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Dear Alicia

Mount Buller Sustainable Water Security Project – Impact on Victoria's Biodiversity

Project no. 24846

Biosis met with the Victorian Government Department of Environment, Land, Water and Planning (DELWP) Hume Regional Office on 16 March 2017 and followed this up with a teleconference on 20 March 2017. These discussions revealed a need to further consider whether the vegetation to be removed for the Mount Buller water storage project (the project) makes a significant contribution to Victoria's biodiversity.

The concept of "significant contribution" is embedded in the decision making process that DELWP and responsible authorities follow when responding to high risk-based pathway permit applications under Clause 52.17 of the Alpine Planning Scheme. According to DELWP's Biodiversity Assessment Guidelines (DEPI 2013) and supporting Handbook (DELWP 2015), a significant contribution to Victoria's biodiversity is determined based on four matters:

- Impacts on important habitat for rare and threatened species, particularly highly localised habitat.
- Proportional impacts on remaining habitat for rare and threatened species.
- If the removal of the native vegetation will contribute to a cumulative impact that is a significant threat to the persistence of a rare or threatened species.
- The availability of, and potential for, gain from offsets.

Whether the permit applicant has taken "reasonable steps" to minimise impacts on biodiversity is also an important consideration for DELWP when assessing high risk-based pathway permit applications. Reasonable steps are considered to be strategic planning or site-level design responses that minimise removal of native vegetation.

The following discussion outlines how the project could be assessed by DELWP according to the abovementioned policy documents and the decision guidelines of Clause 52.17 of the Alpine Planning Scheme.

What are the impacts on important habitat for rare and threatened species, particularly highly localised habitat?

The proposed water storage would require the direct removal of 5.278 hectares of native vegetation, comprising 5.194 hectares of Alpine Grassy Heathland (EVC 1004) and 0.085 hectares of Sub-alpine Woodland (EVC 43). For the purposes of determining offset requirements, a further 0.898 hectares of Sub-alpine Wet Heathland (EVC 210) has been assumed lost, to account for the potential drying and indirect loss of Alpine Sphagnum Bogs downslope of the Project Construction Footprint (PCF). This is a total of 6.177 hectares of

native vegetation that would be considered removed or assumed lost and is used by DELWP as a basis for measuring impacts on habitat for rare and threatened species through the general-specific offset test.

DELWP has produced models of important habitat for species listed as rare or threatened on DELWP's advisory lists (DSE 2009; DSE 2013; DEPI 2014). The native vegetation that would be removed or assumed lost for the project overlaps modelled important habitat for 37 of these rare or threatened species. Removal or loss of the native vegetation would require specific offsets for 18 of these species (determined through the general-specific offset test). This would normally be considered a large number of species requiring specific offsets but in the alpine resorts, where high densities of rare species occur, such a scenario is not unusual and we regularly deal with high risk applications that have more than 10 species requiring specific offsets. The fact that these species are listed as rare or threatened on DELWP's advisory lists is a product of the restricted biophysical settings of alpine and subalpine environments.

Only two of the 18 species (Alpine Bog Skink *Pseudemoia cryodroma* and Mountain Daisy *Brachyscome* sp. 3) are threatened at a state level under the Victorian *Flora and Fauna Guarantee Act 1988* (FFG Act). None of the 18 species is threatened at a national level under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Only one of the 18 species, Planarian *Spathula tryssa*, has highly localised habitat within the native vegetation.

It should be noted that DELWP's highly localised habitat importance map for Planarian is heavily reliant on records for the species, stored in the Victorian Biodiversity Atlas (DELWP 2017). Some of the location data for these records are inaccurate. For example, the modelled Planarian habitat in the PCF corresponds with a January 1994 record that has been placed in a relatively dry area of Alpine Grassy Heathland, approximately 45 metres north of the Summit Road and 140 metres west of ABOM lift terminal. This is not favourable habitat for Planarian. The Planarian retreats to damp and dark microhabitats (streams, wet depressions, underneath rocks and inside rock crevices) during the hot and dry summer months. One would therefore expect important Planarian habitat to correspond with drainage lines and Alpine Bogs in this area. The location accuracy for the record is ±100 metres and the location is noted as being 1.1 kilometres east-southeast of the Mount Buller Summit. This suggests that the record may be closer to the existing Sun Valley Reservoir than currently mapped and potentially outside the PCF. A similar anomaly in the habitat importance map for Planarian has been observed at Mount Stirling and is reported in the Native Vegetation Offset Strategy for the project (Biosis 2017).

Overall, the requirement for specific offsets for 18 species, including one with highly localised habitat, suggests that the native vegetation makes a high contribution to Victoria's biodiversity but it does not conclusively point to the native vegetation making a significant contribution to Victoria's biodiversity, particularly when considered in its alpine context.

What are the proportional impacts on remaining habitat for rare and threatened species?

At less than 0.037%, the project's proportional impact on modelled habitat for 17 of the 18 species is likely to be considered low. It is not considerably greater than the specific offset threshold of 0.005%. The proportional impact on modelled habitat for Planarian is likely to be considered high at 5.925%, but this is due to the habitat being modelled as highly localised. As discussed above, there are anomalies with the modelled habitat for Planarian.

While data gathered during field assessments cannot be used to amend habitat importance scores or offset requirements, "it may be used in addition with the mapped and modelled habitat data when considering if the native vegetation makes a significant contribution to Victoria's biodiversity" (DELWP 2015 p.31). Again, when considered in an alpine context, proportional impacts do not provide strong evidence for a conclusion that the native vegetation makes a significant contribution to Victoria's biodiversity.

Will the removal of the native vegetation contribute to a cumulative impact that is a significant threat to the persistence of a rare or threatened species?

The 18 species requiring specific offsets have distributions that are largely restricted to the Victorian Alps bioregion. Biosis has extensive experience working on ecological assessments in this bioregion, particularly in alpine resorts. We are not aware of any past native vegetation removal that has had a considerable proportional impact on any of the 18 species. We are not aware of any projects to have required specific offsets for Planarian. There is no evidence to suggest that the removal or loss of native vegetation for the project would contribute to a cumulative impact that is a significant threat to the persistence of any rare of threatened species.

Have reasonable steps been taken to ensure that impacts of the proposed removal of native vegetation on biodiversity have been minimised?

Considerable effort has been invested in developing mitigation strategies aimed at ensuring impacts on Victoria's biodiversity are minimised. Through an iterative process, the design of the project has been refined to:

- Avoid all direct impacts on Alpine Bogs.
- Reduce proposed native vegetation removal by more than 10%.
- Minimise removal of habitat for Broad-toothed Rat *Mastacomys fuscus mordicus*, Alpine Bog Skink *Pseudemoia cryodroma* and other fauna.
- Increase the minimum buffer between the PCF and preferred Mountain Pygmy-possum *Burramys parvus* habitat from 70 metres for the original PCF to 200 metres for the current revised PCF.

The redesign has involved (but not been limited to):

- Realignment and narrowing of pipelines and access corridors.
- Moving stockpile locations to existing disturbed areas of non-native vegetation in preference to areas of native vegetation.
- Reducing the overall size of the PCF by almost one hectare.

Further mitigation measures include an Ecological Rehabilitation Plan (ERP; Biosis and Tract 2016) to reinstate 5.278 hectares of native vegetation (mostly Alpine Grassy Heathland), create new habitat for Mountain Pygmy-possum and recreate habitat for Broad-toothed Rat and Alpine Bog Skink within the PCF. A Hydrological and Ecological Monitoring and Adaptive Management Program (HEMAMP; Biosis and GHD 2017) has also been developed to restrict the potential indirect loss of Alpine Bogs to no more than 0.090 hectares.

Are offsets available?

In accordance with Clause 52.17-3 of the Alpine Planning Scheme, a Native Vegetation Offset Strategy (Biosis 2017) has been prepared and identifies 262 hectares at Mount Stirling that can offset the losses of native vegetation through security, maintenance and improvement gains (Biosis 2017). The availability of the required offsets for the project, albeit through an alternative offset arrangement, suggests that the native vegetation that would be removed or lost for the project is less likely to make a significant contribution to Victoria's biodiversity.

Conclusion

The native vegetation that would be removed or assumed lost for construction of the project will have an impact on biodiversity but, in our opinion, this vegetation does not make a significant contribution to Victoria's biodiversity when the above discussion is considered. The decision guidelines under Clause 52.17-5 of the Alpine Planning Scheme specify that the impact on Victoria's biodiversity must be considered in light of steps taken to minimise impacts, the prepared Ecological Rehabilitation Plan, the mitigation measures proposed (HEMAMP) and in light of the offsets proposed in the Native Vegetation Offset Strategy. With this in mind, Biosis is of the opinion that the project meets the "no net loss" objective of the State Planning Policy Framework (Alpine Planning Scheme, Clause 12.01-2). That is, permitted clearing of native vegetation for the water storage project would result in no net loss in the contribution made by native vegetation to Victoria's biodiversity, given the commitments made to minimise and offset impacts.

Please contact me on 0425 797 580 if you would like to discuss this further.

Yours sincerely

Aaron Harvey
Director – Consulting Services

References

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