

Access Road and Dudley Street Upgrade – comments register		
Comments received from:	Southern NSW & ACT Assessments Section (DoEE)	
Comments received on:	17 May 2018	
Response date:	26 July 2018	

Issue raised	Response
<u>Assessment requirements:</u>	
<p>RED: The maps in the Umwelt Impact Assessment (particularly pages 9 and 10) show two Natural Temperate Grassland patches being excluded from areas considered to be Golden Sun Moth habitat. The Department generally considers NTG to be habitat for GSM except where strong justifications are provided. Please confirm which NTG patches are and are not suitable for GSM habitat, and the basis on which that determination was made (e.g.: kangaroo-grass dominance, instead of wallaby-grass). The Department is particularly concerned as the information on pages 5-7 of the Offsets Strategy indicates the large patch of NTG deemed not to be GSM habitat (the patches labelled 12 and 13) has a substantial wallaby grass component.</p>	<p>Section 2.1.1 of the Offset Strategy identifies the vegetation within patches 5, 12, and 13 as being part of vegetation association 7: kangaroo grass – wallaby grass – snow grass moist tussock grassland of the south eastern highlands defined by Armstrong (2013). Vegetation associations are identified to characterise the species that typically make-up these communities to guide decision making and management. As such, a vegetation association is a name to help group vegetation into understandable units based on what is likely to occur; they do not define what is on the ground at any particular site. It is not accurate to assume that because the name includes wallaby grass that this is a substantial component of the vegetation present within patches 5, 12, or 13.</p> <p>In this instance, despite patches 12 and 13 meeting the criteria for vegetation association 7; floristic survey (Umwelt, 2017a) identified that less than four individual wallaby grass (<i>Rytidosperma carphoides</i>) plants occur within the plot and kangaroo grass (<i>Themeda triandra</i>) covers more than 75% of the plot. Patch 12 and 13 was not identified as golden sun moth (<i>Synemon plana</i>) habitat for the following reasons:</p> <ul style="list-style-type: none"> • overall low abundance of golden sun moth feed species; • a growth form that is dominated by large grass tussocks, substantially reducing the availability of space for female display; and • a lack of record of the species in this area (Rowell, 2012; Umwelt, 2014; 2016; 2017a). <p>Patch 5 has a lower cover of kangaroo grass (i.e. 25-50%) and a greater cover of wallaby grasses (more than 15 individual plants); and the vegetation is generally more sparse. Golden sun moth have been observed in this area, therefore it has been mapped as low quality golden sun moth habitat.</p> <p>A comment has been added in Section 2.1.2 of the report to clarify the above.</p>

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<p>The Department also notes that, where an action will impact an area of NTG that is also GSM habitat, both impacts must be considered and acknowledged in impact quantifications. Both impacts may also generate offset liabilities.</p>	<p>Please note the above in relation to patches 12 and 13.</p> <p>All areas containing both golden sun moth and natural temperate grassland have had both impacts considered and acknowledged in impact quantifications.</p>
<p>1. Referral Information, Planning and Conservation Measures</p>	
<p>RED: This information was not attached to the PD package. The Department recommends it be attached as an 'Attachment I' after all other documents.</p>	<p>The Preliminary Documentation Package will be updated to include the Referral as an attachment.</p>
<p>GREEN: Appears not to apply.</p>	<p>Noted.</p>
<p>GREEN: Zoning information provided.</p>	<p>Noted.</p>
<p>ORANGE: A discussion of likely requirements or conditions that may be imposed by other regulators is desirable at this stage and required prior to the final PD.</p>	<p>This is a matter for the Department to liaise with EPSDD and NCA as these agencies have both advised at pre-application meetings that they cannot provide an approval (with any imposed conditions) prior to the Department providing its approval for the Project. We would be happy to co-ordinate a meeting between each of the regulators if required.</p>
<p>2. Proposed Mitigation and Avoidance Measures</p>	
<p>GREEN: The Department considers the description of avoidance and mitigation measures is generally appropriate, detailed, and contains justifications.</p>	<p>Noted.</p>

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<p data-bbox="188 261 734 384">ORANGE: The Department is unsure whether certain proposed mitigation and avoidance measures will necessarily be viable, or may require additional information. Specifically:</p> <ul data-bbox="188 405 743 1066" style="list-style-type: none"> <li data-bbox="188 405 743 895">• The proposed requirement that all vehicles will need to be washed before entering the site is certainly desirable, but the Department is concerned it may not be implementable, or may not be fully complied with. If the requirement is that all construction vehicles and machinery entering the impact area itself will be washed down, that seems appropriate and the Department agrees with the recommendation. If the requirement is that all workers' personal vehicles will be washed down before entering the designated parking area, the Department would have concerns about whether such a measure would be complied with. <li data-bbox="188 916 725 1066">• The Department would appreciate assurances that a detour will be provided for the duration of the Uriarra Track closure to encourage foot and bike traffic to avoid Golden Sun Moth habitat. 	<p data-bbox="770 261 1989 323">Review of Environmental Factors, Mitigation measure 18 has been updated to refer to washing down of vehicles prior to entering the impact area (rather than the site).</p> <p data-bbox="770 339 2045 432">An additional mitigation measure (Mitigation measure 16) has been included in the Review of Environmental Factors: <i>A temporary diversion of the Uriarra Track would be provided for the duration of construction to encourage foot and bicycle traffic to avoid the golden sun moth habitat areas.</i></p>

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<p>ORANGE: The Department notes that the proponent intends impacts in certain areas to be temporary, as those areas will be subject to rehabilitation. Previous projects indicate rehabilitation can be successful, but is not always. The Department supports rehabilitation efforts, but will consider the temporary impact as an impact, and the proposed rehabilitation as an effort to offset the impact. The suitability of rehabilitation as an offset will therefore be calculated through the offset calculator, which will include an analysis of whether the rehabilitation is likely to succeed. This approach will likely mean the rehabilitation is not considered to be a full offset for the impacted area (discussed in the offsets section below).</p>	<p>N/A. The action and impact assessment has been revised.</p> <p>All areas of temporary impact have been considered as part of the offset requirements for golden sun moth. The rehabilitation plan has been updated to represent as an indirect offset. This is discussed in Section 4.4.4 of the revised Offset Strategy.</p>
<p>3. Outcomes-based Conditions</p>	
<p>GREEN: Proponent not pursuing outcome-based conditions.</p>	<p>Noted.</p>
<p>4. Offsets</p>	
<p>GREEN: The proposed Natural Temperate Grassland offset appears adequate.</p>	<p>Noted.</p>

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<p>RED: The Department has concerns about the adequacy of the proposed offset site for Golden Sun Moth. The Offset strategy asserts that the GSM habitat at the North Mitchell site is expected to drop in quality from a score of 6 to a score of 3 in the absence of management actions, but considers appropriate management could achieve a quality of 8 within 5 years. The Department would generally consider those projections improbable.</p>	<p>All values proposed are based on the scores defined in the document. These are related mostly to the described threat of African lovegrass (<i>Eragrostis curvula</i>) and other weeds that have been demonstrated to decimate natural grassland environments in a five year period in the ACT if not appropriately managed.</p> <p>The perceived risk and predicted drop in quality has been further defined in Section 4.4.2 of the Offset Strategy.</p>
<p>The Offset Strategy has not demonstrated a clear and overwhelming threat to the GSM habitat at the North Mitchell site. The Department is aware of a substantial Chilean Needlegrass presence (which could certainly degrade Natural Temperate Grassland), but this is unlikely to excessively threaten GSM habitat. If a clear source of likely degradation could be shown, the Department could potentially consider a drop from 6 to 5 to be plausible, but would require appropriate evidence.</p>	<p>The threat to North Mitchell is from African lovegrass, not Chilean needlegrass (<i>Nassella neesiana</i>). African lovegrass is considered to represent a serious threat to natural grassland ecosystems. The species is aggressive; drought and frost tolerate, and is capable of invading natural temperate grassland and suppressing native groundcover (Environment ACT 2005) while forming a dense monoculture. As a C4 grass, it does not provide foraging opportunities for golden sun moth (as Chilean needlegrass does). Chilean needlegrass has not been recorded at the North Mitchell Grasslands.</p> <p>Further discussion has been provided in Section 4.4.2 to demonstrate the risk.</p>

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<p>Similarly, the Department notes the Offset Strategy does not detail the proposed management measures, instead simply stating a management plan will be developed. The Department therefore cannot have confidence in the environmental outcomes to be achieved. Even were a more detailed set of management measures provided, the Department considers achieving a quality score of 8 would be extremely challenging. Previous projects have indicated habitat quality typically would only increase to at most a 7 for this species. Such an improvement would also often take 10 years.</p>	<p>It is noted that quality scores are only comparable using the same methodology, which has been done in this case between the impact and offset sites. Between projects, scores are qualitative and generally cannot be meaningfully compared.</p> <p>Substantial additional detail has been provided in Section 4.5 of the Offset Strategy to reflect the discussions had during the site inspection held between the Department and the proponent on 1st June 2018. More detail has been provided on the proposed management measures that will be implemented. This should provide more confidence in the improvements proposed.</p> <p>Furthermore, Table 4.9 details how the metrics described in Section 4.4.1 can be used to demonstrate the proposed quality improvement. By targeting management to the matrix between habitat patches and immediate buffer areas, it is believed that this quality improvement can be achieved as these actions improve the connectivity and overall site context of the habitat.</p>
<p>The Department also has concerns about the methodology used to determine site quality scores for both the impact and offset sites. The methodology appears to depart from the conservation advice, including by using the presence of Chilean Needlegrass to assert low quality GSM habitat at the impact site.</p>	<p>The metrics developed for the Offset Strategy take consideration of site condition, context, and stocking rate as per the EPBC Offset Policy. The relevant conservation advice for golden sun moth and natural temperate grassland are considered as part of the site condition component of the EPBC Offset Policy.</p> <p>The Offset Strategy notes that Chilean needlegrass is habitat for golden sun (consistent with the conservation advice) and areas that contain a substantial proportion of Chilean needlegrass have been mapped and considered in the impact assessment accordingly.</p> <p>It is considered appropriate to value areas of Chilean needlegrass as being of low condition as they are dense with limited floristic diversity. As a Weed of National Significance, Chilean needlegrass has been acknowledged as a noxious weed due to its effects on vegetation communities; based on Umwelt's understanding of the ecology of native grasslands, it is paradoxical to consider vegetation dominated by a noxious weed as being in 'high' condition. Umwelt have used a consistent methodology for assessing golden sun moth habitat in similar, previous EPBC approvals which have been considered adequate by the Department.</p> <p>The calculations used to acknowledge that Chilean needlegrass may support high numbers of golden sun moth. In patches where this is true, 'moderate' or 'high' species stocking rate scores have been applied.</p>

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<p>Further, the impact area quality score has been lowered by the presence of unspecified threats to the GSM. It is not appropriate to lower a site's present quality score on that basis. Threats should be considered as indicators of possible future quality loss, or increased risk of loss, but do not reduce present impact.</p>	<p>The EPBC Offset Policy 'How To' guide states that there are three components that contribute to the calculation of habitat quality: site condition, site context, and species stocking rate. The metrics developed for the Offset Strategy relate directly to these three components in a transparent and repeatable way. In particular, it is noted that the EPBC Offset Policy specifies that threats should be considered as part of site context quantifications (see below).</p> <div data-bbox="792 443 1787 935" data-label="Diagram"> <p style="text-align: center;">Determine site characteristics in relation to species or ecological community ecology:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center; padding: 5px;"><u>Site Condition</u></th> <th style="text-align: center; padding: 5px;"><u>Site Context</u></th> <th style="text-align: center; padding: 5px;"><u>Species Stocking Rate</u></th> </tr> </thead> <tbody> <tr> <td style="padding: 5px; vertical-align: top;"> <ul style="list-style-type: none"> What is the structure and condition of the vegetation on the site? What is the diversity of relevant habitat species present (including both endemic and non-endemic)? What relevant habitat features are on the site? </td> <td style="padding: 5px; vertical-align: top;"> <ul style="list-style-type: none"> What is the connectivity with other suitable/known habitat or remnants? What is the importance of the site in relation to the overall species population or the occurrence of the community? What threats occur on or near site? </td> <td style="padding: 5px; vertical-align: top;"> <ul style="list-style-type: none"> What is the presence of the species on the site? (i.e. confirmed / modelled). What is the density of species known to utilise the site? What is the role of the site population in regards to the overall species population? </td> </tr> </tbody> </table> <p style="text-align: center; margin-top: 10px;">↓</p> <div style="text-align: center; border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">Habitat Quality</div> </div> <p>The 'unspecified threats' to golden sun moth are based on the principal threats listed in the species' conservation advice. These have been further defined in Section 4.4.1. As defined in the Offset Strategy, the surrounding threats contribute to the site context score. The impact site has been determined to have 'high intensity threats' which means three or more of the above threats occur; this includes isolation, degradation, and weed invasion. This does not reduce present impact, rather reflects the current status of the site.</p> <p>We have used these golden sun moth metrics in our site context scores for numerous projects which have been reviewed by the Department, including most recently for the West Belconnen Strategic Assessment (approved), and Eastern Broadacre Strategic Assessment (reviewed but not yet approved).</p> <p>It is considered appropriate to retain this metric, as it is specifically included in the Offset Policy supporting documentation (above), and it is important to have consistent metrics between the impact and offset sites to allow comparison.</p> <p>Further description has been added to the document, but no change to the calculations has been made.</p>	<u>Site Condition</u>	<u>Site Context</u>	<u>Species Stocking Rate</u>	<ul style="list-style-type: none"> What is the structure and condition of the vegetation on the site? What is the diversity of relevant habitat species present (including both endemic and non-endemic)? What relevant habitat features are on the site? 	<ul style="list-style-type: none"> What is the connectivity with other suitable/known habitat or remnants? What is the importance of the site in relation to the overall species population or the occurrence of the community? What threats occur on or near site? 	<ul style="list-style-type: none"> What is the presence of the species on the site? (i.e. confirmed / modelled). What is the density of species known to utilise the site? What is the role of the site population in regards to the overall species population?
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<p>Based on the large population observed, the Department considers the impact site has a quality score of 7.</p>	<p>It is noted that the Impact Site was given a quality score of 7 for golden sun moth based on the metrics and calculations described in the Offset Report. This is consistent with the outcome identified by the Department.</p>
<p>Finally, the Department considers that the apparent 'temporary' impact to GSM habitat from the construction compound (0.84 ha) must be considered part of the action's total impact. While the Department encourages rehabilitation, it notes rehabilitation for GSM has a low success rate. Therefore, it is necessary for this action to treat the compound as an impact, then include the proposed rehabilitation as a partial offset measure, with a relatively low confidence score reflecting past outcomes.</p>	<p>As described above, this option has been presented as an indirect offset instead.</p>
<p>When the Department calculates the impact and offset values on the basis outlined above, the proposed offset appears to provide approximately 24% of the environmental gain needed to compensate for the action's likely impacts. This figure includes all proposed rehabilitation works, and appears to be consistent with previous advice from the ACT Government that the North Mitchell site would likely provide between 20% and 30% of the necessary offset for GSM.</p>	<p>Further detail and justification has been provided in the revised Offset Strategy. The predicted habitat improvement (and decline) values have been retained, however due to temporary impacts being included in the direct impact calculation, values have changed slightly. The combined score of the golden sun moth direct offsets would equate to 90%.</p> <p>The Offset Strategy details that values used in the offset calculation tool to get this value.</p>