

Ms Jessie Evans
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By email: jessie.evans@dpie.nsw.gov.au

Dear Jessie

I refer to our previous advice regarding the Dendrobium Mine Extension Project (dated 14/6/2022, our reference DOC22/466886). We advised at that time that we had not been able to inspect the surface infrastructure and subsidence impact areas within the Catchment due to the excessive wet period preventing access. We were also awaiting internal clarity on the appropriate method for determining some species polygons. We have now undertaken a site inspection and progressed our position on determining species polygons. Our updated advice is provided below however in summary, the current BDAR is likely to result in an under-estimation of offset credit obligations.

- Swamp mapping, as per Figure 9 in the BDAR and GIS Shapefile 6624_Coastal_Upland_Swamp_20220318.shp is an accurate representation of the extent of swamps for the purpose of impact assessment and offsetting under the Upland Swamps Offset Policy. As noted previously, the proponent should ensure that the threatened Coastal Upland Swamp community is mapped in accordance with the Final Determination. That is, mapping should consider that the tree-line does not necessarily define the swamp and scattered trees can occur within swamp boundaries. The issue also remains for the proponent to appropriately apply the Upland Swamps Offset Policy as per our previous correspondence.
- The BAM allows a decision maker to require a proponent to include an assessment of additional threatened entities that are at risk of a SAIL other than those identified in the BAM-Calculator (BAM s9.1.5). Following further consideration of impacts, and in view of the potentially irreversible nature of these impacts, the proponent should also address the SAIL Criteria, (Principle 4) for Coastal Upland Swamps.
- We do not accept the proponent's reasoning for determining species polygons for the following species: Littlejohn's tree frog, giant burrowing frog, red-crowned toadlet and giant dragonfly. Specific advice on each species is below.
- Littlejohn's treefrog: The BDAR determines the area of species polygons as swamps within 60m of longwalls, all streams within 60m of longwalls, and halved areas along streams between 60m and 400m from longwalls. The reasoning behind this approach lacks acknowledgement of the extent of impacts that are possible (e.g. normal hydrology not re-instated beyond the 400m buffer, iron staining of pools downstream). The species polygon should therefore be assumed to occur downstream of all watercourses underneath longwalls, until that watercourse joins another watercourse (at least a second order stream which is un-impacted by mining).
- *Red-crowned toadlet*: The BDAR determines the area of species polygon as all first order streams within 60m of longwalls and then halving the area of first order streams between 60 and 400m of longwalls. Halving the area between 60m and 400m of proposed longwalls is not warranted, given hydrological impacts are likely to continue downstream of the first order

streams. How this might impact the red-crowned toadlet is unknown, and therefore warrants a more precautionary approach to deriving the species polygon. The species polygon should therefore include all first order streams within 400m of longwalls.

- *Giant dragonfly*: The species polygon should include the whole of the mapped swamp, as per GIS Shapefile 6624_Coastal_Upland_Swamp_20220318.shp.
- We are also still waiting on a Giant Dragonfly Report which the proponent commissioned but did not include in the BDAR/EIS. This should be provided to BCD for review prior to finalisation of the BDAR.

In conclusion we recommend that the polygon areas for these species are redrawn and re-entered into the BAM Calculator to determine correct credit requirements. Finally, the issue of avoidance still needs to be addressed to enable effective understanding of the extent of any biodiversity impacts.

If you have any further questions about this issue, please contact Mr Chris Page, Senior Team Leader, Biodiversity & Conservation Division, at chris.page@environment.nsw.gov.au

Yours sincerely,



1/8/2022

Michael Saxon
**Director, South East
Biodiversity & Conservation Division**