the broader area). No quolls were detected on site or in any previous survey or monitoring site. There is an ongoing presence of relatively diverse mammal assemblage across the offset area, including species prone to cat and fox predation. Cats and foxes were detected in the offset area and in TA2. Solutions to this will be sought during 2022-2023. A</i>

	Condition	Is the project compliant with this condition?	Evidence / Comment
			<i>review of pest management strategies and fauna crossings for the offset areas will be undertaken as a result of the current monitoring findings.</i> The next performance report is due 10 May 2023.
4	To reduce the likely impacts of the construction activities on the environment, the person taking the action must prepare a Construction Environment Management Plan for the Minister's approval. The Construction Environment Management Plan must include the following measures: a. Measures to reduce the environmental damage from the movement of construction vehicles within and outside the Greenbank Training Area; b. Detailed hygiene protocols suitable for controlling the introduction and spread of invasive weeds due to construction activities; c. Sediment and erosion control measures to manage the movement of sediment on site; and d. Clearly state the legal person or persons responsible for implementing the Construction Environment Management Plan. The approved Construction Environment Management Plan must be implemented until all stages of construction have been completed.	Compliant	Construction was completed in early 2014. A Draft Construction Environment Management Plan was prepared and submitted to Environment Department October 2011 for approval. A revised draft plan was implemented by the project.
5	To mitigate potential impacts associated with ongoing operation activities within Greenbank Training Area, the person taking the action must manage the environmental impact of its activities within the Greenbank Training Area consistent with the Environmental Management System certified under ISO 14000:2004.	Compliant	Ongoing

	Condition	Is the project compliant with this condition?	Evidence / Comment
6	Prior to the removal of any buildings identified as having heritage value in the preliminary documentation, the person taking the action must undertake a full archival photographic record of any heritage fabric identified as having heritage significance in section 2.33 of the preliminary documentation. The full archival photographic record must be consistent with the Queensland Government's 'Guideline: Archival Recording of Heritage Places'. The full archival photographic record must be submitted to the Department within three months of the commencement of construction.	Compliant	Correspondence to Environment Department dated 2 May 2012.
7	Within 30 days of the commencement of the action, the person taking the action must advise the department in writing of the actual date of commencement.	Compliant	Department of Environment was advised in writing 22 February 2011.
8	The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the Environment Offset Strategy required by this approval, and make them available upon request to the department. Such records may be subject to audit by the department or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the Department's website. The results of audits may also be publicised through the general media.	Compliant	Records are maintained on Defence's electronic filing system known as 'Objective'.
9	By 15 July of each year after the commencement of the action, the person taking the action must publish a report on their websites addressing compliance with the conditions of this approval over the previous 12 months. Non-compliance with any of the conditions of this approval must be reported to the department at the same time as the compliance report is published.	Compliant	This report which is available on the Defence Environmental Compliance Reporting webpage: http://www.defence.gov.au/id/Environmental.asp
10	Within three months of every 12 month anniversary of the commencement of the action, the person taking the action must publish a report on their website addressing compliance with each of the conditions of this approval. Documentary evidence providing proof of the date of publication and noncompliance with any of the conditions in this approval must be provided to the department at the same time as the compliance report is published.	Compliant	No non-compliances reported. Publication of report on Defence's environmental compliance reporting website documented in the electronic filing system known as 'Objective'.

	Condition	Is the project compliant with this condition?	Evidence / Comment
11	Upon the direction of the Minister, the person taking the action must ensure that an independent audit of compliance with the conditions of approval is conducted and a report is submitted to the Minister. The independent auditor must be approved by the Minister prior to the commencement of the audit. Audit criteria must be agreed to by the Minister and the audit report must address the criteria to the satisfaction of the Minister.	Not triggered	
12	If the person taking the action wishes to carry out any activity otherwise than in accordance with the Environment Offset Strategy or Construction Environment Management Plan as specified in the conditions, the person taking the action must submit to the department for the Minister's written approval a revised version of that Environment Offset Strategy or Construction Environment Management Plan. The varied activity shall not commence until the Minister has approved the varied Environment Offset Strategy or Construction Environment Management Plan, in writing. The Minister will not approve the varied Environment Offset Strategy or Construction Environment Management Plan unless the revised Environment Offset Strategy or Construction Environment Management Plan would result in an equivalent or improved environmental outcome over time. If the Minister approves the revised Environment Offset Strategy or Construction Environment Management Plan, that Environment Offset Strategy or Construction Environment Management Plan must be implemented in place of the Environment Offset Strategy or Construction Environment Management Plan originally approved.	Not triggered	
13	If the Minister believes that it is necessary or convenient for the better protection of listed threatened species and communities and the environment from impacts by a Commonwealth agency to do so, the Minister may request	Not triggered	

	Condition	Is the project compliant with this condition?	Evidence / Comment
	that the person taking the action to make specified revisions to the Environment Offset Strategy or Construction Environment Management Plan specified in the conditions of approval and submit the revised Environment Offset Strategy or Construction Environment Management Plan for the Minister's written approval. The person taking the action must comply with any such request. The revised approved Environment Offset Strategy or Construction Environment Management Plan must be implemented. Unless the Minister has approved the revised Environment Offset Strategy or Construction Environment Management Plan, then the person taking the action must continue to implement the Environment Offset Strategy or Construction Environment Management Plan originally approved, as specified in the conditions.		
14	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 substantially commence the action without the written agreement of the Minister.	Not triggered	
15	Unless otherwise agreed to in writing by the Minister, the person taking the action must publish the Environment Offset Strategy or Construction Environment Management Plan referred to in these conditions of approval on their website. The Environment Offset Strategy or Construction Environment Management Plan must be published on the website within one month of being approved and must remain published until all actions in the strategy are completed to the satisfaction of the Minister.	Compliant	The Greenbank Environment Offset Strategy, November 2018 and the Environmental Management Plan, are on the Defence Environmental Compliance Reporting webpage: http://www.defence.gov.au/id/Environmental.asp
16	Unless otherwise agreed to in writing by the Minister, the person taking the action must provide a copy of the approved Environment Offset Strategy or Construction Environment Management Plan referred to in these conditions of approval to members of the public upon request. Copies must be provided within a reasonable time of the request.	Not triggered	

3. Correcting Non-Compliances

No non-compliances.

4. New Environmental Risks

No new environmental risks.

**Department of Defence
Vertebrate Monitoring Program Summary 2022**

EPBC Act Approval 2011/5896
Defence Training Facilities, Greenbank Training Area

Dr Fred Ford

1. Vertebrate Monitoring Program Overview

On 10 December 2018, the Environment delegate approved an extension of the period of effect for EPBC approval 2011/5896 to 1 June 2029. The extension was to accommodate the Greenbank Training Area Environment Offset Strategy delivery period and reporting requirements under the approval.

Condition 2 requires the implementation of an approved Offset Strategy (reported on annually in May) including a requirement under 2 b. to provide “Details of ongoing vertebrate surveys at Greenbank Training Area (excluding the range impact area). The monitoring must be of a design that will detect any great changes to the numbers of threatened species within the Greenbank Training Area”.

The monitoring program has been significantly hampered by Covid 19 and repeated flooding that limited site access. However, results of the Autumn deployment of remote cameras and spotlighting surveys are detailed in this report. Sound recorders were also deployed over this period for bats, frogs, birds and vocal mammals, but results are yet to be analysed. Nest box monitoring to follow up 2021 monitoring will be conducted twice during the next reporting period. Surveys for secondary evidence of key species were also conducted (primarily scats and tracks). Enrichment of long-term monitoring and programs by integration into research programs addressing fauna movements and landscape use by koalas is proposed in the Offset Strategy, but relies on the ability to engage a PhD student, which has not been possible during the pandemic. The nature of specific elements of the monitoring program will change during 2022-3 as this integration is now able to occur.

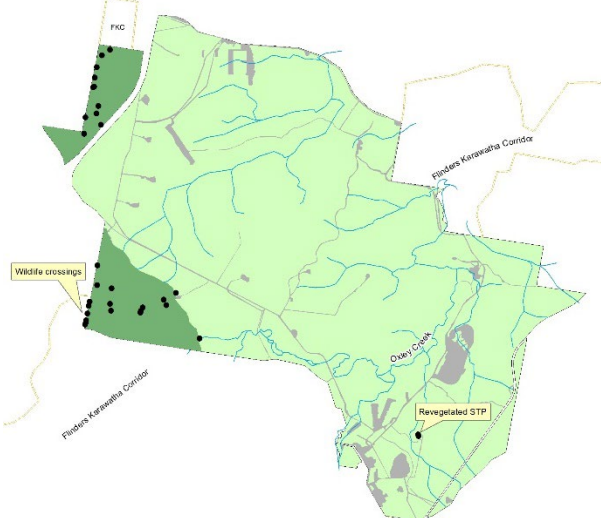
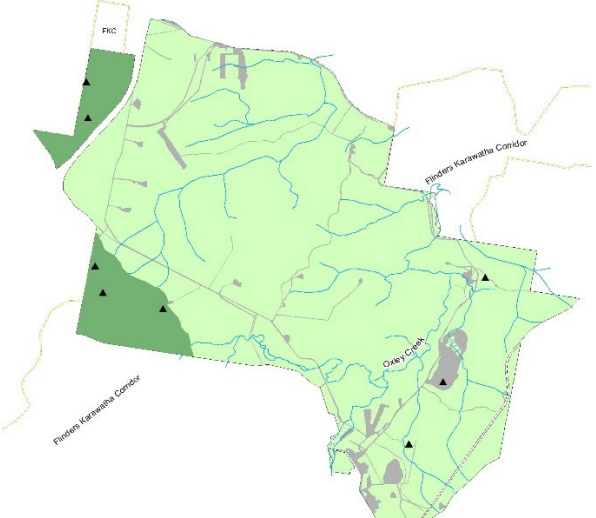
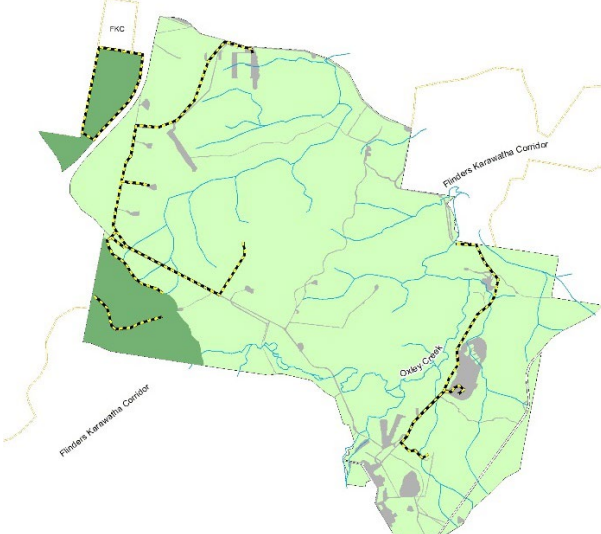
Koalas and spotted-tail quolls were the two focal species highlighted in the approval decision. Despite numerous detections of quoll-sized mammals in camera monitoring no quolls have been detected on site, nor in any previous survey or monitoring on site. The 2022 monitoring period did detect recent koala scats near offset area TA2, and identify likely koala chew trees at the locations where scats were found, as well as a chew mark consistent with an exploratory chew of tree bark by a koala within TA2. Koalas were also reported from the east of the Training Area at some distance from the offset area during this period.

Overall 27 species of vertebrate were recorded on cameras, including birds, mammals and reptiles. Sound recorder data will significantly increase this data set once analysed. Although northern brown and long-nosed bandicoots had previously been detected on the broader Training Area, this year was the first detection within the offset area. The distribution of bandicoot diggings found during searches for secondary evidence indicates a patchy distribution across the Training Area consistent with the pattern of detections on cameras.

Although small mammals species susceptible to fox and cat predation were detected in both offset areas, including the brush-tailed phascogale, *Antechinus* sp, rodents and bandicoots, foxes were commonly detected on cameras, and cats were detected in both offset areas, but were much more common around fauna crossings in TA2. Many of the cats were clearly domestic. These results reinforce previous monitoring of fauna crossings that show exotic predators commonly access the Training Area through those crossings. A review of pest management strategies and fauna crossings for the offset areas will be undertaken on the back of these findings.

2. Program Locations

Table 1. Monitoring Activity Location

Cameras Thirty cameras were deployed across the offset area (dark green areas) for a period of at least eighteen nights at each location. Cameras were set to sample across habitat types, and to specifically target fauna crossing locations in the SW corner of TA2. Two further cameras were set adjoining the footprint of the rehabilitated former sewerage treatment plant to confirm the species identity of bandicoots responsible for digging noted within and around the site. Rehabilitation of the STP is a completed action under the EPBC approval.	Sound recorders Sound recorders were set in areas set back from roads and railways in order to minimise noise interference, and to sample representative areas of the offset area and locations subject to previous or planned offset actions. This included the landscape plantings at the safe driver training area, former STP and adjoining the proposed area of fence line that could be modified to increase fauna movements through the Flinders-Karawatha corridor in the northeast of the Training Area. Results have not yet been analysed. Recorder were set to detect bats for three hours following sunset and two hours preceding sunrise and birds, frogs and vocal mammals for two hours either side of sunset and two hours after sunrise.
	
Spotlighting Spotlighting was conducted from vehicles along sealed roadways and on foot within the offset areas. Frequency and timing of spotlighting was highly constrained during this period (generally a single pass along each route illustrated based on ability to access site) and was not sufficient to compromise a monitoring program. Spotlighting essentially formed an additional opportunistic survey component for this reporting period. More replicated spotlighting effort timed to better enhance detection probabilities will be undertaken in future years.	Secondary evidence searches Active searches for scats, tracks and signs were undertaken across the survey footprints illustrated for other methods. Track and scat searches targeted roadways with suitable surfaces for track preservation. Heavy rains significantly altered the track-holding potential of many areas compared to previous years as finer-particle sands were less prevalent. Claw marks and other evidence of koalas were the focus of search efforts beyond trackways.
	

3. Results Summary

Results are presented in Table 2 as presence/absence of a species in the two offset areas and in other areas of the site. There is not yet explanatory power from monitoring data to make comment on changes to vertebrate populations, particularly for endangered species where detection rates are very low (koala, greater glider and yellow-bellied glider) or consistently high (grey headed flying fox).

Table 2. Species records for 2022 Greenbank Training Area monitoring.

Unconfirmed species identifications indicated by names in (brackets). Note some mouse and rat records may relate to native species and some to non-native. Some photos will be further identified, but some will remain ambiguous. Detection evidence codes; C-camera, L-spotlighting, S-sound, OB-observation, IS-scats, IC- chews, IT-tracks, IM-Claw marks, ID. Codes not included for supplementary records in offset area if species detected by cameras. Secondary evidence records outside offset area detailed only for pest and threatened species. (WPSQ) record indicates spotlighting and call observation of animals inside the offset area by Wildlife Preservation Society of QLD while conducting spotlighting adjoining TA2. Species previously detected on camera arrays but not recorded in this period are included in table.

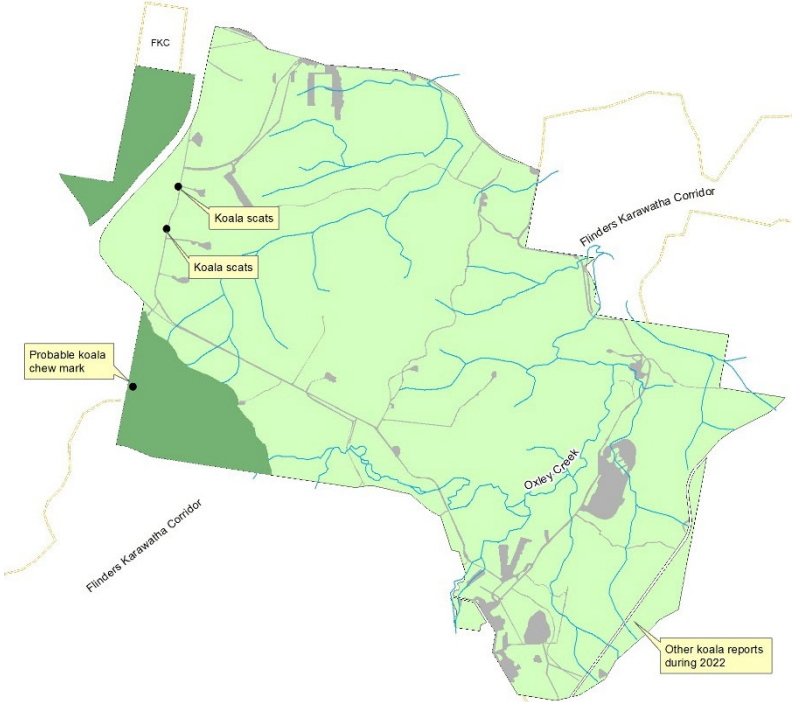
Species	TA1b	TA2	Outside Offset
<u>Native mammals</u>			
Antechinus <i>Antechinus (flavipes)</i>	C		
Northern brown bandicoot <i>Isodon macrourus</i>		C	
Eastern grey kangaroo <i>Macropus giganteus</i>	C	C	
Red-necked wallaby <i>Macropus rufogriseus</i>	C	C	
(Mouse)	C		
Long-nosed bandicoot <i>Perameles nasuta</i>			C
Greater glider* <i>Petaroides volans</i>			
Sugar glider <i>Petaurus brevipes</i>			
Yellow-bellied glider* <i>Petaurus australis</i>		L (WPSQ)	
Squirrel glider <i>Petaurus norfolcensis</i>			L
Brush-tailed phascogale <i>Phascogale tapotafa</i>	C	C	
Koala* <i>Phascolarctus cinereus</i>		IC	IS, IC, OB
Grey-headed flying fox* <i>Pteropus poliocephalus</i>	L	L	L
(Rat)	C	C	
Echidna <i>Tachyglossus aculeatus</i>			
Brush-tailed possum <i>Trichosaurus vulpechula</i>	C	C	L
Swamp wallaby <i>Wallabia bicolor</i>	C	C	
<u>Pest mammals</u>			
Dog <i>Canis lupus familiaris</i>		C	OB
Cat <i>Felis cattus</i>	C	C	IT
House mouse <i>Mus musculus</i>		OB	
Rabbit <i>Oryctolagus caniculus</i>			OB
Fox <i>Vulpes vulpes</i>	C	C	IT
<u>Birds</u>			
Brush turkey <i>Alectura lathami</i>	C		
Spotted quail thrush <i>Cinclosoma punctatum</i>		C	
Grey shrike thrush <i>Colluricincla harmonica</i>	C		
(honeyeater)		C	
Torresian Crow <i>Corvus orru</i>	C		
Kookaburra <i>Dacelo novaeguinea</i>	C		
White-faced heron <i>Egretta novaehollandiae</i>	C		
Peaceful Dove <i>Geopelia placida</i>	C		
Magpie Lark <i>Grallina cyanoleuca</i>	C	C	

Magpie <i>Gymnorhina tibicen</i>			
(quail)		C	
Common bronzewing pidgeon <i>Phaps chalcoptera</i>		C	
Willie wagtail <i>Rhipidura leucophrys</i>	C		
<u>Reptiles</u>			
Lace monitor <i>Varanus varius</i>	C		
Sand monitor <i>Varanus gouldii</i>			
Australian water dragon <i>Intellagama lesueurii</i>	C		
Bearded dragon <i>Pogona barbata</i>	C		

4. Interim recommendations

Monitoring during 2022 has documented the ongoing presence of a relatively diverse mammal assemblage across the offset area, including species prone to cat and fox predation. These predators were also detected in the offset area, and the abundance of cats and foxes in TA2 in particular requires an escalation of management activities. This is complicated by the prevalence of domestic cats among those detected using wildlife crossings through the security fence. Solutions to that issue will be sought during 2022-3. The number of species detected by monitoring using cameras increased slightly during 2022, despite cameras being set for a significantly shorter period. This supports the conclusion that targeted seasonal deployments for ongoing monitoring will be a suitable method in future years.

The key outcome in relation to EPBC approval requirements was the first detection of koala presence in and around the offset area since 2016 (when a single koala was photographed nearby). These records will be followed up with targeted surveys in coming months. However, it is clear that current monitoring methods are not sufficient to detect change in numbers of koalas and the practicality of tracking population numbers will be explored in detail with local researchers through 2022-23. Sound recorders will provide an additional potential means of tracking distribution of koalas across the training area if deployed during the bellowing season later in the year. Koala records from 2022 are shown below.

Koala records 2022 The monitoring program noted possible koala chew trees just north of the TA2 section of the offset area. In each case, close inspection of the surrounds of these chew locations lead to discovery of koala scats, although not directly attributable to the trees in question. A chew mark on a tree within TA2 was also consistent with chew marks from koalas in areas where bark chewing is a noted component of koala behaviour.	
Chew trees Tree at left is a known example of koala bark chewing from the southern tablelands of NSW. Tree at right bottom is at GBTA. It was adjacent to trees under which koala scats were found. It also had chewed areas higher into the canopy. Bite mark at top right is within TA2 at GBTA and closely resembles chews visible at top of image of known chew tree.	
Koala scats Scats found 1250m north of TA2 offset area boundary	