

Adam Cargill
Senior Environmental Advisor
Mt Weld Mining Pty Limited
Level 1, 45 Royal Street
EAST PERTH WA 6004
Via Email: Adam.Cargill@lynasre.com

5th April 2023

Dear Adam,

RE: RESPONSE TO EPA SERVICES REQUESTS, MT WELD LIFE OF MINE DRAFT ENVIRONMENTAL REVIEW DOCUMENT

Onshore Environmental Consultants Pty Ltd (Onshore) has been requested to assist Mt Weld Mining Pty Limited (MWM) in responding to requests from Environmental Protection Authority (EPA) Services Branch in regards to the ERD submitted by MWM in December 2022, and specifically on the on the Arid Bronze Azure Butterfly (ABAB).

EPA/s comments and Onshore's responses are presented below.

Comment

The justification regarding the potential non-occurrence of the Arid Bronze Azure Butterfly (ABAB) (Critically Endangered EPBC and BC Acts) cannot be verified.

Response

The Arid Bronze Azure Butterfly (*Ogyris subterrestris petrina*) is a Threatened species that is listed as Critically Endangered under the EPBC Act and the BC Act. The current conservation rating relates to its low abundance and severely fragmented distribution, with only two extant subpopulations being recorded in Western Australia. These subpopulations are at Barbalin Nature Reserve, and at a second site ~100 km from Barbalin. A third subpopulation (the first discovered, in the 1980s) occurred near Lake Douglas, 12 km southwest of Kalgoorlie, but is now locally extinct. Threats include land clearing and habitat degradation (DBCA 2020).

The Arid Bronze Azure Butterfly has an obligate association with a sugar ant *Camponotus* sp. nr. *terebrans*. The butterfly larvae live entirely within the ant's nest during their development. The ants protect the larvae from predators and are thought to be rewarded with secretions produced by the larvae. The larvae are cryptic and extremely difficult to detect. The most critical factor for habitat occupancy by the butterfly is the presence of large colonies of the host ant; only large colonies can support the Arid Bronze Azure Butterfly because, being a parasitic species, it requires large numbers of hosts. The potential distribution of the ant is extensive and encompasses much of the semi-arid zone (rainfall <325 mm) south of approximately 26° S latitude (see McArthur, Adams and Shattuck 1997).

The target vegetation is mature mixed Gimlet (*Eucalyptus salubris*) / Salmon Gum (*Eucalyptus salmonophloia*) woodlands on red-brown loam soils, with an open understorey. In addition to Gimlet and Salmon Gum, other smooth-barked eucalypts which have basal ant colonies include Wandoo (*Eucalyptus capillosa* subsp. *wandoo*), Smooth-barked York Gum (*Eucalyptus loxophleba* subsp. *lissophloia*) and Ribbon-barked Mallee (*Eucalyptus sheathiana*). The habitat at the locally extinct Lake Douglas site differs from the other sites but is also dominated by mature smooth-barked eucalypt woodland, particularly Victoria Desert Mallee (*Eucalyptus concinna*).

There were eight vegetation types described and mapped within the Mt Weld Project Area, none comprising a structural layer with smooth-barked eucalypts. Furthermore, there was only one record of an unidentified *Eucalyptus* sp. in 2020, no *Eucalyptus* or *Corymbia* species were recorded during the 2011, 2014 or 2018 flora and vegetation surveys at the Mt Weld site. Hence, it can be concluded that there are no stands of smooth-barked eucalypts within the Mt Weld Project Area required to support the host sugar ant *Camponotus* sp. nr. *terebrans*, and hence the Arid Bronze Azure Butterfly will also be absent. This is supported by the Guideline for the survey of arid bronze azure butterfly (ABAB) in Western Australia (DBCA 2020) and supporting document, "Arid bronze azure butterfly (ABAB) survey in Western Australia additional information". These documents outline a systematic approach to the requirement for impact assessment, and include a 'decision tree for host ant and ARAB surveys'.

The decision tree clearly determines that if woodland with smooth barked eucalypts is absent then no survey for the host sugar ant or ABAB is required.

Comment

Provide details of the specialist advice on the ABAB. This should include the name of the consultants and a report or correspondence supporting the statement related to ABAB in the ERD.

Response

The specialist advice was provided in the above comment by Onshore Environmental Consultants Pty Ltd and confirmed by Principal Zoologist Mr Michael Brown. It is noted that recent surveys for the host sugar ant have been completed west of Kalgoorlie within project areas where smooth barked eucalypts do exist. One of these surveys included the site for the new cracking and leaching plant to treat rare earth concentrate from the Mt Weld mine (Lot 500 Great Eastern Highway, Yilkari) and the long-term storage location for by-products originating from the plant (Yarri Road, Parkeston) (Onshore Environmental 2021).

References

Department of Biodiversity, Conservation and Attractions (2020) Guideline for the survey of arid bronze azure butterfly (ABAB) in Western Australia. Version 1.0 September 2020.

Onshore Environmental (2021) Survey of Arid Bronze Azure Butterfly, Cracking and Leaching Plant and By-products Storage Site. Report to Lynas Kalgoorlie Pty Ltd.

Should you have any queries on the above, please contact the undersigned.

Yours sincerely,



Darren Brearley BSc (Bot) Hons, PhD

Managing Director