



30 March 2023

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**Block 5 Section 26, and Blocks 6 and 10 Section 25, Hume, ACT –
Targeted surveys for Striped Legless Lizard *Delma impar*
Capital Ecology project no. 3167**

Dear Rachel Stuckey,

This letter provides the methods and results of Capital Ecology's surveys for the Striped Legless Lizard *Delma impar* across Block 5 Section 26, and Blocks 6 and 10, Section 25, Hume, ACT (the 'study area', approx. 8.45 ha).

The study area has been identified by the ACT Conservator of Flora and Fauna to support potential habitat for the Striped Legless. As such, a program of targeted surveys for the Striped Legless Lizard, listed as vulnerable under both the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and ACT *Nature Conservation Act 2014* (NC Act), was conducted to assess the presence/absence of the species, and if present, to provide data on the likely habitat extent and population size.

Targeted surveys for the Striped Legless Lizard were conducted from September 2022 to December 2022. Figure 1 shows the location of the study area within the locality and Figure 2 show the location of the tile grids used for the targeted survey.

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Striped Legless Lizard targeted survey

Background

The study area is zoned 'IZ1: General Industry', is located adjacent to the intersection of Mugga Lane and John Cory Road, and is surrounded by:

- roads and industrial development to the south and east;
- the Mugga Lane Resource Management Centre to the north-west; and
- disturbed agricultural land to the north and north-east.

Before European occupation, the study area would have been characterised by an open grassy woodland (i.e. Plant Community Type ACT16). However, historic and ongoing impacts have significantly degraded the condition of the vegetation. As a result, the study area is now characterised by an absent canopy over a largely exotic dominant and low diversity groundstorey.

The closest known habitat for the Striped Legless Lizard is approximately 2 km to the north-east in Jerrabomberra East Nature Reserve (ACTMapi), which also represents the closest area of naturally occurring temperate grassland.

Methodology

A program of roof tile surveys was undertaken accordance with the Commonwealth guidelines¹ and the ACT guidelines².

As per the survey guidelines, tiles were placed in grids of 50 (10 rows of 5) with 5 m spacing. One grid is required per 3 ha of potential habitat for sites under 30 ha. As the study area contains approx. 8.45 ha of potential habitat, 3 grids are required. Therefore, 150 tiles will be placed for the survey. The location of each grid was chosen to spatially separate the grids as much as practicable to obtain an adequate coverage of the study area whilst still ensuring grids were placed in locations with appropriate Striped Legless Lizard habitat characteristics. Where possible, grids were therefore placed in open pasture with a well-defined grass tussock structure. The location of each corner of the grid was marked with a GPS (accurate +/- 3m) and each tile was assigned a unique number (Figure 2).

Following a two week 'settling in' period, each tile was checked once per week for 10 weeks. Surveys commenced on 29 September 2022 and were completed on 1 December 2022. All tiles were checked between 0800 hrs and 1200 hrs, with the exact timing of each check chosen to reflect the weather conditions. In this regard, checks were timed to occur when the tiles were warm to the touch, but not hot. Start time, finish time, and weather conditions were recorded for each check (refer Appendix A).

If captured, each Striped Legless Lizard was to have the following data recorded.

- Location (tile number).
- Snout-to-vent (SVL) length (mm).
- Total length (mm).

¹ Commonwealth of Australia (2011). *Environment Protection and Biodiversity Conservation Act 1999 referral guidelines for the vulnerable striped legless lizard, Delma impar* – EPBC Act policy statement 3.28.

² ACT Government (2015). *Survey Guidelines for Striped Legless Lizard*. ACT Government - Conservation Planning and Research Unit (ACT Government, revised October 2015).

- Tail condition (Full/Regrowth).
- Other relevant biometrics (markings, colour, age, etc.).
- A macro photograph of the dorsal head scales. This photo was taken as the dorsal head scales of Striped Legless Lizard are unique to each individual and can therefore be used to determine the number of unique captures across the 10-week survey period.

Once processed, each Striped Legless Lizards was to be released beside the tile of capture, allowing it to move back beneath the tile or to a tussock adjacent to the tile. All other vertebrate fauna found under the tiles were visually identified to species level.

Results

No Stiped Legless Lizards were recorded across the ten-week program of tile surveys (Appendix A).

The only herpetofauna species recorded were Three-toed Skink *Hermiergis talbingoensis* (45 records) and Delicate Skink *Lampropholis delicata* (one record).

Discussion

The study area supported high groundstorey herbage mass throughout the survey program (primarily comprising exotic pasture grasses). This high herbage mass, in conjunction with a cool and wet spring and summer, may have contributed to the low numbers of common herpetofauna recorded during the tile survey program. However, given the nil survey result from the completed full program of surveys, together with the distance to the estimated historical extent of naturally occurring temperate grassland, it is unlikely that Striped Legless Lizards occur in the study area.

Conclusions

No Striped Legless Lizards were recorded over the 10-week survey program. The species is therefore considered unlikely to occur in the study area.

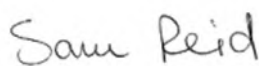
We trust that this letter provides the information required. If, however, you should have any questions, please do not hesitate to contact us.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Robert Speirs".

Robert Speirs

Director / Principal Ecologist

A handwritten signature in black ink, appearing to read "Sam Reid".

Dr Sam Reid

Senior Ecologist

Attachments:

Figure 1. Locality Plan

Figure 2. Striped Legless Lizard Survey

Appendix A. Targeted Striped Legless Lizard Survey Results

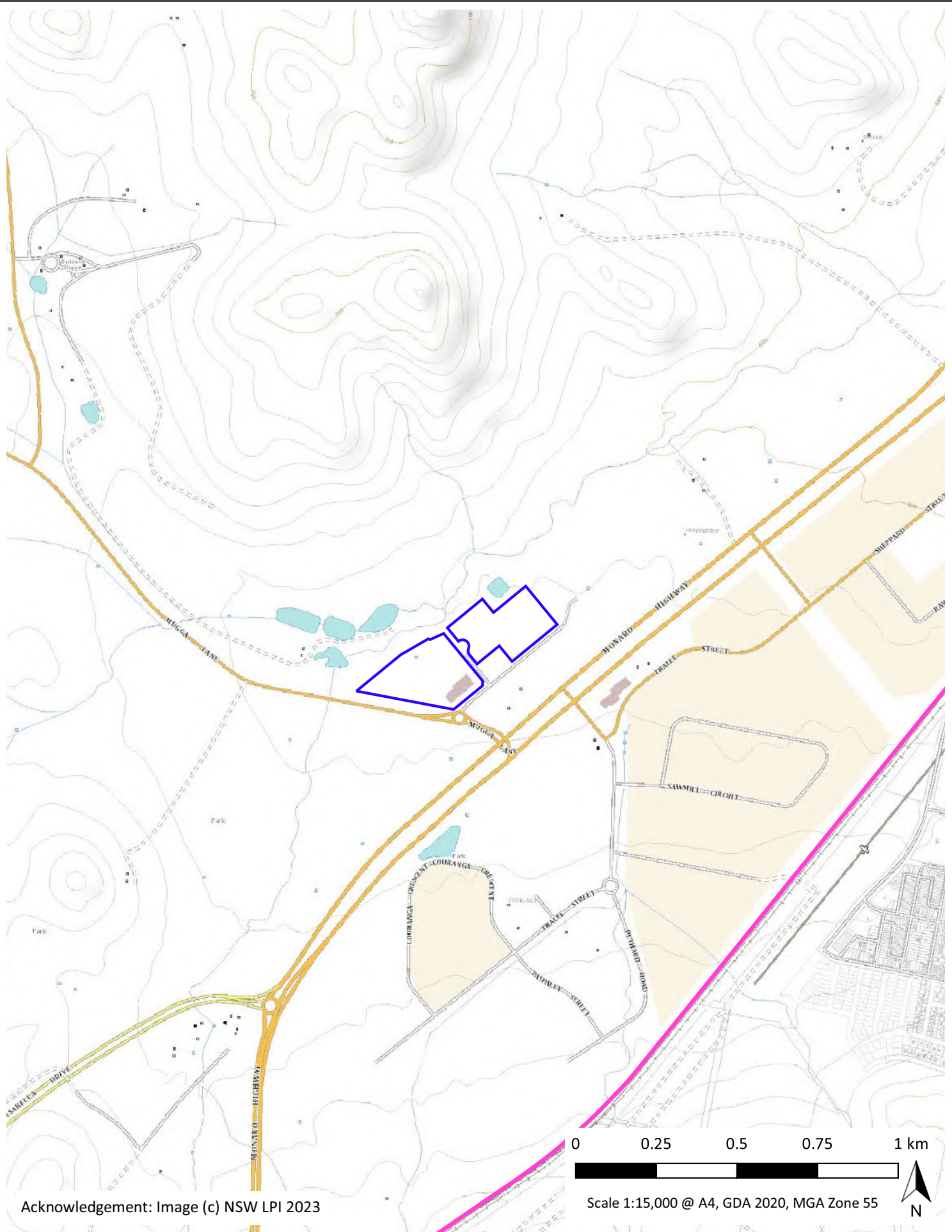


Figure 1. Locality Plan

Capital Ecology Project No: 3167

Drawn by: S. Reid

Date: 30 January 2023

Legend

- Study Area
- ACT Border



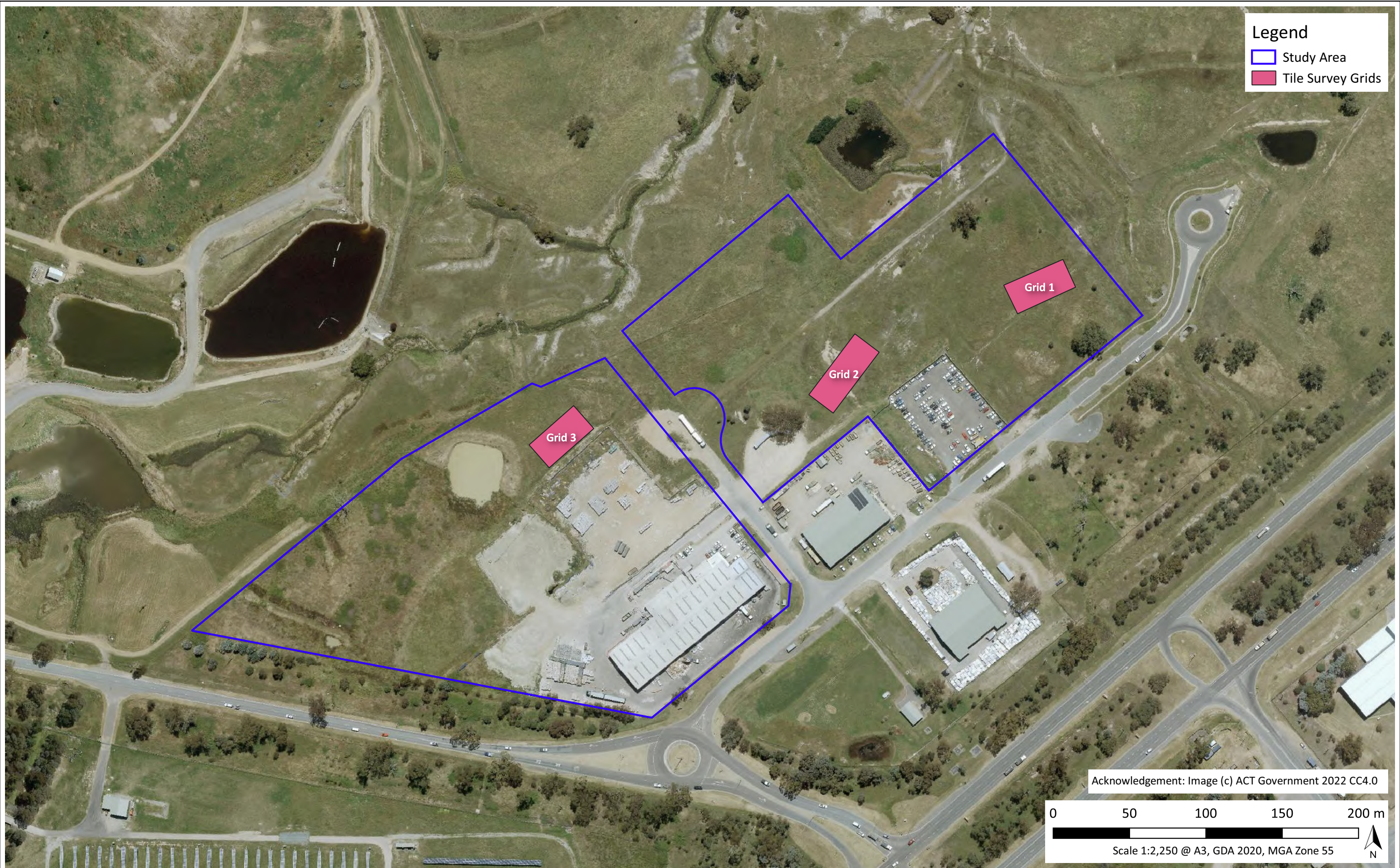


Figure 2. Striped Legless Lizard Survey

Capital Ecology Project No: 3167
Drawn by: S. Reid
Date: 30 January 2023

Appendix A. Targeted Striped Legless Lizard Survey Results

Check	Recorded By	Date	Start Time	End Time	Start Temp (°C)	End Temp (°C)	Cloud	Wind (km/h)	Grid	Species	Common Name	Number	Notes
1	ST and IR	29/09/2022	9:35:00 AM	10:15:00 AM	14.3	-	4/8	17	2	<i>Hemiergis talbingoensis</i>	Three-toed Skink	3	
									3	-	Unidentified Skink	3	
2	CR and MT	4/10/2022	9:25:00 AM	10:00:00 AM	11.3	12.5	8/8	Calm	1	<i>Hemiergis talbingoensis</i>	Three-toed Skink	1	
									2	-	Unidentified Skink	2	
										<i>Hemiergis talbingoensis</i>	Three-toed Skink	2	
									3	<i>Hemiergis talbingoensis</i>	Three-toed Skink	2	
3	CR and MT	10/10/2022	11:30:00 AM	12:00:00 PM	12	12.3	3/8	11	2	<i>Hemiergis talbingoensis</i>	Three-toed Skink	4	
									3	<i>Hemiergis talbingoensis</i>	Three-toed Skink	6	
4	CR and MT	18/10/2022	10:40:00 AM	11:00:00 AM	15.3	15.5	7/8	9	1	<i>Hemiergis talbingoensis</i>	Three-toed Skink	1	
									2	<i>Hemiergis talbingoensis</i>	Three-toed Skink	9	
									3	<i>Hemiergis talbingoensis</i>	Three-toed Skink	2	
5	ST and LA	28/10/2022	9:45:00 AM	10:20:00 AM	13.3	-	2/8	33	3	<i>Hemiergis talbingoensis</i>	Three-toed Skink	4	
									1	<i>Hemiergis talbingoensis</i>	Three-toed Skink	2	
									2	<i>Hemiergis talbingoensis</i>	Three-toed Skink	2	
6	CR and LA	4/11/2022	8:30:00 AM	9:00:00 AM	10	11	2/8	9	2	<i>Hemiergis talbingoensis</i>	Three-toed Skink		
7	RS and ST	10/11/2022	8:15:00 AM	10:15:00 AM	14.2	-	1/8	7	-	-	-	-	No reptiles observed
8	CR	17/11/2022	9:00:00 AM	-	15.1	-	0/8	9	-	-	-	-	No reptiles observed
9	ST and AP	25/11/2022	8:10:00 AM	8:45:00 AM	11.9	-	8/8	4	3	<i>Hemiergis talbingoensis</i>	Three-toed Skink	1	
									2	-	Unidentified Skink	1	
10	ST	1/12/2022	9:00:00 AM	-	15.9	-	7/8	9	1	<i>Lampropholis delicata</i>	Delicate Skink	1	
									1	<i>Hemiergis talbingoensis</i>	Three-toed Skink	2	
									1	<i>Hemiergis talbingoensis</i>	Three-toed Skink	4	