Thesium Pty Ltd

Biodiversity offsets sourcing and administration

Thursday, 19 June 2025

Rita Hatem
Department of Planning, Housing and Infrastructure

Re: Submission by Thesium Pty Ltd to the exhibited documents of the Tilbuster 2 Solar Farm project (SSD-69799460)

Dear Ms Hatem

Thesium Pty Ltd is pleased to be able to provide this response to the exhibited EIS for the Tilbuster 2 Solar Farm project. While much of our interest is in the biodiversity impacts of the project, we would also like to draw attention to other matters which affect not only this project, but most other major projects across NSW.

We declare a potential pecuniary interest in this project. As a provider and agent for biodiversity credits we have matching biodiversity credits that may be of interest to the developer. These are available for immediate transfer as the credits are already in existence, and other credits of the same offset trading group can be sought from appropriate local stewardships.

The credits that we hold for trade include matching credits to the **White Box-Yellow Box-Blakely's Red Gum Grassy Woodland Threatened Ecological Community**. We have 105 credits in hand, can procure another 44, and have projects in consideration that would provide most if not all of the balance of the required credits for this trading group. We are also happy to act to scout out supplies of the other credits needed (New England Grassy Woodlands 70-90% cleared and *Myotis macropus*) if these have not yet been offered or secured.

With regard to matters affecting this project and Major Projects across NSW more generally, the following issues have come to our attention.

1. When the Conditions of Consent document is prepared by the department, for approval by either the IPC or the delegate, the table of required biodiversity credits contains the identified Plant Community Types (PCTs) from the Biodiversity Development Assessment Report (BDAR). This can potentially cause problems, as it is not the PCTs that are able to be used to match the unavoidable biodiversity impacts, but **those which match like-for-like conditions in the BAM Biodiversity Credit Report (Like for like)**, which is usually included as an appendix to the BDAR and are identified as the **Offset Trading Group** (OTG).

   As has been pointed out to me, if an approved project needs to comply with the conditions of consent, and those conditions specify a particular PCT, then **the project must theoretically secure that PCT**. It is unable to use any of the matching PCTs that are identified in the Credit Report. The match in the Biodiversity Offsets Scheme is made on the OTG, and the Assessment Report and Recommended Instrument of Consent for a development should reflect these broader categories. To not do so can potentially cause a project to be in breach of conditions by securing a suitable like for like matching credits type within the OTG list, but not the actual

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identified PCT from the approval.

2. The second matter which also affects almost every Major Project in NSW is the costings that are supplied to identify the contributions, Voluntary Planning Agreement values with local governments and other project-cost-related financial matters in the process. The Estimated Development Cost Estimates that I have inspected from projects on exhibition and also those which have passed through this stage show an alarming omission.

   Very few of them have considered the costs of biodiversity credits required to allow the project to proceed. Biodiversity Credits must be acquired and retired prior to the project commencing development activity on the site. Therefore, they are a mandatory component of the project costing. For the Tilbuster 2 Solar Farm, being commented upon here, I see a report from a quantity surveyor that encompasses an enormous diversity of materials, labour and even a contingency allowance, but has nothing identified of the costs associated to the procuring of biodiversity credits needed by the project.

   At 'ballpark' costs, these credits will form about 3% of the project costs at least. A likely minimum value of the required credits is provided below – and this value makes it the 5th highest input cost – and totally ignored. Even if the project established its own biodiversity offset sites, there would still be the value of the Total Fund Deposit (likely $4-5m) plus site acquisition (~$1m is likely) and assessment (often $250k+) to be identified and costed.

Credit	Count needed	Value Each[1]	Subtotal
Box – Gum Grassy Woodland TEC	568	$5,200	$ 2,953,600
New England Grassy Woodlands 70-90	220	$5,500	$ 1,210,000
Myotis macropus	475	$1,300	$ 617,500
TOTAL			$ 4,781,100

[1] – Using most recent BCT price available or best guess

   That also will impact upon the values the developer has to pay, so I presume they are happy at this departmental oversight in the guidance provided. It is, however, providing an entirely unrealistic view of the costs and values of impacting biodiversity, including the very real fact that this finite resource is often sought at an unrealistically low value given its historical consideration as having zero impact on a project cost (being often considered an uncosted externality). It also, in effect, reduces the capacity of the department to service the biodiversity component of the project as there is no contribution from that component to the costs of assessing the application (funded in essence from the application fee, which is dependent on the project cost).

The following addendum gives more detail for items noted in the summary EIS report, the Estimated Development Cost Estimate and an assessment of the submitted BDAR.

With thanks

Greg Steenbeeke

Director, Thesium Pty Ltd

Addendum – Commentary on EIS

General EIS document comments

In general, there are very few concerns with the document presented. It is noted that there are some typographical errors throughout, as well as the following – generally minor points:

- New England Highway is not dual carriageway at this location (table 6.23)
- Section 6.7.2 'Threatened Species' identifies a microbat – should be *Myotis macropus* – under a name applicable to an Argentinian species, *M. aelleni*.
- Under the section 'disruption to connectivity' (Table 6.65) there is no mention of the potential to raise the likelihood of causing roadkill impacts by pushing fauna onto the highway as it moves around the landscape and is 'directed' by the fencing around the site to move closer to the highway. This is expected to impact primarily those species which are not considered threatened such as kangaroos, wallabies and wombats. It could potentially be raised as a vehicular traffic hazard also.
- There is the suggestion (section 6.13.2) that fuel could be used in vehicles on the site during the operational phase. It would also be reasonable to assume that the vehicles on the site could be electrified, reducing this fuel use as well.
- In section 6.14.1 and in the glossary, AWS is identified as 'all weather station' when in fact it is automatic weather station, as the BoM's own glossary states.
- Community benefit payment (section 6.16.2) is identifying a VPA with ARC of a certain value which is obviously informed by the project cost, which itself is identified in the Estimated Development Cost Estimate report. As noted, this value is already erroneous, as the costs of addressing biodiversity impacts through acquisition of biodiversity credits or establishment of a stewardship site are omitted, yet very sizeable.
- Table 6.94 – PCT 3359 is not identified for Stage 2, yet is mentioned immediately above this as being present in the proposal site.
- Section 7.2.3 – Improved valuation, pricing and incentive mechanisms does not consider the biodiversity costs at all – both financial and in terms of the replaceability, which would be core to ESD. Credits are often priced without good consideration of the cost to the hosting landholder in terms of foregone income (each hectare of grazed woodland generates over $400 per year of income), as well as costs that are identified in the future management fund, the Total Fund Deposit, as calculated for a stewardship site.

Estimated Development Cost Report

While the report is presented in apparent fulfilment of the departmental circular 24-002, there are matters in the AIQS practice standard that are omitted. The most prominent of these is the cost of biodiversity. While that word only appears once in the standards, it is notable that the quantity surveyor is directed 'to include in the EDC for the nominated mitigations … biodiversity costs such as vegetation replacement or associated offsets'. Mitigations are identified for each of the impact categories in Chapter 6 of the EIS, with biodiversity (section 6.7.4) identifying that the developer may establish a stewardship site (B07) but otherwise poorly identifying mitigation measures such as acquiring the credits identified in section 6.7.3. It is uncertain whether the western portion of the site would provide adequately for the required offsets, given it does not include Duval Creek (habitat for the nominated microbat) and also has only one of the two impacted vegetation communities mapped to that portion of the site (figure 7 in the BDAR).

The costings provided in the project EDC report fail to consider biodiversity except in the consideration of 'soft landscaping', which is identified in mitigation measures B04 and B06. As a result, the costing for the biodiversity component of the development is given as $560,000 in total – and relates to that occurring as part of establishing the solar farm, not really mitigating the impacts to biodiversity that it has. It identifies (page 6 of the EDC) that this is remediation and is done by spray seeding, therefore totally ignoring the cots incurred in undertaking the remediation of Duval Creek riparian zone as identified in the EIS (B04 of table 6.71) and BDAR. Doing that remediation and revegetation will add many hundreds of thousands of dollars to the costs.

Biodiversity costs for these impacts have been calculated as being nearly 10 times the nominated amount, and could potentially be much more. It is unlikely that the area identified (25 hectares) would be able to generate the 220 credits needed for that community alone, given biodiversity offset credit generation in good condition vegetation usually runs at about 5 credits per hectare (120 – 150 credits of 220 needed). As a result, the project will be looking to acquire extra area to establish a stewardship, or purchasing credits from the market. These will impose significant costs onto the project. Even if a Stewardship is established, it will still likely cost in excess of $3-5m as the future management fund (the Total Fund Deposit - TFD) will likely need to be paid before the credits can be retired for use by the project.

The contingency amount identified in the EDC report is about $6m. This value would be mostly absorbed by meeting the biodiversity impact costs, leaving no project contingency.

Biodiversity Development Assessment Report (BDAR) comments

Note also any applicable comments from the General EIS Comments section above, given this BDAR informs that document.

2.1.2 – The nearest Wetland of International Importance (Ramsar) is actually only 30 km to the NNE – Little Llangothlin Lagoon, although it is also in a different catchment (Clarence as opposed to Macleay). Additionally, the Gwydir Wetlands are in a different catchment again (Gwydir is on the other side of the Great Dividing Range) so cannot be upstream of the site. The nearest downstream wetlands are those of the Macleay Catchment, which includes an array of wetland sites and near the mouth has the Yarrahapinni Wetlands National Park.

Table 8 – *Thesium australe* – This species is not mandatory for the presence of Thesium australe, which will happily attach to any Andropogoninae grass including the locally-abundant exotic species Whisky Grass and Coolatai Grass. Assessing a species such as this within 5 km of the site is pointless unless all of the area within 5 km has been assessed. The nearest records are Black Mountain cemetery (8 km away) and then Boorolong NR (12 km) and northern residential Armidale (14 km). All of these – and the infrequency with which it is surveyed for – suggest that the omission of this species is not warranted, especially as the grid-based method is not reliably successful for herbs such as this and Bluegrass (*Dichanthium setosum*) which occur in small but often dense patches.

Table 10 – 2 comments:

1. Survey effort for plants seems to be insufficient, especially as some plant species may not have been evident at the time. In the 6 months prior to survey, only September had a rainfall value for the month that was above the long-term average for the Armidale Tree Group nursery weather station site (opened 1997 - http://www.bom.gov.au/jsp/ncc/cdio/weatherData/av?p_nccObsCode=136&p_display_type=dailyDataFile&p_stn_num=056037&p_startYear=). This may have affected the growing

conditions for both herbaceous species and reduced the opportunity for finding them. Three days of survey seems to be insufficient for a site such as this given it was evidently still being grazed at the time.

2. Survey of plots was undertaken at an inappropriate time. August on the New England Tablelands is not a season that matches the requirements for the scattered tree module to have the proportion of native groundcover at its highest (as identified in the data that was collected which is dominated by exotic, cool-season pasture grasses), and would have affected the data collected and used in the assessment of impact. In reality, all vegetation integrity plots should be assessed when the abundance and cover of native species is at their highest. In this region, it would be mid to late summer.