



9 March 2022

Richard Nash
Managing Director
Purdon Planning Pty Ltd
Suite 5, Level 1, 243 Northbourne Ave, Lyneham, ACT, 2602
P: 02 6257 1511
M: 0405 398 899
E: richard.nash@purdon.com.au

Assessment of mapped Golden Sun Moth habitat within 70 Allara Street (Block 16, Section 10), Canberra City.

Capital Ecology project no. 3117

Dear Mr Nash,

This letter provides the findings of my assessment of the habitat suitability for the Golden Sun Moth *Synemon plana* (Commonwealth EPBC Act Vulnerable; ACT NC Act Endangered) of the area located in the north-west corner of 70 Allara Street (Block 16, Section 10), Canberra City (the 'study area') mapped as Golden Sun Moth habitat on ACTmapi¹. Figure 1 shows the study area in the locality, and Figure 2 shows the area mapped as Golden Sun Moth habitat on ACTmapi.

As shown in Figure 2 and the associated inset image, the land within the circular onramp to Commonwealth Avenue (referred to as part of the 'clover leaf') is a mapped polygon of Golden Sun Moth habitat on ACTmapi. In addition to the land within the clover leaf, the mapped polygon extends across the dual lane asphalt onramp to include a small area of the road verge to the northeast, 80 m² of which occurs in the northwest corner of the study area. Given that the proposed redevelopment works within the study area² may impact this 80 m² patch of mapped Golden Sun Moth habitat, I have undertaken this assessment to determine the suitability of the mapped habitat for the species, and if deemed characteristically suitable, assess the likely significance of proposed impacts to the habitat.

¹ <https://app.actmapi.act.gov.au/actmapi/index.html?viewer=ssvcrt>

² <https://www.purdon.com.au/consultation-old/block-16-section-10-city/>

We acknowledge the Traditional Custodians of the land on which we work. We pay our respects to Elders past and present.

Capital Ecology Pty Ltd

PO Box 854
Gungahlin ACT 2912

ACN: 607 364 358
ABN: 50 607 364 358

Phone: 0412 474 415
Email: admin@capitalecology.com.au

www.capitalecology.com.au

Vegetation/habitat characteristics

On 20 February 2022, I visited the study area to assess the characteristics of the mapped habitat. Whilst my inspection focussed on the mapped habitat in the study area, I also inspected the mapped habitat in the adjoining road verge and that within the adjacent clover leaf.

As shown in Photo 1, the mapped habitat in the study area is regularly mown and manicured as part of the ACT Government's open space maintenance program. Apart from a small number of planted Argyle Apple *Eucalyptus cinerea* that overhang the edge of the mapped habitat, the area is clear of woody vegetation. As shown in Photo 2, the groundcover is dominated (> 90% of herbage mass) by the warm season perennial exotic grasses Goose Grass *Eleusine tristachya* and Couch *Cynodon dactylon*, together with a small amount (< 5%) of the cool season perennial exotic grass Chilean Needle Grass *Nassella neesiana*. No native grasses were noted in the study area.



Photo 1. Vegetation within the study area.



Photo 2. Close-up photograph of the groundstorey vegetation in the study area.

Habitat suitability

As noted above, the vegetation within the study area, together with that throughout the rest of the immediately adjoining area of the polygon, is dominated by Goose Grass and Couch. Whilst neither of these species is a known food source for the Golden Sun Moth, Chilean Needle Grass is known to be a food source and provide supplementary habitat for the species at numerous sites across the ACT and region. This is the case across the extensive patches of mapped habitat in the clover leaf and along the Parkes Way median where Chilean Needle Grass is now the dominant grass. Despite being a noxious weed (a declared Weed of National Significance), the suitability of Chilean Needle Grass as habitat for the Golden Sun Moth is widely recognised. However, its importance to the conservation of the species is not fully understood.

In light of the above, whilst much of the adjacent patch of the clover leaf is characteristically suitable, albeit exotic dominant, habitat for the Golden Sun Moth and is known to support a population of the species, I do not believe that this habitat suitability extends across the onramp to the patch adjoining the study area. Whilst the potential for a small number of moths to be present cannot be entirely ruled out, I believe that the lack of a substantial cover of Chilean Needle Grass or other food species in the groundcover prevents the potential for the area to support a substantial population. Accordingly, based on my on-ground inspection of the condition, composition, and other characteristics of the groundstorey vegetation, I believe that the mapped polygon in this location would better reflect the extent of suitable Golden Sun Moth habitat if it were limited to the edge of the clover leaf.

Potential significance of clearance of mapped habitat in the study area

As outlined above, I do not believe that the 80 m² portion of the mapped polygon which extends into the study area is characteristically suitable habitat for Golden Sun Moth, and it is similarly unlikely that much or any of the adjoining area of the polygon outside of the clover leaf is suitable habitat. Accordingly, and noting that the proposed development in the study area would not impact habitat within the clover leaf, the clearance of the 80 m² portion of the mapped polygon in the study area is unlikely to impact upon habitat for the Golden Sun Moth.

Notwithstanding the above, and with reference to the applicable Commonwealth Government guidelines³⁴⁵, I note that even if the 80 m² portion of the mapped polygon within the study area does in fact support a small number of Golden Sun Moths, and is therefore low quality but confirmed habitat, then the clearance of the 80 m² of habitat would be unlikely to significantly impact upon the species.

Recommended amendments to ACTMapi Golden Sun Moth habitat mapping

In addition to the above recommended alteration to the mapped polygon adjoining the study area, I note that there are several instances where the Golden Sun Moth habitat mapping layer applying to the clover leaf and the Parkes Way median includes areas that are asphalt roads or under dense tree canopies, such areas being clearly unsuitable as habitat for the species. There are also a few instances where characteristically suitable habitat is omitted from the polygons of analogous habitat. Accordingly, I recommend that such amendments to the ACTMapi mapping layer are also made if the layer is amended to reflect the on-ground extent of habitat in the study area and adjoining polygon.

I trust that this letter provides the assessment and advice required. If, however, you should have any questions relating to any of the matters discussed herein, please do not hesitate to contact me.

Yours sincerely,



Robert Speirs

Director / Principal Ecologist

Attachments

Figure 1. Locality Plan

Figure 2. ACTMapi Golden Sun Moth Habitat

³ Commonwealth of Australia (2013). *Matters of National Environmental Significance - Significant Impact Guidelines 1.1. Environment Protection and Biodiversity Conservation Act 1999*. Commonwealth Department of the Environment.

⁴ Commonwealth of Australia (2009a). *Significant impact guidelines for the critically endangered golden sun moth (Synemon plana). Nationally threatened species and ecological communities EPBC Act policy statement 3.12*. Department of the Environment, Water, Heritage and the Arts.

⁵ Commonwealth of Australia (2009b). *Background Paper to EPBC Act Policy Statement 3.12 - Significant Impact Guidelines for the Critically Endangered Golden Sun Moth (Synemon plana)*. Department of Environment, Water, Heritage and the Arts.



Figure 1. Locality Plan

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Drawn by: R. Speirs

Date: 9 March 2022

Legend

Landscape Context

Study Area - Block 16 Section 10



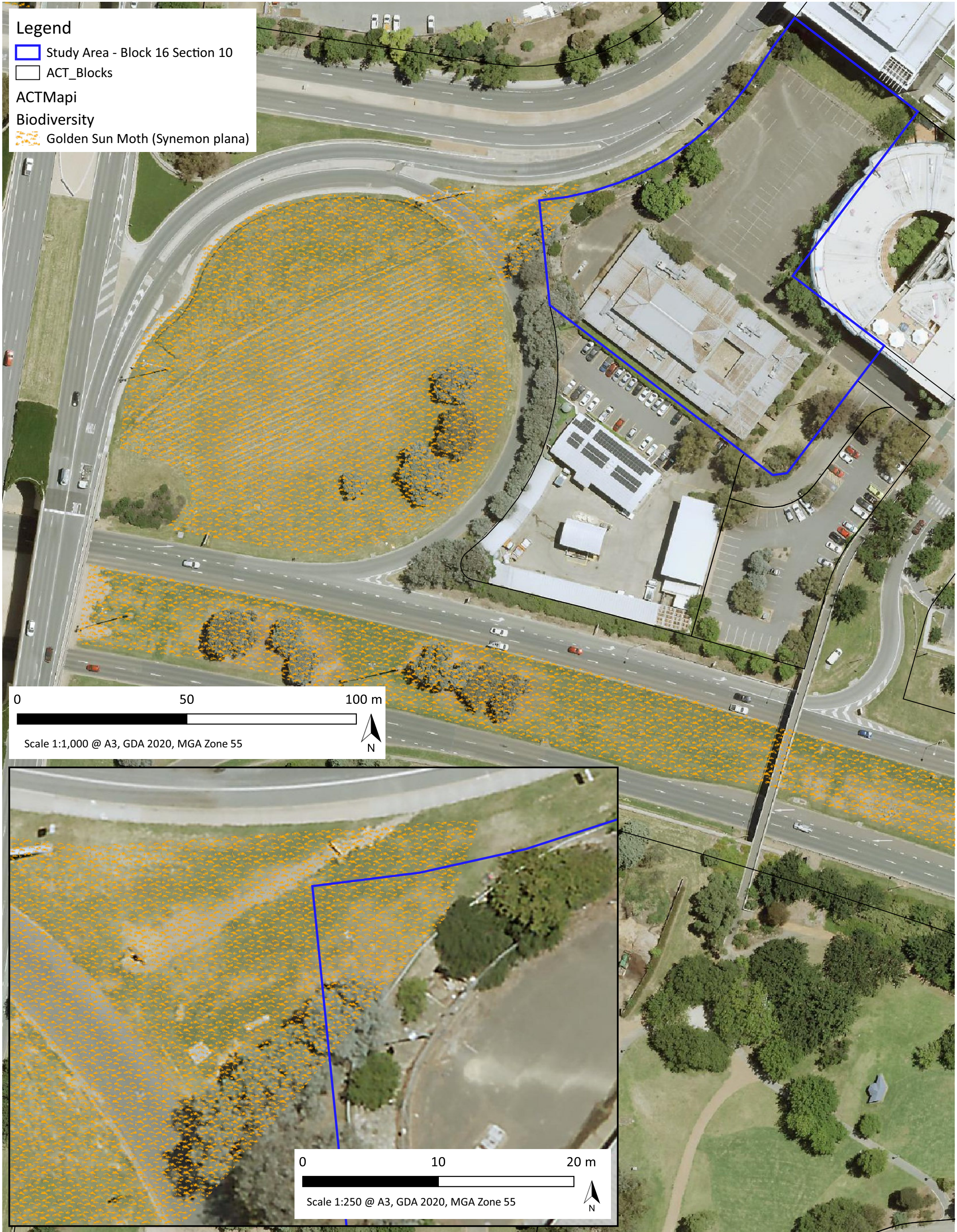


Figure 2. ACTMapi Golden Sun Moth Habitat