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Your ref: SSD-9526

Ms Lauren Evans

Team Leader

Energy and Resource Assessments, Planning and Assessment Division

Department of Planning, Industry and Environment

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Dear Ms Evans

Maxwell Underground Coal Mine Project (SSD 9526) – BAM requirements for Threatened Flora

I refer to a 23 April 2020 email from the Planning and Assessment Group (P&A) of the Department of Planning, Industry and Environment (the Department), requesting the Biodiversity and Conservation Division (BCD) of the Department provide advice in relation to the threatened flora assessment of the Maxwell Underground Coal Mine Project (SSD 9526). BCD has reviewed the *Environmental Impact Statement* and the *Response to Submissions Report* for the project.

Threatened flora assessment for the project was undertaken in accordance with the Draft *Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities* (DEC 2004) and relied heavily on previous surveys undertaken for the previously proposed Drayton South Coal Mine project. The 2004 survey guidelines are not valid for an assessment prepared under the Biodiversity Assessment Method (BAM) and the *Biodiversity Conservation Act 2016*.

The BAM requires the use of the 2016 *NSW Guide to Surveying Threatened Plants* (OEH 2016, 2016 Survey Guidelines) which has been revised in 2020 as the *Surveying threatened plants and their habitats – NSW survey guide for the Biodiversity Assessment Method* (DPIE 2020, 2020 Survey Guidelines). BCD has identified 10 species credit species for which further information or additional survey is required. They have been placed into three groups in relation to survey requirements.

- **Group 1:** Species that can be surveyed at any time of year.
 - *Commersonia rosea*, *Cymbidium canaliculatum* and *Eucalyptus glaucina*
- **Group 2:** Ground orchids that can be surveyed in late spring during flowering. Or an expert report can be prepared if survey conditions are unsuitable (e.g. drought conditions).
 - *Diuris tricolor*, *Prasophyllum petilum* and *Pterostylis chaetophora*
- **Group 3:** Species that can be surveyed during spring/summer.
 - *Lasiopetalum longistamineum*, *Monotaxis macrophylla*, *Ozothamnus tessellatus* and *Thesium australe*

The BDAR and BAM calculator files refer to targeted surveys having been undertaken for *Cymbidium canaliculatum*, *Diuris tricolor*, *Eucalyptus glaucina*, *Monotaxis macrophylla*, *Ozothamnus tessellatus* and *Prasophyllum petilum*. Further details are required on those surveys to determine if they were in accordance with the 2016 Survey Guidelines. Surveys already completed should be in accordance with the 2016 Survey Guidelines and all new surveys should be in accordance with the 2020 Survey Guidelines.

Both the 2016 and 2020 survey guidelines require the use of parallel field traverses ranging in spacing from five to 40 metres based on the life form of the targeted plant species and the density

of the vegetation. A field survey must be undertaken unless an expert report has been prepared for the species or the species is assumed to be present.

Attachment A lists the 10 plant species for which further survey or additional information is required and provides information on the potential credit yield for each species. The extent of suitable habitat was determined based on the Plant Community Types (PCTs) identified as potential habitat for each species in the Threatened Biodiversity Data Collection, and on the extent of each of those PCTs listed in the BDAR. The high condition credit estimate is based on a precautionary approach of assuming the species occur across the entire potential habitat areas. Moderate and low condition credit estimates are based on estimated reduced occurrences across potential habitat areas. The area of potential habitat was based on both Stage 1 and 2 clearing areas provided in the BDAR. Attachment A does not include any potential impacts in subsidence areas.

If you require any further information regarding this matter, please contact Steven Cox, Senior Team Leader Planning, on 4927 3140 or via email at rog.hcc@environment.nsw.gov.au

Yours sincerely



LUCAS GRENADIER
Acting Director Hunter Central Coast Branch
Biodiversity and Conservation Division

Date: 22 May 2020

Enclosure: Attachment A

Attachment A: Summary of timing of survey for 10 threatened plant species and potential credit yield

Threatened flora species that require further field assessment (if not assumed present and in absence of expert report)	Season Survey Timing (month period)	Unit of Measure	Total Potential Habitat Area (ha)	Credits per ha	Low condition estimate (credits)	Medium condition estimate (credits)	High condition estimate (credits)
GROUP 1 – Surveys can be undertaken now							
<i>Commersonia rosea</i>	All year	Area	20.6	75	515	1030	1545
<i>Cymbidium canaliculatum</i> - population in the Hunter Catchment	All year	Count	23.4	2 per plant	47	94	140
<i>Eucalyptus glaucina</i>	All year	Count	13.7	2 per plant	27	55	82
GROUP 2 – Require seasonal survey or expert report							
<i>Diuris tricolor</i> : Pine Donkey Orchid population in the Muswellbrook local government area	Sept to Oct	Area	153.5	50	2,558	5,117	7,675
<i>Prasophyllum petilum</i>	Sept to Oct	Area	139.8	50	2,330	4,660	6,990
<i>Pterostylis chaetophora</i>	Sept to Nov	Area	11.2	48	179	358	538
GROUP 3 – Spring/Summer survey							
<i>Lasiopetalum longistamineum</i>	Sept to Oct	Area	2.9	48	46	93	139
<i>Monotaxis macrophylla</i>	Aug to Feb	Area	0.4	49	7	13	20
<i>Ozothamnus tessellatus</i>	Sept to Oct	Area	12.3	37	152	303	455
<i>Thesium australe</i>	Nov to Feb	Area	1.3	35	15	30	46