

4th June 2020

TF & A Millett
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Attention: David Sammut (General Manager - Land Development) Phone 9971 6300

By Email — david.sammut@udmgt.com.au

Dear David,

**RE: ROSENTHAL ESTATE: 100 VINEYARD ROAD, SUNBURY
GOLDEN SUN MOTH MONITORING
REPORT 15148 (8.1)**

Introduction and summary

This letter provides the results of recent Golden Sun Moth (GSM) monitoring surveys within the two conservation reserves at the Rosenthal Estate at 100 Vineyard Road, Sunbury. These surveys are required under the Conservation Management Plan (EHP 2015) endorsed by Hume City Council.

Four surveys, as required by the DELWP guidelines (DSE 2010), were undertaken at the site in late 2019. Details of each survey are presented in the Table 1 below.

GSM was not recorded during these surveys.

Method

Survey Guidelines

GSM surveys were required within the two conservation reserves at the Rosenthal Estate at 100 Vineyard Road, Sunbury to assist in determining the status of GSM within the study area. The survey methodology (DSE 2010) is outlined below:

- GSM surveys must be timed to coincide with the Moth's active season (November - December). In some wet years the season may be extended (to January).
- Surveys must only be undertaken during suitable weather conditions, namely:
 - Warm to hot days (days above 20°C by 10 am);
 - During the warmest part of the day;

- Clear to mostly cloudless sky;
 - Still or relatively still wind conditions during the survey period; and
 - At least two days since rain.
- Surveys must be undertaken when male moths are known to be flying. This will be determined by visiting a reference site supporting a known moth population close to the study area prior to undertaking the survey, and/or by liaison with DELWP or other consultants who have visited a reference site.
 - Surveys will occur between 10am and 3pm on suitable days unless moths are still observed flying. In such circumstances the surveys will continue until no more moths are observed flying.
 - Transect locations will be recorded using a hand-held GPS.
 - The aim of the surveys will be to record the moth if it is present. As per the guidelines, this is achieved by undertaking a total of up to four surveys in areas of suitable habitat. Every GSM record will be logged on a hand-held GPS for mapping.
 - Each survey will involve up to four site visits where transects of decreasing width will be walked. On the first visit, transects will be spaced at 50m, on the second at 25m, and the third and fourth at 10m. Surveying can cease once moths are observed and an adequate estimate of numbers is obtained (i.e. not all survey days may be required).

Results

Table 1: GSM survey results

Survey Date	18/11/2019	25/11/2019	8/12/2019	17/12/2019
Site	100 Vineyard Rd, Sunbury (-37.589763, 144.705492)	100 Vineyard Rd, Sunbury (-37.589763, 144.705492)	100 Vineyard Rd, Sunbury (-37.589763, 144.705492)	100 Vineyard Rd, Sunbury (-37.589763, 144.705492)
Survey type	50m Transect survey	25m Transect survey	10m Transect survey	10m Transect survey
Reference site validating survey	Barry Rd, Broadmeadows Valley park (37°39'52.83"S, 144°55'6.07"E)	Barry Rd, Broadmeadows Valley park (37°39'52.83"S, 144°55'6.07"E)	Barry Rd, Broadmeadows Valley park (37°39'52.83"S, 144°55'6.07"E)	Barry Rd, Broadmeadows Valley park (37°39'52.83"S, 144°55'6.07"E)

Survey Date	18/11/2019	25/11/2019	8/12/2019	17/12/2019
Survey start time	13:45	11:00	10:58	11:10
Survey duration	1.5 hours	1:15 hours	50 minutes	1.05 hours
GSM recorded? Y/N	No			
Time of sighting	Not applicable			
Total Number GSM	Not applicable			
Temp on site (°C)	26.9-28.3	28.2-29.5	19-20	25-28
Cloud cover %	0	10	0	40
Wind direction	N	NW	None	SE
Average Wind strength	Gentle	Gentle	None	Gentle
Ground conditions (dry/damp/wet)	Dry			
Vegetation description	Chilean Needle-grass, Austrostipa sp., Perrenial Rye-grass, 0-5% bare ground	Chilean Needle-grass, Austrostipa sp., Perrenial Rye-grass, 0-5% bare ground	Chilean Needle-grass, Austrostipa sp., Perrenial Rye-grass, 0-5% bare ground	Chilean Needle-grass, Austrostipa sp., Perrenial Rye-grass, 0-5% bare ground
Other notes	GSM confirmed in good numbers at reference site, but not in study areas	GSM confirmed in good numbers at reference site, but not in study areas	GSM confirmed in good numbers at reference site, but not in study areas	GSM confirmed in good numbers at reference site but not in study areas

Conclusion

As can be seen from Table 1 above, no GSM were recorded within the study area this season (2019/2020).

GSM have not been recorded during the past four monitoring years. The species may have become locally extinct.

Management of the conservation reserves should continue in accordance with the Council endorsed Conservation Management Plan (EHP 2015).

If you have any questions regarding the above, please do not hesitate to call me.

Yours sincerely,

Alan Brennan

**Director
Nature Advisory Pty Ltd**

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