

30 August 2022

MACH Energy Australia  
PO Box 2115  
DANGAR NSW 2309

Attn: Chris Lauritzen

Dear Chris

**RE: Mount Pleasant Optimisation Project (SSD 10418) Identification of Legless Lizard**

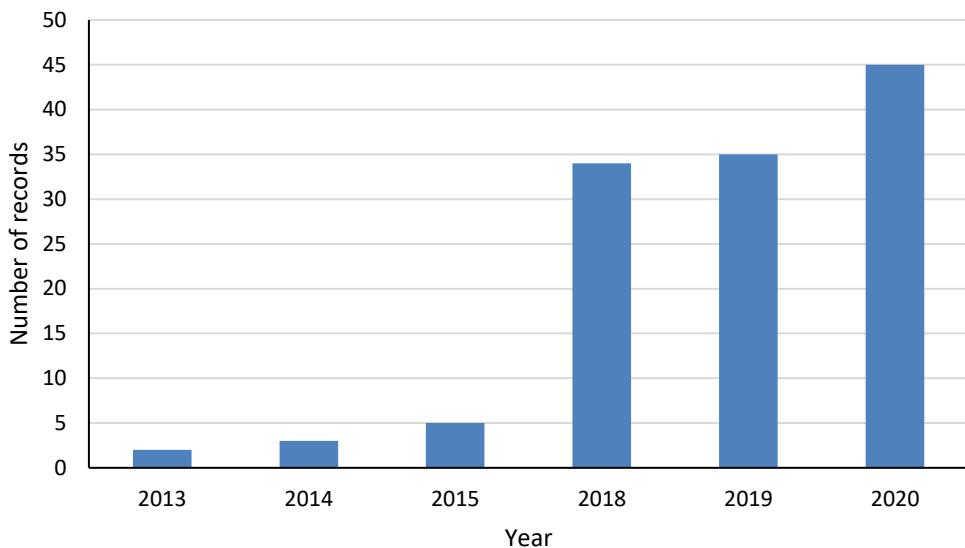
As the author of the Biodiversity Development Assessment Report (BDAR) for the MACH Energy Mount Pleasant Optimisation Project (Hunter Eco, 2021) I am writing to provide further context regarding the Striped Legless Lizard. During targeted field surveys across a 2,300 hectare (ha) study area for the Project, zoologists made one record inside the approved Mount Pleasant Project development area (EPBC 2011/5795 and DA92/97) of what was then identified as the Striped Legless Lizard (*Delma impar*). The detail of these surveys can be found in Future Ecology (2020) but can be summarised as including over 30 days of field survey and over 114,000 trap nights. *Delma impar* is listed as vulnerable under the NSW *Biodiversity Conservation Act 2016* (BC Act) and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Recently (July 2022) a genetic and morphological study was published (Mahony *et al*, 2022) which describes the previously identified occurrences of *Delma impar* from the Hunter Valley and Liverpool Plains of NSW to be a new species, *Delma vescolineata*, which is not listed as threatened under either the BC Act or EPBC Act. Mahony *et al* (2022) recognise that '*Delma vescolineata* is morphologically similar to *Delma impar*' and that '*Delma impar* exhibits morphological variability across its distribution and it is feasible that this is similar to *Delma vescolineata* ...'. This morphological similarity both within and between the two species meant that prior to the genetic study it was not possible to detect the new species.

My expertise is with botany, including threatened flora surveys, and I often see increasing trends in records of a species following its listing as threatened. Being listed as threatened necessitates intensive targeted surveys as part of environmental impact assessment that otherwise would not occur. This can result in an increasing number of records of a species over time, post listing as threatened. This is particularly the case where the species is cryptic in nature, and is therefore unlikely to be identified without targeted effort, which appears to be the case with this species.

Figure 1 shows the cumulative occurrence records of the Striped Legless Lizard (reported as *Delma impar* but now recognised as *Delma vescolineata*) in the Hunter catchment from two records at the Muswellbrook Common in 2013 to 45 records by 2022. It is likely that this trend will continue as further data are gathered from more targeted surveys.

Cumulative *Delma impar* (now *Delma vescolineata*) records  
in the Hunter catchment



**Figure 1**

Sources: DPE (2022a), Umwelt (2022)

Note: figure does not include records in the Liverpool Plains

The *Delma vescolineata* individual recorded inside the approved Mount Pleasant Project development area (EPBC 2011/5795 and DA92/97) was found under a dried cow pat (dung) within a disturbed area surrounded by an open grassy area with scattered trees (Figure 2). During the same surveys, a second individual was recorded outside the mining lease (Figure 2). This individual was recorded under lightly embedded rock on a farm track in an area of grassy open hillside with no trees.

The habitats in which *Delma vescolineata* was found at site are consistent with that described by Mahony *et al*, (2022), and the species is known from sites containing no natural surface refugia, sheltering beneath discarded rubbish or dried fecal material of cattle. Interestingly, Mahony *et al*, (2022) note that *D. vescolineata* may have had natural low abundance and has benefited from historic woodland clearing providing more preferred habitat.

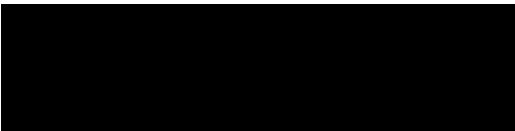
Despite the only recent identification of *D. vescolineata*, the species (14 records) is known to occur within a proposed Biodiversity Stewardship Site (offset area) (1,051 ha) for the Maxwell Underground Coal Mine Project (Figure 2) (Department of Planning, Industry and Environment, 2019).

In accordance with applicable State and Commonwealth offset requirements, MACH Energy will offset impacts on the native vegetation in the proposed Project Development Footprint. Immediately to the west of the mining lease, one record of *Delma vescolineata* has been made in a conservation heritage area being established by MACH Energy.

As described above, *Delma vescolineata* is not listed as threatened under the BC Act and for this reason no species credits are required for the species. However, MACH Energy is proposing to provide a specific offset for the species if it becomes listed as a threatened species under the BC Act within a reasonable timeframe.

Based on the increasing number of *Delma vescolineata* records in the local area since targeted survey effort commenced (Figures 1 and 2), it is highly unlikely that the Project would pose any risk of local population extinction, particularly given the total disturbance area of the Mount Pleasant Operation would effectively be unchanged. Rather, MACH Energy's commitment to provide a specific offset if the species is listed within a reasonable timeframe is likely to result in increased research into, and conservation of, the habitat of the species.

Regards  
HUNTER ECO

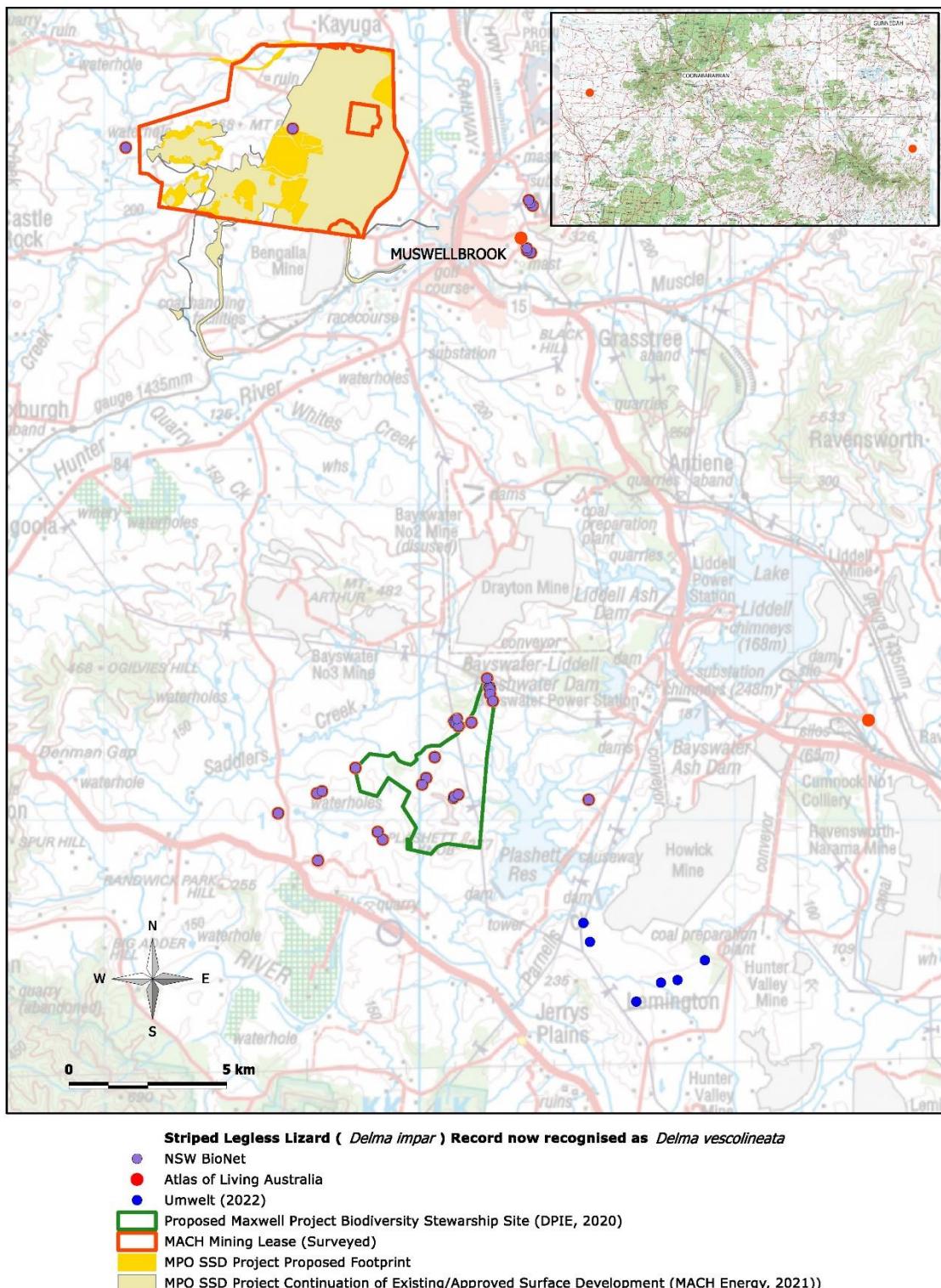


Dr Colin Driscoll  
Environmental Biologist

References

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- Umwelt (2022) Hunter Valley Operations Continuation Project Biodiversity Matters of National Environmental Significance Report. March 2022.

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**Figure 2 Records distribution of *Delma vescolineata***