

# Woolgoolga to Ballina Pacific Highway upgrade

**Threatened Gliders Monitoring Program**

**Annual Report 2020 (Year 4)**

**Version 2.0**



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# Woolgoolga to Ballina Pacific Highway Upgrade

## Threatened Gliders Monitoring Program

### Annual Report 2020 (Year 4)



Sandpiper Ecological

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**Cover Photo:** Yellow-bellied glider *Petaurus australis* captured by a camera trap within the vegetated median in section 2 (Photograph: Sandpiper Ecological).

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# 1. Introduction

## 1.1 Background

The Woolgoolga to Ballina (W2B) Pacific Highway Upgrade received State approval under Part 5.1 of the *Environmental Planning and Assessment Act 1979 (EP&A Act)* on 24 June 2014 and Federal approval under the *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)* on 14 August 2014. The Threatened Glider Management Plan (TGMP) (Roads and Maritime Services, version 3.0, February 2018) was developed to meet the requirements of State Ministerial Condition of Approval (MCoA) D8 and components of MCoA D2. None of the glider species addressed in the plan are listed under the *EPBC Act*.

The TGMP identifies potential impacts of the upgrade on two threatened glider species - squirrel glider (*Petaurus norfolcensis*) and yellow-bellied glider (*P. australis*) - collectively referred to as 'threatened gliders'. Both species are listed as vulnerable by the NSW *Biodiversity Conservation Act 2016 (BC Act)* and inhabit open forests and woodlands throughout the ranges and coastal areas of north-east NSW although the yellow-bellied glider is largely absent from highly fragmented alluvial floodplains and coastal heathlands (RMS 2018). Numerous records of both species occur within 10km of the W2B alignment (RMS 2018).

The TGMP details a comprehensive monitoring program. The components of the monitoring program include:

1. Glider population monitoring.
2. Arboreal crossing structures and widened medians monitoring.
3. Road mortality monitoring.
4. Nest box monitoring.
5. Habitat revegetation monitoring.

The following report addresses components 1 – 3 of the monitoring program. Components 4 and 5 (Nest box monitoring and Habitat revegetation monitoring) are not part of the scope of this report. Earlier phases of components 1 - 3 of the monitoring program have been reported on previously (refer Sandpiper Ecological 2014, 2015, 2016, 2018a, 2019, 2020a).

### 1.1.1 Glider population monitoring

The TGMP states that the objective of glider population monitoring is:

*“To establish if there is a difference in occupational abundance of threatened gliders or activity levels before, during and after the project.”*

To achieve this objective, the TGMP directs that population monitoring will occur at:

- Impact sites: mitigated sites such as widened medians and crossing structures within 100m of the road edge.
- Control sites: unmitigated sites within 100m of the road edge.
- Reference sites: sites >300m from the project.

The TGMP details that glider population monitoring will occur before (i.e., pre-disturbance), during (i.e., during disturbance) and after (i.e., post-disturbance/operation phase when mitigation in place) construction and that the occupation rates (i.e., presence/absence) will be compared between these periods for impact, control and reference sites.



To determine the effectiveness of mitigation measures, Table 8.1 of the TGMP describes performance indicators and corrective actions for threatened glider population monitoring. A single performance indicator is stated for the threatened glider population monitoring:

1. Decline in the after-construction occupancy rates of squirrel glider or yellow-bellied glider at impact sites over three consecutive monitoring sessions (years).

In the event of a decline in post-construction occupational abundance (i.e., rates), the following *Corrective Actions* are described:

- a. *Review monitoring methods, considering further monitoring and assessment should there be a decline in population abundance.*
- b. *Consider potential for natural variation to be responsible for decline in population numbers /density.*
- c. *Review location of arboreal crossing structures and consider adding new structures.*
- d. *Investigate habitat adjoining the highway and consider improving habitat condition and connectivity.*
- e. *Post three years of monitoring and implementation of corrective actions, if connectivity measures cannot be demonstrated to be effective at successfully mitigating the barrier and fragmentation impact to glider species, the residual impact to connectivity shall be offset. This is in accordance with MCoA D2.*

### **1.1.2 Arboreal crossing structures and widened medians monitoring**

The TGMP states that the objective of arboreal crossing structures and widened medians monitoring is:

*“To establish the level of use of various crossing structures (i.e., glide poles, widened medians and rope bridges) by squirrel glider and yellow-bellied glider.”*

Monitoring locations include connectivity structures targeted for threatened gliders listed in Table 8.4 of the TGMP and include rope crossings, land bridges and widened medians. As different sections of the W2B upgrade are being constructed independently, crossing structure deployment will occur at different times during the construction phase. The intention is to schedule monitoring of all arboreal crossing structures within a project section/portion at the same time, rather than individually (RMS 2018). This will enable meaningful and robust data comparisons and reduce the potentially confounding effects of differing stages of construction.

To determine the effectiveness of crossing structures and widened medians, Table 8.2 of the TGMP outlines performance indicators and corrective actions. A single Performance Indicator is stated for crossing structures and widened medians monitoring:

1. No evidence of use of arboreal crossing structures and widened medians by threatened gliders post-construction.

In the event of no evidence of use, the following *Corrective Actions* are described:

- a. *Review location and type of connectivity structures installed and implement provisional measures in consultation with EPA which may include but not limited to the installation of more glide poles or rope bridges, particularly where known mortality hotspots occur.*
- b. *Consider more strategic planting of habitat or the installation of additional glide poles, informed by the long-term population monitoring data.*
- c. *Post three years of monitoring and implementation of corrective actions, if connectivity measures cannot be demonstrated to be effective at successfully mitigating the barrier and fragmentation*

*impact to glider species, the residual impact to connectivity shall be offset. This is in accordance with MCoA D2.*

### 1.1.3 Road mortality monitoring

Monitoring of threatened glider mortalities on the road will occur adjacent to all arboreal crossing structures and the widened medians in relevant project sections and at established control sites (RMS 2018). The monitoring program will measure correlations between connectivity structures and glider road mortalities. A higher mortality at impact sites compared to control sites may indicate that the mitigation measure is ineffective for road mortality prevention or reduction.

The stated objective of road mortality monitoring is:

*“Record the incidence of glider-vehicle collisions at mitigated (impact) and unmitigated (control) sites, to establish if there is a positive effect (i.e., decrease in glider mortality) associated with crossing structures. This is to meet MCoA D8(g).”*

To determine the effectiveness of connectivity structures in preventing or reducing glider road mortality, Table 8.3 of the TGMP outlines Performance Indicators (1 & 2) and their respective *Corrective Actions* (a, b, ... etc.). They are as follows:

1. Higher mortality rate at impact sites or no significant difference in mortality rates for threatened gliders between impact and control sites.
  - a. *Review reported usage level of crossing structure by threatened gliders.*
  - b. *Corrective actions may include but not limited to the installation of more glide poles or rope bridges to known mortality hotspots.*
  - c. *Crossing structures also serve as ‘insurance’ in the case of stochastic events such as fire or disease, which may occur at long time intervals. Further the cost of decommissioning and relocating a rope bridge or glide pole array is likely to be comparable to the cost of installing a new structure. Therefore, existing glide poles/rope bridges will be retained.*
  - d. *Should road kill data indicate a road-kill hot-spot for gliders where there is limited crossing structures RMS will investigate the feasibility of installing additional crossing structures*
  - e. *Post three years of monitoring and implementation of corrective actions, if connectivity measures cannot be demonstrated to be effective at successfully mitigating the barrier and fragmentation impact to glider species, the residual impact to connectivity shall be offset. This is in accordance with MCoA D2.*
2. High number of incidental records of threatened glider mortality away from crossing structures.
  - a. *Identify a hot spot.*
  - b. *Review options for mitigation, i.e., crossing structure, signage, lowering speed limit.*
  - c. *Consider implementation of crossing structure at identified hot-spot or other methods to reduce mortality (e.g. signage, review design of structure in that locality, additional plantings to encourage gliders away from road and to crossing structure).*

## 1.2 Scope

Sandpiper Ecological was engaged by Jacobs in January 2017 to undertake the W2B threatened glider monitoring program. The current annual report refers to year 4 monitoring activities undertaken during Q1-4 of the 2020 calendar year in sections 1-2 (year 3 operation phase) and sections 3-11 (Q1-3 construction phase,

Q4 operation phase). These activities build upon years 1, 2 and 3 monitoring (refer Sandpiper 2018a, 2019, 2020a) and earlier baseline and construction phase monitoring (refer Sandpiper 2014, 2015, 2016).

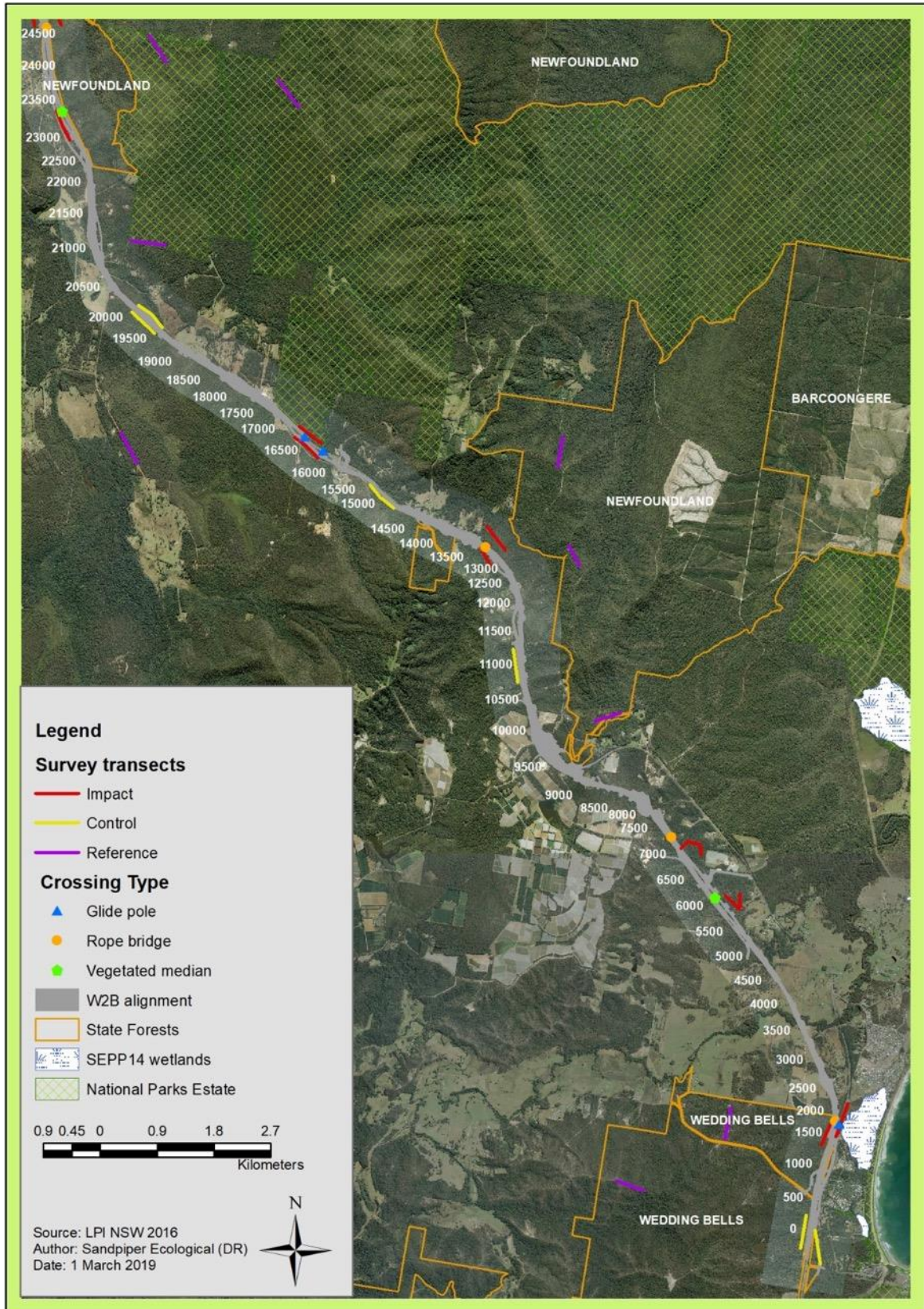
## 2. Methods

### 2.1 Study area

The study area focal sections include sections 1-2 and sections 3, 6 and 7 (referred to as sections 3-11) of the W2B Pacific Highway upgrade, between Woolgoolga and Tabbimoble and habitat within 1km of the project alignment (impact and control sites) and habitat surrounding reference sites up to 4km from the project alignment (Figures 1-6). Focal areas were largely dry sclerophyll forest and small areas of swamp sclerophyll forest. The study area is located within the north coast bioregion and experiences a largely sub-tropical climate (NSW NPWS 2003).

The five focal sections of the W2B alignment featured 76 monitoring sites - 31 impact, 26 control and 19 reference sites (Table 1). Impact sites were at locations of proposed crossing structures and vegetated medians. Control sites were positioned in forest habitat largely equivalent to impact sites and a minimum 500m but mostly >1000m from impact sites. Reference sites were in equivalent forest habitat >1-4km from either impact or control sites.





**Figure 1:** Threatened glider impact, control and reference sites across the W2B alignment.



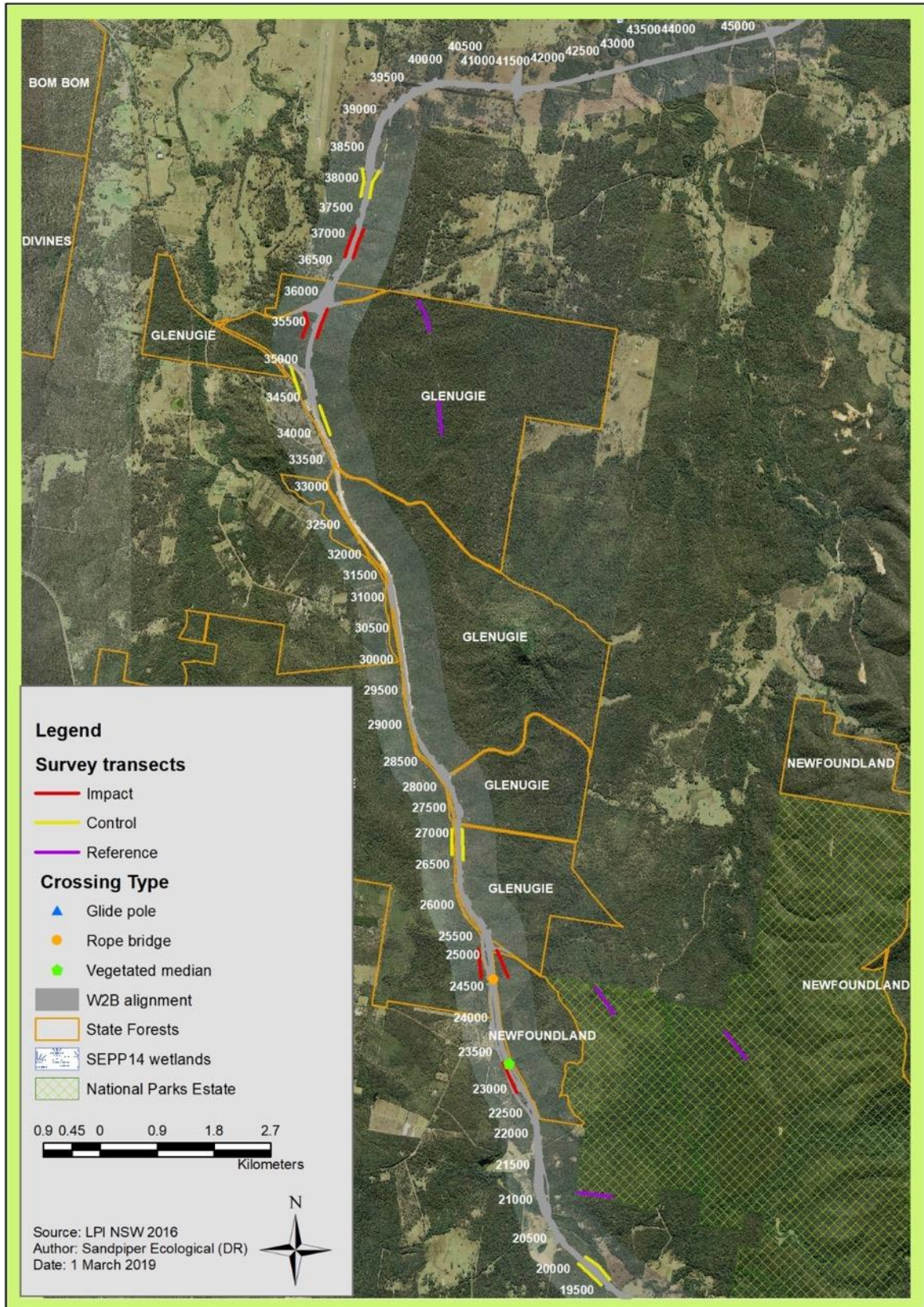
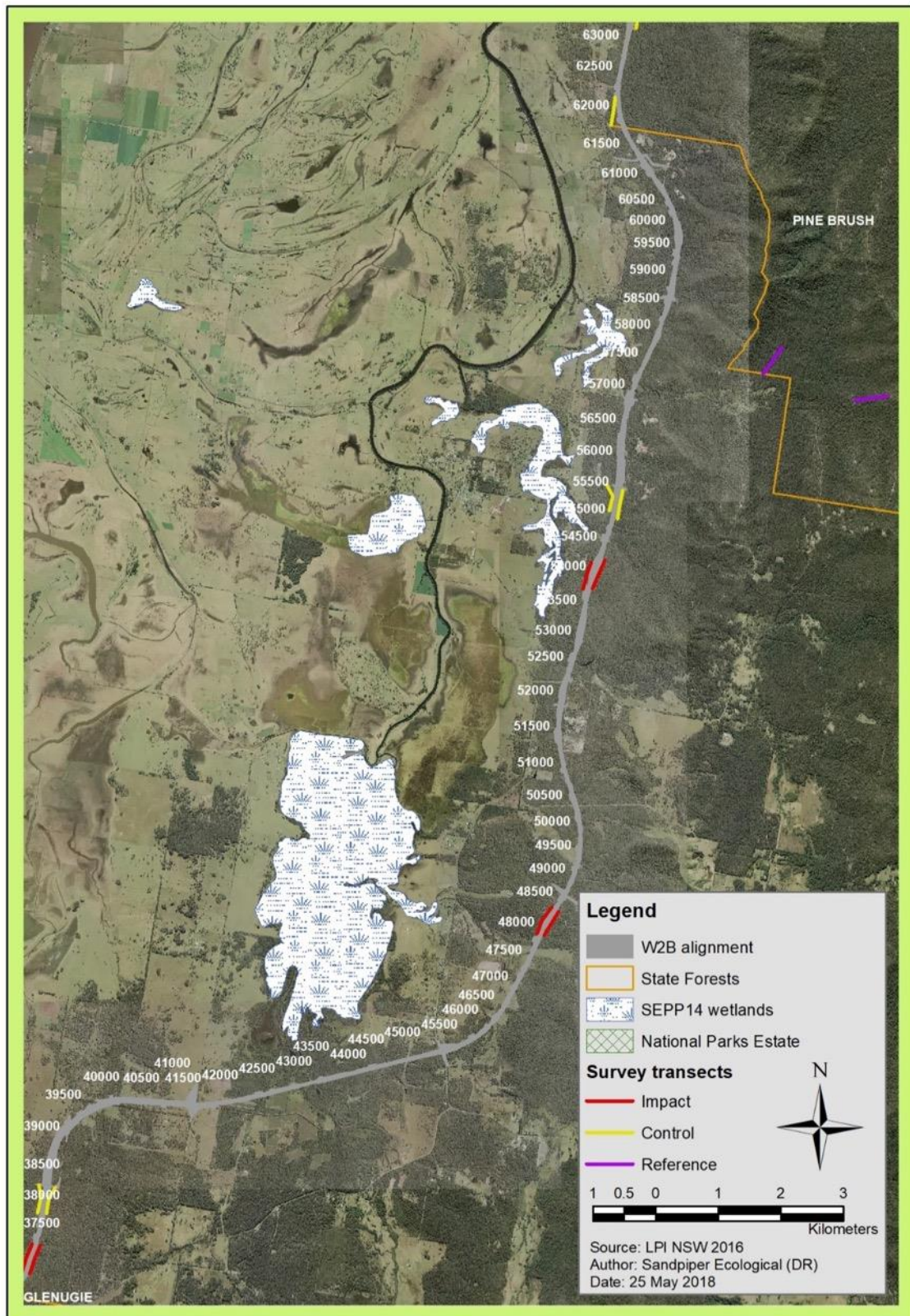


Figure 2: Threatened glider impact, control and reference sites across the W2B alignment.





**Figure 3:** Threatened glider impact, control and reference sites across the W2B alignment.



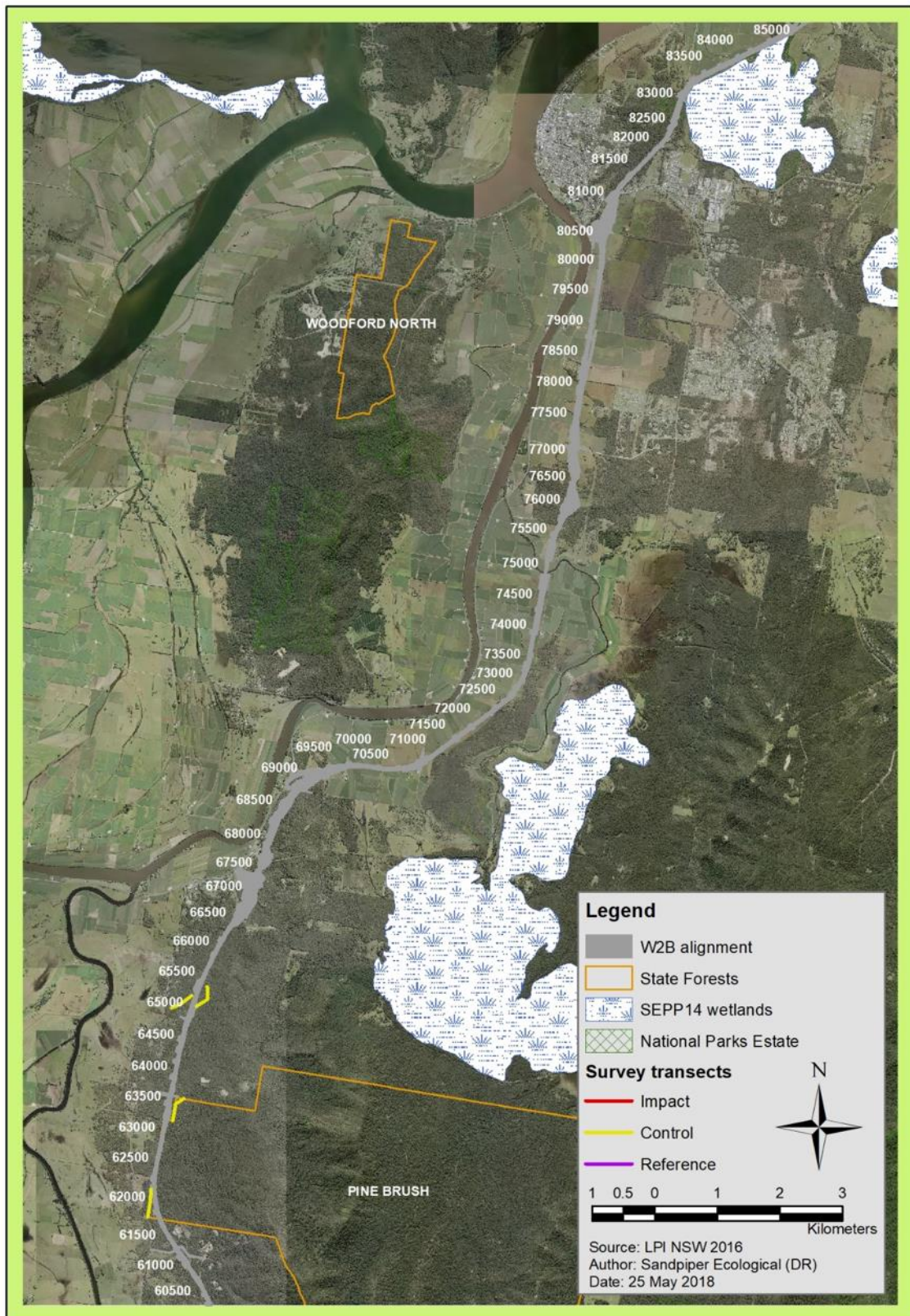


Figure 4: Threatened glider impact, control and reference sites across the W2B alignment.



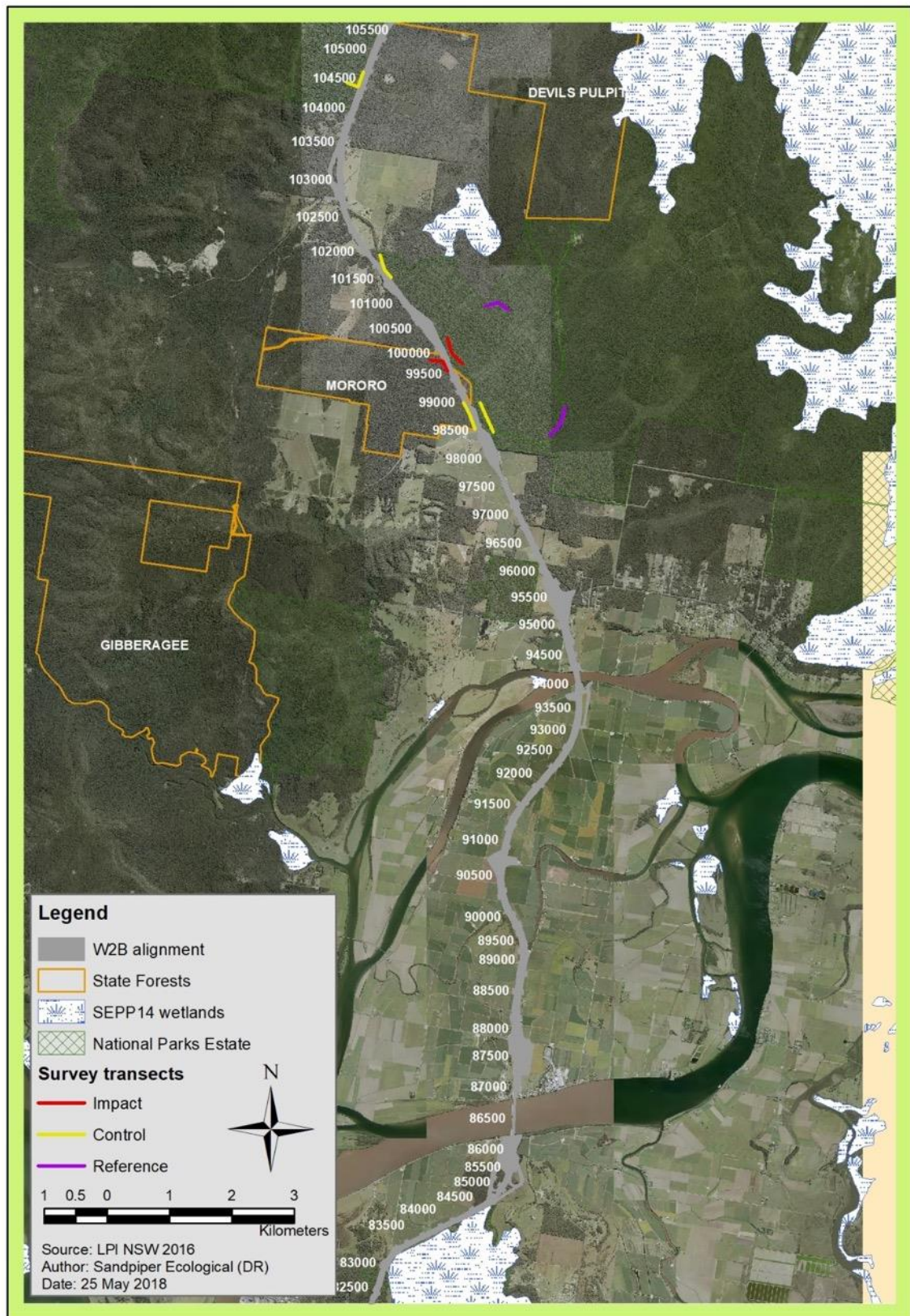


Figure 5: Threatened glider impact, control and reference sites across the W2B alignment.



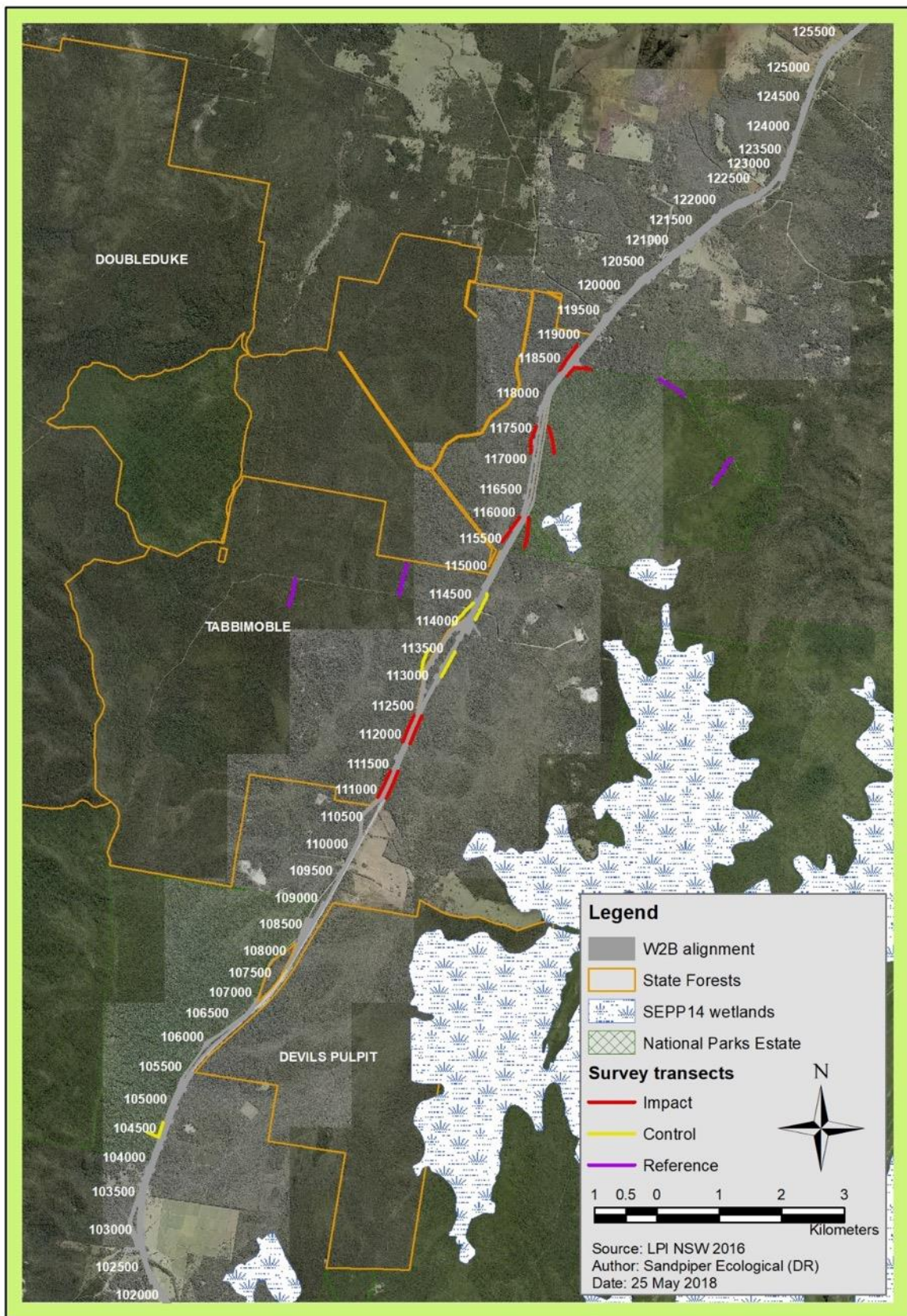


Figure 6: Threatened glider impact, control and reference sites across the W2B alignment.

**Table 1:** Location of impact, control and reference sites positioned in sections 1-2 and 3-11 of the W2B Upgrade. RB = rope bridge; GP = glide pole; VM = vegetated median.

Section	Site Name	Transect ID	Approximate chainage at centre of transect		
			Impact	Control	Reference
1	C1 (RB1 & GP1)	C1-east/north	1900	100	1500
		C1-west/south	1900	100	500
1	M1 (VM1)	M1	6000	-	-
1	S2 (RB2)	S2	7300	-	-
1	M1/S2	M1/S2	-	11200	9000
1	C2 (RB3)	C2-east/north	13100	-	13200
		C2-west/south	13100	15000	13200
2	C3 (GP2 & GP3)	C3-east	16000	19600	20900
		C3-west	16000	19600	20300
2	M2 (VM2)	M2	23200	-	-
2	S3 (RB4)	S3-east	25000	27000	25200
		S3-west	25000	27000	25200
3	Glenugie South	GS-east	35700	34050	-
		GS-west	35700	34750	-
3	Glenugie North	GN-east	37050	38000	-
		GN-west	37050	38000	-
3	Glenugie Reference	G-r-north	-	-	35800
		G-r-south	-	-	33950
3	Tucabia South	TucS-east	48250	55250	-
		TucS-west	48250	55350	-
3	Tucabia Mid	TucM-east	-	63500	-
		TucM-west	-	61850	-
3	Tucabia North	TucN-east	54050	65300	-
		TucN-west	54050	65100	-
3	Tucabia Reference	Tuc-r-north	-	-	57900
		Tuc-r-south	-	-	57200
6	Mororo	Mor-east/north	99600	98500	100100
		Mor-west/south	99600	98600	98100
6 & 7	Tabbimoble South	TabS-east	111350	101400	-
		TabS-west	111350	104550	-
7	Tabbimoble Mid	TabM-east	112350	113550	-
		TabM-west	112350	113550	-
7	Tabbimoble North	TabN-east	115950	114550	-
		TabN-west	115950	114550	-
7	Tabbimoble Veg Median	TabVM-east	117400	-	-
		TabVM-west	117400	-	-
7	Tabbimoble Land Bridge	TabLB-east	118850	-	-
		TabLB-west	118850	-	-
7	Tabbimoble Nature Reserve Reference	TabNR-r-nth	-	-	118700
		TabNR-r-sth	-	-	117300
7	Tabbimoble Double Duke State Forest Reference	TabDD-r-north	-	-	114750
		TabDD-r-south	-	-	114300
Total Transects			31	26	19

## 2.2 Glider population monitoring

Glider population surveys were conducted at monitoring sites established during baseline surveys (Sandpiper 2015, 2016a; Table 1). Each site featured a 500m-long transect mostly positioned on existing tracks or management trails. Impact and control transects were parallel to and within 100m of the highway alignment whereas reference transects were >1km from the highway alignment. Transects were located within dry open forest habitat or a combination of dry open forest and moist open forest or swamp forest.

Spotlight and call playback surveys were conducted at each site in each quarter during 2020. Survey periods were from 16-26/3/2020 (Q1), 11-21/5/2020 (Q2), 10-20/8/2020 (Q3) and 7-22/12/2020 (Q4). Each transect was surveyed on two non-consecutive nights during each survey period. Two to four experienced ecologists conducted the surveys concurrently on nearby transects (i.e., one observer/transect). The order and allocation of transects was changed each survey to avoid bias and to ensure each transect was surveyed during the early part of the evening at least once during the survey period. Several transects were inaccessible for some surveys including TabNR-rn and rs (Q1) due to collapse of access bridge and G-rn and rs (Q1, second survey) and Tuc-rn and rs (Q4) due to flooding of access roads. M1-i transect was not surveyed in any quarter and has not been surveyed since access was denied in 2015.

Spotlight surveys were of 30 minutes' duration and were preceded by yellow-bellied glider call playback. Playback included a five-minute listening period, five minutes of playback followed by spotlighting with a hand-held 200+ lumen torch. Surveys began at least 30 minutes after sunset and were completed within six hours. Surveys were conducted between third quarter and first quarter moon phases to avoid the period around the full moon. Weather conditions were generally fine during surveys with occasions of moderate winds (i.e. moves large branches) and/or light showers.

On occasions during surveys when an individual could not be confidently distinguished between a squirrel glider and a sugar glider (*P. brevicaeps*), it was recorded as squirrel/sugar. To determine the likelihood of each of these records being a squirrel glider, all survey data for all periods (including pre-construction) for each of these transects was reviewed. If squirrel gliders only were detected on that transect on other occasions or on more occasions than sugar gliders, the record was scored as 'probable' squirrel glider and included as a 'presence' record. If squirrel gliders were not detected on that transect on other occasion(s) or if sugar gliders were previously detected on more occasions the record was scored as 'probable' sugar glider.

## 2.3 Arboreal crossing structures and widened medians monitoring

### 2.3.1 Rope bridges

The four rope bridges were ladder mesh design and featured 400mm-wide mesh made from 10mm diameter silver rope woven into a 100mm wide grid pattern. The mesh included two 20mm-thick ropes running through the length (Plate 1). Rope bridges were slung between 3mm wire rope and supported by 10mm wire rope. Bridges spanned 57m (RB4) to 72m (RB1) and were fixed to the top of poles by bulkheads which were 9.6m (RB3 east – on top of cutting) to 18.2m (RB1 east) above ground level (Table 2). Bridge ends/bulkheads were at the height of mid-upper canopy of adjoining forest and 2-8m from the closest tree canopy. Lengths of 25mm diameter silver rope extended from the bulkhead to adjacent trees (Plate 1).



**Table 2:** Rope bridge dimensions and site features.

Rope bridge no.	Chainage (section)	Length of bridge (m)	Height of bulkhead east / west (m)	Distance to tree canopy east/west (m)
RB1	1800 (1)	72	18.2 / 14	2 / 3
RB2	7100 (1)	58	15 / 15.5	6 / 2
RB3	13040 (1)	68	9.6 / 16.8	3 / 4
RB4	24800 (2)	57	8 / 2	



**Plate 1:** Rope bridges were suspended >10m above the road deck (upper) and supported by poles adjacent to the forest edge. A camera was strapped to the bulkhead at each end of the bridge (lower left). Black core-flute was cable tied to the underside of the rope ladder at each end during year 1 to reduce the incidence of false-triggering caused by traffic (lower right).

Rope bridge monitoring entailed camera surveillance of the rope bridge surface at each end to determine use by arboreal fauna. Cameras were strapped to the bulkhead at each end of the four rope bridges and faced out along the length of the ladder mesh (Plate 1). Camera types used included Swift 3C, Swift Enduro and Spromise S108. Cameras were scheduled to turn on at 1700 hours and turn off at 0600 hours eastern standard time (EST). Cameras were set at low sensitivity to further reduce the incidence of false triggering caused by passing traffic and programmed to take 10 seconds of video upon triggering with no delay between triggers.

Cameras were initially installed by a tree climber in June 2018 and have operated continuously since this time. During the 2020 monitoring year, cameras were checked on 15/1/2020, 7/5/2020, 17/8/2020 and 21/12/2020 to refresh batteries and change SD cards. Either camera at each of the four rope bridges was active for between 228 days (RB1e) and 341 days (RB1w, RB2w, RB3e, RB4w) during the monitoring period (Table 3). This represented between 67% and 100% of the 341-day period (i.e., 15/1/2020 – 21/12/2020). At least one camera at each site was active for the entire monitoring period.

**Table 3:** Rope bridge camera activity periods during the 2020 monitoring year (341 days).

Rope bridge no.	No. of videos	No. of days each camera active (east/west)	% of period either camera active
RB1	90	228/341	100
RB2	2230	338/341	100
RB3	5502	341/292	100
RB4	406	292/341	100

### 2.3.2 Glide poles

Glide poles were positioned within the median at Halfway Creek (GP2 & GP3) and along the southbound road shoulder of the Solitary Islands Way/old Pacific Hwy (GP1). Poles were CCA-treated hardwood timber and stood 19m (GP1) to 19.5-20.0m (GP2 & GP3) above road level (Table 4; Plate 2). Poles were approximately 450mm diameter at breast height and tapered to approximately 330mm near the pole top. A 500mm diameter metal predator shield was attached to the top of GP3 (Plate 3).

Each pole featured two cross arms for gliders to launch from. Each arm was approximately 2400mm long and 90 x 100mm thick hardwood and brace-mounted to the pole at its centre (Plate 3). Arms were oriented perpendicular and parallel to the highway and the upper arm was attached approximately 300mm below the top of the pole. For GP2 and GP3, the upper arm was parallel to the highway and fixed approximately 70mm above the lower/perpendicular arm. The arm positions were the opposite for GP1.

Glide distances from poles to the closest roadside tree trunks greater than 200mm DBH (i.e., viable glide landing trees for squirrel glider and yellow-bellied glider) ranged between 22m and 25m for highway median poles GP2 and GP3 (Table 4). GP1 was 10m from roadside trees to the east and 37m from the closest roadside tree to the west. GP1 was also located 48m from the east end of RB1 and intended to provide a link, in conjunction with remnant canopy trees, for gliders moving to or from the rope bridge.

**Table 4:** Glide pole site features.

Glide pole no.	Chainage (section)	Position on road corridor	Height of upper cross arm (m)	Distance EAST to closest tree >200mm DBH (m)	Distance WEST to closest tree >200mm DBH (m)
GP1	1800 (1)	Edge of Solitary Islands Way	19	10	37
GP2	16060 (1)	median	20	24	22
GP3	16430 (1)	median	19.5	25	23



**Plate 2:** Glide poles stood 19m to 20m above road level and featured perpendicular and parallel-to-road cross arms. GP1 (left) was positioned adjacent roadside forest habitat on the eastern edge of the Solitary Island Way, approximately 50m from the rope bridge at chainage 1800 (RB1). GP2 (mid) and GP3 (right) were positioned within the highway median at Halfway Creek area (chainage 16060 & 16430).



**Plate 3:** GP3 featured a predator shield above the pole top (left). Cameras were mounted on a flat metal bar and projected ~150mm beyond the end of the parallel glide arm to capture glider activity (mid & right).

Glide pole monitoring entailed camera surveillance of the parallel arm of each pole to determine use by gliding mammals. Installation involved attaching a Swift Enduro camera to a flat 600-900mm long metal bar which was then mounted on the northern end of the parallel arm of each glide pole such that each camera was positioned 100-200mm beyond the end of the glide pole arm (Plate 3). Cameras were scheduled to turn on at 1700 hrs and turn off at 0600hrs EST. Cameras were set on medium sensitivity and programmed to take 10 seconds of video footage upon triggering with no delay between triggers.

Cameras were initially installed by a tree climber in June 2018 and have operated continuously since this time. During the 2020 monitoring year, cameras were checked on 15/1/2020, 7/5/2020, 17/8/2020 and 21/12/2020 to refresh batteries and change SD cards. Glide pole cameras were active for 338 - 341 days or 99.1% - 100% of the 341-day monitoring period (Table 5).

**Table 5:** Glide pole camera activity periods during the 2020 monitoring year (341 days).

Glide pole no.	No. of videos	No. of days camera active	% of period camera active
GP1	311	338	99.1
GP2	640	341	100
GP3	267	341	100

### 2.3.3 Vegetated medians

Vegetated medians extend for 1150m (VM1: chainage 5350-6500) and 550m (VM2: chainage 22900-23450) and pass through dry sclerophyll open forest (Figure 7). Carriageway corridor widths range between 30-60m and roadside tree heights are approximately 15-25m. Both sites feature a parallel-running service road 15-70m west of the northbound carriageway (i.e., McLaughlin's Road at VM1 & old Pacific Highway at VM2).

Hair funnels were installed within each vegetated median and in habitat immediately to the east and west of each median during Q1 and Q2 of year three (Figure 7). Ten funnels were installed in an approximate line and spaced along the length of each median and each adjoining habitat as per previous surveys (Sandpiper Ecological 2020). Hair funnels were retrieved at the end of each sampling period and sent to recognised hair identification analysts (Robyn Carter, Georgeanna Story). Hair funnels were installed on 4/3/2020 (Q1) and 1/6/2020 (Q2) and remained active for a minimum of 14 nights in each period. Because the hair of squirrel glider and sugar glider cannot be reliably differentiated, hair samples attributed to either species is reported as SqG/SuG.

In order to obtain more definitive evidence of use by squirrel gliders (and yellow-bellied gliders), camera traps were installed in each vegetated median during Q3 and Q4 instead of hair funnels. Camera traps featured a Swift Enduro camera, mounted to a 150mm x 500mm x 10mm timber board, oriented towards a capped 250mm x 100mm diameter PVC pipe (Plate 4). The PVC pipe was perforated by numerous holes and filled with creamed honey. The camera/pipe/board was attached to a metal bracket and mounted to subject trees at approximately 6m above ground level (Plate 4). A dilute mixture of honey and water was sprayed up the trunk of the tree above the camera trap to act as extra attractant.

Two camera traps were installed in each vegetated median and each positioned at the most viable glide crossing locations (Figure 7). Cameras were installed on 24/9/2020 and checked on 24-25/11/2020 and 20/1/2021 to refresh batteries and change SD cards. To account for the delay in camera installation and to satisfy the minimum 14-day sample period/quarter, cameras ran continuously from 24/9/2020 – 20/1/2021 (118 days). Cameras were active for 42-118 days during this period (Table 6).

**Table 6:** Vegetated median camera activity periods during Q3/Q4 of the 2020 monitoring year (118 days). VM1 = southern median; VM2 = northern median; n = camera positioned in northern section of median; s = camera positioned in southern section of the median.

Camera location	No. of videos	No. of days camera active
VM1s	304	118
VM1n	257	118
VM2s	140	42
VM2n	285	90





**Figure 7:** Aerial image of vegetated median sites VM1 (left) and VM2 (right). Blue lines represent hair funnel sampling transects. Red stars represent position of camera traps installed in Q3 and Q4. Map source: Google Earth.



**Plate 4:** Vegetated median camera trap set up.

## 2.4 Road mortality monitoring

Car-based road mortality surveys were conducted during each of the four quarters of year 4 monitoring. Car-based surveys entailed a driver and passenger observer travelling both the northbound and southbound length of sections 1-2. The survey vehicle featured a 'Vehicle Frequently Stopping' sign on the back and flashing light and travelled at 80-90 km/h in the left-hand lane. Surveys involved the passenger scanning the road surface and road shoulder for animal carcasses. When a carcass was observed, the vehicle would pull over at the nearest safe location and the passenger would walk back to inspect the carcass behind the guard rail/rope. The exact location of each carcass was recorded on a data sheet and referred to in subsequent surveys to avoid double-counting. Car-based surveys were substituted for walking-based surveys during year three due to



safety concerns with walking along the edge of the highway (refer Sandpiper 2020a). Surveys were completed on 30/1/2020 (Q1), 20/4/2020 (Q2), 9/7/2020 (Q3) and 16/10/2020 (Q4).

## 2.5 Data analysis

### 2.5.1 Population survey data

Due to the different stages of completion, population monitoring data for sections 1-2 and section 3-11 were analysed separately. For each survey quarter, data for the two samples were pooled to determine presence/absence of yellow-bellied glider and squirrel glider for each transect. The number of present or 'occupied' transects for each species for each survey period/quarter were then summed and expressed as a proportion of total sites (i.e. occupancy rate) for that treatment (i.e., impact, control, reference).

The occupancy rate of yellow-bellied glider and squirrel glider for each treatment for each survey quarter was then tabulated according to phase of construction. A mean ( $\pm$  SD) of all samples (i.e., survey quarters) was calculated for each treatment type for the three construction phases: pre-construction, construction and operation. To enable comparisons, year one, two and three operation phase data for sections 1-2 were treated separately. Only one quarter (i.e., Q4 2020) of operation phase monitoring has been completed for sections 3-11.

By completion of the year 4 monitoring period, all highway sections had been surveyed in four quarters during pre-construction; seven quarters (sections 1-2) and 16 quarters (sections 3-11) during construction; and 12 quarters (sections 1-2) and one quarter (sections 3-11) during operation.

In order to determine the association between pre-construction and operation phase occupation rate of yellow-bellied glider and squirrel glider at impact sites in sections 1-2, a Fisher's Exact Test was performed. The test examines the relationship between proportions (i.e., presence/absence) of categorical variables (i.e., pre-construction and operation) and is appropriate for small sample sizes (McDonald 2014). Presence/absence data (i.e., 0 or 1) were organised in columns according to phase of construction (i.e., pre-construction, operation year 1, operation year 2, operation year 3). The null hypothesis was that the proportion of present/absent records do not differ between treatments. Data analyses were performed on SYSTAT 13.1 (Systat Software Inc.). The test was not performed on sections 3-11 data as only one quarter of a monitoring year has been completed.

### 2.5.2 Rope bridge and glide pole camera data

Rope bridge and glide pole camera images were uploaded to a desktop computer and viewed using Windows Photo Viewer. Data recorded included: site, date, time, species, identification accuracy, number of images and image numbers. Senior staff reviewed all images, with reference to standard field guides (e.g., Menkhorst & Knight 2003; Pizzey & Knight 2007). A hierarchical approach was adopted for species identification, which included: species, genus or group. Identification accuracy was scored as either definite (90%+ certainty), probable (75-90% certainty) or possible (60-75% certainty).

For rope bridge pictures/footage, the road crossing likelihood was also scored according to the following criteria:

- *Complete crossing* - animal moves past camera in either direction and does not return within 10 minutes.
- *Incomplete crossing* - animal either moves away from camera but returns within 10 minutes, or exhibits no directional movement along the bridge, or shows only exploratory movement, or glides from end of bridge after moving past camera.

According to these definitions, a ‘complete crossing’ does not require complementary evidence of the same crossing event from both cameras. Instead, it is inferred from display of strong directional movement and no evidence of return movement albeit this can be difficult to interpret for the feathertail glider (*Acrobates spp.*) due to their erratic and rapid movements. The absence of images/footage at the other end of the bridge is presumed to be an instance of detection evasion and is consistent with other investigations of arboreal crossing structure use (see Goldingay *et al.* 2013; Soanes *et al.* 2015).

For glide pole footage, any animal detection on median-positioned glide poles (i.e., GP2 & GP3) was scored as a highway crossing. On occasions when the glide launch was captured, the direction of highway crossing was also recorded. When detections did not include images/footage of glide launch, a crossing was inferred based on the reasoning that while an individual may glide to the central pole and return to the same side, it likely represents a very small proportion of detections. There is no habitat in the centre of the carriageway where GP2 and GP3 are located and, therefore, no apparent reason for gliders to repeatedly access the glide pole without completing a crossing. This is consistent with analyses of glide pole monitoring records from the Hume Highway which were supported by radio-tracking data (see Soanes *et al.* 2015) and previous glide pole monitoring at Sapphire to Woolgoolga Pacific Highway upgrade (Sandpiper Ecological 2018b).

For GP1, which is positioned on the eastern roadside of Solitary Islands Way and adjacent forest habitat, some glider detections likely represent movements along the eastern forest edge and not road crossings (see Goldingay *et al.* 2019). As such, we acknowledge that the sum of glider detections at that site is likely an overestimate of road crossings. Other information recorded from glide pole detections included (where discernible): species, sex, tail tip tone (for sugar gliders) and movement type (i.e., explore arm, climb pole, launch east, launch west).

Each rope bridge and pole site was treated as a replicate of that structure type. Further, data from both cameras at rope bridge sites were pooled for analysis.

## 2.6 Survey limitations and constraints

The severe drought conditions of 2019 extended into January 2020 before being broken by widespread flooding in February 2020. Catastrophic bushfires, which occurred during late 2019, variously affected much of the section 6 (Mororo) and section 7 (Tabbimobile) study area. Local flooding also occurred on several occasions during the 2020 monitoring year.

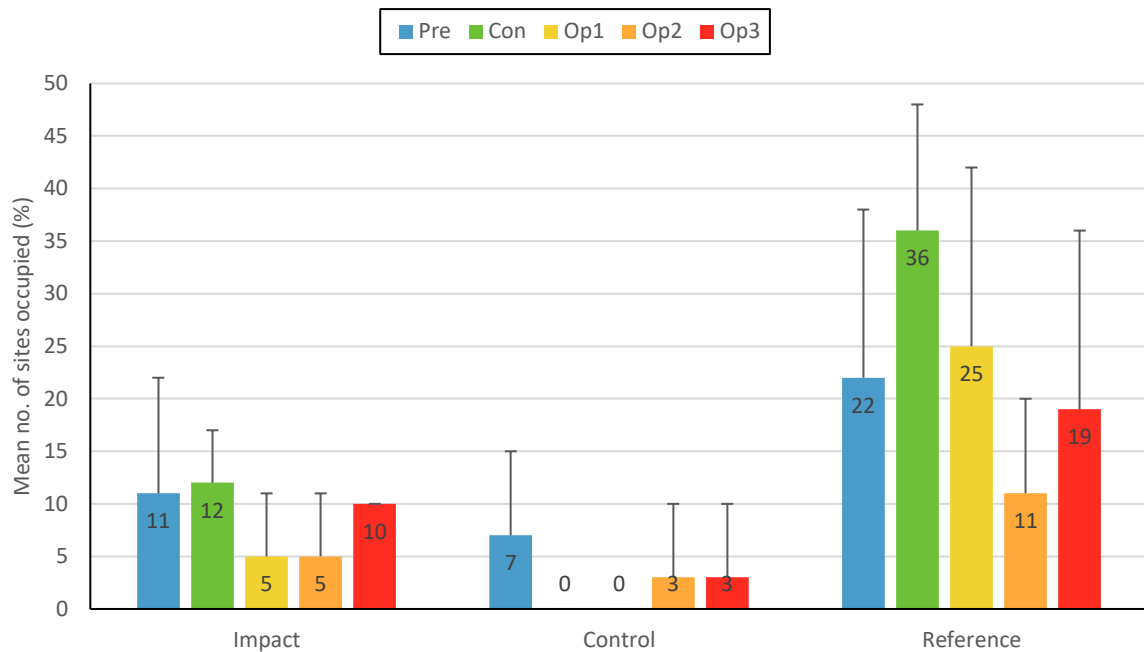
# 3. Results

## 3.1 Population monitoring

### 3.1.1 Sections 1-2

The mean year 3 operation phase occupation rates for yellow-bellied glider were 10% at impact sites, 3% at control sites and 19% at reference sites (Figure 8). When compared to year 1 and year 2 operation phase data, year 3 values represent a rise at impact sites, a rise after a year 2 decline at reference sites and a stabilisation of rates at control sites. A comparison between values for year 3 operation phase and pre-construction phase shows that occupation rates have risen to near pre-construction levels at impact and reference sites (i.e., 90.9% and 86.4% of pre-construction levels, respectively) but remained at 42.9% of pre-construction levels at control sites (Figure 8).

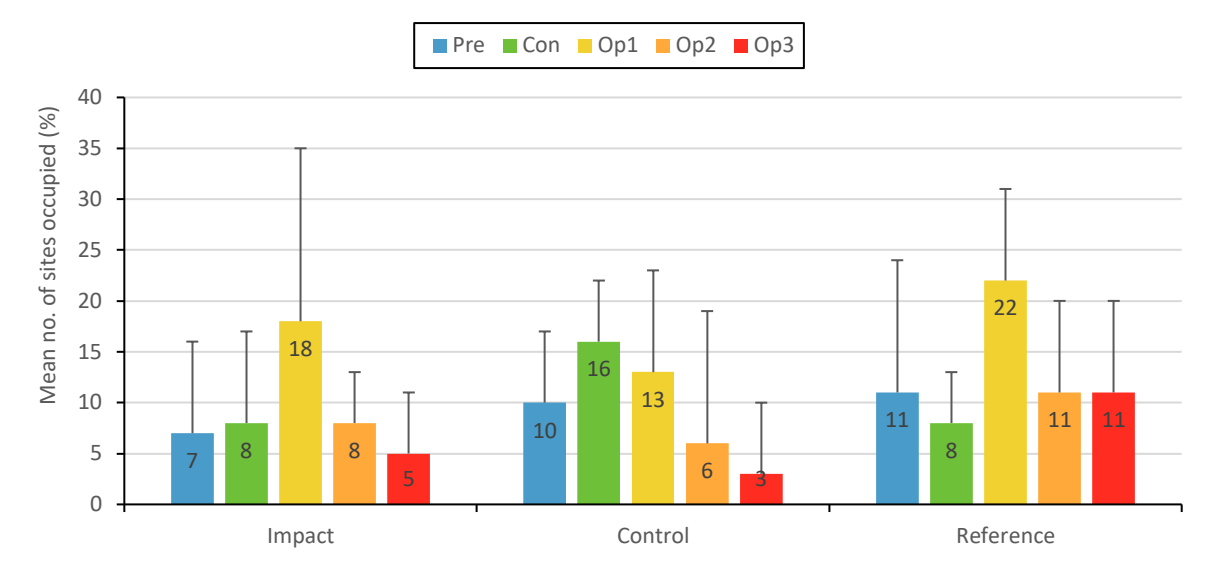
Results of the Fisher’s Exact Test suggest that impact site occupation levels did not differ significantly for yellow-bellied glider between pre-construction and operation year 1 ( $P = 0.437$ ), pre-construction and operation year 2 ( $P = 0.437$ ) and pre-construction and operation year 3 ( $P = 1.0$ ).



**Figure 8:** Mean  $\pm$  SD occupation rates for yellow-bellied glider at impact, control and reference sites in sections 1-2 according to different phases of construction. Pre = pre-construction; Con = construction. Op1 = operation year 1 (2018); Op2 = operation year 2 (2019), Op3 = operation year 3 (2020, current).

The mean year 3 operation phase occupation rates for squirrel glider were 5% at impact sites, 3% at control sites and 11% at reference sites (Figure 9). When compared to year 1 and year 2 operation phase data, year 3 values represent a downward trend at impact and control sites and a stable yet lower than year 1 rate at reference sites. A comparison between values for year 3 operation phase and pre-construction phase shows that occupation rates were at pre-construction levels at reference sites, marginally below pre-construction levels at impact sites (i.e., 71.4% of pre-construction levels) and were well below pre-construction levels at control sites (i.e., 30% of pre-construction levels) (Figure 9).

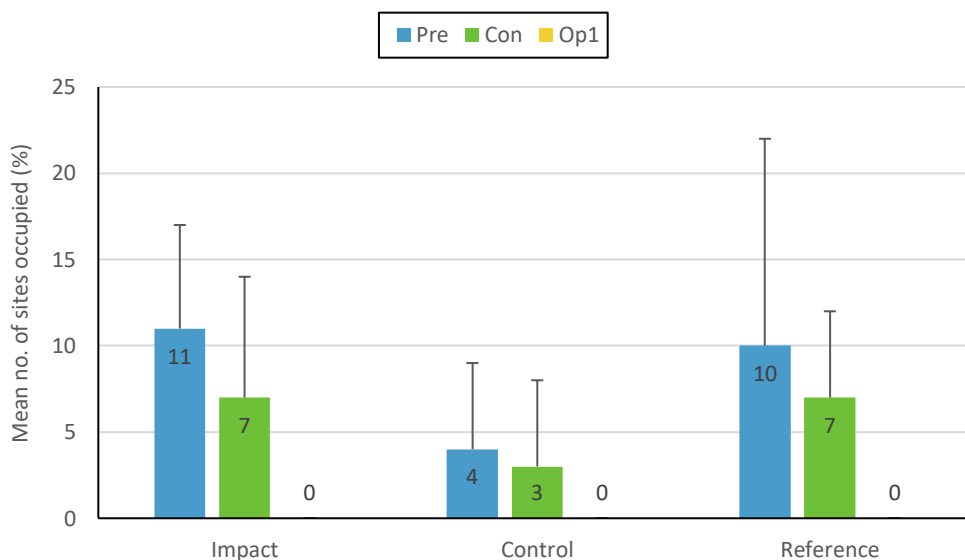
Results of the Fisher's Exact Test suggest that impact site occupation rates did not differ significantly for squirrel glider between pre-construction and operation year 1 ( $P = 0.182$ ), pre-construction and operation year 2 ( $P = 1.0$ ) and preconstruction and operation year 3 ( $P = 1.0$ ).



**Figure 9:** Mean  $\pm$  SD occupation rates for squirrel glider at impact, control and reference sites in sections 1-2 according to different phases of construction. Pre = pre-construction; Con = construction. Op1 = operation year 1 (2018); Op2 = operation year 2 (2019), Op3 = operation year 3 (2020, current).

### 3.1.2 Sections 3-11

With the inclusion of 2020 data, the mean yellow-bellied glider construction phase occupation rate in sections 3-11 continued to show a decline from pre-construction levels across all treatments (Figure 10). The scale of the decline was relatively consistent across the treatments ranging from 25% at control sites to 36.4% at impact sites. The downward trend continued into year 1 operation phase with zero occupation recorded for all treatments albeit survey data were only for one quarter.

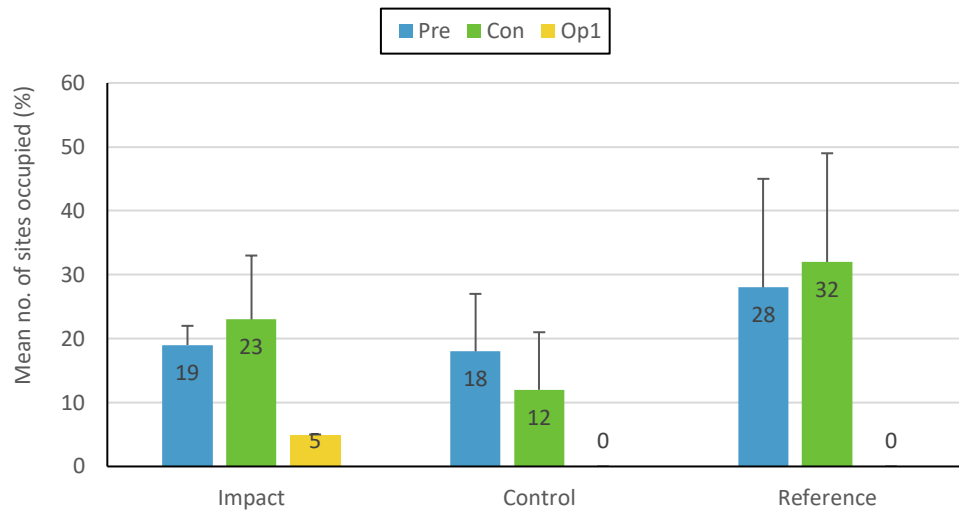


**Figure 10:** Mean  $\pm$  SD occupation rates for yellow-bellied glider at impact, control and reference sites in sections 3-11 during pre-construction, construction and a single quarter of operation phase (i.e., Q4 of 2020). Pre = pre-construction; Con = construction; Op1 = operation year 1.

The trend in occupation rate across treatments was mixed for squirrel glider (Figure 11). With the inclusion of 2020 data, mean squirrel glider occupation rates during construction phase were 21.1% and 14.3% higher than pre-construction levels at impact and reference sites, respectively. This compares with a decline of 33.3% from

pre-construction levels at control sites. Occupation rates were 5% at impact sites and zero at control and reference sites for operation phase Q4 2020.

Full details of population survey effort and fauna detections for all survey sections are presented in Appendix A.



**Figure 11:** Mean  $\pm$  SD occupation rates for squirrel glider at impact, control and reference sites in sections 3-11 during pre-construction, construction and a single quarter of operation phase (i.e., Q4 of 2020). Pre = pre-construction; Con = construction; Op1 = operation year 1.

## 3.2 Arboreal crossing structures and widened medians monitoring

### 3.2.1 Rope bridges

In 2020, arboreal mammals were detected on 597 occasions across the four rope bridge sites during 2,514 nights of camera monitoring (Table 7). The most detections were recorded at RB2 ( $n=456$ ) followed by RB3 ( $n=92$ ). RB1 featured the fewest detections ( $n=17$ ). The overall mean weekly detection rate was  $1.57 \pm 2.12$  SD.

Squirrel gliders were recorded making 84 complete crossings and 60 incomplete crossings. Most complete crossings ( $n = 80$ ) occurred at RB2 (Table 6). Complete crossings in both directions were recorded at RB2 and RB3 (Plate 5). Only a westward crossing was recorded at RB4 and incomplete crossings at RB1. The mean number of weekly complete crossings was  $0.22 \pm 0.41$  SD and ranged from zero to 0.82 crossings/week. Individuals were observed using both the central webbing/thick inner rope and outside wire rope to move along (Plate 5).

Feathertail gliders were the most frequently detected species and were recorded making 178 complete crossings and 231 incomplete crossings (Table 7). Most detections occurred at RB2 ( $n = 300$ ) and fewest at RB1 ( $n = 7$ ) and crossings occurred in both directions. The mean number of weekly complete crossings was  $0.47 \pm 0.57$  SD and ranged from 0.06 to 1.32 crossings/week. Feathertail glider movements were mostly along the outer thick wire or one of the inner thick ropes (Plate 6).

Sugar gliders were recorded making complete crossings in both directions at RB2 and a westward crossing at RB4 (Plate 6). *Antechinus* spp. (either *A. flavipes* or *A. stuartii*) was recorded making complete crossings at all rope bridges except RB4. Yellow-bellied gliders were not detected on rope bridges.

Full details of rope bridge detections are presented in Appendix B.

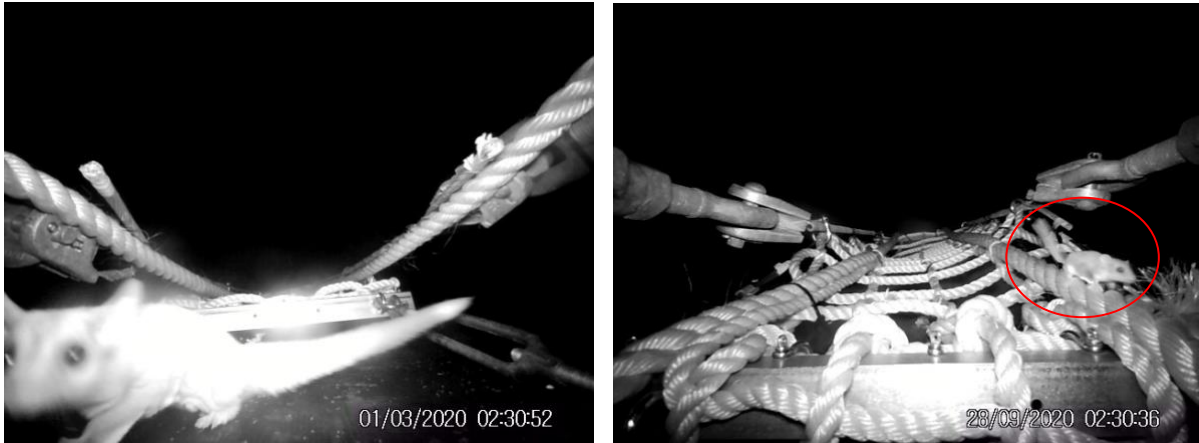
**Table 7:** Rope bridge detections and rate of weekly crossings. cc = complete crossing; ic = incomplete crossing. Weekly crossing rate is shown in parenthesis.

Rope bridge no. (sum of weeks cams active)	Camera detections*	Feathertail glider		Squirrel glider		Sugar glider		<i>Antechinus</i> spp.	
		cc	ic	cc	ic	cc	IC	cc	ic
RB1 (81.3)	17 (0.21)	5 (0.06)	2 (0.02)	0	3 (0.04)	0	0	1 (0.01)	6 (0.07)
RB2 (97)	456 (4.7)	128 (1.32)	172 (1.77)	80 (0.82)	45 (0.46)	3 (0.03)	8 (0.08)	5 (0.05)	3 (0.03)
RB3 (90.4)	92 (1.02)	26 (0.29)	55 (0.61)	3 (0.03)	3 (0.03)	0	0	2 (0.02)	2 (0.02)
RB4 (90.4)	32 (0.35)	19 (0.21)	2 (0.02)	1 (0.01)	9 (0.1)	1 (0.01)	0	0	0
Total (359.1)	597	178	231	84	60	4	8	8	11
Mean weekly rate $\pm$ SD	1.57 $\pm$ 2.12	0.47 $\pm$ 0.57	0.61 $\pm$ 0.82	0.22 $\pm$ 0.41	0.16 $\pm$ 0.21	0.01 $\pm$ 0.01	0.02 $\pm$ 0.04	0.02 $\pm$ 0.02	0.03 $\pm$ 0.03

\* Sum of cc & ic is not equal to sum of Camera detections because a crossing detected by both cameras is scored as a single complete crossing.

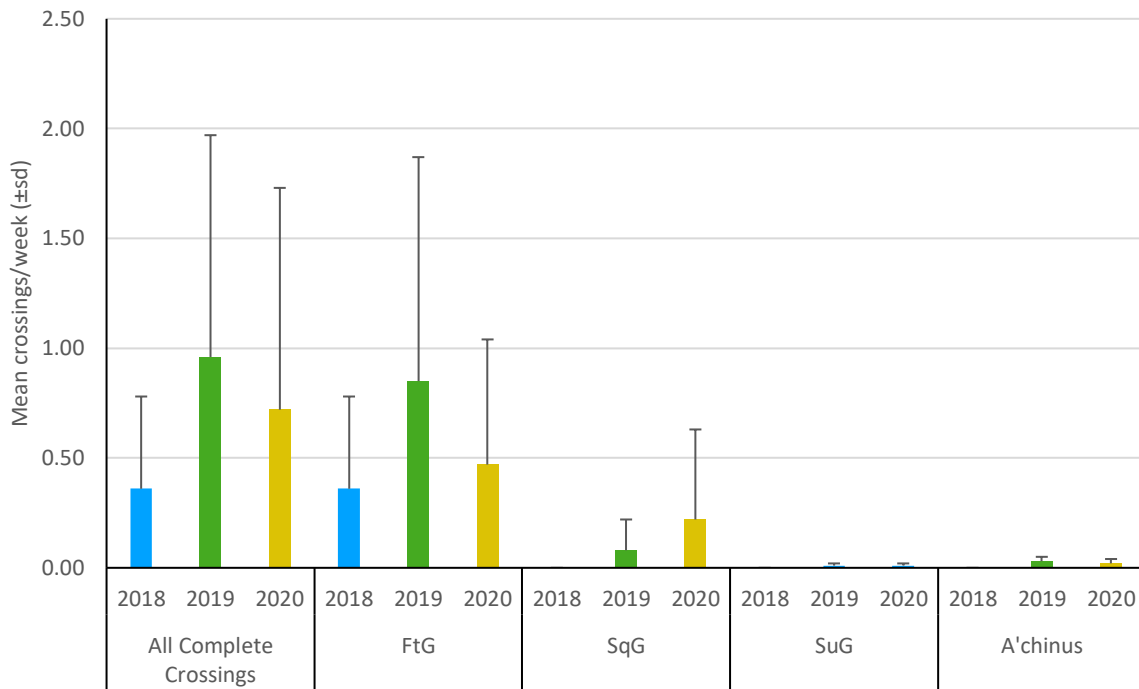


**Plate 5:** A squirrel glider captured making a westward crossing at RB3.



**Plate 6:** A sugar glider captured making a westward crossing at RB2 (left) and a feathertail glider captured making a westward crossing at RB1 (right).

The overall mean number of complete crossings/week in 2020 ( $0.72 \pm 1.01$  SD) was lower than that recorded in 2019 ( $0.96 \pm 1.01$  SD) yet double the rate recorded in 2018 ( $0.36 \pm 0.42$  SD) (Figure 12). Complete crossings by squirrel glider continued to rise from zero in 2018 to  $0.08 \pm 0.14$  SD in 2019 and  $0.22 \pm 0.41$  SD crossings/week in 2020. Sugar glider and *Antechinus* spp., which were also not detected during 2020, recorded similar small numbers of complete crossings in 2020 to that recorded in 2019. Feathertail glider remained the most frequently detected taxa although their overall rate of detection declined moderately from 2019 levels (Figure 12).



**Figure 12:** Comparison of mean  $\pm$  SD weekly rope bridge complete crossings for 2018, 2019 and 2020. FtG = feathertail glider; SqG = squirrel glider; SuG = sugar glider; A'chinus = *Antechinus* spp.

### 3.2.2 Glide poles

Arboreal mammals were detected on 237 occasions across the three glide poles during a combined total of 1,020 nights of camera monitoring (Table 8). Most detections were recorded at GP1 (n = 127) followed by GP3 (n = 69) and GP2 (n = 37). The overall mean weekly detection rate was  $1.63 \pm 0.99$  SD.

Squirrel gliders were recorded on glide poles on 11 occasions (Table 8). They were detected on five occasions each at GP2 and GP3 and on one occasion at GP1. Video footage captured glide launches in both directions at GP2. Weekly crossing rate ranged between 0.02 and 0.1 crossings/week and averaged  $0.08 \pm 0.05$  SD for the period. Squirrel glider movement ranged between slow, exploratory inspections of the arm and pole structure to quickened movements along the pole arm. Observed glide launches typically showed individuals pausing and looking towards the presumed target before launching off the edge of the pole arm (Plate 7).

Feathertail gliders were the most frequently detected species and were recorded on 220 occasions (Table 7). The most detections occurred at GP1 (n = 127) and fewest at GP2 (n = 31). Video footage showed glide launches in both directions at all three pole sites except only westward launches were observed at GP2. This included 12 westward launches at GP1, which requires a road-crossing glide of 37m to reach the closest tree. Weekly crossing rate ranged between 0.64 and 2.63 crossings/week and averaged  $1.51 \pm 1.02$  SD for the period. Feathertail glider movements were typically erratic and observed glides showed individuals briefly pausing at the outer edge of the cross arm and then launching (Plate 8).

A sugar glider was recorded on one occasion at GP3 (Table 8). The individual was observed making slow exploratory movements along the pole arms. *Antechinus* spp. (either *A. flavipes* or *A. stuartii*) was recorded on several occasions at all three glide poles (Table 8). On each occasion individuals were observed making rapid exploratory movements across the surface of the pole and pole arm.

Full details of glide pole detections are presented in Appendix C.

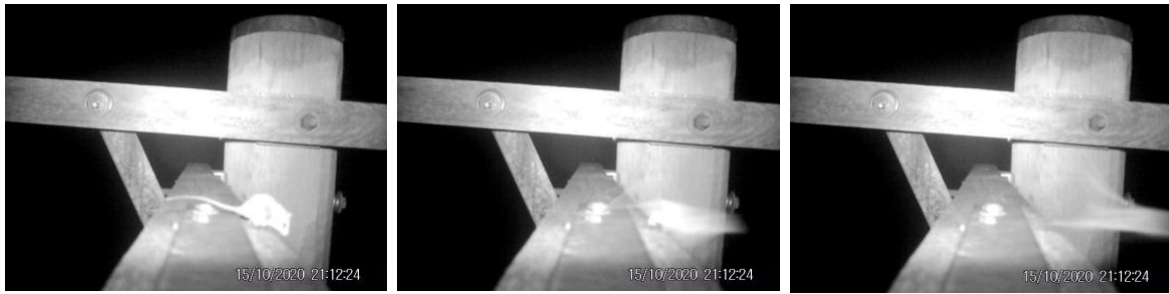
**Table 8:** Glide pole detections and rate of weekly crossings. Weekly crossing rate is shown in parenthesis. Glide direction = number and direction of observed glide launches; e = east; w = west.

Glide pole no. (weeks cam active)	Camera detections*	Feathertail glider		Squirrel glider		Sugar glider		<i>A'chinus</i> spp. Detections
		Crossings	Glide direction	Crossings	Glide direction	Crossings	Glide direction	
GP1 (48.3)	131 (2.71)	127 (2.63)	11e 12w	1 (0.02)	-	0	-	3 (0.06)
GP2 (48.7)	37 (0.76)	31 (0.64)	3w	5 (0.1)	2e 1w	0	-	1 (0.02)
GP3 (48.7)	69 (1.42)	62 (1.27)	1e 1w	5 (0.1)	-	1 (0.02)	-	1 (0.02)
Total (145.7)	237	220	-	11	-	1	-	5
Mean weekly rate ( $\pm$ sd)	1.63 $\pm$ 0.99	1.51 $\pm$ 1.02	-	0.08 $\pm$ 0.05	-	0.01 $\pm$ 0.01	-	0.03 $\pm$ 0.02



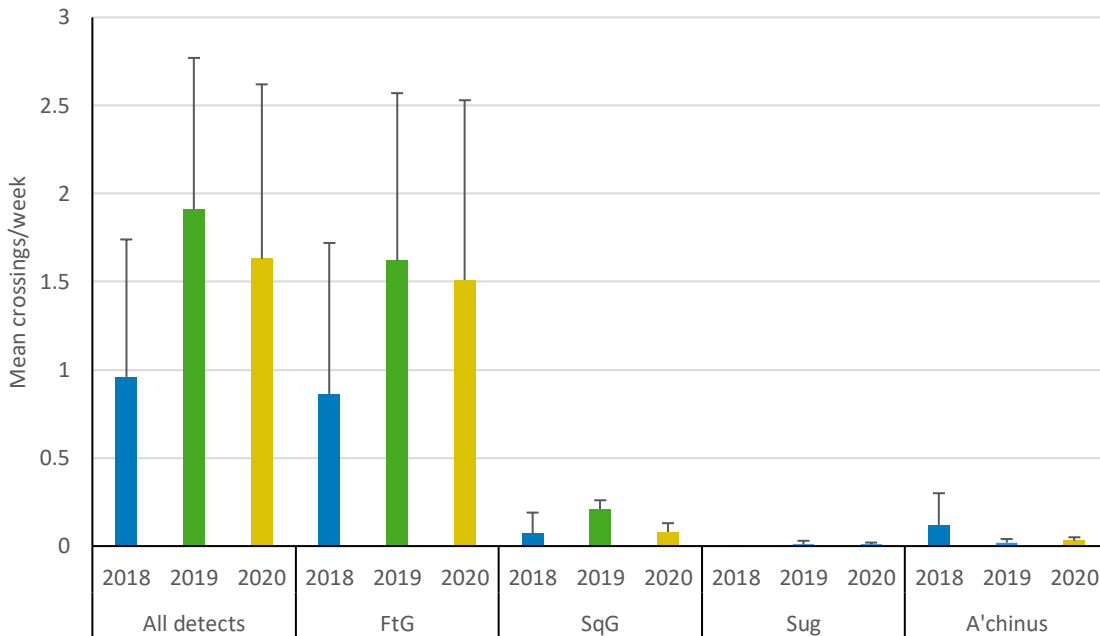


**Plate 7:** A squirrel glider captured gliding east off the parallel arm of GP2 at Halfway Creek median.



**Plate 8:** A feathertail glider captured gliding west off the parallel arm of GP1 at Corindi Beach.

The overall mean detection rate for 2020 was 14.7% below 2019 levels but still 41.1% above the 2018 detection rate (Figure 13). The relative decline in detections was broadly similar across all taxa, except *Antechinus* spp., which increased marginally from 2019 levels. Squirrel glider detections declined by 61.9% and those for feathertail glider by 6.8%. Yellow-bellied gliders, which were detected on nine occasions at GP2 and GP3 during 2019, were not detected at glide poles during the 2020 monitoring period.



**Figure 13:** Comparison of mean  $\pm$  SD weekly glide pole detections for 2018, 2019 and 2020. FtG = feathertail glider; SqG = squirrel glider; SuG = sugar glider; A'chinus = *Antechinus* spp.

### 3.2.2 Vegetated medians

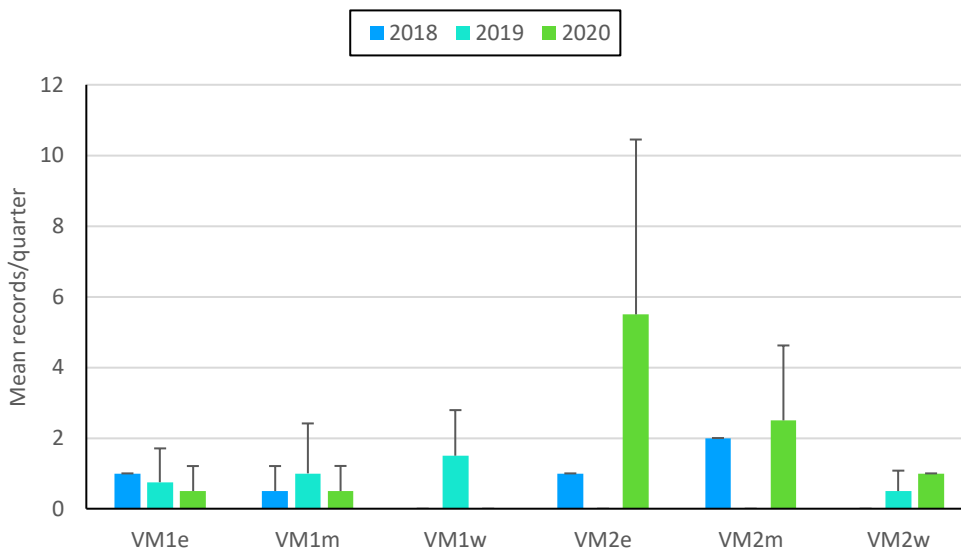
#### Hair funnels

Squirrel glider and/or sugar glider (SqG/SuG) hair was detected in both vegetated medians (i.e., southern median VM1 and northern median VM2) during Q1 and Q2 2020 (Figure 14). SqG/SuG hair was also detected within adjoining forest east and west of both medians except the west side of VM1. Yellow-bellied glider hair was not detected at either median.

A comparison with 2018 and 2019 SqG/SuG records shows a general increase in detections during 2020 at VM1 and a reduction in detections at VM2 (Figure 14). Records for the medians themselves demonstrate an increase in detection frequency at VM2 and a marginal decline in detections at VM1.

Other arboreal mammals detected included feathertail gliders (VM1 east and VM2 west), common brush-tail possum *Trichosurus vulpecula* (VM1 mid and east) and black rat *Rattus rattus* (VM1 mid). Small dasyurid hair was also frequently detected at all sites in all quarters.

Full details of hair funnel detections are presented in Appendix D.



**Figure 14:** Comparison of mean  $\pm$ SD number of squirrel/sugar glider (SqG/SuG) hair detection records/quarter at vegetated median sites during 2018 (Q3-4), 2019 (Q1-4) and 2020 (Q1-2). Definite and probable records were pooled. e = east side of median, m = within median, w = west side of median.

#### Camera traps

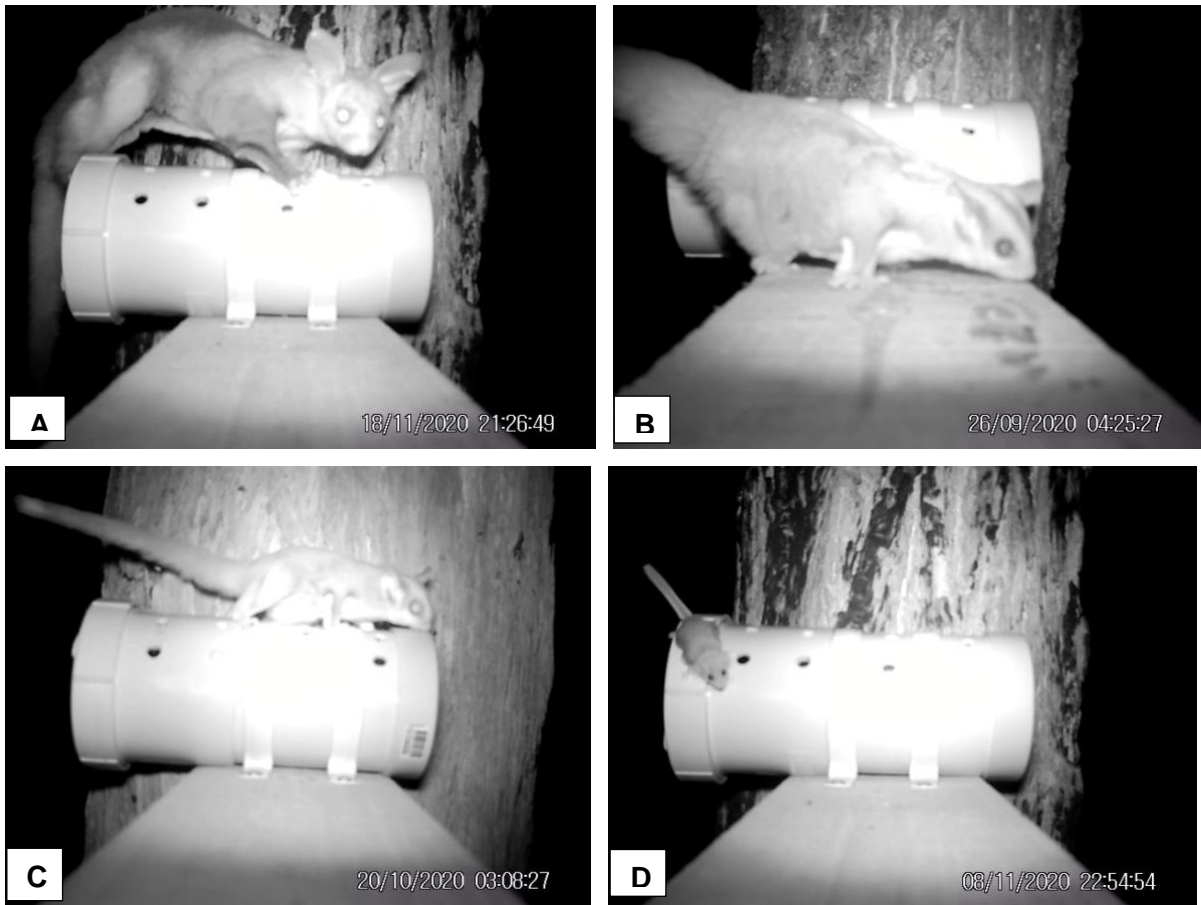
Camera traps in the vegetated medians detected four species of glider plus *Antechinus* spp. and black rat (Table 9). Yellow-bellied glider was detected in the northern vegetated median by both cameras on three occasions (Plate 9). Squirrel glider was detected in both vegetated medians by three of the four cameras on 15 - 51 occasions (Plate 9). Sugar glider and feathertail glider were detected in both vegetated medians by all four cameras on numerous occasions (Plate 9).

Full details of camera trap detections are presented in Appendix E.

**Table 9:** Vegetated median camera detections. VM1 = southern median; VM2 = northern median; n = camera positioned in northern section of median; s = camera positioned in southern section of the median.

Camera location	Yellow-bellied glider	Squirrel glider	Sugar glider	Feathertail glider	Antechinus spp.	Black rat
VM1s	-	51	31	21	6	2

VM1n	-	-	22	20	14	-
VM2s	1	15	11	3	2	-
VM2n	3	51	11	11	6	-



**Plate 9:** Camera traps in the vegetated medians detected yellow-bellied gliders at VM2 (A), squirrel gliders at VM1 (B) & VM2, sugar gliders at VM1 (C) and VM2, and feathertail gliders at VM1 and VM2 (D).

### 3.3 Road mortality

No gliders were recorded during 2020 road mortality surveys. Refer to Appendix F for raw data. A carcass of a yellow-bellied glider was reportedly observed on the edge of the Old Pacific Highway at Wells Crossing, approximately 100m south of Parker Road and adjacent the northern vegetated median (Plate 10). A local resident observed the road-killed individual on 31/7/2020. The glider was presumably struck by a vehicle whilst attempting to glide across the old highway.



**Plate 10:** Carcass of a yellow-bellied glider on the edge of the Old Pacific Highway at Wells Crossing.

## 4. Discussion

Results of the 2020 monitoring year are discussed with reference to the performance indicators described in the TGMP.

### 4.1 Population monitoring

#### 4.1.1 Decline in the after-construction occupancy rates of squirrel glider or yellow-bellied glider at impact sites over three consecutive monitoring sessions.

Yellow-bellied glider occupation rates at sections 1-2 impact sites increased to near pre-construction levels during year three (i.e., 10% compared with 11% for pre-construction) and were double those recorded during years one and two of operation (i.e., 5%). The results of the Fisher's Exact Test suggest that the lower levels in sections 1-2 were not significantly different to pre-construction levels for any of the three operation years although the high variance and low numbers of yellow-bellied gliders somewhat constrain the power of the test.

The lower yellow-bellied glider occupation rates during all operation years compared to pre-construction year at section 1-2 impact sites was largely consistent with trends at control and reference sites (Figure 8). Indeed, pre-construction occupation rate at control and reference sites have not been recorded during operation apart from during year 1 at reference sites. This was also consistent with a continued decline at all treatment types in sections 3-11 and the pattern of decline suggests that the primary causative factor is not the highway upgrade.

A similar pattern of decline in yellow-bellied glider detections between 2014 and 2020 has been reported at reference and impact sites associated with the Warrell Creek to Nambucca Heads (WC2NH) Pacific Highway upgrade (Sandpiper Ecological 2020a). Yellow-bellied glider abundance is sensitive to changes in climatic conditions driven by rainfall which trigger variations in food availability (Goldingay 1992). Rainfall data from Lower Bucca (the closest long-term weather station to sections 1-2) shows that rainfall for the three years preceding 2014 baseline surveys were 28-41% above average whereas rainfall for the three years preceding the 2019 surveys ranged between 23% below and 17% above average and 2019 was 50% below the long-term average (Bureau of Meteorology). Despite the improved conditions during 2020 (annual rainfall total 11% above long-term average as at end November), the low and variable rainfall conditions since 2014 and the

severe drought, extreme high temperatures and wildfires of 2019/20 has adversely affected yellow-bellied glider abundance.

Squirrel glider occupation rates across the three operation years in sections 1-2 have trended downwards after peaking well above pre-construction levels at all treatments during year one operation (Figure 9). This trend was more pronounced at impact and control sites and is consistent with declines at all treatment types in sections 3-11. Despite the apparent decline, the results of the Fisher's Exact Test suggest that the lower levels at sections 1-2 impact sites were not significantly different to pre-construction levels for any of the three operation years. Further, most year three operation phase squirrel glider detections at impact and control sites in sections 1-2 occurred during Q3 and Q4 suggesting a possible population recovery.

As for the yellow-bellied glider, it is likely that the low and variable rainfall conditions since 2014 and the severe drought, extreme high temperatures and wildfires of 2019/20 has adversely affected population numbers of squirrel glider. Low rainfall, in particular, can adversely affect flowering events, which are known to impact squirrel glider populations (Sharpe & Goldingay 1998). This further suggests that the primary causative factor of population declines is not the highway upgrade.

## 4.2 Use of rope bridges, glide poles and vegetated median

### 4.2.1 No evidence of use of arboreal crossing structures and widened medians by threatened gliders post-construction

#### *Rope bridges*

Rope bridges were increasingly used by squirrel gliders, sugar gliders and *Antechinus* spp. during the current monitoring year whereas feathertail glider use declined marginally. Squirrel glider use continued to rise from zero in 2018 to  $0.22 \pm 0.41$  SD complete crossings/week in 2020. The 2020 mean weekly rate is lower than that reported for squirrel gliders on the Hume Highway (i.e.,  $0.84 \pm 0.84$  SD crossings/night or 5.9 crossings/week, Soanes *et al.* 2015) but comparable to that reported at Glenugie Pacific Highway upgrade (i.e., 0.01 – 0.14 visits/week, Sandpiper Ecological 2017).

Rope bridges #2 and #3 continued to record considerably more activity than RB1 and RB4 which may be indicative of habitat quality. Both bridges adjoin large blocks of relatively high-quality habitat whereas habitat adjacent RB1 and RB4 is of lower quality and fragmented by the nearby old Pacific Highway. While yellow-bellied gliders have not been recorded using the section 1-2 rope bridges, there is only one reported record of rope bridge use by this species – an incomplete crossing of the Devils Pulpit rope bridge on the Pacific Highway during 2018 (Geolink 2019).

#### *Glide poles*

Glide poles showed continued use by squirrel gliders, feathertail gliders and sugar gliders during the 2020 monitoring year. The level of use was marginally lower than for 2019 but still almost double that recorded during 2018 (i.e.,  $1.63 \pm 0.99$  SD compared to  $0.96 \pm 0.78$  SD crossings/week). The 2020 mean weekly rate (i.e.,  $1.63 \pm 0.99$  SD) was lower than that reported for squirrel gliders on the Hume Highway (i.e.,  $0.38 \pm 0.17$  crossings/night or 2.6 crossings/week, Soanes *et al.* 2015) but considerably higher than that reported at Sapphire to Woolgoolga (S2W) Pacific Highway upgrade (i.e., 0.23 crossings/week, Sandpiper Ecological 2018b). Whereas yellow-bellied gliders were recorded using glide poles for the first known time in Australia during 2019 (Taylor & Rohweder 2020), they were not detected during 2020 monitoring.

Evidence so far from the current project and other highway projects (e.g., S2W, Sandpiper Ecological 2018b) suggests that squirrel gliders, sugar gliders and yellow-bellied gliders may prefer launching from cross arms

oriented parallel to the road and feathertail gliders may prefer to launch from perpendicular oriented cross arms, presumably to reduce the required glide distance. Possible orientation preference for the greater glider is unknown. As such, glide poles should include both a perpendicular and parallel oriented cross arm.

### ***Vegetated medians***

Hair funnel sampling of the vegetated medians during Q1 and Q2 confirmed the continued presence of squirrel glider and/or sugar glider within both medians and the adjoining habitat. It also confirmed feathertail glider presence in the adjoining habitat but not within the vegetated medians. Yellow-bellied glider hair was not detected during these sessions or during 2018 or 2019 sampling. By contrast, 62 nights of camera trap monitoring with two cameras/vegetated median revealed definitive evidence of the presence of yellow-bellied gliders (VM2), squirrel gliders (VM1 & 2), sugar gliders (VM1 & 2) and feathertail gliders (VM1 & 2). Indeed, these records and those obtained during 2020 population monitoring provide the first definitive evidence of use of vegetated medians by yellow-bellied gliders. Conversely, squirrel gliders and sugar gliders have previously been reported using vegetated highway medians (Taylor & Rohweder 2013; Sandpiper Ecological 2018b; van der Ree *et al.* 2010) and squirrel gliders have used land-bridges with glide poles to cross a dual carriageway (Taylor & Goldingay 2012).

Population and rope bridge monitoring approximately 500m north of VM1 have repeatedly confirmed the presence of squirrel gliders, sugar gliders and feathertail gliders. Yellow-bellied gliders have not been detected during the last 2.5 years of rope bridge monitoring and were last detected during population monitoring in 2014. This suggests that yellow-bellied gliders may be absent or in very low abundance in vicinity of the VM1 area. Despite this, the VM1 site attributes (i.e., roadside tree heights and cross-carriageway canopy gaps) appear to provide viable glide crossing opportunities in both directions across both carriageways at numerous locations for the full range of gliding species.

At VM2, in addition to using the median, yellow-bellied gliders, squirrel gliders and feathertail gliders have been recorded in the western habitat during population surveys. Yellow-bellied gliders have also been heard calling from the eastern habitat and were recorded recently in a nest box approximately 100m to the east of VM2 (Sandpiper 2021, unpub. data). Further, the yellow-bellied glider road mortality record on the Old Pacific Highway to the west of the vegetated median provides evidence that an individual(s) is utilising the western habitat.

Despite the evidence of use of the vegetated median by gliders, the site attributes at VM2, particularly along the southbound carriageway, appear to provide limited crossing opportunities for gliders, particularly the smaller species. It is possible that individuals residing in the east forest are unable to cross the southbound carriageway to move west and vice versa and individuals detected in the median may be moving from the west side only. In this regard, the possibility that the site attributes of VM2 are inadequate to enable crossing of the alignment in both directions is a trigger for Corrective Action:

***CA-1. Review location and type of connectivity structures installed and implement provisional measures in consultation with EPA which may include but not limited to the installation of more glide poles or rope bridges, particularly where known mortality hotspots occur (from Table 8.2 of TGMP).***

A review of efficacy of VM2 should involve an assessment of tree heights and canopy gap widths to determine whether site attributes enable multiple crossing opportunities in both directions.

### 4.3 Road mortality

#### 4.3.1 Higher mortality rate at impact sites or no significant difference in mortality rates for threatened gliders between impact and control sites.

No gliders were reported or recorded during road mortality surveys of the dual carriageway during 2020.

#### 4.3.2 High number of incidental records of threatened glider mortality away from crossing structures.

The yellow-bellied glider carcass collected by a member of the public from the edge of the old Pacific Highway approximately 100m south of Parker Road, Wells Crossing, was likely a road mortality victim. Considering the low abundance of yellow-bellied gliders across sections 1 and 2 the road mortality record is highly significant. Importantly, the road-kill occurred during construction of section 2A when that part of the old highway was still active. Subsequent to that road-kill occurring all highway traffic has been moved onto the new carriageway and traffic volume on the subject section of old highway has been substantially reduced. The change in traffic volume reduces the likelihood that additional yellow-bellied gliders would be struck at this location and is considered to largely mitigate the impact of vehicle strike at that location.

## 5. Recommendations

Recommendation No.	Recommendation	TfNSW response
1	As per Corrective Action, conduct an assessment of tree heights and glide distances between roadside trees along the northbound and southbound carriageways adjacent VM2.	Agreed



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## Appendix A – Population survey effort, weather and fauna detections

**Table A1:** Survey effort, weather conditions and fauna detections Q1 2020 threatened glider population monitoring. Msb = wind moves small branches; MLB = wind moves large branches. Ns = not surveyed. SqG = squirrel glider; SuG = sugar glider; YbG = yellow-bellied glider; GG = greater glider; FtG = feathertail glider; BtPhas = brush-tailed phascogale; CBtP = common brushtail possum; SeBtP = short-eared brushtail possum; CRP = common ringtail possum; TF = tawny frogmouth; PO = powerful owl; SO = sooty owl; MO = masked owl; BbO = boobook owl; ON = owlet nightjar; WtN = white-throated nightjar; GhFF = grey-headed flying fox; LRFF = little red flying fox. HM = heard movement, HC = heard call; HL = heard glide-land on tree; SE = saw eyeshine; SG = saw glide; SM = saw movement.

Transect	Date	Observer	Temp	Humidity	Cloud %	Wind	Rain	Moon	Start	Finish	Fauna
TabLB-ie	16/3/20	DR	21	65	1/8	MSB	Nil	3/4	1945	2015	HC ONJ 10w100n
	18/03/20	DR	17.9	88	0/8	Nil	Nil		1320	1350	
TabLB-iw	16/3/20	LA	21	65	1/8	MSB	Nil	3/4	1945	2015	SE GG 1w 250n
	18/03/20	LA	17.9	88	0/8	Nil	Nil		1320	1350	SE GG 250n 15w
TabNR-rn											Not surveyed (no access)
											Not surveyed (no access)
TabNR-rs											Not surveyed (no access)
											Not surveyed (no access)
TabVM-ie	16/3/20	DR	21	65	1/8	MSB	Nil	3/4	2030	2100	Nil
	18/3/20	DR	17.9	88	0/8	Nil	Nil		0040	1310	SE Pet sp. 200s10e, HC SuG 400s50e. OnJ
TabVM-iw	16/3/20	LA	21	65	1/8	MSB	Nil	3/4	2030	2100	Nil
	18/03/20	LA	17.9	88	0/8	Nil	Nil		0040	1310	Nil
TabN-ie	16/3/20	DR	21	65	1/8	MSB	Nil	3/4	2120	2150	SqG SE 30s 20w
	18/3/20	DR	21.2	66	0/8	Nil	Nil		0000	0030	Nil
TabN-iw	16/3/20	LA	21	65	1/8	MSB	Nil	3/4	2120	2150	Nil
	18/03/20	LA	21.2	66	0/8	Nil	Nil		0000	0030	Nil
TabN-ce	16/3/20	DR	21	65	1/8	MSB	Nil	3/4	2210	2240	Nil
	18/3/20	DR	21.2	66	0/8	Nil	Nil		2315	2345	Nil
TabN-cw	16/3/20	LA	21	65	1/8	MSB	Nil	3/4	2215	2245	Nil
	18/03/20	LA	21.2	66	0/8	Nil	Nil		2315	23345	Nil
TabDD-rn	16/3/20	DR	21	65	1/8	MSB	Nil	3/4	2250	2320	GG SE 250s 50w
	18/3/20	DR	21.2	66	0/8	Nil	Nil		2210	2240	Nil
TabDD-rs	16/3/20	LA	21	65	1/8	MSB	Nil	3/4	2245	2315	Hc SqG 0n 50e
	18/03/20	LA	21.2	66	0/8	Nil	Nil		2210	2240	Nil
TabM-ce	16/3/20	DR	21	65	1/8	MSB	Nil	3/4	2350	0020	Wollem froglet 400s20e
	18/3/20	DR	21.2	66	0/8	Nil	Nil		2135	2205	Nil
TabM-cw	16/3/20	LA	21	65	1/8	MSB	Nil	3/4	2350	0020	HC OnJ 20s 60 e
	18/03/20	LA	21.2	66	0/8	Nil	Nil		2135	2205	OnJ
TabM-ie	16/3/20	DR	21	65	1/8	MSB	Nil	3/4	0050	0120	Wollem froglet HC
	18/03/20	DR	21.8	71	0/8	ML	Nil	3/4	2035	2105	SuG 200N 10E se

Transect	Date	Observer	Temp	Humidity	Cloud %	Wind	Rain	Moon	Start	Finish	Fauna
TabM- iw	16/3/20	LA	21	65	1/8	MSB	Nil	3/4	0050	0120	Nil
	18/03/20	LA	21.8	71	0/8	ML	Nil	3/4	2035	2105	Nil
TabS-ie	16/3/20	BT	20.5	60	2/8	MSB	Nil	3/4	2450	120	Nil
	18/3/20	DR	21.8	71	0/8	ML	Nil	3/4	1945	2015	Nil
TabS-iw	16/3/20	BT	20.5	60	2/8	MSB	Nil	3/4	2412	2442	Nil
	18/03/20	LA	21.8	71	0/8	ML	Nil	3/4	1945	2015	Nil
TabS-ce	16/3/20	BT	21.7	60	2/8	MSB	Nil	3/4	2245	2315	FtG,sm,350n20w
	18/3/20	BT	20.6	67	1/8	ML	Nil	3/4	2021	2050	Nil
TabS-cw	16/3/20	BT	21.7	60	2/8	MSB	Nil	3/4	2325	2356	Nil
	18/3/20	BT	20.6	67	1/8	ML	Nil	3/4	1940	2010	Nil
MOR-ie	16/3/20	BT	22	67	2/8	MSB	Nil	3/4	2024	2054	TF
	18/3/20	BT	22.0	70	1/8	Nil	Nil	3/4	2146	2217	Nil
MOR-iw	16/3/20	BT	22	60	2/8	MSB	Nil	3/4	2200	2230	SqG,se350n15w
	18/3/20	BT	22.0	70	1/8	ML	Nil	3/4	2102	2133	Nil
MOR-ce	19/3/20	DR	20.5	77	1/8	Nil	Nil	3/4	2041	2110	Nil
	18/3/20	BT	20.5	66	1/8	Nil	Nil	3/4	2350	2420	Nil
MOR-cw	16/3/20	BT	22	60	2/8	MSB	Nil	3/4	2115	2145	SqG,se,400n10w; TF
	18/3/20	BT	20.5	66	1/8	Nil	Nil	3/4	2445	0115	Nil
MOR-rn	16/3/20	BT	22	67	2/8	MLB	Nil	3/4	1940	2011	Nil
	18/3/20	BT	20.5	66	1/8	Nil	Nil	3/4	2228	2259	ONj, TF
MOR-rs	19/3/20	DR	20.5	77	1/8	Nil	Nil	3/4	1935	2006	SqG,425s10e. ONj
	18/3/20	BT	20.5	66	1/8	Nil	Nil	3/4	2309	2339	ONj
TucN-ce	17/3/20	BT	18.7	82	5/8	MSB	Nil	3/4	112	140	Nil
	19/3/20	LA	17.4	93	1/8	Nil	Nil	3/4	0050	1320	TF
TucM-ce	17/3/20	BT	18.7	82	5/8	MSB	Nil	3/4	2422	2453	Nil
	19/3/20	BT	17.4	93	1/8	Nil	Nil	3/4	0050	1320	CBP,se150n30w. ONj
TucN-cw	17/3/20	LA	18.7	82	5/8	MSB	Nil	3/4	112	140	CBP,se,5n40e; TF
	19/3/20	LA	17.4	93	1/8	Nil	Nil	3/4	0011	0041	HC BtP 400s 20w
TucM- cw	17/3/20	LA	18.7	82	5/8	MSB	Nil	3/4	2422	2453	SqG, hc, 200n 40w
	19/3/20	BT	17.4	93	1/8	Nil	Nil	3/4	0011	0041	ONj
Tuc-r-n	17/3/20	BT	18.7	82	5/8	MSB	Drizzle	3/4	2328	2359	SqG,hm,100e10s
	19/3/20	LA	20.5	77	1/8	Nil	Nil	3/4	1930	2000	Wtnj
Tuc-r-s	17/3/20	LA	18.7	82	5/8	MSB	Drizzle	3/4	2328	2359	SqGx2,hc,100n50e, hc 300n30w
	19/3/20	BT	20.5	77		Nil	Nil	3/4	1930	2000	TF
TucS-ce	17/3/20	BT	19.3	83	5/8	MSB	Drizzle	3/4	2240	2310	SqG,hc10n20e
	19/3/20	LA	20.5	77	Nil	Nil	Nil	3/4	2015	2045	TF Onj
TucS-cw	17/3/20	LA	19.3	83	5/8	MSB	Drizzle	3/4	2240	2310	Nil

Transect	Date	Observer	Temp	Humidity	Cloud %	Wind	Rain	Moon	Start	Finish	Fauna
	19/3/20	BT	20.5	77	Nil	Nil	Nil	3/4	2015	2045	Nil
TucN-ie	17/3/20	BT	19.3	83	5/8	MSB	Drizzle	3/4	2200	2230	CBP,se200n20e; BbO, ONj
	19/3/20	LA	20.5	77	Nil	Nil	Nil	3/4	2055	2125	Nil
TucN-iw	17/3/20	LA	19.3	83	5/8	MSB	Drizzle	3/4	2200	2230	FtG,sm,120s5w. BbO, ONj
	19/3/20	BT	20.5	77	Nil	Nil	Nil	3/4	2055	2125	HC SqG 450n50w
TucS-ie	17/3/20	BT	19.3	83	5/8	MSB	Nil	3/4	2109	2140	SqG,hc,400n60e; MO. ONj
	19/3/20	LA	18.8	91	Nil	Nil	Nil	3/4	2140	2210	Nil
TucS-iw	17/3/20	LA	19.3	83	5/8	MSB	Nil	3/4	2109	2140	CBP,se,490s5e. PO
	19/3/20	BT	18.8	91	Nil	Nil	Nil	3/4	2140	2210	ONj
GN-ce	17/3/20	BT	21	69	5/8	MSB	Nil	3/4	2020	2050	GG,se10n70e; ONj
	19/3/20	LA	18.8	91	Nil	Nil	Nil	3/4	2230	2300	BB
GN-cw	17/3/20	LA	21	69	5/8	MSB	Nil	3/4	2020	2050	Nil
	19/3/20	BT	18.8	91	Nil	Nil	Nil	3/4	2230	2300	ONj
GN-ie	17/3/20	BT	21	69	5/8	MSB	Nil	3/4	1940	2011	Nil
	19/3/20	LA	18.8	91	Nil	Nil	Nil	3/4	2311	2341	ONj
GN-iw	17/3/20	LA	21	69	5/8	MSB	Nil	3/4	1940	2011	Nil
	19/3/20	BT	18.8	91	Nil	Nil	Nil	3/4	2311	2341	CBtP Se 200N80w, ONj
GS-ie	24/3/20	BT	19.4	89	100	ML	Nil	New	1931	2000	CBP,se200s10e. Cat
	26/3/20	BT	17.7	100	50	MSB	Nil	New	2412	2441	CBP,se200n20e
GS-iw	24/3/20	LA	19.4	89	100	ML	Nil	New	1931	2000	Nil
	26/3/20	LA	17.7	100	50	MSB	Nil	New	2412	2441	Nil
GS-ce	24/3/20	BT	19.4	89	100	ML	Nil	New	2014	2045	GG,se400n40e
	26/3/20	BT	17.7	100	50	MSB	Nil	New	2456	0125	Nil
GS-cw	24/3/20	LA	19.4	89	100	ML	Nil	New	2014	2045	Nil
	26/3/20	LA	17.7	100	50	MSB	Nil	New	2456	0125	Nil
G-r-n	24/3/20	BT	19.2	86	100	Nil	Nil	New	2102	2133	ONj
	26/3/20	BT									
G-r-s	24/3/20	LA	19.2	86	100	Nil	Nil	New	2102	2133	ONj
	26/3/20	LA									
S3/M2-ce	24/3/20	BT	19.2	86	100	ML	Nil	New	2158	2230	Nil
	26/3/20	LA	18	91	100	MSB	Nil	New	2155	2225	Nil
S3/M2-cw	24/3/20	LA	19.2	86	100	ML	Nil	New	2158	2230	TF
	26/3/20	BT	18	91	100	MSB	Shwrs	New	2155	2225	TF
S3/M2-re	24/3/20	BT	19.2	86	100	ML	Nil	New	2322	2352	Nil
	26/3/20	BT	18	91	100	ML	Nil	New	2242	2311	Nil
S3/M2-rw	24/3/20	BT	19.2	86	100	ML	Nil	New	2242	2313	ONj
	26/3/20	BT	18	91	100	ML	Shwrs	New	2320	2350	Nil
S3-ie	24/3/20	LA	19.2	86	100	ML	Nil	New	2322	2352	Nil
	26/3/20	LA	18	91	100	ML	Shwrs	New	2320	2350	Nil
S3-iw	24/3/20	LA	19.2	86	100	ML	Nil	New	2242	2313	Nil
	26/3/20	LA	18	91	100	ML	Shwrs	New	2242	2311	FtGx2,hm10n20w

Transect	Date	Observer	Temp	Humidity	Cloud %	Wind	Rain	Moon	Start	Finish	Fauna
M2-i	24/3/20	LA	19.1	85	100	ML	Nil	New	2407	2436	Nil
	26/3/20	L/B	18	91	100	MSB	Shwrs	New	2122	2142	Nil
C3-re	24/3/20	BT	19.1	85	100	ML	Nil	New	2407	2436	CBP,se50e40s. ONj, TF
	26/3/20	BT	18	91	100	MSB	Shwrs	New	2040	2109	FtG,sm100n5e
C3-rw	24/3/20	BT	19.1	85	100	ML	Nil	New	2455	0125	ONj
	26/3/20	BT	19.6	89	100	MLB	Nil	New	1958	2029	CBPx2, se200n10w & 400n15w
C3-ce	24/3/20	LA	19.1	85	100	ML	Nil	New	0131	0159	Nil
	26/3/20	LA	18	91	100	MSB	Shwrs	New	2040	2109	Nil
C3-cw	24/3/20	LA	19.1	85	100	ML	Nil	New	2455	0125	Nil
	26/3/20	LA	19.6	89	100	MLB	Nil	New	1958	2029	Nil
C3-ie	23/3/20	BT	18	93	90	ML	Light showers	New	0114	0145	Nil
	25/3/20	LA	23.3	72	50	MSB	Nil	New	2100	2130	Nil
C3-iw	23/3/20	LA	18	93	90	ML	Light showers	New	0114	0145	TF
	25/3/20	BT	23.3	72	50	MSB	Nil	New	2100	2130	Nil
C2-c	23/3/20	BT	18	93	90	ML	Nil	New	2245	2315	YbG,hc100n60w
	25/3/20	LA	23	70	50	MSB	Nil	New	2015	2045	Nil
C2-rn	23/3/20	LA	18	93	90	ML	Light showers	New	2420	2450	Nil
	25/3/20	LA	23	70	50	MSB	Nil	New	2145	2215	ONj
C2-rs	23/3/20	BT	18	93	90	ML	Light showers	New	2420	2450	Nil
	25/3/20	BT	23	70	50	MSB	Nil	New	2145	2215	GG,se200s50w; FtG,sm150s10w
C2-ie	23/3/20	BT	18	93	90	ML	Nil	New	2333	2402	Nil
	25/3/20	BT	23	70	50	MSB	Nil	New	2015	2045	Nil
C2-iw	23/3/20	LA	18	93	90	ML	Nil	New	2333	2402	YbGx2, hc 320n 30w & 320n70e
	25/3/20	BT	23	70	50	MSB	Nil	New	1930	2001	Nil
S2/M1-c	23/3/20	LA	18	93	90	ML	Nil	New	2245	2315	Nil
	25/3/20	LA	23	70	50	MSB	Nil	New	1930	2001	Nil
S2/M1-r	23/3/20	BT	18	93	90	ML	Light showers	New	2147	2217	YbG,hc100e80s
	25/3/20	BT	23	70	50	MSB	Nil	New	2244	2315	YbG,hc10e80n. SuG,hc50e50n
S2-i	23/3/20	LA	18	93	90	ML	Light showers	New	2147	2217	CBtPx2, se 20n20e & se 200e20s
	25/3/20	LA	23	70	50	MSB	Nil	New	2244	2315	CBPx2,sm120s20w, se120s40w
C1-ie	23/3/20	LA	18.7	93	90	MSB	Light showers	New	2015	2045	CBtP se120n 25e, GHFF
	25/3/20	LA	21	82	50	MSB	Nil	New	2405	2434	SuG,hc300s70e
C1-iw	23/3/20	LA	18.7	93	90	MSB	Light	New	2052	2123	Nil

Transect	Date	Observer	Temp	Humidity	Cloud %	Wind	Rain	Moon	Start	Finish	Fauna
							showers				
	25/3/20	LA	21	82	50	ML	Nil	New	2328	2400	Nil
C1-rn	23/3/20	LA	18.7	93	90	MLB	Nil	New	1932	2001	Nil
	25/3/20	LA	21	82	50	MSB	Drizzle	New	2452	0123	SuGx2, sm300n5w & hc320n60e; PO
C1-rs	23/3/20	BT	18.7	93	90	MLB	Nil	New	1932	2001	Nil
	25/3/20	BT	21	82	50	MSB	Drizzle	New	2452	0123	SqG,hc400e60s; SuG,hc20e80n
C1-ce	23/3/20	BT	18.7	93	90	MSB	Light showers	New	2017	2045	Nil
	25/3/20	BT	21	82	50	ML	Nil	New	2328	2400	Nil
C1-cw	23/3/20	BT	18.7	93	90	MSB	Light showers	New	2052	2123	CBP,se200n20w
	25/3/20	BT	21	82	50	MSB	Nil	New	2405	2434	Nil

**Table A2:** Survey effort, weather conditions and fauna detections Q2 2020 threatened glider population monitoring. Msb = wind moves small branches; MLB = wind moves large branches. Ns = not surveyed. SqG = squirrel glider; SuG = sugar glider; YbG = yellow-bellied glider; GG = greater glider; FtG = feathertail glider; BtPhas = brush-tailed phascogale; CBtP = common brushtail possum; SeBtP = short-eared brushtail possum; CRP = common ringtail possum; TF = tawny frogmouth; PO = powerful owl; SO = sooty owl; MO = masked owl; BbO = boobook owl; ON = owlet nightjar; WtN = white-throated nightjar; GhFF = grey-headed flying fox; LRFF = little red flying fox. HM = heard movement, HC = heard call; HL = heard glide-land on tree; SE = saw eyeshine; SG = saw glide; SM = saw movement.

Transect	Date	Order	Observer	Temp	Humidity	Cloud %	Wind	Rain	Moon	Start	Finish	Fauna
TabLbie	11/5/20	2	DR	15.9	60	1/8	MLB	Nil	3/4	620	650	Nil
	13/5/20	6	DR						3/4	2234	2304	Nil
TabLbiw	11/5/20	2	LA	15.9	60	1/8	MLB	Nil	3/4	620	650	Nil
	13/05/20	7	DR	16	84	50	Nil	Nil	3/4	2313	2343	GG,se400n30w
TabNRrn	11/5/20	1	LA	15.9	60	1/8	MLB	Nil	3/4	545	615	Nil
	13/05/20	8	DR	16	84	50	Nil	Nil	3/4	2155	2225	Nil
TabNRrs	11/5/20	1	DR	15.9	60	1/8	MLB	Nil	3/4	545	615	TF
	13/05/20	9	DR						3/4	2123	2150	ONj
TabVM-ie	11/5/20	3	DR	15.9	60	1/8	MLB	Nil	3/4	700	730	Nil
	13/05/20	9	LA	15.9	60	1/8	MLB	Nil		1102	1132	TF
TabVM-iw	11/5/20	3	LA	15.9	60	1/8	MLB	Nil	3/4	700	730	Nil
	13/05/20	8	LA	15.9	60	1/8	MLB	Nil		1022	1052	Nil
TabN-ie	11/5/20	4	DR	15.9	60	1/8	MLB	Nil	3/4	744	816	Nil
	13/05/20	7	LA	15.9	60	1/8	MLB	Nil		938	1008	Nil
TabN-iw	11/5/20	4	LA	15.9	60	1/8	MLB	Nil	3/4	744	816	Nil
	13/05/20	6	LA	15.9	60	1/8	MLB	Nil		902	932	Nil
TabN-ce	11/5/20	5	DR	15.1	60	1/8	MLB	Nil	3/4	825	855	Nil
	13/05/20	5	LA	15.9	60	1/8	MLB	Nil		822	852	Nil
TabN-cw	11/5/20	5	LA	15.1	60	1/8	MLB	Nil	3/4	825	855	Nil
	13/05/20	5	DR	16	90	0	Nil	Nil	3/4	2032	2102	CRTP,se75s50w; Onj
TabDD-rn	11/5/20	6	LA	15.1	60	1/8	MLB	Nil	3/4	910	940	Nil
	13/05/20	4	DR						3/4	1948	2018	Nil
TabDD-rs	11/5/20	6	DR	15.1	60	1/8	MLB	Nil	3/4	910	940	Nil
	13/05/20	3	DR	17	77	5	Nil	Nil	3/4	1904	1935	Nil
TabM-ce	11/5/20	7	DR	15.1	60	1/8	MLB	Nil	3/4	1011	1041	Nil
	13/05/20	4	LA	17	81	8/8	ML	Nil		738	808	Nil
TabM-cw	11/5/20	7	LA	15.1	60	1/8	MLB	Nil	3/4	1011	1041	Nil
	13/05/20	3	LA	17	81	8/8	ML	Nil		659	729	Nil
TabM-ie	11/5/20	8	DR	15.1	60	1/8	MLB	Nil	3/4	1051	1121	Nil
	13/05/20	2	DR						3/4	181	1845	GG,se450s20w

Transect	Date	Order	Observer	Temp	Humidity	Cloud %	Wind	Rain	Moon	Start	Finish	Fauna
	0									5		
TabM- iw	11/5/20	8	LA	15.1	60	1/8	MLB	Nil	3/4	1051	1121	FtG, se5w120S
	13/05/20	1	DR	18	77	95	Nil	Nil	3/4	1740	1807	nil
TabS-ie	11/5/20	9	DR	15.1	60	1/8	MLB	Nil	3/4	1133	1203	Nil
	13/05/20	2	LA	19.7	73	8/8	ML	Nil	3/4	538	608	Nil
TabS-iw	11/5/20	9	LA	15.1	60	1/8	MLB	Nil	3/4	1133	1203	Nil
		1	LA	19.7	73	8/8	ML	Nil	3/4	612	642	Nil
TabS-ce	11/5/20	8	BT	15.1	62	1/8	MSB	Nil	3/4	2259	2330	Nil
	13/5/20	3	BT	17	81	8/8	ML	Nil	3/4	1859	1930	Nil
TabS- cw	11/5/20	7	BT	15.1	62	1/8	MSB	Nil	3/4	2214	2245	BrkOwl
	13/5/20	2	BT	19.7	73	8/8	ML	Nil	3/4	1822	1850	Nil
MOR-ie	11/5/20	1	BT	15.6	61	1/8	MLB	Nil	3/4	1743	1812	Nil
	13/5/20	7	BT	17	81	8/8	Still	Nil	3/4	2157	2228	SuGx2,sm250s20w
MOR- iw	11/5/20	6	BT	15.9	60	1/8	MLB	Nil	3/4	2123	2154	Nil
	13/5/20	4	BT	17	81	8/8	Still	Nil	3/4	1943	2012	Nil
MOR-ce	11/5/20	4	BT	15.9	60	1/8	MLB	Nil	3/4	1955	2025	Nil
	13/5/20	8	BT	17	81	8/8	Still	Nil	3/4	2240	2310	Nil
MOR- cw	11/5/20	5	BT	15.9	60	1/8	MLB	Nil	3/4	2040	2111	Nil
	13/5/20	1	BT	19.7	73	8/8	ML	Nil	3/4	1741	1810	Nil
MOR-rn	11/5/20	2	BT	15.6	61	1/8	MLB	Nil	3/4	1828	1900	MO, TF
	13/5/20	6	BT	17	81	8/8	Still	Nil	3/4	2113	2144	Nil
MOR-rs	11/5/20	3	BT	15.6	61	1/8	MLB	Nil	3/4	1910	1940	ONj
	13/5/20	5	BT	17	81	8/8	Still	Nil	3/4	2028	2059	GG,se450e20n
TucN-ce	12/5/20	7	BT	12.2	95	1/8	Still	Nil	3/4	2245	2315	Nil
	14/05/20	1	LA							540	610	Nil
TucN- cw	12/5/20	8	BT	12.2	95	1/8	Still	Nil	3/4	2320	2350	Nil
	14/05/20	2	LA							618	648	Nil
TucM- ce	12/05/20	8	LA	12.2	95	1/8	Still	Nil	3/4	1022	1052	Nil
	14/05/20	3	LA							658	728	Nil
TucM-	12/05/2	7	LA	12.2	95	1/8	Still	Nil	3/4	940	1010	Nil



Transect	Date	Order	Observer	Temp	Humidity	Cloud %	Wind	Rain	Moon	Start	Finish	Fauna
cw	0											
	14/05/20	4	LA							735	805	Nil
Tuc-r-n	12/5/20	5	BT	13.5	90	1/8	Still	Nil	3/4	2110	2140	ONj
	14/5/20	1	BT	20	63	8/8	MLB	Nil	3/4	1745	1815	<b>SqG, hc250n50w</b>
Tuc-r-s	12/5/20	6	BT	13.5	90	1/8	Still	Nil	3/4	2152	2223	BtPhas, hm50e10s. CBP, se200e20n. ONj
	14/5/20	2	BT	20	63	8/8	MLB	LS	3/4	1824	1855	Nil
TucS-ce	12/05/20	5	LA	13.5	90	1/8	Still	Nil	3/4	821	851	BtPoss, hc30 s 20e
	14/5/20	3	BT	15.4	71	6/8	MLB	Nil	3/4	1922	1951	Nil
TucS-cw	12/05/20	6	LA	13.5	90	1/8	Still	Nil	3/4	854	924	<b>SqG, hc70n 30w</b>
	14/5/20	4	BT	15.4	71	6/8	MLB	Nil	3/4	2001	2033	Nil
TucN-ie	12/05/20	3	LA	15.8	86	1/8	ML	Nil	3/4	706	736	SuG, hm110n 5e. Onj; TF
	14/5/20	5	BT	15.4	71	6/8	MSB	Nil	3/4	2042	2111	GG, se250n50e
TucN-iw	12/05/20	4	LA	15.8	86	1/8	ML	Nil	3/4	740	810	ONJ
	14/5/20	6	BT	15.4	71	6/8	ML	Nil	3/4	2116	2145	ONj
TucS-ie	12/5/20	4	BT	15.8	86	1/8	ML	Nil	3/4	1945	2015	<b>SqG, hm400s10e. PO. MO. BbO. ONj</b>
	14/05/20	5	LA							830	900	ONJ
TucS-iw	12/5/20	3	BT	15.8	86	1/8	ML	Nil	3/4	1907	1938	<b>SqG, sm400n20w</b>
	14/05/20	6	LA							905	935	CBTP, hc150s5W; Onj. PO.
GN-ce	12/05/20	1	LA	17.7	75	1/8	ML	Nil	3/4	540	610	Nil
	14/5/20	8	BT	15.4	85	58	ML	Nil	3/4	2238	2310	GG, se150n40e. CBP, se450n10w
GN-cw	12/05/20	2	LA	17.7	75	1/8	ML	Nil	3/4	612	642	OnJ
	14/5/20	7	BT	15.4	85	58	ML	Nil	3/4	2202	2231	Nil
GN-ie	12/5/20	1	BT	17.7	75	1/8	ML	Nil	3/4	1742	1813	Nil
	14/05/20	7	LA									FtG, sm310N10E; Onj
GN-iw	12/5/20	2	BT	17.7	75	1/8	ML	Nil	3/4	1820	1851	CBP, se20n50w
	14/05/20	8	LA									<b>YbG, hc20s100W, OnJ</b>
GS-ie	19/5/20	1	BT	17.7	83	1/8	ML	Nil	3/4	1740	1810	Nil
	21/5/20	7	BT	15.2	100	7/8	ML	Nil	3/4	2201	2230	TF
GS-iw	19/5/20	2	BT	17.7	83	1/8	ML	Nil	3/4	181	1850	Nil

Transect	Date	Order	Observer	Temp	Humidity	Cloud %	Wind	Rain	Moon	Start	Finish	Fauna
										9		
	21/5/20	8	BT	15.2	100	7/8	ML	Nil	3/4	2240	2311	CBP,se400n40w
GS-ce	19/5/20	3	LA	17.7	83	1/8	ML	Nil	3/4	1855	1925	Nil
	21/05/20	9	BT/LA							2300	2340	TF
GS-cw	19/5/20	3	BT	17.7	83	1/8	ML	Nil	3/4	1856	1925	CBP,se150s20w
	21/05/20	6	LA							2047	2117	Nil
G-r-n	19/05/20	1	LA	17.7	83	1/8	ML	Nil	3/4	1740	1810	Nil
	21/05/20	8	LA							2215	2245	TF
G-r-s	19/05/20	2	LA	17.7	83	1/8	ML	Nil	3/4	1814	1844	Nil
	21/05/20	7	LA							2138	2208	nil
S3/M2-ce	19/5/20	4	BT	15.6	92	1/8	ML	Nil	3/4	1942	2011	Nil
	21/5/20	1	BT	16.6	100	8/8	ML	Nil	3/4	1737	1808	CBP,sb200s10e
S3/M2-cw	19/5/20	6	LA	15	95	7/8	ML	Nil	3/4	900	930	Nil
	21/05/20	5	LA							2008	2048	Nil
S3/M2-re	19/5/20	5	BT	15.6	92	1/8	ML	Nil	3/4	2028	2100	SqG,se200n20w
	21/5/20	4	BT	16.2	100	8/8	ML	Nil	3/4	1934	2005	nil
S3/M2-rw	19/5/20	6	BT	15.6	92	1/8	ML	LS	3/4	2107	2137	Nil
	21/5/20	3	BT	16.2	100	8/8	ML	Nil	3/4	1855	1925	Nil
S3-ie	19/5/20	7	LA	15	95	7/8	ML	Nil	3/4	2146	2216	Nil
	21/5/20	2	BT	16.6	100	8/8	ML	Nil	3/4	1814	1845	Nil
S3-iw	19/5/20	5	LA	15.6	92	1/8	ML	Nil	3/4	2016	2046	Nil
	21/05/20	4	LA							1931	2001	Nil
M2-i	19/5/20	4	LA	15.6	92	1/8	ML	Nil	3/4	1940	2010	Nil
	21/5/20	6	BT	16.2	100	8/8	ML	Nil	3/4	2059	2130	YbG,hc380s30e
C3-re	19/5/20	7	BT	15	95	7/8	ML	LS	3/4	2155	2225	Nil
	21/5/20	5	BT	16.2	100	8/8	ML	Nil	3/4	2015	2045	Nil
C3-rw	19/5/20	8	BT	15	95	7/8	ML	Nil	3/4	2235	2304	YbG,hc50s60e
	21/05/20	1	LA							1740	1810	FtG sm320s 10w
C3-ce	19/5/20	9	LA/BT	15	95	7/8	ML	Nil	3/4	2300	2330	Nil
	21/05/20	2	LA							181	1847	Nil

Transect	Date	Order	Observer	Temp	Humidity	Cloud %	Wind	Rain	Moon	Start	Finish	Fauna
	0									7		
C3-cw	19/5/20	8	LA	15	95	7/8	ML	Nil	3/4	2225	2255	Nil
	21/05/20	3	LA							1852	1922	Nil
C3-ie	18/05/20	8	LA	15.8	83	4/8	ML	Nil	3/4	1052	1122	SuG,hc360s80e
	20/5/20	3	BT	17.5	91	8/8	ML	Nil	0/4	1855	1926	Nil
C3-iw	18/5/20	8	BT	15.8	83	4/8	ML	Nil	3/4	2249	2320	Nil
	20/5/20	2	BT	18.7	80	8/8	ML	Nil	0/4	1817	1847	CBP,se20n20e
C2-c	18/5/20	7	BT	15.8	83	4/8	ML	Nil	3/4	2207	2237	Nil
	20/5/20	1	BT	18.7	80	8/8	ML	Nil	0/4	1740	1810	Nil
C2-rn	18/5/20	6	BT	16.1	82	4/8	MSB	Nil	3/4	2121	2150	YbG,hc500s60se. CBP,se200s30e
	20/5/20	2	LA	18.7	80	8/8	ML	Nil	0/4	1815	1845	YbG,hc275n70w, ONj
C2-rs	18/5/20	5	BT	16.1	82	4/8	ML	Nil	3/4	2042	2110	Nil
	20/5/20	1	LA	18.7	80	8/8	ML	Nil	0/4	1740	1810	nil
C2-ie	18/05/20	7	LA	15.8	83	4/8	ML	Nil	3/4	1010	1040	Nil
	20/5/20	5	BT	16.6	94	7/8	ML	Nil	0/4	2013	2042	Nil
C2-iw	18/05/20	6	LA	16.1	82	4/8	ML	Nil	3/4	2130	2200	Bbo
	20/5/20	4	BT	17.5	91	8/8	ML	Nil	0/4	1937	2006	Nil
S2/M1-c	18/05/20	5	LA	19.5	65	4/8	ML	Nil		2050	2120	Nil
	20/5/20	3	LA	17.5	91	8/8	ML	Nil	0/4	1902	1932	Nil
S2/M1-r	18/5/20	4	BT	19.5	65	4/8	ML	Nil	3/4	1955	2025	GHFF
	20/5/20	6	BT	16.6	94	7/8	MSB	Nil	0/4	2055	2125	YbG,hc300e80ne. SuG,hc200e50n
S2-i	18/05/20	4	LA	19.5	65	4/8	ML	Nil		2000	2030	CBtP,se20s10w, CBTP,hm180s 20w
	20/5/20	4	LA	17.5	91	8/8	ML	Nil	0/4	1945	2015	CBtPx2,se220s10w, GHFF
C1-ie	18/05/20	2	LA	20.1	60	6/8	MLB	Nil	3/4	1818	1848	Nil
	20/5/20	7	BT	18.8	81	5/8	MSB	Nil	0/4	2152	2223	CBP,se200n15e
C1-iw	18/05/20	3	LA	19.5	65	4/8	ML	Nil		1855	1925	Nil
	20/5/20	8	BT	18.8	81	5/8	MSB	Nil	0/4	2238	2310	CBP.se500n20w
C1-rn	18/5/20	2	BT	20.1	60	4/8	ML	Nil	3/4	1820	1849	Nil
	20/5/20	6	LA	16.6	94	7/8	ML	Nil		2115	2145	YbG,hc310n50w, GHFF

Transect	Date	Order	Observer	Temp	Humidity	Cloud %	Wind	Rain	Moon	Start	Finish	Fauna
C1-rs	18/5/20	1	BT	20.1	60	6/8	MLB	Nil	3/4	1741	1810	Nil
	20/5/20	5	LA	16.6	94	7/8	ML	Nil		2036	2106	SuG,sg220n5e
C1-ce	18/05/20	1	LA	20.1	60	6/8	MLB	Nil	3/4	1740	1810	GHFF
	20/5/20	8	LA	16.6	94	7/8	ML	Nil		2228	2258	Nil
C1-cw	18/5/20	3	BT	19.5	65	4/8	ML	Nil	3/4	1902	1931	CBP,se300n20e.GHFF
	20/5/20	7	LA	16.6	94	7/8	ML	Nil		2150	2220	Nil

**Table A3:** Survey effort, weather conditions and fauna detections Q3 2020 threatened glider population monitoring. Msb = wind moves small branches; MLB = wind moves large branches. Ns = not surveyed. SqG = squirrel glider; SuG = sugar glider; YbG = yellow-bellied glider; GG = greater glider; FtG = feathertail glider; BtPhas = brush-tailed phascogale; CBtP = common brushtail possum; SeBtP = short-eared brushtail possum; CRP = common ringtail possum; TF = tawny frogmouth; PO = powerful owl; SO = sooty owl; MO = masked owl; BbO = boobook owl; ON = owlet nightjar; WtN = white-throated nightjar; GhFF = grey-headed flying fox; LRFF = little red flying fox. HM = heard movement, HC = heard call; HL = heard glide-land on tree; SE = saw eyeshine; SG = saw glide; SM = saw movement.

Transect	Date	Order	Observer	Temp	Humidity	Cloud %	Wind	Rain	Moon	Start	Finish	Fauna
TabLbie	10/8/20	2	NM	15.2	62	0	MLB	Nil	3/4	1838	1908	Nil
	12/8/20	9	LA	13.4	92	0	RL	Nil	3/4	0000	0030	Nil
TabLbiw	10/8/20	2	LA	15.2	62	0	MLB	Nil	3/4	1838	1908	Nil
	12/8/20	9	NM	13.4	92	0	RL	Nil	3/4	0000	0030	Nil
TabNRrn	10/8/20	1	LA	15.2	62	0	MLB	Nil	3/4	1800	1830	Nil
	12/8/20	8	NM	13.4	92	0	RL	Nil	3/4	2310	2340	Nil
TabNRrs	10/8/20	1	NM	15.2	62	0	MLB	Nil	3/4	1800	1830	Nil
	12/8/20	8	LA	13.4	92	0	RL	Nil	3/4	2310	2340	Nil
TabVM-ie	10/8/20	3	NM	14.6	62	0	MLB	Nil	3/4	1914	1944	Nil
	12/8/20	7	LA	13.4	92	0	RL	Nil	3/4	2200	2230	GG,se120S5W
TabVM-iw	10/8/20	3	LA	14.6	62	0	MLB	Nil	3/4	1914	1944	Nil
	12/8/20	7	NM	13.4	92	0	RL	Nil	3/4	2200	2230	Nil
TabN-ie	10/08/20	4	NM	14.6	62	0	MLB	Nil	3/4	1957	2027	Nil
	12/8/20	6	LA	14.4	89	0	RL	Nil	3/4	2120	2150	Nil
TabN-iw	10/08/20	4	LA	14.6	62	0	MLB	Nil	3/4	1957	2027	Nil
	12/8/20	6	NM	14.4	89	0	RL	Nil	3/4	2120	2150	Nil
TabN-ce	10/08/20	5	NM	14.6	62	0	MLB	Nil	3/4	2042	2112	Nil
	12/8/20	5	LA	14.4	89	0	RL	Nil	3/4	2035	2105	OnJ
TabN-cw	10/08/20	5	LA	14.6	62	0	MLB	Nil	3/4	2042	2112	Nil
	12/8/20	5	NM	14.4	89	0	RL	Nil	3/4	2035	2105	Nil
TabDD-rn	10/08/20	6	LA	14.6	62	0	Nil	Nil	3/4	2119	2149	SuG/SqG, sg 100n40e
	12/8/20	4	NM	14.4	89	0	RL	Nil	3/4	2000	2030	Nil
TabDD-rs	10/08/20	6	NM	14.6	62	0	Nil	Nil	3/4	2119	2149	Nil
	12/8/20	4	LA	14.4	89	0	RL	Nil	3/4	2000	2030	Nil

Transect	Date	Order	Observer	Temp	Humidity	Cloud %	Wind	Rain	Moon	Start	Finish	Fauna
TabM-ce	10/8/20	7	NM	14.3	58	0	MLB	Nil	3/4	1003	1033	Nil
	12/8/20	3	LA	15.8	85	0	RL	Nil	3/4	1915	1945	Nil
TabM-cw	10/8/20	7	LA	14.3	58	0	MLB	Nil	3/4	1003	1033	Nil
	12/8/20	3	NM	15.8	85	0	RL	Nil	3/4	1915	1945	OnJ
TabM-ie	10/8/20	8	NM	14.3	58	0	MLB	Nil	3/4	1037	1107	Nil
	12/8/20	2	LA	15.8	85	0	RL	Nil	3/4	1840	1910	TF
TabM-iw	10/8/20	8	LA	14.3	58	0	MLB	Nil	3/4	1037	1107	Nil
	12/8/20	2	NM	15.8	85	0	RL	Nil	3/4	1840	1910	Nil
TabS-ie	10/8/20	9	NM	13.8	57	0	MLB	Nil	3/4	1118	1148	Nil
	12/8/20	1	LA	15.8	85	0	RL	Nil	3/4	1800	1830	Nil
TabS-iw	10/8/20	9	LA	13.8	57	0	MLB	Nil	3/4	1118	1148	Nil
	12/8/20	1	NM	15.8	85	0	RL	Nil	3/4	1800	180	Nil
TabS-ce	10/8/20	2	BT	15.4	62	2/8	MLB	NIL	3/4	1842	1911	ONj
	12/8/20	7	BT	13.9	91	0/8	MSB	Nil	3/4	2202	2233	Nil
TabS-cw	10/8/20	1	BT	15.4	62	2/8	MLB	NIL	3/4	1802	1831	Nil
	12/8/20	6	BT	14.2	89	0/8	MLB	Nil	3/4	2125	2155	Nil
MOR-ie	10/8/20	7	BT	14.1	58	0/8	MLB	NIL	3/4	2159	2230	Nil
	12/8/20	4	BT	14.9	87	0/8	MSB	Nil	3/4	2004	2035	Nil
MOR-iw	10/8/20	3	BT	14.7	63	2/8	MLB	NIL	3/4	1922	1953	Nil
	12/8/20	8	BT	13.9	91	0/8	MSB	Nil	3/4	2246	2317	Nil
MOR-ce	10/8/20	4	BT	14.7	63	2/8	MLB	NIL	3/4	2000	2030	Nil
	12/8/20	5	BT	14.2	89	0/8	MSB	Nil	3/4	2042	2112	Nil
MOR-cw	10/8/20	8	BT	14.1	58	0/8	MLB	NIL	3/4	2244	2315	Nil
	12/8/20	1	BT	16.7	83	0/8	MSB	Nil	3/4	1802	1831	Nil
MOR-rn	10/8/20	6	BT	14.5	60	0/8	MLB	NIL	3/4	2113	2143	Koala, se300w50s
	12/8/20	3	BT	14.9	87	0/8	MSB	Nil	3/4	1923	1953	Nil
MOR-rs	10/8/20	5	BT	14.5	60	0/8	MLB	NIL	3/4	2035	2105	ONj
	12/8/20	2	BT	16.7	83	0/8	MSB	Nil	3/4	1840	1912	SqG,se100s20e; BbO, ONj

Transect	Date	Order	Observer	Temp	Humidity	Cloud %	Wind	Rain	Moon	Start	Finish	Fauna
TucN-ce	11/8/20	6	NM	14.2	82	0	Nil	Nil	3/4	2210	2240	Nil
	13/8/20	1	LA	18.3	66	0	RL	Nil	3/4	1800	1830	Nil
TucN-cw	11/8/20	6	LA	14.2	82	0	Nil	Nil	3/4	2210	2240	Nil
	13/8/20	1	NM	18.3	66	0	RL	Nil	3/4	1800	1860	CBtP,se
TucM-ce	11/8/20	6	BT	14.1	81	1/8	Nil	Nil	3/4	2148	2218	Nil
	13/8/20	1	BT	19.2	92	0/8	MSB	Nil	3/4	1803	1833	ONj
TucM-cw	11/8/20	5	BT	14.1	81	1/8	Nil	Nil	3/4	2105	2135	CBP,se300n20w
	13/8/20	2	BT	19.2	92	0/8	ML	Nil	3/4	1845	1915	Nil
Tuc-r-n	11/8/20	3	BT	15.2	81	1/8	Nil	Nil	3/4	1935	2006	CBP,se200n50e; ONj
	13/8/20	3	BT	18.8	95	0/8	ML	Nil	3/4	1935	2005	<b>SqG,hc20n50w; CBP,sm250n20e; ONj</b>
Tuc-r-s	11/8/20	4	BT	15.2	81	1/8	Nil	Nil	3/4	2014	2045	<b>SqGx2,se300e20s,hc400e50n; ONj; GHFF</b>
	13/8/20	4	BT	18.8	95	0/8	ML	Nil	3/4	2018	2048	BnO; BbO
TucS-ce	11/8/20	5	LA	15	81	0	RL	Nil	3/4	2110	2140	Nil
	13/8/20	2	NM	18.3	66	0	RL	Nil	3/4	1900	1930	TF
TucS-cw	11/8/20	5	NM	15	81	0	RL	Nil	3/4	2110	2140	SuG,hc200s 50sw
	13/8/20	2	LA	18.3	66	0	RL	Nil	3/4	1900	1930	Nil
TucN-ie	11/8/20	4	LA	15	81	0	RL	Nil	3/4	2020	2050	TF
	13/8/20	6	NM	12.5	11	80	RL	Nil	3/4	2215	2245	Nil
TucN-iw	11/8/20	4	NM	15	81	0	RL	Nil	3/4	2020	2050	Nil
	13/8/20	6	LA	12.5	11	80	RL	Nil	3/4	2215	2245	Nil
TucS-ie	11/8/20	3	LA	15.8	71	0	MSB	Nil	3/4	1945	2015	Nil
	13/8/20	5	NM	12.5	11	80	RL	Nil	3/4	2135	2205	OnJ
TucS-iw	11/8/20	3	NM	15.8	71	0	MSB	Nil	3/4	1945	2015	Nil
	13/8/20	5	LA	12.5	11	80	RL	Nil	3/4	2135	2205	Nil
GN-ce	11/8/20	1	NM	15.8	71	0	MSB	Nil	3/4	1800	1830	Nil
	13/8/20	3	LA	18.3	66	0	RL	Nil	3/4	1950	2020	GG,se480s10e
GN-cw	11/8/20	1	LA	15.8	71	0	MSB	Nil	3/4	1800	1830	Nil

Transect	Date	Order	Observer	Temp	Humidity	Cloud %	Wind	Rain	Moon	Start	Finish	Fauna
	13/8/20	3	NM	18.3	66	0	RL	Nil	3/4	1950	2020	Nil
GN-ie	11/8/20	2	NM	15.8	71	0	MSB	Nil	3/4	1840	1910	Nil
	13/8/20	4	LA	12.5	11	80	RL	Nil	3/4	2034	2104	Nil
GN-iw	11/8/20	2	LA	15.8	71	0	MSB	Nil	3/4	1840	1910	CBtP,se 425s30w. BBO, TF
	13/8/20	4	NM	12.5	11	80	RL	Nil	3/4	2034	2104	Nil
GS-ie	11/8/20	1	BT	15.6	75	1/8	MSB	Nil	3/4	1801	1830	Nil
	13/8/20	5	BT	18.0	96	0/8	ML	Nil	3/4	2125	2155	Nil
GS-iw	11/8/20	2	BT	15.6	75	1/8	MSB	Nil	3/4	1835	1905	Nil
	13/8/20	6	BT	18.0	96	0/8	ML	Nil	3/4	2201	2230	Nil
GS-ce	18/8/20	1	BT	16.1	61	4/8	MSB	Nil	0/4	1812	1842	Nil
	20/8/20	8	LA	12.1	51	0/8	MSB	Nil	0/4	2301	2330	Nil
GS-cw	18/8/20	2	BT	16.1	61	4/8	ML	Nil	0/4	1848	1918	Nil
	20/8/20	7	LA	13.7	53	0/8	MSB	nil	0/4	2201	22031	Nil
G-r-n	18/8/20	1	LA	16.1	61	4/8	MSB	Nil	0/4	1812	1842	Nil
	20/8/20	7	BT	12.1	51	0/8	MSB	Nil	0/4	2214	2245	Nil
G-r-s	18/8/20	2	LA	16.1	61	4/8	ML	Nil	0/4	1848	1918	Nil
	20/8/20	6	BT	14.4	47	0/8	MSB	Nil	0/4	2132	2203	SqG,hm150n40e. CBP,se150n30e
S3/M2-ce	18/8/20	3	BT	13.8	66	2/8	Still	Nil	0/4	1930	2002	FtG,sm450s10e
	20/8/20	1	BT	18.4	33	0/8	MT	Nil	0/4	1810	1839	Nil
S3/M2-cw	18/8/20	5	LA	13.8	66	2/8	Still	Nil	0/4	2102	2132	Nil
	20/8/20	6	LA	13.7	53	0/8	MSB	nil	0/4	2116	2146	Nil
S3/M2-re	18/8/20	5	BT	13.1	77	2/8	Still	Nil	0/4	2108	2139	ONj
	20/8/20	4	BT	15.1	44	0/8	MSB	Nil	0/4	1958	2030	Nil
S3/M2-rw	18/8/20	4	BT	13.8	66	2/8	Still	Nil	0/4	2025	2055	Nil
	20/8/20	3	BT	15.1	44	0/8	MLB	Nil	0/4	1921	1952	CBP,se100s40e
S3-ie	18/8/20	3	LA	13.8	66	2/8	Still	Nil	0/4	1945	2015	Nil
	20/8/20	2	BT	18.4	33	0/8	MLB	Nil	0/4	1845	1915	Nil
S3-iw	18/8/20	4	LA	13.8	66	2/8	Still	Nil	0/4	202	2052	Ftg, SM 80s15e



Transect	Date	Order	Observer	Temp	Humidity	Cloud %	Wind	Rain	Moon	Start	Finish	Fauna
										2		
	20/8/20	5	LA	13.7	53	0/8	MSB	nil	0/4	2039	2109	
M2-i	18/8/20	7	BT	11.6	81	2/8	Still	Nil	0/4	2237	2308	SqG,se200sVMe; YbG,hc300sVMe
	20/8/20	4	LA	17.6	53	0/8	MSB	nil	0/4	1958	2028	YGB HC 320sVme
C3-re	18/8/20	6	BT	13.1	77	2/8	Still	Nil	0/4	2153	2223	ONj
	20/8/20	5	BT	14.4	47	0/8	MSB	Nil	0/4	2038	2108	Nil
C3-rw	18/8/20	6	LA	11.6	81	2/8	Still	Nil	0/4	2149	2219	OnJ
	20/8/20	1	LA	17.6	53	0/8	MLB	nil	0/4	1813	1843	Cbtp Se
C3-ce	18/8/20	7	LA	11.6	81	2/8	Still	Nil	0/4	2232	2302	Nil
	20/8/20	2	LA	17.6	53	0/8	MLB	nil	0/4	1845	1915	Nil
C3-cw	18/8/20	8	LA	11.6	81	2/8	Still	Nil	0/4	2305	2306	Nil
	20/8/20	3	LA	17.6	53	0/8	MLB	nil	0/4	1917	1947	Nil
C3-ie	17/8/20	8	BT	9.9	91	0/8	ML	Nil	0/4	2322	2354	Nil
	19/8/20	2	BT	19.4	23	0/8	MLB	Nil	0/4	1850	1921	Nil
C3-iw	17/8/20	8	LA	9.9	91	0/8	ML	Nil	0/4	2322	2354	Nil
	19/8/20	1	BT	19.4	23	0/8	MLB	Nil	0/4	1809	1840	CBP,se100n20e
C2-c	17/8/20	5	BT	9.9	91	0/8	ML	Nil	0/4	2111	2140	Nil
	19/8/20	1	LA	19.4	23	0/8	MLB	Nil	0/4	1811	1841	Nil
C2-rn	17/8/20	7	LA	8.6	83	0/8	MSB	Nil	0/4	2240	2310	ONj
	19/8/20	3	BT	17.1	33	0/8	MSB	Nil	0/4	1930	2000	ONj
C2-rs	17/8/20	7	BT	8.6	83	0/8	MSB	Nil	0/4	2240	2310	Nil
	19/8/20	4	BT	17.1	33	0/8	MSB	Nil	0/4	2013	2044	Nil
C2-ie	17/8/20	6	BT	9.9	91	0/8	ML	Nil	0/4	2155	2225	Nil
	19/8/20	2	LA	19.4	23	0/8	MLB	Nil	0/4	1847	1917	Nil
C2-iw	17/8/20	6	LA	9.9	91	0/8	ML	Nil	0/4	2155	2225	Nil
	19/8/20	3	LA	15.7	33	0/8	MLB	Nil	0/4	1919	1949	Nil
S2/M1-c	17/8/20	5	LA	9.9	91	0/8	ML	Nil	0/4	2111	2140	Nil

Transect	Date	Order	Observer	Temp	Humidity	Cloud %	Wind	Rain	Moon	Start	Finish	Fauna
	19/8/20	4	LA	15.7	33	0/8	MLB	Nil	0/4	2001	2031	Nil
<b>S2/M1-r</b>	17/8/20	4	BT	10.6	83	0/8	ML	Nil	0/4	2014	2045	<b>YbG,hc150e100n</b>
	19/8/20	5	BT	15.7	33	0/8	MLB	Nil	0/4	2058	2130	Nil
<b>S2-i</b>	17/8/20	4	LA	10.6	83	0/8	ML	Nil	0/4	2014	2045	SUG,se70s20w
	19/8/20	5	LA	15.7	33	0/8	MLB	Nil	0/4	2046	2116	GHFF
<b>C1-ie</b>	17/8/20	1	LA	16.4	56	0/8	MSB	Nil	0/4	1805	1835	Nil
	19/8/20	6	LA	15.7	33	0/8	MLB	Nil	0/4	2125	2155	Nil
<b>C1-iw</b>	17/8/20	2	LA	16.4	56	0/8	ML	Nil	0/4	1845	1916	Nil
	19/8/20	7	LA	14.9	37	0/8	MLB	Nil	0/4	2200	2230	Nil
<b>C1-rn</b>	17/8/20	1	BT	16.4	56	0/8	MSB	Nil	0/4	1805	1835	GHFF
	19/8/20	7	BT	14.9	37	0/8	MLB	Nil	0/4	2223	2253	GHFF
<b>C1-rs</b>	17/8/20	2	BT	16.4	56	0/8	ML	Nil	0/4	1845	1916	WtNj
	19/8/20	6	BT	15.7	33	0/8	MLB	Nil	0/4	2143	2213	Nil
<b>C1-ce</b>	17/8/20	3	BT	10.6	83	0/8	ML	Nil	0/4	1923	1952	CBP,se200n20w; GHFF
	19/8/20	8	LA	14.9	37	0/8	MLB	Nil	0/4	2236	1106	GHFF
<b>C1-cw</b>	17/8/20	3	LA	10.6	83	0/8	ML	Nil	0/4	1923	1952	Nil
	19/8/20	8	BT	14.9	37	0/8	MLB	Nil	0/4	2307	2337	GHFF

**Table A4:** Survey effort, weather conditions and fauna detections Q4 2020 threatened glider population monitoring. Msb = wind moves small branches; MLB = wind moves large branches. Ns = not surveyed. SqG = squirrel glider; SuG = sugar glider; YbG = yellow-bellied glider; GG = greater glider; FtG = feathertail glider; BtPhas = brush-tailed phascogale; CBtP = common brushtail possum; SeBtP = short-eared brushtail possum; CRP = common ringtail possum; TF = tawny frogmouth; PO = powerful owl; SO = sooty owl; MO = masked owl; BbO = boobook owl; ON = owlet nightjar; WtN = white-throated nightjar; GhFF = grey-headed flying fox; LRFF = little red flying fox. HM = heard movement, HC = heard call; HL = heard glide-land on tree; SE = saw eyeshine; SG = saw glide; SM = saw movement.

Transect	Date	Order	Observer	Temp	Humidity	Cloud %	Wind	Rain	Moon	Start	Finish	Fauna
TabLbie	17/12/20	5	NM	20.5	100	100	MSB	Spit	0/4	2308	2338	Little red FF
	22/12/20	2	LA	26.0	69	100	Nil	Nil	2/4	2050	2120	Little red FF
TabLbiw	17/12/20	5	LA	20.5	100	100	MSB	Spit	0/4	2308	2338	Nil
	22/12/20	2	NM	26.0	69	100	Nil	Nil	2/4	2050	2120	Little red FF
TabNRrn	17/12/20	4	LA	20.5	100	100	MSB	Spit	0/4	2230	2300	Little red FF
	22/12/20	1	NM	26.0	69	50	Nil	Nil	2/4	2015	2045	Little red FF
TabNRrs	17/12/20	4	NM	20.5	100	100	MSB	Spit	0/4	2230	2300	Nil
	22/12/20	1	LA	26.0	69	50	Nil	Nil	2/4	2015	2045	Nil
TabVMie	17/12/20	6	NM	20.5	100	100	MSB	Nil	0/4	2350	20	Little red FF
	22/12/20	3	LA	26.0	69	100	RL	Nil	2/4	2134	2204	Nil
TabVMiw	17/12/20	6	LA	20.5	100	100	MSB	Nil	0/4	2350	20	Nil
	22/12/20	3	NM	26.0	69	100	RL	Nil	2/4	2134	2204	FtG,sm83s10w
TabNie	17/12/20	7	NM	20.0	94	100	MSB	Nil	0/4	1230	1300	Little red FF
	22/12/20	4	LA	25.9	66	100	RL	Nil	2/4	2210	2240	Little red FF
TabNiw	17/12/20	7	LA	20.0	94	100	MSB	Nil	0/4	1230	1300	Nil
	22/12/20	4	NM	25.9	66	100	RL	Nil	2/4	2210	2240	Nil
TabNce	17/12/20	3	NM	23.1	91	100	MSB	Spit	0/4	2140	2210	Nil
	22/12/20	6	LA	25.9	66	100	RL	Nil	2/4	2325	2355	Nil
TabNcw	17/12/20	3	LA	23.1	91	100	MSB	Spit	0/4	2140	2210	FtG,se50s15w
	22/12/20	6	NM	25.9	66	100	RL	Nil	2/4	2325	2355	Nil
TabDDRn	17/12/20	2	LA	23.1	91	100	MSB	Spit	0/4	2105	2135	Nil
	22/12/20	5	NM	25.9	66	100	RL	Spit	2/4	2250	2320	Nil
TabDDRrs	17/12/20	2	NM	23.1	91	100	MSB	Spit	0/4	2105	2135	Nil
	22/12/20	5	LA	25.9	66	100	RL	Spit	2/4	2250	2320	Nil
TabMce	17/12/20	1	NM	23.1	91	100	MSB	Spit	0/4	2015	2045	Little red FF
	22/12/20	8	LA	24.4	73	40	RL	Nil	2/4	1245	115	Little red FF
TabMcw	17/12/20	1	LA	23.1	91	100	MSB	Spit	0/4	2015	2045	Little red FF

Transect	Date	Order	Observer	Temp	Humidity	Cloud %	Wind	Rain	Moon	Start	Finish	Fauna
	22/12/20	8	NM	24.4	73	40	RL	Nil	2/4	1245	115	Little red FF
TabM-ie	17/12/20	8	NM	20.0	94	100	RL	Nil	0/4	110	140	Nil
	22/12/20	9	LA	24.4	73	40	RL	Nil	2/4	120	150	Little red FF
TabM-iw	17/12/20	8	LA	20.0	94	100	RL	Nil	0/4	110	140	Little red FF
	22/12/20	9	NM	24.4	73	40	RL	Nil	2/4	120	150	Little red FF
TabS-ie	17/12/20	9	NM	20.0	94	100	RL	Nil	0/4	150	220	Nil
	22/12/20	7	LA	24.4	73	100	RL	Nil	2/4	1205	1235	Little red FF
TabS-iw	17/12/20	9	LA	20.0	94	100	RL	Nil	0/4	150	220	Nil
	22/12/20	7	NM	24.4	73	100	RL	Nil	2/4	1205	1235	Little red FF
TabS-ce	17/12/20	7	BT	22.6	100	8/8	ML	<1h	0/4	2435	105	Nil
	22/12/20	2	BT	26.8	74	8/8	MSB	Nil	1/4	2058	2130	SuG,sm400n20e
TabS-cw	17/12/20	6	BT	23	99	8/8	MSB	<1h	0/4	2352	2423	Nil
	22/12/20	1	BT	26.8	74	8/8	MSB	Nil	1/4	2015	2045	Nil
MOR-ie	17/12/20	2	BT	23.2	98	8/8	MSB	<24h	0/4	2048	2120	ONj
	22/12/20	6	BT	26	73	8/8	ML	Nil	1/4	2338	2409	ONj
MOR-iw	17/12/20	8	BT	22.6	100	8/8	ML	<1h	0/4	115	145	Nil
	22/12/20	3	BT	26.8	74	8/8	MSB	Nil	1/4	2138	2210	Nil
MOR-ce	17/12/20	3	BT	23.2	98	8/8	MSB	<24h	0/4	2130	2200	Nil
	22/12/20	5	BT	26	73	8/8	ML	Nil	1/4	2302	2333	Nil
MOR-cw	17/12/20	5	BT	23	99	8/8	MSB	LS	0/4	2310	2340	Nil
	22/12/20	8	BT	25.5	71	8/8	ML	Nil	1/4	101	130	ONj
MOR-rn	17/12/20	1	BT	23.2	98	8/8	MSB	<24h	0/4	2012	2043	LRFF
	22/12/20	7	BT	25.5	71	8/8	ML	Nil	1/4	2415	2445	SuG,hc100e40n. LRFF
MOR-rs	17/12/20	4	BT	23	99	8/8	MSB	<24h	0/4	2206	2236	Nil
	22/12/20	4	BT	26	73	8/8	ML	Nil	1/4	2218	2249	FtG,sg200n20e
TucN-ce	16/12/20	2	BT	23.2	90	100	MLB	<24h	0/4	2055	2125	Nil
	18/12/20	7	NM	23.8	98	100	MSB	<1h	0/4	2345	0115	Nil
TucN-cw	16/12/20	2	NM	23.2	90	100	MLB	<24h	0/4	2055	2155	Nil
	18/12/20	7	BT	23.8	98	100	MSB	<1h	0/4	2345	0115	Nil
TucM-ce	16/12/20	1	BT	23.2	90	100	MLB	<24h	0/4	2012	2041	Nil
	18/12/20	6	NM	23.8	98	100	MSB	<1h	0/4	2302	2330	Nil
TucM-cw	16/12/20	1	NM	23.2	90	100	MLB	<24h	0/4	2012	2041	Nil
	18/12/20	6	BT	23.8	98	100	MSB	<1h	0/4	2302	2330	Nil

Transect	Date	Order	Observer	Temp	Humidity	Cloud %	Wind	Rain	Moon	Start	Finish	Fauna
	0											
Tuc-r-n	16/12/20											No access
Tuc-r-s	16/12/20											No access
TucS-ce	16/12/20	3	BT	23.2	90	100	MLB	<24h	0/4	2150	2220	Nil
	18/12/20	5	NM	23.8	98	100	MSB	<1h	0/4	2320	2351	Nil
TucS-cw	16/12/20	3	NM	23.2	90	100	MLB	<24h	0/4	2150	2220	Nil
	18/12/20	5	BT	23.8	98	100	MSB	<1h	0/4	2320	2351	Nil
TucN-ie	16/12/20	7	BT	22.9	86	100	MLB	<24h	0/4	100	130	GG,se,50n20e
	18/12/20	4	NM	23.8	98	100	MSB	LS	0/4	2240	2310	FtG,sg256n2w
TucN-iw	16/12/20	7	NM	22.9	86	100	MLB	<24h	0/4	100	130	FtG28n35esm
	18/12/20	4	BT	23.8	98	100	MSB	LS	0/4	2240	2310	Nil
TucS-ie	16/12/20	6	BT	23.0	87	100	MSB	<24h	0/4	1215	1245	Nil
	18/12/20	3	NM	23.8	98	100	MLB	LS	0/4	2150	2220	CBtPse336n,0
TucS-iw	16/12/20	6	NM	23.0	87	100	MSB	<24h	0/4	1215	1245	Nil
	18/12/20	3	BT	23.8	98	100	MLB	LS	0/4	2150	2220	SqG,se350n20w
GN-ce	16/12/20	4	BT	23.0	87	100	MSB	<24h	0/4	2240	2310	Nil
	18/12/20	1	NM	23.9	96	8/8	MSB	LS	0/4	2015	2045	Nil
GN-cw	16/12/20	4	NM	23.0	87	100	MSB	<24h	0/4	2240	2310	FtG,sg,430s2w
	18/12/20	1	BT	23.9	96	8/8	MSB	LS	0/4	2015	2045	Nil
GN-ie	16/12/20	5	BT	23.0	87	100	MSB	<24h	0/4	2320	2350	Nil
	18/12/20	2	NM	23.9	96	8/8	MSB	LS	0/4	2100	2130	Nil
GN-iw	16/12/20	5	NM	23.0	87	100	MSB	<24h	0/4	2320	2350	CBtP,Se20s20e
	18/12/20	2	BT	23.9	96	8/8	MSB	LS	0/4	2100	2130	Nil
GS-ie	8/12/20	7	BT	17.4	68	0/8	MSB	Nil	3/4	2420	2451	CBP,se100s20e
	10/12/20	1	BT	23.4	64	3/8	MLB	Nil	3/4	2012	2042	Nil
GS-iw	8/12/20	8	BT	17.4	68	0/8	MSB	Nil	3/4	2456	0125	Nil
	10/12/20	2	BT	23.4	64	3/8	MLB	Nil	3/4	2047	2116	Nil
GS-ce	8/12/20	9	BT	17.4	68	0/8	MSB	Nil	3/4	0132	0200	Nil
	10/12/20	3	LA							2126	2156	Nil
GS-cw	8/12/20	8	LA							23:21	23:51	nil
	10/12/20	3	BT	23.4	64	3/8	MLB	Nil	3/4	2122	2152	CBP,se150s10w
G-r-n	8/12/20	7	LA							0:51	1:21	Onj
	10/12/20	1	LA							2016	2046	Onj

Transect	Date	Order	Observer	Temp	Humidity	Cloud %	Wind	Rain	Moon	Start	Finish	Fauna
G-r-s	8/12/20	6	LA							0:13	0:43	SuG,hc,20n80e. Onj
	10/12/20	2	LA							2049	2119	Nil
S3/M2-ce	8/12/20	1	BT	20	63	0/8	MSB	Nil	3/4	2010	2040	Nil
	10/12/20	4	BT	22.8	70	8/8	MLB	Nil	3/4	2159	2228	Nil
S3/M2-cw	8/12/20	5	LA							22:44	23:14	nil
	10/12/20	7	LA							0007	0037	nil
S3/M2-re	8/12/20	4	BT	18	66	0/8	MLB	Nil	3/4	2210	2240	Nil
	10/12/20	6	BT	22.8	70	8/8	ML	LR	3/4	2322	2352	Nil
S3/M2-rw	8/12/20	3	BT	20	63	0/8	MSB	Nil	3/4	2128	2200	Nil
	10/12/20	5	BT	22.8	70	8/8	ML	Nil	3/4	2241	2311	ONj
S3-ie	8/12/20	2	BT	20	63	0/8	MSB	Nil	3/4	2051	2120	Nil
	10/12/20	6	LA							2329	2359	nil
S3-iw	8/12/20	4	LA							22:08	22:38	nil
	10/12/20	5	LA							2249	2319	FtG, sm50s20e. CbtP, se120s 5w.
M2-i	8/12/20	6	BT	18	66	0/8	MLB	Nil	3/4	2330	2401	SqG,se100n10e
	10/12/20	4	LA							2208	2048	Nil
C3-re	8/12/20	5	BT	18	66	0/8	MLB	Nil	3/4	2247	2318	YbG,hc50e70s
	10/12/20	7	BT	21.9	79	8/8	ML	LSh	3/4	2402	2432	Nil
C3-rw	8/12/20	3	LA							21:27	21:57	SqG,se @220s10e
	10/12/20	8	BT	21.9	79	8/8	ML	LSh	3/4	2438	0110	Nil
C3-ce	8/12/20	1	LA							2043	21:13	nil
	10/12/20	9	L/B	21.9	79	8/8	ML	LSh	3/4	0116	0145	Nil
C3-cw	8/12/20	2	LA							20:10	20:40	nil
	10/12/20	8	LA							0045	0115	nil
C3-ie	7/12/20	8	BT	22.9	73	6/8	MSB	<24h	3/4	0120	0150	SeBP,se10s20e
	9/12/20	3	BT	22.1	60	3/8	ML	Nil	3/4	2127	2158	YbG,hc200s50e
C3-iw	7/12/20	8	NM	22.9	73	6/8	MSB	<24h	3/4	0120	0150	Nil
	9/12/20	2	BT	22.1	60	3/8	ML	Nil	3/4	2050	2120	Nil
C2-c	7/12/20	6	BT	22.9	73	6/8	MSB	<24h	3/4	2350	2420	Nil
	9/12/20	1	BT	22.1	60	3/8	MSB	Nil	3/4	2011	2042	Nil
C2-rn	7/12/20	7	NM	22.9	73	6/8	MSB	<24h	3/4	2435	0105	Nil
	9/12/20	4	LA							2213	2243	Nil
C2-rs	7/12/20	7	BT	22.9	73	6/8	MSB	<24h	3/4	2435	0105	CBP,se450s10e
	9/12/20	3	LA							2139	2209	TF, Onj
C2-ie	7/12/20	6	NM	22.9	73	6/8	MSB	<24h	3/4	2350	2420	FF



Transect	Date	Order	Observer	Temp	Humidity	Cloud %	Wind	Rain	Moon	Start	Finish	Fauna
	9/12/20	4	BT	21	63	3/8	Still	Nil	3/4	2220	2251	GHFF
C2-iw	7/12/20	5	BT	22.9	73	6/8	MSB	<24h	3/4	2258	2330	Nil
	9/12/20	2	LA							2059	2129	Nil
S2/M1-c	7/12/20	5	NM	22.9	73	6/8	MSB	<24h	3/4	2258	2330	SqG,sm270n10w
	9/12/20	1	LA							2016	2046	Nil
S2/M1-r	7/12/20	4	BT	22.9	73	6/8	MSB	<24h	3/4	2212	2242	SqG,se200e20s
	9/12/20	5	BT	21	63	3/8	Still	Nil	3/4	2310	2341	CBPx2,hm300e20n . ONJ
S2-i	7/12/20	4	NM	22.9	73	6/8	MSB	<24h	3/4	2212	2242	Nil
	9/12/20	5	LA							2301	2331	CbtP se, 320n15e, GHFF
C1-ie	7/12/20	3	BT	22.4	80	7/8	MSB	<24h	3/4	2008	2038	CBP,se200n40e
	9/12/20	6	LA							2341	0009	3xSug. 1 x se285n,5e, 2x sm240n10w
C1-iw	7/12/20	3	NM	22.4	80	7/8	MSB	<24h	3/4	2008	2038	LRFF
	9/12/20	7	LA							0021	0051	nil
C1-rn	7/12/20	1	NM	22.4	80	7/8	MSB	<24h	3/4	2008	2038	LRFF
	9/12/20	6	BT	19	65	1/8	Still	Nil	3/4	2355	2425	GHFF
C1-rs	7/12/20	1	BT	22.4	80	7/8	MSB	<24h	3/4	2008	2038	WtNj, LRFF
	9/12/20	7	BT	19	65	1/8	Still	Nil	3/4	2435	0105	NilGHFF
C1-ce	7/12/20	2	NM	22.4	80	7/8	MSB	<24h	3/4	2050	2120	Nil
	9/12/20	8	LA							0021	0051	nil
C1-cw	7/12/20	2	BT	22.4	80	7/8	MSB	<24h	3/4	2050	2120	LRFF
	9/12/20	8	BT	19	65	1/8	Still	Nil	3/4	0112	0142	GHFF

## Appendix B – Rope bridge fauna detections

**Table B1:** Results of 2020 rope bridge fauna detections. SqG = squirrel glider; SuG = sugar glider; FtG = Feathertail Glider; E = moved east; W = moved west; CC = complete crossing; IC = incomplete crossing; NC = non-crossing movement; NDM = non-directional movement; EXM = exploratory movement.

Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's	Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's
<b>RB1 East (Corindi)</b>							<b>RB1 west</b>						
04/01/20	0218	Antechinus sp.	D	West	CC	21-22							
28/01/2020							28/01/2020	2311	FtG	Pr	NDM	NC	1
							29/01/2020	0231	Antechinus spp	Pr	EXM	NC	2-3
							29/01/2020	2208	FtG	Pr	EXM	NC	4
							2/02/2020	0134	FtG	D	West	CC	5
							3/03/2020	0247	SqG	D	EXM	NC	6-8
12/05/20	2023	Antechinus spp	D	EXM	NC	3-4							
31/05/20	0253	Antechinus spp	D	EXM	NC	6							
15/06/20	2157	Antechinus spp	D	EXM	NC	8							
							22/9/20	2303	SqG	D	EXM	NC	1-4
27/09/20	0341	FtG	D	East	CC	6							
							28/09/2020	0230	FtG	D	West	CC	5
05/10/20	2055	Antechinus spp	D	EXM	NC	7-Dec							
13/11/20	0123	Antechinus spp	D	EXM	NC	17							
							26/11/2020	2203	SqG	D	EXM	NC	6-8
07/12/20	2139	FtG	D	West	CC	20							
10/12/20	2353	FtG	D	West	CC	21							
<b>RB2 East (Dirty Ck)</b>							<b>RB2 west</b>						

Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's	Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's
11/01/19	2041	SuG	D	EXM	NC	155-158							
							27/01/20	0215	FtG	D	West	CC	1
28/01/20	46	Antechinus spp	D	EXM	NC	3,6,8							
01/02/20	146	Antechinus spp	D	west	CC	9							
02/02/20	46	SqG	D	west	CC	10	2/2/20	0100	SqG	Pr	West	CC	3-4
19/02/20	2354	Antechinus spp	Pr	west	CC	13							
23/02/20	6	FtG	D	EXM	NC	14							
28/02/20	113	FtG	D	west	CC	15							
28/02/20	212	FtG	D	EXM	NC	16							
29/02/20							29/02/2020	0222	Antechinus spp	Pr	East	CC	6
01/03/20	0111	FtG	D	EXM	NC	19							
01/03/20							1/03/2020	0230	SuG	D	NDM	NC	7
04/03/20	0158	SqG	Pr	NDM	NC	22							
18/03/20							18/03/2020	0153	SqG	D	EXM	NC	8-25
22/03/20	0354	Antechinus spp	Pr	EXM	NC	23							
							24/03/2020	2058	SqG	Pr	NDM	NC	26
24/03/20	2221	SqG	Pr	NDM	NC	26							
							12/04/2020	2025	SqG	Pr	East	CC	27
12/04/20	2135	SqG	Pr	West	CC	30-31							
24/04/20							24/04/20	2341	FtG	D	East	CC	28
25/04/20							25/04/20	349	SqG	Pr	EXM	NC	29-31
25/04/20							25/04/20	2310	SqG	Pr	EXM	NC	32-34
26/04/20	0003	SqG	Pr	NDM	NC	33							
26/04/20	0031	SqG	D	West	CC	34-38	26/04/2020	0035	SqG	D	West	CC	35
26/04/20	2233	SuG	Pr	East	CC	40-43							
							30/04/2020	0507	Antechinus spp	Pr	West	CC	36
01/05/20	0312	SqG	Pr	East	CC	46-47							
							10/05/2020	1847	SqG	D	NDM	NC	1
10/05/20	2051	SqG	Pr	EXM	NC	1							
							12/05/2020	2036	SqG	D	East	CC	2

Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's	Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's
							14/05/2020	2009	Antechinus spp	D	East	CC	3
							15/05/2020	2129	SqG	D	East	CC	4
16/05/20	0004	SqG	D	NDM	NC	2							
17/05/20	0122	SqG	D	West	CC	3							
							18/05/20	2224	SqG	D	East	CC	6
18/05/20	2353	SqG	Pr	West	CC	4							
							19/05/2020	0414	SqG	D	East	CC	7
							20/05/2020	2121	SqG	Pr	East	CC	8
							21/05/2020	2101	SqG	Pr	East	CC	9
							22/05/2020	2150	SqG	D	East	CC	10-11
22/05/20	0131	SqG	D	West	CC	5-6							
							23/05/20	2109	SqG	Pr	East	CC	12
23/05/20	2302	SqG	Pr	West	CC	7							
							24/05/2020	2255	SqG	Pr	East	CC	13
25/05/20	0043	SqG	Pr	EXM	NC	9-10							
							25/05/2020	2150	SqG	Pr	East	CC	14
							26/05/2020	2234	SqG	Pr	East	CC	15
							27/05/2020	1912	SqG	Pr	East	CC	16
28/05/20	1858	SqG	D	NDM	NC	12	28/05/20	1855	SqG	Pr	East	CC	17
							29/05/20	2240	SqG	D	East	CC	18
29/05/20	2345	SqG	D	East	CC	15-16	29/05/2020	2344	SqG	Pr	East	CC	19
							30/05/2020	2339	SqG	Pr	East	CC	20
01/06/20	0241	SqG	D	EXM	NC	19-24							
							2/06/2020	0156	SqG	D	East	CC	21
							3/06/2020	0310	SqG	Pr	East	CC	22
08/06/20	1849	SqG	Pr	EXM	NC	25							
							8/06/2020	1944	SqG	Pr	East	CC	23
09/06/20	2013	SqG	Pr	EXM	NC	27							
							13/06/2020	2120	SqG	D	East	CC	25
							14/06/2020	1954	SqG	D	East	CC	26
							15/06/2020	2013	SqG	Pr	East	CC	27
16/06/20	0133	FtG	Pr	EXM	NC	30							



Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's	Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's
							16/06/2020	1827	SqG	D	East	CC	28
17/06/20	1904	SqG	Pr	NDM	NC	32	17/06/2020	1903	SqG	Pr	East	CC	29
							19/06/2020	0023	SqG	D	West	CC	30
							21/06/2020	2115	SqG	D	East	CC	31
22/06/20	0206	SqG	D	West	CC	36-37							
22/06/20	0429	SqG	D	EXM	NC	41-44							
							23/06/2020	0020	SqG	D	East	CC	32
							24/06/2020	2349	SqG	D	East	CC	33-35
							25/06/2020	2120	SqG	Pr	East	CC	36
							26/06/2020	0045	SuG	Pr	EXM	NC	37
26/06/20	0216	SqG	D	EXM	NC	45-48	26/06/2020	0204	SuG	Pr	EXM	NC	39
26/06/20	2118	FtG	D	EXM	NC	50							
							28/06/2020	0138	SqG	D	EXM	NC	41-45
							29/06/2020	0122	SqG	D	EXM	NC	46-47
							30/06/2020	0252	SqG	D	East	CC	48
30/06/20	0335	FtG	D	West	CC	52							
							1/07/2020	0304	SqG	D	East	CC	49
							7/07/2020	1854	SqG	Pr	East	CC	50
11/07/20	2030	SqG	D	EXM	NC	54							
							13/07/2020	2142	SqG	D	East	CC	52
13/07/20	2224	SqG	D	EXM	NC	55-59							
14/07/20	2254	SqG	D	East	CC	60-64	14/07/2020	2248	SqG	D	East	CC	53
							15/07/2020	0220	SqG	D	EXM	NC	54-63
							15/07/2020	2113	SqG	D	EXM	NC	64-67
							16/07/2020	2255	SqG	D	East	CC	68
							17/07/2020	0211	FtG	D	West	CC	69
							18/07/2020	2329	SqG	D	EXM	NC	70-72
							21/07/2020	0230	SqG	D	EXM	NC	73-75
							21/07/2020	2133	SqG	D	East	CC	76
							23/07/2020	0013	SqG	D	EXM	NC	77-81
							24/07/2020	0130	SqG	D	East	CC	82
							27/07/2020	2329	SqG	D	NDM	NC	83

Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's	Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's
							28/07/2020	0044	SqG	D	EXM	NC	84-85
30/07/20	0200	FtG	D	EXM	NC	67-68							
							1/08/2020	0342	SqG	D	East	CC	88-89
							2/08/2020	0444	SqG	Pr	EXM	NC	90
							5/08/2020	1843	SqG	Pr	East	CC	91
							10/08/2020	2320	SqG	D	EXM	NC	92-93
							11/08/2020	2148	SqG	D	East	CC	94
							13/08/2020	2158	SqG	D	East	CC	95
							13/08/2020	2226	SqG	D	EXM	NC	96-97
							14/08/2020	0237	SqG	D	EXM	NC	98-99
15/08/20	2238	FtG	D	EXM	NC	76							
16/08/20	0012	FtG	D	EXM	NC	78							
							16/08/2020	2258	SqG	D	East	CC	101
							17/08/2020	0403	SqG	D	EXM	NC	102-104
							18/08/2020	0019	SqG	D	East	CC	1-2
							18/08/2020	2358	SqG	D	West	CC	3
							20/08/2020	0011	SqG	D	East	CC	4
							24/08/2020	0216	SqG	Pr	NDM	NC	5-6
							24/08/2020	2330	SqG	Pr	NDM	NC	7-8
							25/08/2020	2259	SqG	Pr	NDM	NC	9
							27/08/2020	0359	SuG	D	EXM	NC	10-12
							6/09/2020	2133	SqG	Pr	East	CC	14
07/09/20	2012	FtG	D	West	2012	15							
							11/09/2020	2138	SqG	D	East	CC	15
							11/09/2020	2357	FtG	D	West	CC	16
							12/09/2020	1936	FtG	D	West	CC	17
							12/09/2020	2002	FtG	D	West	CC	18
							12/09/2020	2211	FtG	D	West	CC	19-20
12/09/20	2300	FtG	D	EXM	NC	18-19	12/09/2020	2304	FtG	D	West	CC	21
12/09/20	2327	SqG	D	EXM	NC	20-22							

Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's	Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's
12/09/20	2342	FtG	D	West	CC	24							
							13/09/2020	0253	FtG	D	West	CC	22
							13/09/2020	1933	FtG	D	EXM	NC	24
							13/09/2020	2018	FtG	D	EXM	NC	25
							13/09/2020	2103	FtG	D	West	CC	26
							13/09/2020	2300	FtG	D	West	CC	27
							13/09/2020	2347	FtG x 2	D	West	CC	28
							14/09/2020	0036	FtG	D	EXM	NC	30-33
							14/09/2020	0108	FtG	D	West	CC	34
							14/09/2020	0146	FtG	D	NDM	NC	36
							14/09/2020	0229	FtG	D	EXM	NC	37-38
							14/09/2020	1930	FtG	D	West	CC	40
							15/09/2020	1927	FtG	Pr	EXM	NC	41
							15/09/2020	2311	FtG	Pr	EXM	NC	42
							15/09/2020	2348	FtG	D	EXM	NC	43
16/09/20	0058	FtG	D	EXM	NC	29							
							16/09/2020	2327	FtG	D	West	CC	44
							17/09/2020	2229	FtG	D	EXM	NC	46
							49/9/20	2000	FtG	D	East	CC	47
							20/09/2020	2359	SqG	D	East	CC	48
							23/09/2020	2212	FtG	D	West	CC	49
							23/09/2020	2350	SqG	Pr	East	CC	50
							25/09/2020	0001	FtG	D	EXM	NC	51-52
							25/09/2020	0248	FtG	D	EXM	NC	55-56
							26/09/2020	0211	SqG	D	EXM	NC	57-58
							27/09/2020	0259	FtG	D	EXM	NC	59-61
							4/10/2020	0348	FtG	D	East	CC	63
							4/10/2020	0407	FtG	D	East	CC	64
							4/10/2020	1902	SqG	D	East	CC	65
							5/10/2020	0018	FtG	Pr	NDM	NC	66
							5/10/2020	2017	SqG	D	East	CC	67
							6/10/2020	0013	FtG	D	East	CC	68

Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's	Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's
							6/10/2020	0149	FtG	Pr	East	CC	69
06/10/20	1942	FtG	D	West	CC	34							
							6/10/2020	1959	SqG	D	East	CC	70
06/10/20	2220	FtG	D	EXM	NC	36							
06/10/20	2248	FtG	D	West	CC	37							
08/10/20	2201	FtG	D	West	CC	40-41							
08/10/20	2324	FtG	D	West	CC	43							
							9/10/2020	0026	FtG	D	EXM	NC	71
							9/10/2020	0148	FtG	D	East	CC	72
							9/10/2020	2201	FtG	D	EXM	NC	74-75
							9/10/2020	2251	FtG	D	East	CC	76
10/10/20	1956	FtG	D	EXM	NC	48-49							
							10/10/2020	2047	SqG	D	East	CC	77
10/10/20	2147	FtG	D	EXM	NC	51-52							
10/10/20	2231	FtG	D	EXM	NC	53							
10/10/20	2353	FtG	D	EXM	NC	55-58							
11/10/20	0016	FtG	D	EXM	NC	59-63							
							11/10/2020	0216	FtG	D	EXM	NC	81
							11/10/2020	0304	FtG	D	EXM	NC	82
11/10/20	2030	FtG	D	EXM	NC	65							
11/10/20	2147	FtG	D	West	CC	67							
11/10/20	2250	FtG	D	East	CC	69	11/10/2020	2254	FtG	D	EXM	NC	83
							11/10/2020	2336	FtG	D	West	CC	84
12/10/2020	17	FtG	D	EXM	NC	71							
							12/10/2020	0026	FtG	D	EXM	NC	85-86
							12/10/2020	0050	FtG	D	East	CC	87
12/10/2020	131	FtG	D	EXM	NC	75							
13/10/2020	12	FtG	D	EXM	NC	76							
							13/10/2020	2009	FtG	D	West	CC	90
							13/10/2020	2107	FtG	D	East	CC	91
							13/10/2020	2311	SqG	D	East	CC	92

Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's	Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's
							14/10/2020	0020	FtG	D	West	CC	93
							14/10/2020	0137	FtG	D	West	CC	95
							14/10/2020	0204	FtG	D	EXM	NC	96-97
14/10/20	2115	FtG	D	EXM	NC	77							
							14/10/2020	2125	SqG	D	East	CC	98
							14/10/2020	2240	FtG	D	EXM	NC	99-100
14/10/20	2333	FtG	D	EXM	NC	78							
							15/10/2020	0015	FtG	D	EXM	NC	101
15/10/20	0122	FtG	D	West	CC	79							
							15/10/2020	0156	FtG	D	EXM	NC	102-103
							15/10/2020	0254	FtG	D	EXM	NC	106-107
15/10/20	1941	FtG	D	EXM	NC	80							
							15/10/2020	2308	FtG	D	EXM	NC	108
							16/10/2020	2111	FtG	D	EXM	NC	110
16/10/20	2328	FtG	D	EXM	NC	85	16/10/2020	2335	FtG	D	EXM	NC	111
							16/10/2020	2349	FtG	D	East	CC	112
17/10/20	0036	FtG	D	West	CC	86							
							17/10/2020	0350	FtG	D	EXM	NC	114
17/10/20	1917	FtG	D	West	CC	90							
17/10/20	2100	FtG	D	EXM	NC	91							
17/10/20	2144	FtG	D	EXM	NC	94-102							
17/10/20	2214	FtG	D	EXM	NC	115-116							
							17/10/2020	2232	FtG	D	EXM	NC	115
17/10/20	2312	FtG	D	EXM	NC	120-128	17/10/2020	2249	FtG x 2	D	West	CC	116
17/10/2020	2344	FtG	D	West	CC	130,134							
18/10/2020	1	FtG	D	EXM	NC	136							
18/10/20	0045	FtG	D	West	CC	139	18/10/2020	0043	FtG	D	EXM	NC	118-121
							18/10/2020	0100	SqG	D	EXM	NC	122
18/10/2020	102	FtG	D	EXM	NC	142-148,152-153							



Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's	Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's
							18/10/2020	0237	FtG	D	EXM	NC	123
19/10/20	2258	FtG	D	EXM	NC	154							
20/10/20	1919	FtG	D	East	CC	155							
21/10/20	2017	FtG	D	East	CC	156-157							
20/10/20	2110	FtG	D	East	CC	160							
20/10/20	2111	FtG	D	EXM	NC	161							
							20/10/2020	2202	FtG	D	West	CC	124
20/10/20	2218	FtG	D	EXM	NC	163,166							
							20/10/2020	2237	FtG	D	West	CC	125
20/10/20	2259	FtG	D	EXM	NC	167							
20/10/20	2335	FtG	D	East	CC	170-172							
							20/10/2020	2347	FtG	D	EXM	NC	127-128
21/10/20	0041	FtG	D	East	CC	178							
21/10/20	0107	FtG	D	East	CC	182							
21/10/20	0108	FtG	D	EXM	NC	183-84							
21/10/20	1913	FtG	D	EXM	NC	185							
21/10/20	1943	FtG	D	EXM	NC	186-87							
21/10/20	2039	FtG	D	EXM	NC	188,190							
							21/10/2020	2047	FtG	D	East	CC	129
21/10/20	2115	FtG	D	EXM	NC	191							
21/10/20	2205	FtG	D	EXM	NC	195-202							
							21/10/2020	2223	FtG	D	East	CC	130
21/10/20	2251	FtG	D	EXM	NC	203-05							
21/10/20	2321	FtG	D	East	CC	206-208							
21/10/20	2341	FtG	D	East	CC	206-211							
21/10/20	2351	FtG	D	EXM	NC	212-219							
22/10/20	0042	<b>FtG</b>	D	WEST	CC	220							
22/10/21	0106	FtG	D	EXM	NC	221							
							22/10/2020	0216	FtG	D	West	CC	131
22/10/21	2333	FtG	D	EXM	NC	223-225							
23/10/21	2319	FtG	D	EXM	NC	226-229							

Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's	Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's
24/10/21	0109	FtG	D	EXM	NC	230-232							
							24/10/2020	0144	SqG	D	East	CC	133
							24/10/2020	0204	FtG	D	West	CC	134
25/10/21	0129	FtG	D	WEST	CC	235							
26/10/21	2250	SqG	PR	EXM	NC	237-238							
							27/10/2020	0139	FtG	D	EXM	NC	135-136
							27/10/2020	2358	SqG	Pr	NDM	NC	137
							30/10/2020	2318	FtG	D	East	CC	139
							1/11/2020	0058	FtG	D	NDM	NC	140
							1/11/2020	0309	FtG	D	NDM	NC	141
							1/11/2020	1855	FtG	D	EXM	NC	142,144
01/11/20	1949	FtG	D	WEST	CC	241	1/11/2020	1950	FtG	D	EXM	NC	145-146
							1/11/2020	1950	FtG	D	EXM	NC	145-146
							1/11/2020	2109	FtG	D	West	CC	147
01/11/20	2249	FtG	D	WEST	CC	242							
01/11/20	2328	FtG	D	WEST	CC	245							
							2/11/2020	0105	FtG	D	EXM	NC	148-149
03/11/20	1934	FtG	D	EXM	NC	248-251							
							3/11/2020	1938	SqG	D	East	CC	152
							3/11/2020	2008	SqG	Pr	West	CC	153
							4/11/2020	0024	FtG	D	East	CC	154
							4/11/2020	1924	FtG	D	EXM	NC	155-156
04/11/20	1932	FtG	D	EXM	NC	252-259							
							4/11/2020	1942	FtG	D	EXM	NC	157
04/11/20	2116	FtG	D	EXM	NC	260-264							
							4/11/2020	2359	FtG	D	East	CC	160
05/11/20	0054	FtG	D	WEST	CC	265							
05/11/20	2138	SuG	D	East	CC	267							
06/11/20	0039	FtG	D	West	CC	270							

Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's	Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's
							6/11/2020	0200	FtG	D	EXM	NC	162-164
							6/11/2020	1935	FtG	D	EXM	NC	165
							6/11/2020	2106	SuG	D	EXM	NC	166
							7/11/2020	0004	FtG	D	East	CC	168
							7/11/2020	0025	FtG	D	West	CC	169-170
							7/11/2020	0054	FtG	D	EXM	NC	171-173
07/11/20	0137	FtG	D	West	CC	277							
							7/11/2020	0217	FtG	D	West	CC	174
							8/11/2020	0005	SqG	D	East	CC	175
							8/11/2020	2000	FtG	D	NDM	NC	176
							8/11/2020	2021	FtG	D	West	CC	177
							8/11/2020	2104	FtG	D	West	CC	178
08/11/20	2140	FtG	D	West	CC	279							
							8/11/2020	2200	SqG	D	East	CC	179
							8/11/2020	2208	FtG	D	EXM	NC	180-181
08/11/20	2258	FtG	D	East	CC	280	8/11/2020	2256	FtG	D	East	CC	182
08/11/20	2302	SqG	Pr	East	CC	282							
							8/11/2020	2323	FtG	D	EXM	NC	184
08/11/20	2327	FtG	D	EXM	NC	286							
09/11/20	0018	FtG	D	EXM	NC	287-289							
							9/11/2020	0031	SqG	Pr	EXM	NC	185-188
							9/11/2020	0101	FtG	D	West	CC	191
09/11/20	0144	SqG	D	EXM	NC	291-295							
							9/11/2020	0153	FtG	D	EXM	NC	192-195
							9/11/2020	0255	FtG	D	EXM	NC	196-198
09/11/20	1921	FtG	D	EXM	NC	296-302							
							9/11/2020	1950	FtG	D	EXM	NC	200
							9/11/2020	2023	FtG	D	EXM	NC	201

Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's	Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's
							9/11/2020	2100	FtG	D	EXM	NC	202
09/11/20	2103	FtG	D	EXM	NC	303-305							
09/11/20	2256	FtG	D	West	CC	306							
							10/11/2020	2116	SqG	Pr	NDM	NC	203
10/11/20	0142	FtG	D	West	CC	308	10/11/2020	0146	FtG	D	West	CC	206
							10/11/2020	0241	FtG	D	East	CC	207
10/11/20	1938	FtG	D	EXM	NC	311							
10/11/20	1958	FtG	D	EXM	NC	313							
							10/11/2020	2109	SqG	D	East	CC	209
10/11/20	2202	FtG	D	EXM	NC	315-317							
10/11/20	2332	FtG	D	EXM	NC	318-319							
11/11/20	0037	FtG	D	EXM	NC	320-322							
							11/11/2020	0112	FtG	D	EXM	NC	211
							11/11/2020	1927	FtG	D	EXM	NC	212-13
11/11/20	2104	FtG	D	EXM	NC	327-329							
							11/11/2020	2146	FtG	D	East	CC	214
11/11/20	2303	FtG	D	EXM	NC	330-331							
12/11/20	0001	FtG	D	EXM	NC	332-338							
							12/11/2020	0007	FtG	D	West	CC	215
							12/11/2020	0049	FtG	D	East	CC	216
12/11/20	0128	FtG	D	West	CC	341							
							12/11/2020	0146	FtG	D	West	CC	217
							13/11/2020	0108	FtG	D	EXM	NC	219
							14/11/2020	2123	SuG	D	West	CC	220
							14/11/2020	2312	FtG	D	EXM	NC	221-22
							15/11/2020	0156	FtG	D	EXM	NC	223-24
							15/11/2020	1920	FtG	D	EXM	NC	225
							15/11/2020	2127	FtG	D	East	CC	227
							15/11/2020	2330	FtG	D	EXM	NC	228-29
							16/11/2020	0146	FtG	D	EXM	NC	230-32
							16/11/2020	0239	FtG	D	EXM	NC	233-235

Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's	Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's
							17/11/2020	0100	FtG	D	West	CC	236
							17/11/2020	0151	FtG	D	West	CC	237
							17/11/2020	0210	FtG	D	West	CC	238
							17/11/2020	2253	FtG	D	West	CC	239
							18/11/2020	0309	FtG	D	EXM	NC	240-43
							18/11/2020	0343	FtG	D	EXM	NC	244
							18/11/2020	2029	FtG	D	West	CC	245
							18/11/2020	2213	FtG	D	West	CC	246
							19/11/2020	0135	SqG	Pr	West	CC	248
							19/11/2020	0155	FtG	D	West	CC	249
							19/11/2020	2011	FtG	D	East	CC	252
							19/11/2020	2142	FtG	D	West	CC	253
							19/11/2020	2241	FtG	D	West	CC	254
							21/11/2020	2112	FtG	D	EXM	NC	257
							22/11/2020	0018	Antechinus spp	D	EXM	NC	258
							22/11/2020	0120	FtG	D	West	CC	259
							22/11/2020	0140	SuG	D	EXM	NC	260
							22/11/2020	0218	FtG	D	EXM	NC	262
							22/11/2020	0250	FtG	D	EXM	NC	263
							22/11/2020	0325	FtG	D	EXM	NC	264
							22/11/2020	1937	FtG	D	EXM	NC	265
							22/11/2020	2048	FtG	D	East	CC	266
							22/11/2020	2145	FtG	D	East	CC	267
23/11/20	0051	SqG	D	East	CC	669							
							24/11/2020	0225	FtG	D	EXM	NC	268-69
							24/11/2020	2027	FtG	D	EXM	NC	270-71
							25/11/2020	0009	FtG	D	EXM	NC	272-73
							25/11/2020	0057	FtG	D	EXM	NC	274
							25/11/2020	2029	FtG	D	EXM	NC	275
							25/11/2020	2157	FtG	D	EXM	NC	276-77
							26/11/2020	0026	FtG	D	EXM	NC	278
							26/11/2020	0155	FtG	D	EXM	NC	279

Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's	Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's
							26/11/2020	0305	FtG	D	EXM	NC	280-81
							26/11/2020	1940	FtG	D	East	CC	282
							26/11/2020	2147	FtG	D	East	CC	283-84
							26/11/2020	2333	FtG	D	NDM	NC	285
							27/11/2020	0141	FtG	D	East	CC	286
							27/11/2020	0208	FtG	D	EXM	NC	287-290
							27/11/2020	0307	FtG	D	EXM	NC	291,293
							27/11/2020	1947	FtG	D	East	CC	294
							30/11/2020	1931	FtG	D	East	CC	295
							1/12/2020	0342	SqG	Pr	East	CC	296
							3/12/2020	0237	SqG	Pr	EXM	NC	297
							3/12/2020	0309	SqG	Pr	East	CC	299
							4/12/2020	1946	SqG	Pr	East	CC	300
							4/12/2020	2015	FtG	D	East	CC	301
							5/12/2020	0052	FtG	D	EXM	NC	302-03
							5/12/2020	0121	FtG	D	East	CC	304
							5/12/2020	0152	FtG	D	NDM	NC	305
							5/12/2020	0322	FtG	D	NDM	NC	306
							6/12/2020	2046	SqG	Pr	East	CC	308
							6/12/2020	2357	FtG	D	NDM	NC	309
							7/12/2020	2223	FtG	D	West	CC	310
							8/12/2020	1954	FtG	D	EXM	NC	311
							8/12/2020	2101	FtG	D	East	CC	312-314
							8/12/2020	2129	FtG	D	EXM	NC	315
							8/12/2020	2242	SqG	Pr	East	CC	316
							8/12/2020	2314	SqG	Pr	EXM	NC	317-319
							8/12/2020	2318	FtG	D	East	CC	320
							8/12/2020	2349	FtG	D	East	CC	321
							9/12/2020	0037	FtG	D	East	CC	322



Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's	Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's
							9/12/2020	0053	SuG	Pr	EXM	NC	323-24
							9/12/2020	0118	FtG	D	East	CC	322-324
							9/12/2020	0232	FtG	D	EXM	NC	328-29
							9/12/2020	1941	FtG	D	EXM	NC	330
							9/12/2020	2255	SqG	Pr	West	CC	331
13/11/2020 to							19/12/2020	2107	FtG	D	EXM	NC	334-35
20/12/20		FtG	D	28exm12w7e			20/12/2020	0224	FtG	D	NDM	NC	337
<b>RB3 East (McPhillips)</b>							<b>RB3 west</b>						
15/01/2020	0026	FtG	D	East	CC	218							
15/01/20	2152	Antechinus spp	D	EXM	NC	1-3							
20/01/20							20/01/2020	0222	SqG	D	East	CC	1
24/01/20	0026	Antechinus spp	D	West	CC	4-6							
01/02/20	2358	Antechinus spp	D	West	CC	10							
02/02/20	0121	FtG	D	EXM	NC	11-12							
04/02/20	0203	Antechinus spp	D	EXM	NC	13							
29/02/20	2308	FtG	D	West	CC	16							
01/03/20	0100	FtG	D	EXM	NC	17,19							
01/03/20	0418	FtG	D	East	CC	20							
05/03/20	0424	FtG	D	East	CC	21							
08/03/20	0355	FtG	D	West	CC	22							
13/03/20							13/03/20	0330	SqG	D	West	CC	3
16/03/20	2115	FtG	D	East	CC	24							
18/03/20	0058	FtG	D	West	CC	26							
18/03/20	1928	FtG	D	NDM	NC	27							
19/03/20	0313	FtG	D	East	CC	29							
22/03/20	0059	FtG	D	East	CC	33							

Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's	Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's
22/03/20	0153	FtG	D	East	CC	34							
26/03/20	2245	FtG	D	EXM	NC	37							
27/03/20	0242	FtG	D	EXM	NC	38							
28/03/20	0002	FtG	D	East	CC	40							
28/03/20	0057	FtG	D	EXM	NC	41,43							
29/03/2020	2037	FtG	D	EXM	NC	48							
3/04/2020	0458	FtG	D	East	CC	53							
5/04/2020	0316	FtG	D	West	CC	55							
9/04/2020	1902	FtG	D	West	CC	57							
21/04/2020	1908	FtG	D	West	CC	60							
22/04/2020	1928	FtG	D	East	CC	61							
24/04/2020	2317	FtG	D	EXM	NC	63							
3/05/2020	1931	FtG	D	EXM	NC	66							
							20/05/2020	2336	FtG	D	East	CC	1014
							21/05/2020	2148	SqG	Pr	EXM	NC	1104
2/06/2020	0321	FtG	D	EXM	NC	1	25/05/2020	0223	SqG	Pr	EXM	NC	1403-1407
29/06/2020	0435	FtG	Pr	West	CC	2							
21/07/2020	0012	FtG	Pr	West	CC	3							
29/07/2020	0218	FtG	Pr	West	CC	4							
16/09/2020	2106	FtG	Pr	NDM	NC	1							
21/09/2020	2217	FtG	Pr	NDM	NC	2							
24/09/2020	0159	FtG	Pr	NDM	NC	3							
							26/09/2020	0457	FtG	D	East	CC	27
5/10/2020	2032	FtG	Pr	NDM	NC	4							
							11/10/2020	0059	FtG	Pr	EXM	NC	29
11/10/2020	0208	FtG	D	EXM/East	CC	5	11/10/2020	0202	FtG	Pr	EX/east	CC	31
							11/10/2020	0252	FtG	Pr	EXM	NC	32
							13/10/2020	2245	FtG	D	EXM	NC	37
							14/10/2020	2341	FtG	D	EXM	NC	39
							14/10/2020	2358	FtG	Pr	EXM	NC	42

Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's	Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's
							15/10/2020	0015	FtG	Pr	East	CC	45
							15/10/2020	0242	FtG	D	EXM	NC	46
							15/10/2020	2025	FtG	D	EXM	NC	49
							15/10/2020	2126	SuG		EXM	NC	51-125
							15/10/2020	2309	FtG	D	EXM	NC	127
22/10/2020	0214	FtG	D	East	CC	6							
							8/11/2020	105	FtG	Pr	EXM	NC	138
							8/11/2020	2257	FtG	Pr	EXM	NC	140
							9/11/2020	121	FtG	Pr	EXM	NC	142
11/11/2020	0233	FtG	D	East	CC	8							
12/11/2020	0347	FtG	D	East	CC	9							
							15/11/2020	2149	FtG	D	EXM	NC	149
							15/11/2020	2249	FtG	D	EXM	NC	151
							15/11/2020	2340	FtG	D	EXM	NC	152-153
							17/11/2020	0142	FtG	D	EXM	NC	154
							18/11/2020	2018	FtG	D	EXM	NC	157
							18/11/2020	2213	FtG	D	EXM	NC	159-175
							18/11/2020	2326	FtG	D	EXM	NC	176-182
							19/11/2020	0004	FtG	D	EXM	NC	183-186
							19/11/2020	0033	FtG	Pr	EXM	NC	187
							19/11/2020	0058	FtG	Pr	EXM	NC	188-190
							19/11/2020	0209	FtG	D	EXM	NC	191-195
							19/11/2020	0312	FtG	D	EXM	NC	196-202
							19/11/2020	1949	FtG	D	EXM	NC	203-211
							19/11/2020	2142	FtG	Pr	EXM	NC	214
							20/11/2020	0133	FtG	D	EXM	NC	215-17
							20/11/2020	0206	FtG	D	EXM	NC	218

Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's	Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's
							21/11/2020	2151	FtG	D	EXM	NC	220
							21/11/2020	2229	FtG	D	EXM	NC	222-229
							21/11/2020	2330	FtG	D	EXM	NC	233
22/11/2020	0058	SqG	Pr	East	CC	11							
22/11/2020	0146	FtG	D	East	CC	12							
							22/11/2020	0305	FtG	D	East	CC	235-238
							22/11/2020	2030	FtG	D	EXM	NC	240-246
22/11/2020	2349	FtG	D	EXM	NC	13							
							23/11/2020	0006	FtG	D	West	CC	250
							23/11/2020	2352	FtG	D	EXM	NC	253-255
							25/11/2020	2312	FtG	D	EXM	NC	257
26/11/2020	0017	FtG	D	EXM	NC	14							
							26/11/2020	2354	FtG	D	EXM	NC	259-263
							27/11/2020	0330	FtG	D	EXM	NC	264
							28/11/2020	0146	FtG	D	EXM	NC	266-68
							28/11/2020	2138	FtG	D	EXM	NC	269-270
7/12/2020	0117	FtG	Pr	East	CC	15							
							8/12/2020	0142	FtG	D	EXM	NC	273-279
							13/12/2020	0229	FtG	D	EXM	NC	284-299
							20/12/2020	2314	SqG	Pr	EXM	NC	300
							21/12/2020	0028	FtG	D	EXM	NC	303-314
							<b>RB4 west</b>						
05/01/20	0243	SuG	D	West	CC	112	RB4 west						
02/02/20	0041	FtG	D	West	CC	9							

Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's	Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's
22/02/20	0241	FtG	D	West	CC	25							
17/03/20	2256	FtG	D	West	CC	31							
19/03/20	1953	SqG	Pr	NDM	NC	32							
02/05/20													
23/03/20	2357	FtG	D	West	CC	33							
24/03/20	2355	FtG	D	West	CC	34							
25/03/20	2128	FtG	D	West	CC	35							
25/03/20	2220	FtG	D	West	CC	36							
26/03/20	0021	FtG	D	West	CC	37							
26/03/20	0352	FtG	D	West	CC	38							
28/03/20	0120	SqG	Pr	NDM	NC	39-40							
31/03/20	2331	FtG	D	West	CC	41							
01/04/20	2332	FtG	D	West	CC	42							
02/04/20	2142	FtG	D	West	CC	43							
05/04/20	0353	FtG	D	West	CC	44							
16/04/20	2348	SqG	Pr	NDM	NC	46-47							
26/04/20	0232	SqG	Pr	NDM	NC	52							
27/04/20	0325	SqG	D	EXM	NC	53-55							
13/05/2020	2148	SqG	D	EXM	NC	3							
25/05/20	0056	SqG	D	EXM	NC	4-5							
25/05/20	0453	SqG	D	EXM	NC	6							
27/05/20	1943	FtG	D	West	CC	7							
29/05/20	1924	FtG	D	West	CC	8							
02/06/20	0322	FtG	Pr	West	CC	9							
02/06/20	2155	FtG	D	West	CC	10							
04/06/20	0300	FtG	D	East	CC	11							
							25/07/2020	0216	SqG	Pr	west	CC	195
							16/09/2020	2111	FtG	D	EXM	NC	1

Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's	Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's
							28/09/2020	0312	FtG	D	East	CC	3
08/11/20	2139	SqG	D	EXM	NC	1-2							



## Appendix C – Glide pole fauna detections

**Table C1:** Results of 2020 glide pole fauna detections. SqG = squirrel glider; SuG = sugar glider; FtG = Feathertail Glider; East = eastward launch; West = westward launch; C = crossing; NDM = non-directional movement; EXM = exploratory movement; NC = no crossing/launch observed.

Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's
<b>GP1 (Corindi glide Pole)</b>						
11/01/2020	2029	FtG	D	West	Westward C	113
17/01/20	2013	FtG	D	EXM	NC	1
21/01/20	0212	FtG	D	EXM	NC	3
22/01/20	2151	Antechinus spp	D	EXM	NC	4-5
23/01/20	0352	FtG	D	EXM	NC	6
29/01/20	0403	FtG	Pr	EXM	NC	11
30/01/20	0354	FtG	Pr	EXM	NC	12
01/02/20	0404	FtG	D	EXM	NC	13
01/02/20	0412	FtG	D	EXM	NC	16
02/02/20	0101	FtG	Pr	EXM	NC	17
02/02/20	0404	FtG	D	EXM	NC	19-20
03/02/20	0105	FtG	D	EXM	NC	22
03/02/20	0312	Antechinus spp	D	EXM	NC	23-24
05/02/20	0351	FtG	D	EXM	NC	27-29
08/02/20	0429	FtG	D	EXM	NC	31
17/02/2020	0212	FtG	D	EXM	NC	32-33
18/02/2020	0203	FtG	D	EXM	NC	34
19/02/2020	0400	FtG	D	EXM	NC	35-36
21/02/2020	0325	FtG	D	EXM	NC	38
25/02/2020	0355	FtG	D	EXM	NC	42
27/02/2020	2041	FtG	D	West	Westward C	46
28/02/2020	0242	FtG	D	EXM	NC	47
28/02/2020	441	FtG	D	EXM	NC	48-50
29/02/2020	0439	FtG	D	EXM	NC	52
1/03/2020	0444	FtG	D	EXM	NC	53
2/03/2020	2350	FtG	D	East	Eastward C	57
3/03/2020	0021	FtG	D	EXM	NC	58
3/03/2020	0222	FtG	D	EXM	NC	59
3/03/2020	0431	FtG	D	EXM	NC	61
4/03/2020	0418	FtG	D	EXM	NC	64
5/03/2020	0423	FtG	D	EXM	NC	65
6/03/2020	0423	FtG	D	EXM	NC	66-67,69
7/03/2020	0451	FtG	D	EXM	NC	74-76
8/03/2020	0435	FtG	D	EXM	NC	78
9/03/2020	0519	FtG	D	EXM	NC	79-80

Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's
10/03/2020	1958	FtG	D	EXM	NC	81-82
12/03/2020	2156	FtG	D	EXM	NC	84-85
14/03/2020	0126	FtG	D	EXM	NC	86
14/03/2020	2334	FtG	D	EXM	NC	88
16/03/2020	2143	FtG	D	EXM	NC	89
19/03/2020	0325	FtG	D	EXM	NC	92-94
27/03/2020	0456	FtG	D	EXM	NC	96-97
21/04/2020	0306	Antechinus spp	D	EXM	NC	99
2/05/2020	0034	FtG	D	EXM	NC	100
25/06/2020	0139	FtG	D	EXM	NC	1
9/08/2020	2048	FtG	D	East	Eastward C	4
13/08/2020	2341	FtG	D	East	Eastward C	5
20/08/2020	2209	FtG	D	EXM	NC	4
24/08/2020	0229	FtG	D	EXM	NC	7
25/08/2020	0112	FtG	D	East	Eastward C	11
25/08/2020	2333	FtG	D	EXM	NC	12
26/08/2020	0027	FtG	D	EXM	NC	13-17
26/08/2020	0028	FtG	D	EXM	NC	18
27/08/2020	0247	FtG	D	EXM	NC	19-21
28/08/2020	0500	FtG	D	EXM	NC	22
11/09/2020	2326	FtG	D	EXM	NC	29
12/09/2020	0236	FtG	D	East	Eastward C	31
13/09/2020	0417	FtG	D	East	Eastward C	32
16/09/2020	2000	FtG	D	EXM	NC	35
22/09/2020	2347	FtG	D	EXM	NC	38
23/09/2020	2351	FtG	D	EXM	NC	40
24/09/2020	2222	FtG	D	EXM	NC	44
26/09/2020	2140	FtG	D	East	Eastward C	47
27/09/2020	0237	FtG	D	West	Westward C	50
27/09/2020	0500	FtG	D	East	Eastward C	57
29/09/2020	0325	FtG	D	EXM	NC	63-65
30/09/2020	0406	FtG	D	East	Eastward C	66-67
10/10/2020	2342	FtG	D	West	Westward C	69
11/10/2020	1936	FtG	D	EXM	NC	70-71
11/10/2020	2059	FtG	D	EXM	NC	72
13/10/2020	0124	FtG	D	East	Eastward C	73
14/10/2020	0032	FtG	D	EXM	NC	75
15/10/2020	0130	FtG	D	EXM	NC	78
15/10/2020	2112	FtG	D	West	Westward C	79
16/10/2020	0343	FtG	D	West	Westward C	80
18/10/2020	0345	FtG	D	EXM	NC	81-83
20/10/2020	2049	FtG	D	EXM	NC	85
21/10/2020	0144	FtG	D	EXM	NC	86

Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's
22/10/2020	0017	FtG	D	EXM	NC	87
24/10/2020	0400	FtG	D	EXM	NC	89,91
25/10/2020	0354	FtG	D	EXM	NC	92
28/10/2020	0346	FtG	D	EXM	NC	97
30/10/2020	0347	FtG	D	West	Westward C	98
8/11/2020	2134	FtG	D	EXM	NC	110
8/11/2020	2333	FtG	D	EXM	NC	111-112
10/11/2020	0124	FtG	D	EXM	NC	113
11/11/2020	2123	FtG	D	EXM	NC	115
11/11/2020	2252	FtG	D	EXM	NC	116
13/11/2020	0043	FtG	D	EXM	NC	118
15/11/2020	0130	FtG	D	West	Westward C	123-124
15/11/2020	2236	FtG	D	EXM	NC	125
17/11/2020	0304	FtG	D	EXM	NC	126
18/11/2020	2217	FtG	D	EXM	NC	128-129
19/11/2020	0029	FtG	D	EXM	NC	131
19/11/2020	0208	FtG	D	EXM	NC	132
19/11/2020	0302	FtG	D	West	Westward C	133
19/11/2020	0322	FtG	D	EXM	NC	134
19/11/2020	2137	FtG	D	EXM	NC	135-136
20/11/2020	0034	FtG	D	EXM	NC	137
20/11/2020	0125	FtG	D	EXM	NC	138-140
20/11/2020	1957	FtG	D	EXM	NC	141
20/11/2020	2036	FtG	D	EXM	NC	142
21/11/2020	2102	FtG	D	EXM	NC	145
22/11/2020	0053	FtG	D	EXM	NC	147
22/11/2020	0254	FtG	D	EXM	NC	149-151
22/11/2020	2355	FtG	D	EXM	NC	152
24/11/2020	0303	FtG	D	EXM	NC	154,156
24/11/2020	0332	FtG	D	EXM	NC	157-160
25/11/2020	0135	FtG	D	EXM	NC	161-162
26/11/2020	0054	FtG	D	EXM	NC	164-165
26/11/2020	2115	FtG	D	West	Westward C	166
27/11/2020	0307	FtG	D	EXM	NC	167
28/11/2020	0150	SqG	D	EXM	NC	170-177
3/12/2020	1954	FtG	D	EXM	NC	180-182
6/12/2020	2258	FtG	D	EXM	NC	186-189
7/12/2020	2015	FtG	D	EXM	NC	190
7/12/2020	2035	FtG	D	West	Westward C	191
7/12/2020	2055	FtG	D	EXM	NC	192
8/12/2020	2145	FtG	D	EXM	NC	193-194
9/12/2020	0051	FtG	D	EXM	NC	195-196
9/12/2020	2022	FtG	D	EXM	NC	197

Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's
9/12/2020	2237	FtG	D	EXM	NC	198-199
10/12/2020	2348	FtG	D	West	Westward C	200
12/12/2020	0002	FtG	D	EXM	NC	201
17/12/2020	2002	FtG	D	EXM	NC	203
<b>GP2 (Halfway Ck glide pole SOUTH)</b>						
31/12/19	0052	FtG	D	West	Westward C	261
16/01/20	2105	FtG	D	EXM	NC	4-6
18/01/20	2028	FtG	D	West	Westward C	7-8
23/01/20	0312	SqG	D	EXM	NC	25
27/01/20	0046	FtG	D	EXM	NC	33
19/02/20	2315	FtG	D	EXM	NC	103
28/02/20	2100	FtG	D	EXM	NC	134
29/02/20	0023	FtG	D	EXM	NC	135
29/02/20	0225	FtG	D	EXM	NC	138
04/03/20	0512	Antechinus spp	D	EXM	NC	159
15/03/20	0357	SqG	D	EXM	NC	191
25/04/20	1923	FtG	D	EXM	NC	230
28/06/20	0007	SqG	D	East	Eastward C	18
14/08/20	2009	FtG	D	West	Westward C	54-56
22/09/20	2336	FtG	D	EXM	NC	57-59
24/09/20	0058	SqG	D	West	Westward C	62-67
10/10/20	2112	FtG	D	EXM	NC	121
10/10/20	2311	FtG	D	EXM	NC	123-124
11/10/20	0032	SqG	D	East	Eastward C	125-126
14/10/20	1948	FtG	D	EXM	NC	136
17/10/20	2109	FtG	D	EXM	NC	150
18/10/20	0126	FtG	D	EXM	NC	151
08/11/20	2154	FtG	D	EXM	NC	181-182
08/11/20	2349	FtG	D	EXM	NC	183-185
11/11/20	0033	FtG	D	EXM	NC	193
11/11/20	0130	FtG	D	EXM	NC	194
11/11/20	0306	FtG	D	EXM	NC	195-199
12/11/20	0109	FtG	D	EXM	NC	200-
12/11/20	2315	FtG	D	EXM	NC	203
16/11/20	0023	FtG	D	EXM	NC	213
16/11/20	2255	FtG	D	EXM	NC	217-219
19/11/20	0013	FtG	D	EXM	NC	235-237
22/11/20	0142	FtG	D	EXM	NC	246
04/12/20	2133	FtG	D	EXM	NC	279-282
08/12/20	2239	FtG	D	EXM	NC	285-286
09/12/20	0112	FtG	D	EXM	NC	290
10/12/20	0051	FtG	D	EXM	NC	292-293

Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's
<b>GP3 (Halfway Ck glide pole NORTH)</b>						
20/01/20	0028	FtG	D	EXM	NC	2
26/01/20	2313	FtG	D	EXM	NC	4
27/01/20	0018	FtG	D	EXM	NC	5
27/01/20	2352	SqG	D	EXM	NC	7,9-11
28/01/20	0053	FtG	D	EXM	NC	13
28/01/20	0141	SqG	D	EXM	NC	15-16
29/01/20	0335	FtG	D	EXM	NC	17
02/02/20	0029	FtG	D	EXM	NC	20
02/02/20	0057	SqG	D	EXM	NC	22
02/02/20	0132	FtG	D	EXM	NC	24
02/02/20	0212	FtG	D	EXM	NC	26
02/02/20	0232	FtG	D	EXM	NC	27
29/02/20	2120	FtG	D	EXM	NC	45
29/02/20	2250	FtG	D	EXM	NC	46
05/03/20	0045	SqG	D	EXM	NC	47-48
11/05/20	1856	FtG	D	EXM	NC	1-2
12/06/20	2147	FtG	D	East	Eastward C	12
11/07/20	2221	SqG	D	EXM	NC	14
04/10/20	1950	FtG	D	EXM	NC	20
05/10/20	2113	FtG	D	EXM	NC	22
09/10/20	2301	FtG	D	EXM	NC	40-41
11/10/20	0200	FtG	D	EXM	NC	42
11/10/20	2145	FtG	D	EXM	NC	45
11/10/20	2237	FtG	D	EXM	NC	46-47
12/10/20	2106	FtG	D	EXM	NC	50
14/10/20	0010	FtG	D	EXM	NC	52-57
15/10/20	0347	Antechinus spp	D	EXM	NC	58-59
16/10/20	2246	FtG	D	EXM	NC	60-61
17/10/20	1957	FtG	D	EXM	NC	62
17/10/20	2152	FtG	D	EXM	NC	63-66
18/10/20	0013	FtG	D	EXM	NC	67-70
18/10/20	0142	FtG	D	EXM	NC	71-72
18/10/20	0234	FtG	D	EXM	NC	73-76
19/10/20	2348	FtG	D	EXM	NC	78
20/10/20	2137	FtG	D	EXM	NC	79-81
21/10/20	0200	FtG	D	EXM	NC	82-83
24/10/20	0147	FtG	D	EXM	NC	84-87
09/11/20	0102	FtG	D	EXM	NC	92
10/11/20	2234	FtG	D	EXM	NC	93-97
11/11/20	2057	FtG	D	EXM	NC	99-100
11/11/20	2302	FtG	D	EXM	NC	101-102
15/11/20	0032	FtG	D	EXM	NC	105
15/11/20	0128	FtG	D	EXM	NC	106
15/11/20	2058	FtG	D	EXM	NC	107-110
15/11/20	2132	FtG	D	EXM	NC	111
16/11/20	0018	FtG	D	EXM	NC	112
16/11/20	0037	FtG	D	EXM	NC	113-114

Date	Time	Species	Accuracy	Movement Direction	Crossing Type	Image No's
16/11/20	0120	FtG	D	EXM	NC	115-118
16/11/20	2036	FtG	D	EXM	NC	119-120
16/11/20	2110	FtG	D	EXM	NC	121-123
16/11/20	2329	FtG	D	EXM	NC	124-125
18/11/20	2025	FtG	D	EXM	NC	129-130
18/11/20	2210	FtG	D	EXM	NC	131
18/11/20	2340	FtG	D	West	Westward C	132-134
19/11/20	0000	FtG	D	EXM	NC	135-140
20/11/20	2350	FtG	D	EXM	NC	143-144
21/11/20	0139	FtG	D	EXM	NC	145-147
21/11/20	2345	FtG	D	EXM	NC	149-151
22/11/20	0106	FtG	D	EXM	NC	152-153
22/11/20	0121	FtG	D	EXM	NC	154-161
23/11/20	0113	FtG	D	EXM	NC	163-164
25/11/20	0228	FtG	D	EXM	NC	165
27/11/20	0121	SuG	D	EXM	NC	166
02/12/20	0054	FtG	D	EXM	NC	167-169
07/12/20	0135	FtG	D	EXM	NC	170
07/12/20	2234	FtG	D	EXM	NC	171
09/12/20	2302	FtG	D	EXM	NC	172-173
10/12/20	0210	FtG	D	EXM	NC	175
10/12/20	2123	FtG	D	EXM	NC	176



## Appendix D – Vegetated median hair funnel detections

**Table D1:** Results of Q1-Q2 2020 hair funnel detections. Records are number of definite and probable hair funnel detections. SqG/SuG = squirrel/sugar glider; Small dasyurids = brown antechinus, yellow-footed antechinus, dusky antechinus, common dunnart; east = east side of median, mid = within median, west = west side of median.

Site	Quarter	SqG/SuG	Small dasyurid	Cmn b-tail possum	Black rat	Feathertail glider
VM1 east	Q1	1	4	1		
	Q2		10			
VM1 mid	Q1	1	3	1		
	Q2		7		1	
VM1 west	Q1		1			1
	Q2		9			
VM2 east	Q1	9	3			
	Q2	2	6			
VM2 mid	Q1	4	1			
	Q2	1	8			
VM2 west	Q1	1	6			3
	Q2	1	8			

## Appendix E – Vegetated median camera trap detections

**Table E1:** Results of Q3-Q4 2020 vegetated median camera trap detections. YbG = yellow-bellied glider; SqG = squirrel glider; SuG = sugar glider; FtG = Feathertail Glider.

Site & Cam position	Date	Time	Species	Accuracy	Image No's
VM1-south	25/09/2020	353	SqG		1
VM1-south	26/09/2020	423	SqG	D	44016
VM1-south	27/09/2020	28	SqG	D	12663
VM1-south	27/09/2020	417	SqG	D	35-43
VM1-south	27/09/2020	2348	SqG	Pr	45-48
VM1-south	28/09/2020	4	SuG	D	49-50
VM1-south	28/09/2020	435	SqG	D	51-55
VM1-south	28/09/2020	1910	SqG	Pr	57
VM1-south	29/09/2020	440	SuG	D	58
VM1-south	29/09/2020	1902	SqG	Pr	59
VM1-south	30/09/2020	450	Sug	D	61
VM1-south	30/09/2020	2137	SqG	D	62-64
VM1-south	1/10/2020	2026	SqG	D	65
VM1-south	8/10/2020	354	SqG	D	68-69
VM1-south	9/10/2020	407	SqG	D	70-71
VM1-south	11/10/2020	246	SqG	D	74-75
VM1-south	13/10/2020	2201	SqG	D	77-78
VM1-south	14/10/2020	145	SqG	D	79
VM1-south	14/10/2020	419	SqG	D	80-82
VM1-south	14/10/2020	2027	SqG	D	83
VM1-south	15/10/2020	23	SqG	D	84-90
VM1-south	15/10/2020	351	SuG	D	91
VM1-south	15/10/2020	402	Antechinus spp	D	92-94
VM1-south	15/10/2020	2025	SqG	Pr	95
VM1-south	16/10/2020	19	SuG	D	97-98
VM1-south	16/10/2020	225	FtG	D	99
VM1-south	18/10/2020	329	FtG	D	102
VM1-south	18/10/2020	2214	SqG	D	103
VM1-south	18/10/2020	2234	Antechinus spp	D	104-105
VM1-south	19/10/2020	16	SuG	Pr	106-107
VM1-south	20/10/2020	2012	SqG	D	108
VM1-south	21/10/2020	136	SuG	D	110
VM1-south	21/10/2020	1859	SqG	D	111
VM1-south	22/10/2020	428	SqG	D	112

Site & Cam position	Date	Time	Species	Accuracy	Image No's
VM1-south	24/10/2020	119	SuG	D	113-121
VM1-south	24/10/2020	255	SqG	D	122-123
VM1-south	24/10/2020	413	SuG	D	124-126
VM1-south	24/10/2020	421	Antechinus spp	D	128
VM1-south	25/10/2020	103	SqG	D	129
VM1-south	25/10/2020	404	SuG	D	130
VM1-south	25/10/2020	2320	SqG	D	131
VM1-south	26/10/2020	19	SqG	D	133-134
VM1-south	26/10/2020	348	Antechinus spp	D	135
VM1-south	26/10/2020	419	SuG	D	136
VM1-south	27/10/2020	127	SuG	Pr	137-139
VM1-south	27/10/2020	209	SuG	D	140-143
VM1-south	27/10/2020	230	SuG	D	144
VM1-south	27/10/2020	302	SqG	D	145-146
VM1-south	27/10/2020	407	SqG	D	148
VM1-south	29/10/2020	1840	SqG	D	149-153
VM1-south	29/10/2020	117	SuG	D	154-155
VM1-south	30/10/2020	1847	SqG	D	156-158
VM1-south	1/11/2020	356	SqG	D	159-162
VM1-south	2/11/2020	310	SqG	D	166-170
VM1-south	4/11/2020	40	SuG	D	173
VM1-south	4/11/2020	132	FtG	D	174
VM1-south	5/11/2020	1927	SuG	D	175
VM1-south	8/11/2020	200	FtG	D	176
VM1-south	8/11/2020	2243	FtG	D	177-178
VM1-south	9/11/2020	16	SqG	D	179
VM1-south	9/11/2020	2335	Antechinus spp	D	180-181
VM1-south	10/11/2020	300	SuG	D	182
VM1-south	11/11/2020	219	SqG	D	183
VM1-south	11/11/2020	322	SqG	D	184
VM1-south	11/11/2020	342	FtG	D	185-186
VM1-south	11/11/2020	348	SqG	D	187
VM1-south	12/11/2020	126	SqG	D	190
VM1-south	12/11/2020	315	SqG	D	191
VM1-south	13/11/2020	327	SqG	D	192
VM1-south	15/11/2020	224	SqG	Pr	194
VM1-south	19/11/2020	317	SqG	D	197
VM1-south	20/11/2020	304	FtG	D	198-120
VM1-south	21/11/2020	203	FtG	D	203
VM1-south	22/11/2020	215	SqG	D	204-207
VM1-south	22/11/2020	2353	FtG	D	209

Site & Cam position	Date	Time	Species	Accuracy	Image No's
VM1-south	25/11/2020	343	SqG	D	211
VM1-south	26/11/2020	312	SqG	Pr	1-2
VM1-south	26/11/2020	358	SqG	Pr	4-6
VM1-south	26/11/2020	2302	SqG	Pr	7
VM1-south	28/11/2020	220	FtG	D	9-13
VM1-south	29/11/2020	330	SqG	Pr	15-17
VM1-south	3/12/2020	145	FtG	D	19
VM1-south	8/12/2020	2211	SuG	D	20-22
VM1-south	9/12/2020	318	SuG	D	23
VM1-south	9/12/2020	2245	SuG	Pr	25
VM1-south	13/12/2020	347	SuG	Pr	27
VM1-south	20/12/2020	135	FtG	D	31
VM1-south	21/12/2020	349	SqG	Pr	32
VM1-south	24/12/2020	2312	FtG	D	35
VM1-south	25/12/2020	124	FtG	D	36
VM1-south	25/12/2020	137	SuG	D	38-42
VM1-south	25/12/2020	205	FtG	D	43-44
VM1-south	25/12/2020	337	SqG	Pr	46-47
VM1-south	26/12/2020	328	FtG	D	48
VM1-south	26/12/2020	339	SuG	Pr	51
VM1-south	26/12/2020	2219	SuG	Pr	52-53
VM1-south	29/12/2020	326	Black rat	Pr	54-55
VM1-south	4/01/2021	46	SqG	Pr	57
VM1-south	8/01/2021	2209	SuG	D	59-61
VM1-south	9/01/2021	132	SqG	Pr	62
VM1-south	9/01/2021	2124	FtG	D	63
VM1-south	11/01/2021	122	FtG	D	65
VM1-south	11/01/2021	2248	Antechinus spp	D	66-67
VM1-south	13/01/2021	37	FtG	D	71
VM1-south	13/01/2021	41	SuG	D	72
VM1-south	14/01/2021	226	SuG	Pr	75
VM1-south	14/01/2021	2339	SuG	Pr	76-77
VM1-south	18/01/2021	32	FtG	D	78
VM1-south	18/01/2021	258	FtG	D	79-83
VM1-south	18/01/2021	2330	Black rat	D	84
VM1-south	20/01/2021	215	SuG	Pr	85-88
VM1-south	20/01/2021	246	SuG	Pr	90-92
VM1-north	5/10/2020	1903	SuG	D	44142
VM1-north	9/10/2020	2150	FtG	D	14
VM1-north	16/10/2020	258	FtG	D	25

Site & Cam position	Date	Time	Species	Accuracy	Image No's
VM1-north	16/10/2020	2128	FtG	D	26
VM1-north	20/10/2020	305	SuG	D	28-42
VM1-north	21/10/2020	326	FtG	D	43
VM1-north	22/10/2020	417	FtG	D	45
VM1-north	25/10/2020	121	FtG	D	46
VM1-north	3/11/2020	240	SuG		49
VM1-north	6/11/2020	16	FtG	D	52
VM1-north	8/11/2020	7	SuG		55-60
VM1-north	9/11/2020	2109	FtG	D	64
VM1-north	11/11/2020	2116	SuG	D	66
VM1-north	12/11/2020	108	FtG	D	67
VM1-north	12/11/2020	239	FtG	D	68-74
VM1-north	15/11/2020	327	SuG	D	78-84
VM1-north	16/11/2020	2121	SuG		85-86
VM1-north	17/11/2020	2321	FtG	D	88
VM1-north	20/11/2020	352	FtG	D	89
VM1-north	20/11/2020	2342	FtG	D	90
VM1-north	22/11/2020	302	FtG	D	91
VM1-north	22/11/2020	2259	FtG	D	93-94
VM1-north	23/11/2020	2232	FtG	D	95
VM1-north	25/11/2020	343	FtG	D	96-97
VM1-north	26/11/2020	339	FtG	D	2
VM1-north	10/12/2020	256	FtG	D	14
VM1-north	11/12/2020	2006	SuG	D	15-24
VM1-north	12/12/2020	2128	SuG	D	25-34
VM1-north	12/12/2020	2149	SuG	D	35-45
VM1-north	12/12/2020	2352	SuG	D	46-51
VM1-north	13/12/2020	20	SuG	D	52-55
VM1-north	13/12/2020	59	SuG	Pr	56-57
VM1-north	13/12/2020	118	SuG	Pr	59-64
VM1-north	13/12/2020	239	SuG	Pr	65-75
VM1-north	13/12/2020	333	SuG	Pr	76-79
VM1-north	13/12/2020	1958	SuG	Pr	81-88
VM1-north	15/12/2020	55	SuG	D	90-96
VM1-north	15/12/2020	127	SuG	D	97
VM1-north	15/12/2020	1956	SuG	Pr	100-102
VM1-north	23/12/2020	108	Antechinus spp	D	105-106
VM1-north	24/12/2020	342	Antechinus spp	D	107
VM1-north	26/12/2020	117	Antechinus spp	D	110
VM1-north	29/12/2020	104	FtG	D	111-112
VM1-north	30/12/2020	343	SuG	D	113-116

Site & Cam position	Date	Time	Species	Accuracy	Image No's
VM1-north	2/01/2021	2125	Antechinus spp	D	140-142
VM1-north	3/01/2021	2121	Antechinus spp	D	143
VM1-north	7/01/2021	2037	SuG	Pr	144
VM1-north	8/01/2021	2059	Antechinus spp	D	146
VM1-north	9/01/2021	247	Antechinus spp	D	147-148
VM1-north	10/01/2021	234	Antechinus spp	D	149
VM1-north	10/01/2021	2112	Antechinus spp	D	150-151
VM1-north	11/01/2021	2021	Antechinus spp	D	152
VM1-north	13/01/2021	2055	Antechinus spp	D	154
VM1-north	16/01/2021	402	Antechinus spp	D	155
VM1-north	17/01/2021	305	Antechinus spp	D	158-159
VM1-north	19/01/2021	2345	Antechinus spp	Pr	160
VM2-south	25/09/2020	328	SuG	D	1
VM2-south	26/09/2020	0347	SuG	D	2-8
VM2-south	27/09/2020	0436	SuG	D	9-17
VM2-south	28/09/2020	0434	SuG	D	18-49
VM2-south	29/09/2020	0039	SuG	D	51-52
VM2-south	29/09/2020	422	SqG	D	53-80
VM2-south	29/09/2020	1848	SqG	Pr	81-83
VM2-south	30/09/2020	53	SqG	D	85
VM2-south	30/09/2020	356	SqG	D	86-97
VM2-south	30/09/2020	425	SqG	D	98-99
VM2-south	2/10/2020	1834	SqG	D	100-101
VM2-south	2/10/2020	2303	SuG	D	102
VM2-south	4/10/2020	258	SqG	Pr	103-104
VM2-south	6/10/2020	2203	SuG	D	105-6
VM2-south	7/10/2020	455	Antechinus spp	D	107-8
VM2-south	12/10/2020	1804	Antechinus spp	D	109
VM2-south	15/10/2020	416	SqG	D	110
VM2-south	15/10/2020	2258	FtG	D	111
VM2-south	25/11/2020	2051	SuG	Pr	1
VM2-south	26/11/2020	41	SuG	D	5
VM2-south	28/11/2020	310	SqG	Pr	9
VM2-south	28/11/2020	2009	YBG	D	10
VM2-south	3/12/2020	335	SqG	D	14-15
VM2-south	6/12/2020	344	SqG	D	18
VM2-south	9/12/2020	105	FtG	D	19
VM2-south	9/12/2020	314	SqG	Pr	20
VM2-south	11/12/2020	248	SqG	Pr	22
VM2-south	13/12/2020	311	FtG	D	23



Site & Cam position	Date	Time	Species	Accuracy	Image No's
VM2-south	13/12/2020	333	SqG	Pr	24-25
VM2-south	15/12/2020	247	SuG	Pr	26
VM2-south	15/12/2020	2102	SqG	Pr	27-28
VM2-south	15/12/2020	2256	SuG	Pr	29
VM2-north	26/09/2020	315	Antechinus spp	D	43862
VM2-north	27/09/2020	308	Antechinus spp	D	41334
VM2-north	28/09/2020	59	FtG	D	15
VM2-north	28/09/2020	309	Antechinus spp	D	16-18
VM2-north	5/10/2020	222	SqG	D	20-23
VM2-north	10/10/2020	2348	FtG	D	25
VM2-north	11/10/2020	1832	SuG	D	26-27
VM2-north	11/10/2020	1955	SqG	D	28
VM2-north	11/10/2020	2301	SqG	D	30-36
VM2-north	12/10/2020	112	SqG	D	37-38
VM2-north	12/10/2020	134	SqG	D	39-41
VM2-north	21/10/2020	111	SqG	D	42
VM2-north	21/10/2020	149	SuG	D	43-48
VM2-north	26/10/2020	110	Antechinus spp	D	51
VM2-north	26/10/2020	121	SuG	D	52-56
VM2-north	27/10/2020	158	SuG	D	57
VM2-north	4/11/2020	23	SqG	Pr	60-66
VM2-north	7/11/2020	2215	SuG	Pr	68-69
VM2-north	8/11/2020	2254	FtG	D	70
VM2-north	8/11/2020	2328	FtG	D	71
VM2-north	11/11/2020	2002	FtG	D	72
VM2-north	11/11/2020	2228	FtG	D	73
VM2-north	11/11/2020	2247	SqG	D	74-77
VM2-north	12/11/2020	2322	SqG	Pr	79
VM2-north	13/11/2020	2206	FtG	D	80
VM2-north	14/11/2020	2227	SqG	D	81-83
VM2-north	14/11/2020	2332	SqG	D	85-89
VM2-north	15/11/2020	2200	FtG	D	90
VM2-north	16/11/2020	145	YBG	D	91-92
VM2-north	17/11/2020	130	Antechinus spp	D	93
VM2-north	18/11/2020	105	SqG	D	94-96
VM2-north	18/11/2020	2124	YBG	D	97-112
VM2-north	18/11/2020	2138	SqG	D	113-114
VM2-north	22/11/2020	2332	SuG	D	115
VM2-north	23/11/2020	121	FtG	D	116
VM2-north	24/11/2020	2334	SuG	D	1-4

Site & Cam position	Date	Time	Species	Accuracy	Image No's
VM2-north	25/11/2020	144	SuG	D	5-8
VM2-north	25/11/2020	2322	SuG	D	9-11
VM2-north	26/11/2020	135	FtG	D	12
VM2-north	26/11/2020	2348	SuG	D	15-18
VM2-north	27/11/2020	311	FtG	D	19
VM2-north	28/11/2020	32	YBG	D	20-24
VM2-north	28/11/2020	312	SqG	D	25-39
VM2-north	8/12/2020	109	SqG	D	42-43
VM2-north	8/12/2020	2037	SqG	D	44-50
VM2-north	8/12/2020	2201	Antechinus spp	D	51-55
VM2-north	10/12/2020	2209	SqG	Pr	57
VM2-north	12/12/2020	2250	SqG	D	58
VM2-north	12/12/2020	2317	SqG	D	59
VM2-north	13/12/2020	24	SqG	D	61-66
VM2-north	13/12/2020	111	SqG	D	67-71
VM2-north	13/12/2020	227	SqG	Pr	72
VM2-north	13/12/2020	253	SqG	Pr	73-74
VM2-north	13/12/2020	1952	SqG	D	75-76
VM2-north	13/12/2020	2014	SqG	D	78-79
VM2-north	13/12/2020	2123	SqG	D	80
VM2-north	13/12/2020	2216	SuG	Pr	81-84
VM2-north	13/12/2020	2319	SqG	Pr	86-87
VM2-north	15/12/2020	1935	SqG	D	89-93
VM2-north	15/12/2020	2114	SqG	Pr	94,96
VM2-north	15/12/2020	2203	SqG	D	98
VM2-north	15/12/2020	2224	SqG	Pr	99
VM2-north	15/12/2020	2253	SqG	Pr	102
VM2-north	15/12/2020	2352	SqG	D	103
VM2-north	16/12/2020	209	SqG	Pr	104
VM2-north	16/12/2020	2119	SqG	Pr	106
VM2-north	16/12/2020	2201	SqG	D	107
VM2-north	16/12/2020	2248	SqG	D	108-109
VM2-north	17/12/2020	47	2 x SqG	Pr	110-111
VM2-north	17/12/2020	101	SqG	Pr	112
VM2-north	17/12/2020	125	SqG	D	113-117
VM2-north	17/12/2020	211	SqG	Pr	118-119
VM2-north	17/12/2020	1930	SqG	D	120
VM2-north	17/12/2020	2304	SqG	Pr	122
VM2-north	18/12/2020	111	SqG	D	123-125
VM2-north	18/12/2020	227	SqG	D	126-133
VM2-north	19/12/2020	2107	SqG	Pr	134

Site & Cam position	Date	Time	Species	Accuracy	Image No's
VM2-north	20/12/2020	202	SqG	D	135-141
VM2-north	20/12/2020	305	SqG	D	142-146
VM2-north	20/12/2020	1931	SqG	D	147-8
VM2-north	21/12/2020	51	SqG	D	150-152
VM2-north	21/12/2020	133	SuG	D	153-156
VM2-north	22/12/2020	27	SqG	D	157-165
VM2-north	22/12/2020	2301	SqG	Pr	166-168

## Appendix F – Road mortality survey results

**Table F1:** Results of Q1-Q4 2020 road mortality driving surveys.

Date	Survey period	Observers	Time start	Time end	Carriage way	Species	Age of r-k	Easting	Northing	Location on road	Cleared off Rd	Live fauna on Rd edge	Notes
30/01/2020	Q1	NM & SR			NB	Large mammal	>1month	513215	6685008	Shoulder	Yes	Nil	
30/01/2020	Q1	NM & SR			NB	Large mammal	>1month	506448	6691206	Shoulder median side	No	Nil	
30/01/2020	Q1	NM & SR			NB	Btposs spp	< 7days	505749	6693214	Road	No	Nil	
30/01/2020	Q1	NM & SR			NB	Large reptile	>1month	505736	6693362	Shoulder	Yes	Nil	
30/01/2020	Q1	NM & SR			SB	Fox	>1month	508748	6688630	Shoulder	Yes	Nil	
30/01/2020	Q1	NM & SR			SB	Wallaby spp	>1month	517038	6679556	Shoulder	No	Nil	
30/01/2020	Q1	NM & SR			SB	Purple swamp hen	>1month	517076	6679512	Shoulder	No	Nil	
20/04/2020	Q2	NM & OT	11:00	1245	NB	Large mammal	V old	515080	6682054	Shoulder	No	No	South bound
21/04/2020	Q2	NM & OT			NB	Noisy friarbird	V old	516329	6680523	Shoulder	Yes	No	South bound
22/04/2020	Q2	NM & OT			NB	Medium mammal	V old	517081	6679505	Shoulder	No	No	On cassons bridge
23/04/2020	Q2	NM & OT			NB	Prob crested pigeon	New	517376	6679089	Shoulder	No	No	On simmons flat bridge
24/04/2020	Q2	NM & OT			NB	Turtle	Old	517862	6678003	Shoulder	No	No	
25/04/2020	Q2	NM & OT			NB	Dog	Old	517626	6678544	Shoulder	No	No	Corindi ck bridge
26/04/2020	Q2	NM & OT			NB	Prob Pacific black duck	Old	517300	6679163	Shoulder	No	No	Simmons flat bridge north bound
27/04/2020	Q2	NM & OT			NB	Australian Magpie	New	517228	6679256	Shoulder	No	No	Past two days old

Date	Survey period	Observers	Time start	Time end	Carriage way	Species	Age of r-k	Easting	Northing	Location on road	Cleared off Rd	Live fauna on Rd edge	Notes
28/04/2020	Q2	NM & OT			NB	Prob red-necked wallaby	Old	517160	6679352	Shoulder	No	No	
29/04/2020	Q2	NM & OT			NB	Medium bird	Old	508521	6688750	Road	No	No	700M north halfway servo
9/07/2020	Q3	LA & NM	1345	1500	NB	Medium mammal	>7days	517704	6678360	Shoulder	No	No	50S corindi ck bridge
9/07/2020	Q3	LA & NM			SB	Fox	>7days	506466	6691379	Shoulder	Partly	No	500m s luthers rd
9/07/2020	Q3	LA & NM			SB	European hare	>7days	512250	6686252	Shoulder	Partly	No	Mchillips rd
9/07/2020	Q3	LA & NM			SB	NB bandicoot	<7days	514469	6682265	Shoulder	No	No	1200M s range road e
9/07/2020	Q3	LA & NM			SB	Dog	<7days	515200	6681967	Shoulder	No	No	1650M n mclaughlin rd
9/07/2020	Q3	LA & NM			SB	Bandicoot spp	>7days	517892	6678027	Shoulder	No	No	470M n kangaroo trail rd
16/10/20	Q4	NM & BT	1420	1530	SB	Laughing kookaburra	<7days	509392	6688190	Shoulder	Yes	No	Near servo
16/10/20	Q4	NM & BT			SB	Cat	>7days	510391	6687391	Shoulder	Yes	No	Near servo
16/10/20	Q4	NM & BT			NB	Bandicoot spp	>7days	517645	6678501	Shoulder	No	No	Corindi ck bridge
16/10/20	Q4	NM & BT			NB	Eastern grey kangaroo	>7days	506546	6690606	Shoulder	No	No	Halfway ck bridge