



CLIENTS | PEOPLE | PERFORMANCE



Enhancing Life and Liveability

Use and Effectiveness of Glider Pole Linkages as a Mitigation Measure

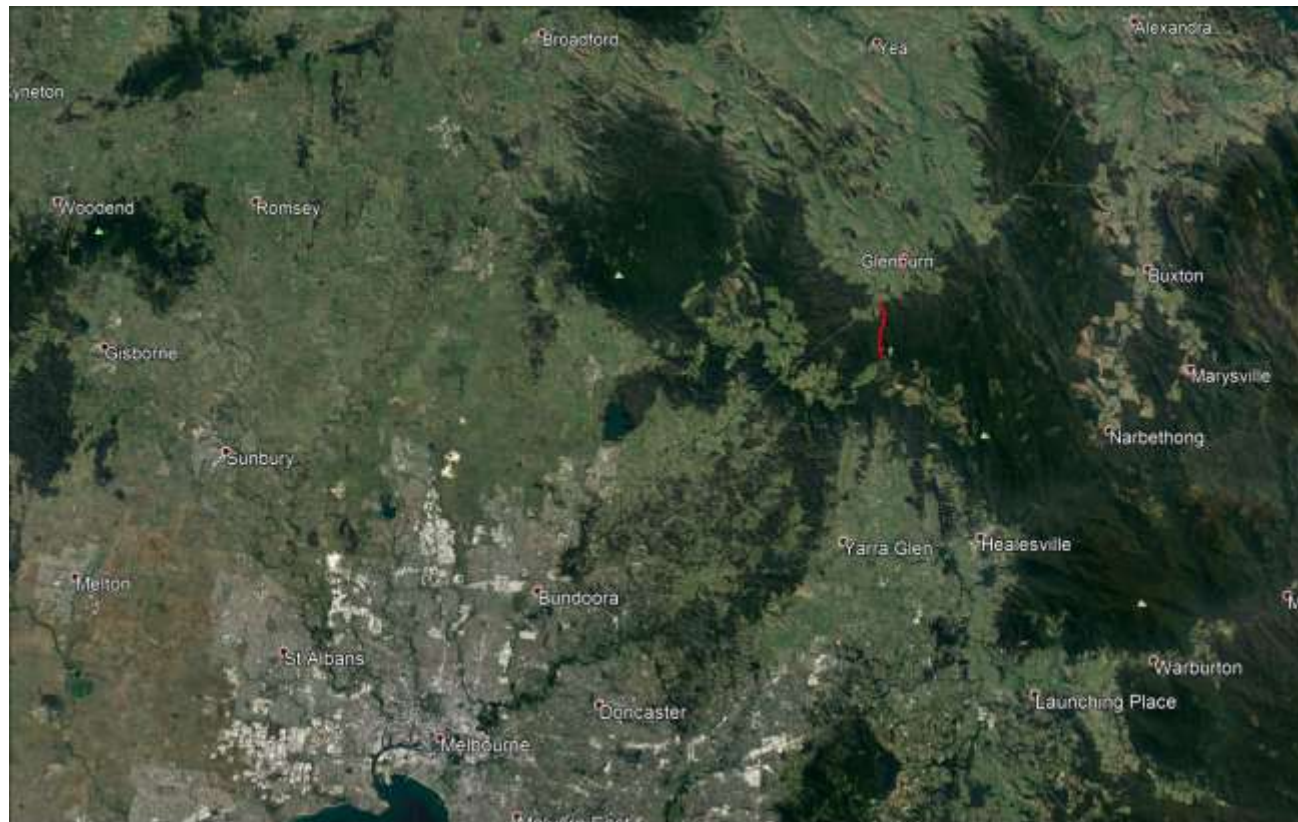
Sugarloaf Pipeline Project

Kelly Dalton | Senior Zoologist GHD



Overview

- Toolangi State Forest
- 30-60 m wide easement
- 83 glider poles erected across 37 linkages



Objectives of the monitoring program

- Adhere to monitoring and mitigation plans that were used to secure approval of the project
- Monitor the effectiveness and usage of the glider poles by native fauna for at least two years



Methods

Preliminary spotlighting surveys

- To determine if sufficient numbers of gliders present
- To determine location of camera establishment

Establishment of cameras on the glider poles

- Motion triggered, wireless cameras
- Monitor 30% of linkages (13 cameras)

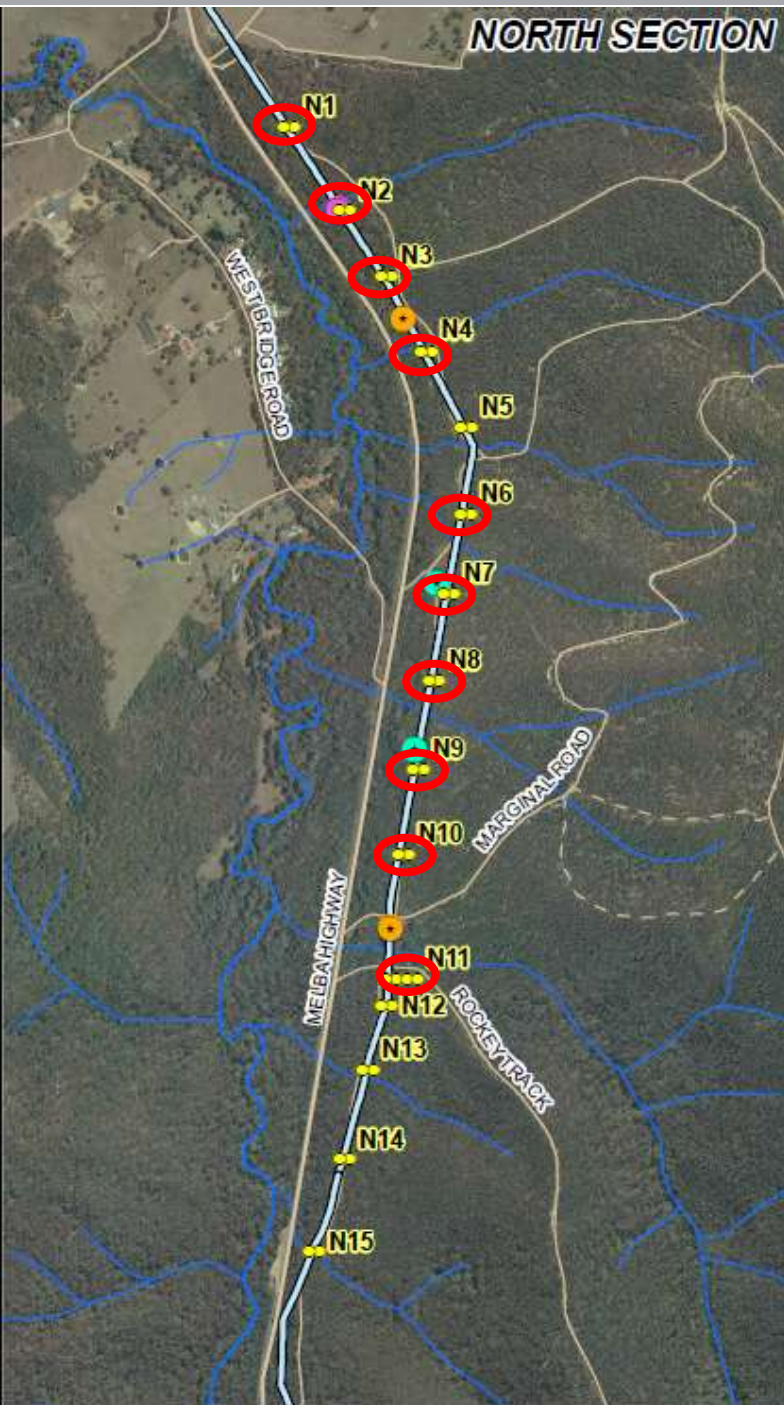
Ongoing spotlighting surveys during the two-year camera deployment period

- To provide a control for camera results

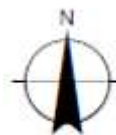
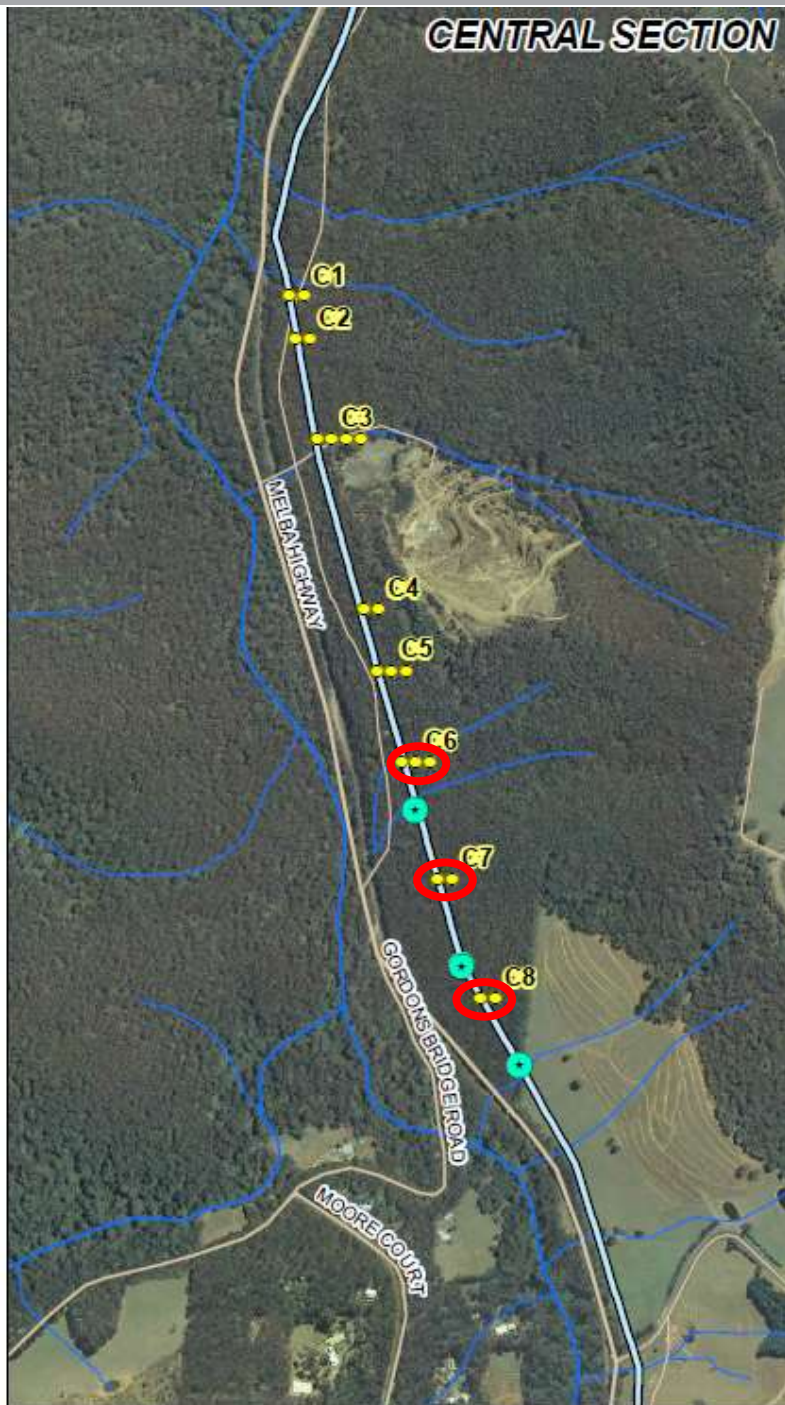
Data analysis



NORTH SECTION



CENTRAL SECTION



Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55

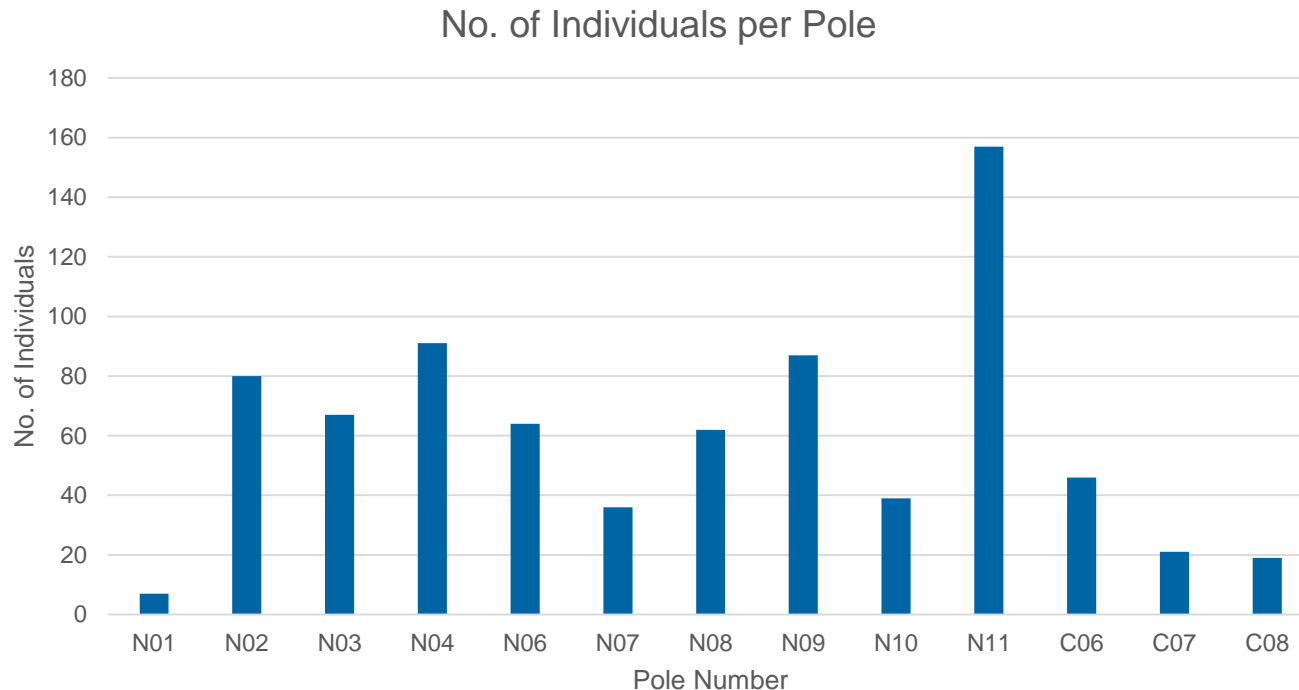
- Glider Pole Locations
- Glider Locations**
 - Greater Glider
 - Sugar Glider
 - Yellow-bellied Glider
- Pipeline
- Cameras

Results – Cameras

Parameter	No. of photos
Total no. of photos captured	3728
Total no. of photos with animals (excluding unknown)	1912
Total no. of individual animals (this may include repeated sightings of individuals at different location or times)	782

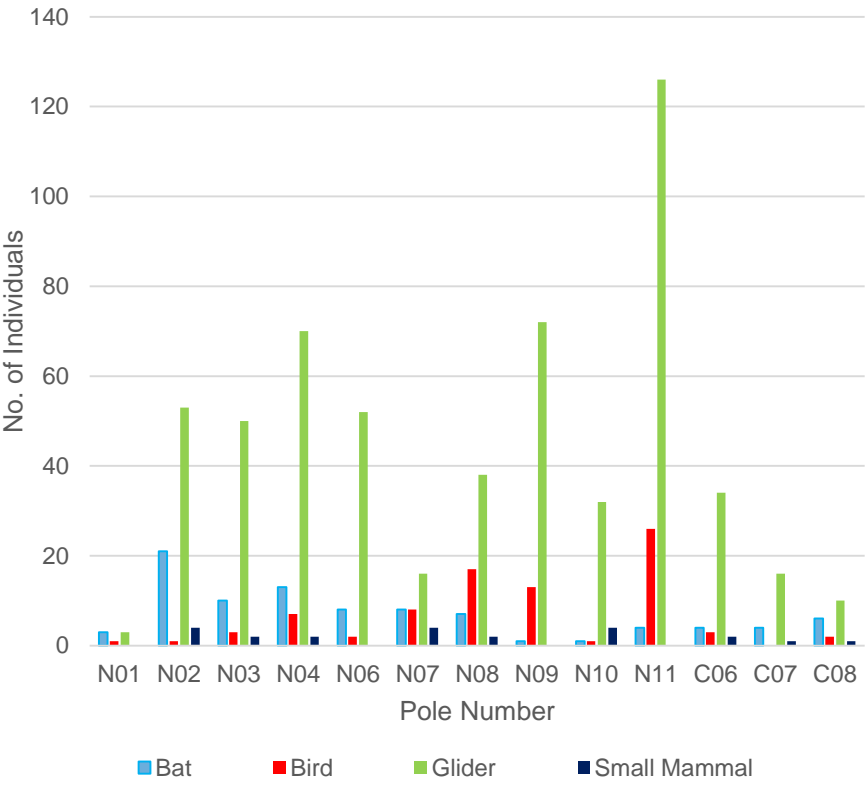
Results - Camera

- More than twice the no. of animals per pole in north vs central
- Fewer individuals photographed on poles at edges of forest
- Similar average number of species captured in each section per pole (North 5.7 species; Central 5 species)

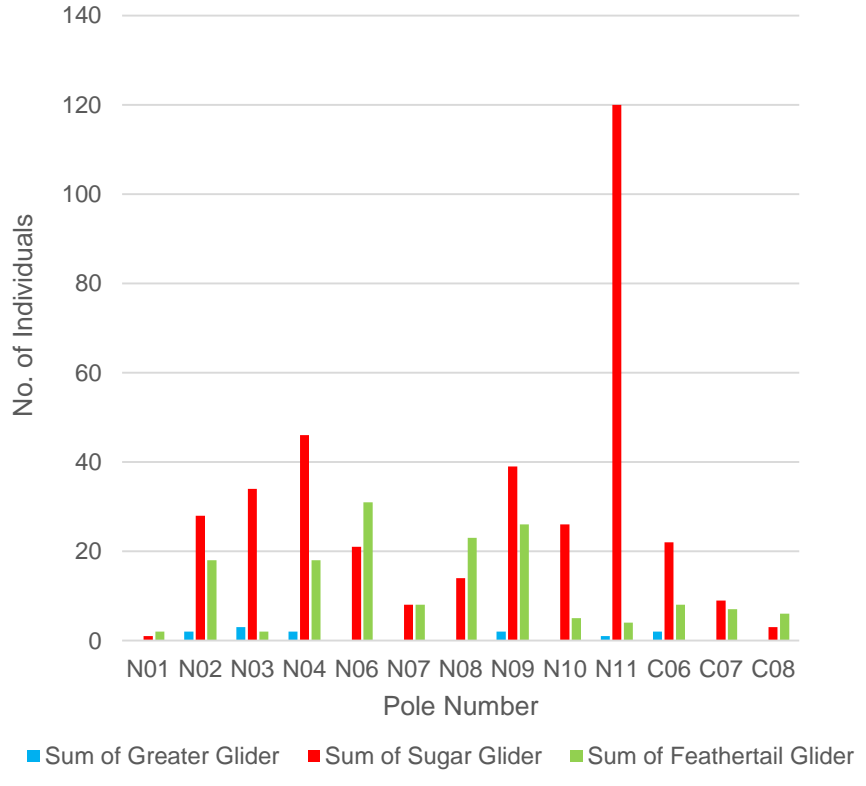


Results - Camera

Pole Use by Faunal Group

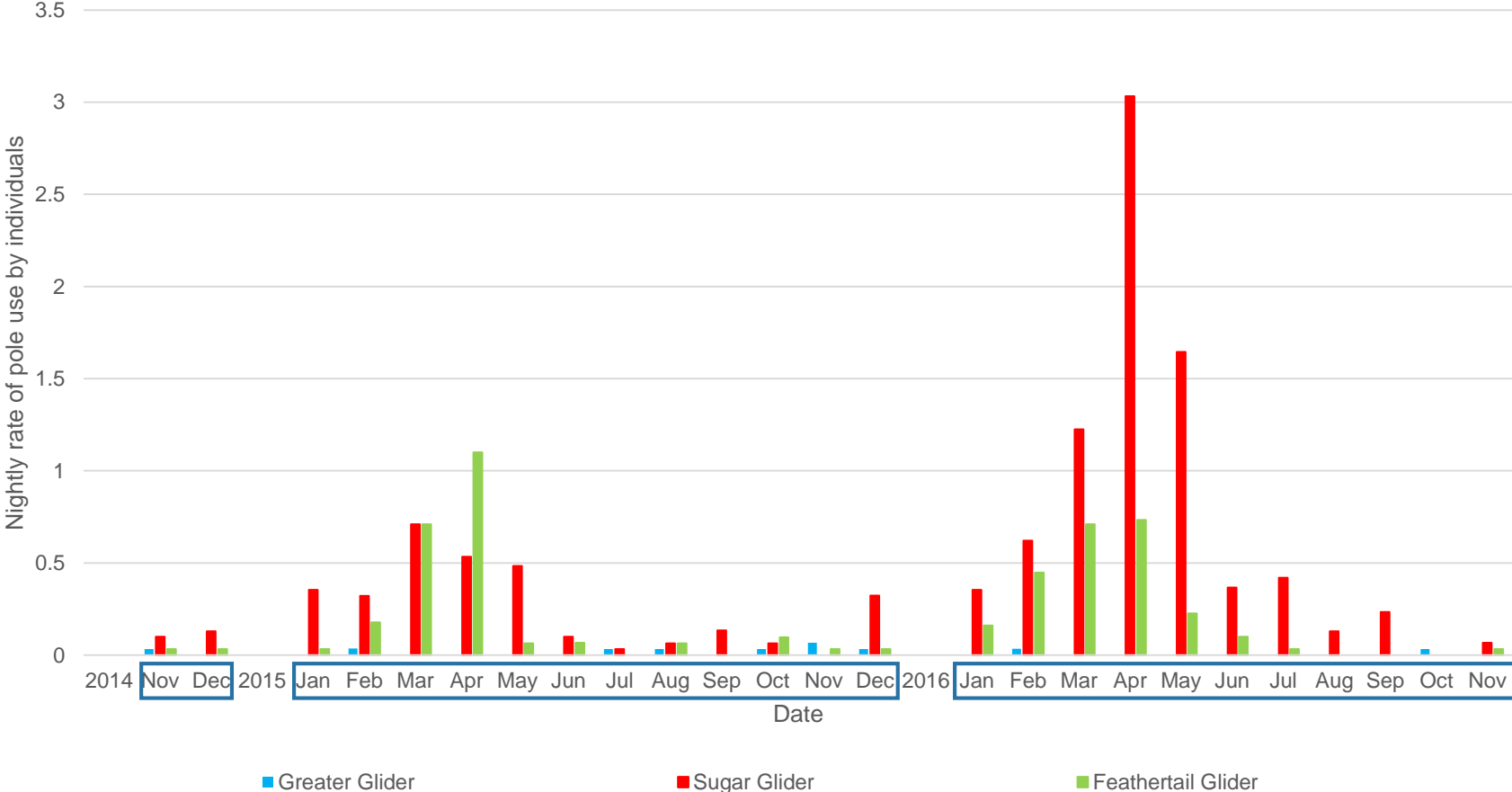


No. of Individual Gliders per Pole



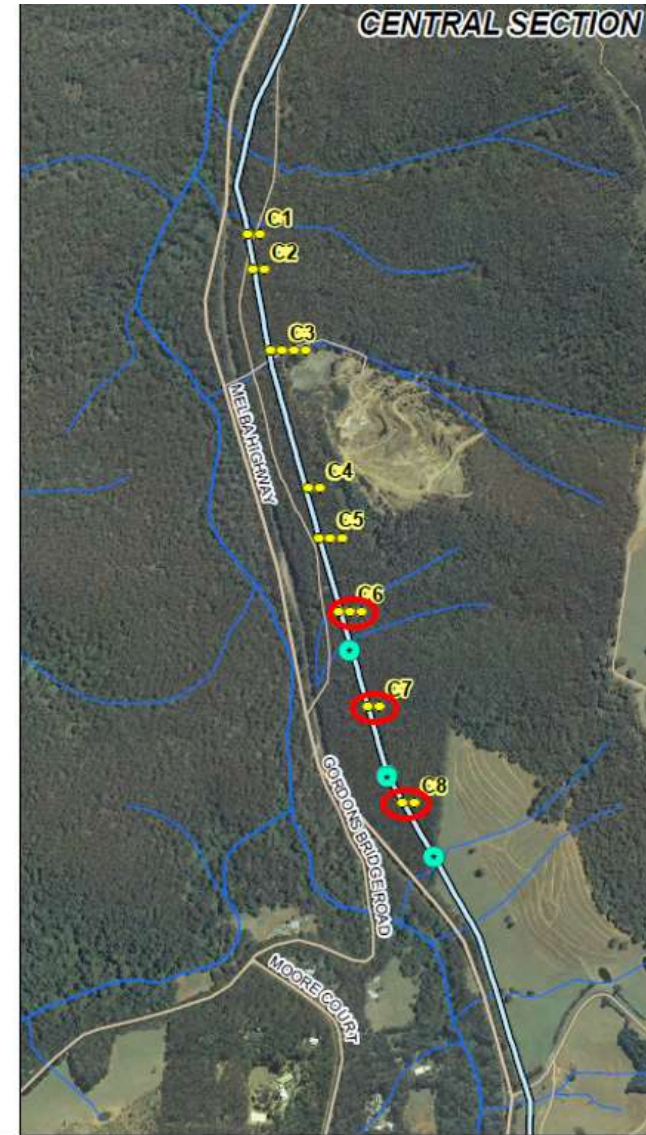
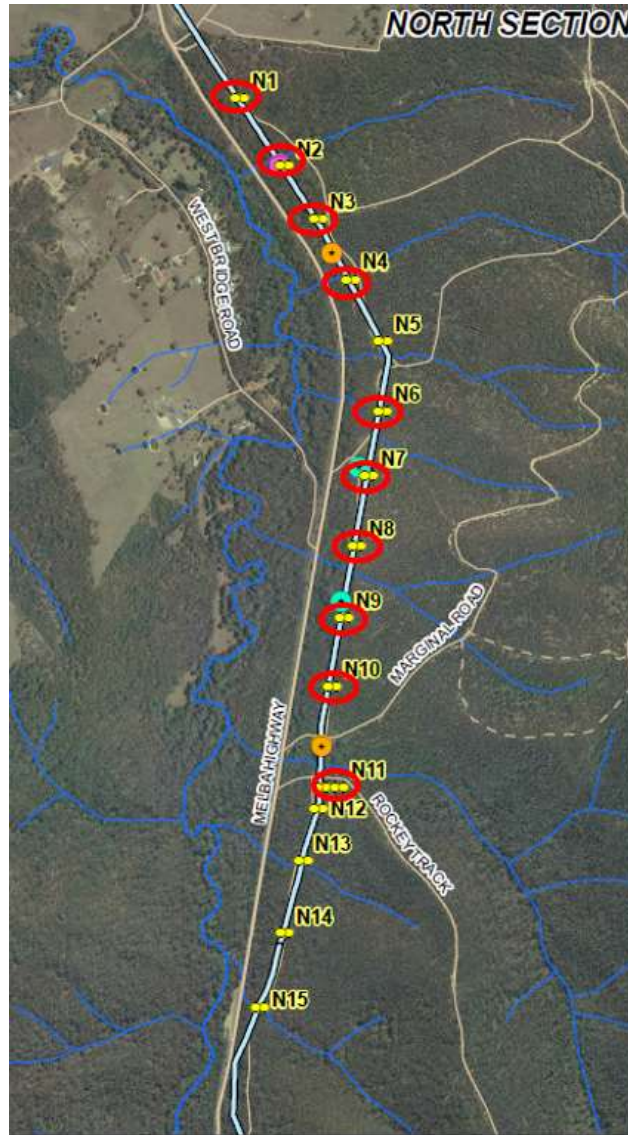
Results - Camera

Glider Activity Over Time



Discussion

- Edge effects
- Easement width



0 100 200 400 600

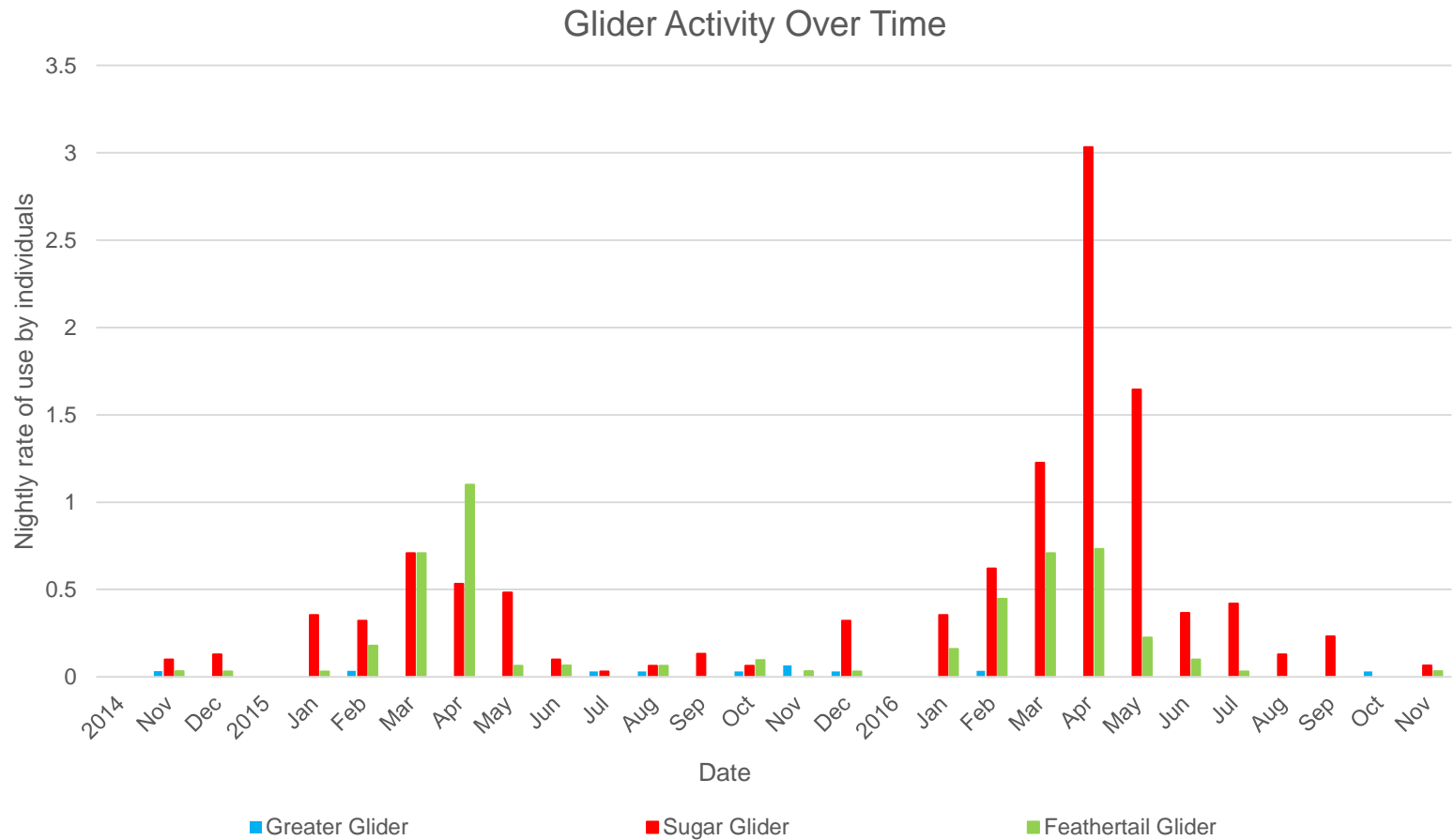
Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55

- Glider Pole Locations
- Glider Locations
 - Greater Glider
 - Sugar Glider
 - Yellow-bellied Glider
- Cameras
- ▬ Pipeline

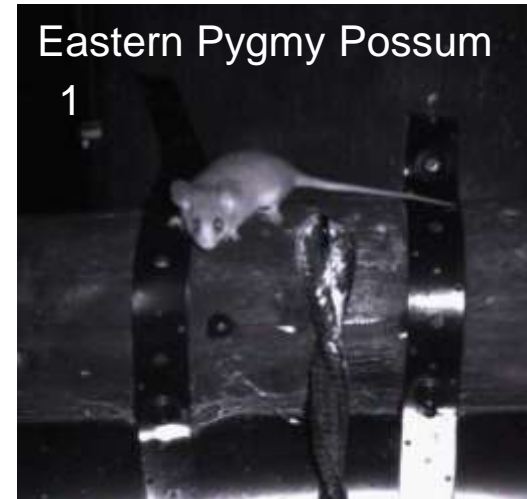
Discussion

- Activity over time
- Peak activity times



Discussion

- Species abundance



Conclusions

- Conclusions regarding effectiveness of crossing structures historically limited
- Modifications to methods
- Study requires better data on movement between poles
- Successful?
- Peak activity periods for Sugar Gliders and Feathertail Gliders

Acknowledgements

- GHD Ecology team
- Melbourne Water
- Faunatech



www.ghd.com

