MALABAR COAL LIMITED
ABN 29 151 691 468
Level 26, 259 George Street
Sydney NSW 2000
PO Box R864
Royal Exchange NSW 1225
Ph: +61 2 8248 1272
Fax: +61 2 8248 1273
Website: www.malabarcoal.com.au

15 June 2020

Matthew Sprott
Director Resource Assessments
NSW Department of Planning, Industry and Environment
GPO Box 39
Sydney NSW 2001

By email: matthew.sprott@planning.nsw.gov.au

Dear Matthew,

RE: RESPONSE TO BCD COMMENTS ON THE MAXWELL PROJECT (SSD-9526) (June 2020)

I refer to the supplementary comments received from the Biodiversity and Conservation Division (BCD) of the Department of Planning, Industry and Environment (DPIE) regarding the Maxwell Project (SSD 9526) (dated 22 May 2020).

Dr Colin Driscoll (HunterEco) has prepared a response to BCD's comments (refer Enclosure 1).

Based on Dr Driscoll's letter, Malabar understands:

- The NSW *Biodiversity Assessment Method* does not require a number of the species included in the BCD letter to be assessed and offset for the Maxwell Project (i.e. the species distribution does not include the bioregion in which the Maxwell Project is located).
- A number of the species included in the BCD letter were appropriately surveyed in accordance with the *NSW Guide to Surveying Threatened Plants* (OEH, 2016), which is the survey guideline recommended in the BCD letter. Following rigorous field studies, these species were not found in the Maxwell Project disturbance area.
- There remains some residual uncertainty regarding the presence (or otherwise) of the Pine Donkey Orchid *(Diuris tricolor*) due to the prevailing drought conditions during the last few survey windows.

Given the residual uncertainty regarding the Pine Donkey Orchid *(Diuris tricolor*), Malabar would accept a Development Consent condition that requires the species to be offset in accordance with the requirements in Table 1, unless an expert report or further survey (during favourable conditions for orchid flowering) demonstrate to the satisfaction of BCD/DPIE that the species is not present within the Maxwell Project disturbance area.

Table 1
Proposed Offset Requirements

Species	Potential Habitat within Biodiversity Assessment Development Footprint		Biodiversity Offset Requirement (credits)		
	Plant Community Types	Total Area (hectares)	Stage 1	Stage 2	Total
Pine Donkey Orchid (*Diuris tricolor*)	PCT 201, PCT 1604, PCT 1606, PCT 1655	153.5	1,474	157	1,631

Note: Refer to Enclosure 1 for detail regarding offset calculations. Actual offset requirement to be determined by expert report and/or further survey, in consultation with BCD and DPIE.

Please do not hesitate to contact the undersigned should you wish to discuss.

Yours sincerely,

Bill Dean
General Manager – Projects
Malabar Coal Limited

Enclosure 1 Hunter Eco Response to BCD Letter (June 2020)

Enclosure 1
Hunter Eco Response to BCD Letter (June 2020)

Bill Dean
Malabar Coal Limited
c/- Resource Strategies
PO Box R864 Royal Exchange
NSW 1225

15 June 2020

Dear Bill

Maxwell Project
Responding to NSW DPIE Letter (DOC20/336068-11, 22 May 2020)
Maxwell Underground Coal Mine Project (SSD 9526) –
BAM requirements for Threatened Flora

Please find herein a response to the letter received from the Biodiversity and Conservation Division (BCD) of the NSW Department of Planning, Industry and Environment (dated 22 May 2020).

The BCD's letter principally relies on the following statement (emphasis added):

> ***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).*

This assertion is not correct. Section 7.6 ('Threatened Flora Species') of the *Maxwell Project Baseline Flora Report* (Attachment A of the *Maxwell Project Biodiversity Development Assessment Report*) states:

> ***Targeted surveys were conducted in accordance with the NSW Guide to Surveying Threatened Plants (OEH 2016a).*** *However, surveys were also conducted with the possibility in mind of previously unrecorded threatened species being present. All flora species encountered were positively identified so an unexpected occurrence was unlikely to be missed. In other words, all threatened flora species were targeted by default irrespective of habitat suitability or likelihood of occurring.*

The *Draft Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities* (DEC 2004) are not mentioned in the *Maxwell Project Baseline Flora Report*.

BCD would also be aware that the 2020 Survey Guidelines are not relevant to this Project on the basis that the EIS (including the surveys and assessments) was completed and submitted prior to release of the guidelines in March 2020 (as per DPIE Assessor Update 36).

In addition, it is incorrect for the BCD to state that the assessment relied heavily on previous surveys undertaken for the previously proposed Drayton South Coal Mine project; on the contrary, to provide for the most rigorous outcomes this information was considered (not ignored) in the assessment. Further clarification on this point is provided below.

The BCD letter also refers to a number of species that are not predicted to occur in the BAM Credit Calculation for the Project or within the IBRA subregion in which the Project is located. The *Biodiversity Assessment Method* (BAM) specifically provides that biodiversity development assessment reports are only required to assess impacts to species where the species distribution includes the IBRA subregion that the project is located in (refer extract from the BAM in Attachment A).

The following provides information regarding each of the 10 threatened flora species listed in Attachment A of the BCD letter.

Sandy Hollow Commersonia (*Commersonia rosea*)

BCD should not have identified this species as requiring further consideration. ***This species is not identified in the BAMC as a relevant candidate species for the Project (Attachment B), which means that this species is not required to be targeted by surveys.***

This species is not known to occur in the subregion relevant to the Project (Sydney Basin Bioregion Hunter subregion), and the nearest record is 22 km to the north-west, within the Kerrabee subregion (DPIE 2020a) (Figure 1). Further, the PCTs that occur in the Project area are not recognised as habitat for this species on the DPIE *Threatened Biodiversity Data Collection* (DPIE, 2020).

Further, the EPBC Act protected matters search over the Development Footprint (Attachment C) does not indicate that this species may occur in the locality. This species was also not listed in the Commonwealth input into the SEARs.

Given the above, this species does not warrant further consideration.

Rusty Velvet Bush (*Lasiopetalum longistamineum*)

BCD should not have identified this species as requiring further consideration. ***This species is not identified in the BAMC as a relevant candidate species for the Project (Attachment B), which means that this species is not required to be targeted by surveys.***

Lasiopetalum longistamineum is not known to occur in the subregion relevant to the Project (Sydney Basin Bioregion Hunter subregion), and the nearest record is 22 km to the north-west, within the Kerrabee subregion (DPIE 2020a) (Figure 1). It is only listed for the Kerrabee subregion (DPIE 2020b). Further, the PCTs that occur in the Project area are not recognised as habitat for this species on the DPIE *Threatened Biodiversity Data Collection* (DPIE 2020).

Further, the EPBC Act protected matters search over the Development Footprint (Attachment C) does not indicate that this species may occur in the locality. This species was also not listed in the Commonwealth input into the SEARs.

Given the above, this species does not warrant further consideration.

Austral Toadflax (*Thesium australe*)

BCD should not have identified this species as requiring further consideration. ***This species is not identified in the BAMC as a relevant candidate species for the Project (Attachment B), which means that this species is not required to be targeted by surveys.***

Although the EPBC Act protected matters search for the Development Footprint (Attachment B) indicates that this species may occur in the locality, this species has been fully assessed as required by the input into the SEARs.

There are no nearby records of this species (Figure 1). As described within the flora survey report, this species has not been recorded during previous surveys in the Study Area (i.e. Cumberland Ecology, 2015) or during any surveys in the surrounds in offset areas or other mine sites (i.e. Dames and Moore 2000; Umwelt Environmental Consultants [Umwelt] 2006; Hansen Bailey 2007; Umwelt 2007; Cumberland Ecology 2009b; Umwelt 2011; Cumberland Ecology 2012; Hunter Eco 2013). Austral Toadflax is known to be generally associated with Kangaroo Grass (*Themeda triandra*), of which there was very little in the Study Area. Further, the PCTs that occur in the Project area are not recognised as habitat for this species on the DPIE *Threatened Biodiversity Data Collection* (DPIE 2020).

Given the above, this species does not warrant further consideration.

Tiger Orchid (*Cymbidium canaliculatum*)

BCD should not have identified this species as requiring further consideration. *Cymbidium canaliculatum* (Tiger Orchid) is a large arboreal plant (that lives in trees) with dense long broad leaves. It can be found in dead or living trees and is readily observed. This orchid was searched for during all survey methods (vegetation community mapping, BAM plots, transects, Rapid Data Point [RDP] collection [Figure 2]) where almost every tree was inspected, a procedure more thorough than only transect surveys recommended by the NSW *Guide to Surveying Threatened Plants* (OEH 2016).

Further to the above, this species can be found at any time of year and the detectability of this plant would not be affected by drought conditions as it is a perennial plant.

One previously unrecorded occurrence of this species was found. There were none recorded within the Biodiversity Development Assessment Footprint.

Given the above, this species does not warrant further consideration.

Slaty Red Gum (*Eucalyptus glaucina*)

BCD should not have identified this species as requiring further consideration. This species was searched for during all survey methods (vegetation community mapping, BAM plots, transects, RDP collection [Figure 2]) where almost every tree was identified and recorded. None were found in the entire study area.

Although the EPBC Act protected matters search for the Development Footprint (Attachment B) indicates that this species may occur in the locality, this species has been fully assessed as required by the Commonwealth input into the SEARs.

As described within the flora survey report, this species has not been recorded during previous surveys in the Study Area (i.e. Cumberland Ecology, 2015) or during any surveys in the surrounds in offset areas or other mine sites (i.e. Dames and Moore 2000; Umwelt 2006; Hansen Bailey 2007; Umwelt 2007; Cumberland Ecology 2009b; Umwelt 2011; Cumberland Ecology 2012; Hunter Eco 2013).

Eucalyptus glaucina is a Red Gum tree and the only Red Gum species recorded within the Biodiversity Development Assessment Footprint was Blakely's Red Gum (*Eucalyptus blakelyi*), distinctly different to *Eucalyptus glaucina* which is distinguished by glaucous (dusty grey) juvenile and mature leaves. As described within the flora survey report, this species is unlikely to occur as it grows in deep moderately fertile well-watered soil that does not occur in the Study Area.

Further to the above, this species can be found at any time of year and the detectability of this plant would not be affected by drought conditions as it is a perennial plant.

Given the above, this species does not warrant further consideration.

Large-leafed Monotaxis (*Monotaxis macrophylla*)

BCD should not have identified this species as requiring further consideration. NSW PlantNET (2020) describes the preferred habitat to be rocky ridges and hillsides. As noted in the BDAR, such habitat does not occur in the Biodiversity Development Assessment Footprint.

There are no nearby records of this species (Figure 1). As described within the flora survey report, this species has not been recorded during previous surveys in the Study Area (i.e. Cumberland Ecology, 2015) or during any surveys in the surrounds in offset areas or other mine sites (i.e. Dames and Moore 2000; Umwelt 2006; Hansen Bailey 2007; Umwelt 2007; Cumberland Ecology 2009b; Umwelt 2011; Cumberland Ecology 2012; Hunter Eco 2013).

Monotaxis macrophylla (Large-leafed Monotaxis) is a fire ephemeral species only appearing for a short period following fire (Bell and Holzinger 2015; DPIE 2020d). The Large-leafed Monotaxis species profile (DPIE 2020d) notes as follows:

> *The distribution and supposed rarity of* Monotaxis macrophylla *within NSW is related to the occurrence of fire. At least within NSW, the species has not been found in the absence of fire.*
>
> Monotaxis macrophylla *displays the properties of a fire ephemeral species in many ways. Germination is stimulated by the passage of fire, individual plants have a short life span, a large biomass is produced in a short period of time, flowering occurs shortly after germination, and populations do not persist in the absence of fire.*

There was no evidence of recent fire across the Study Area and in particular in the disturbance area. Certainly, there have been no fires within the Study Area since surveys began in 2009 (Cumberland Ecology 2009a).

Given the above, this species does not warrant further consideration.

Tesselate Everlasting (*Ozothamnus tesselatus*)

BCD should not have identified this species as requiring further consideration. This species is a shrub growing to over one metre tall generally in groups. Had it been present, the species would have been found during the survey (vegetation community mapping, BAM plots, transects, Rapid Data Point (RDP) collection [Figure 2]). The plant has distinctive foliage compared with its congener *Ozothamnus diosmifolius* that was recorded in the study area, but not in the Biodiversity Development Assessment Footprint. This species can be found at any time of year and the detectability of this plant would not be affected by drought conditions as it is a perennial plant.

There are no nearby records of this species (Figure 1). As described within the flora survey report, this species has not been recorded during previous surveys in the Study Area (i.e. Cumberland Ecology, 2015) or during any surveys in the surrounds in offset areas or other mine sites (i.e. Dames and Moore 2000; Umwelt 2006; Hansen Bailey 2007; Umwelt 2007; Cumberland Ecology 2009b; Umwelt 2011; Cumberland Ecology 2012; Hunter Eco 2013; Cumberland Ecology 2015).

Further, the EPBC Act protected matters search for the Development Footprint (Attachment C) does not indicate that this species may occur in the locality. This species was also not listed in the Commonwealth input into the SEARs.

Given the above, this species does not warrant further consideration.

Pine Donkey Orchid (*Diuris tricolor*)

As described in my letter dated 28 January 2020, Cumberland Ecology (2015) had conducted surveys for *Diuris tricolor* across an area similar to the Maxwell Study Area in 2011, in clearly favourable growing conditions for the species, and had only recorded them in one location.

Close grazing by cattle in combination with drought presented extremely unfavourable conditions in 2017, 2018 and 2019 for terrestrial orchid surveys. Thus, the results of previous surveys during more favourable conditions, when *Diuris tricolor* was recorded, was considered (not ignored) in the assessment. To reiterate, in previous surveys *Diuris tricolor* was not found in the development footprint.

The BCD has assumed a potential credit requirement for *Diuris tricolor* in the letter dated 22 May 2020. It states:

> *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.*

On review, the BCD has miscalculated the potential credit yields for *Diuris tricolor* by not using the vegetation integrity scores (VI scores) presented in the BDAR. By doing this, BCD has presented an unrealistic view of the condition of the habitat for this species in the disturbance footprint.

A revised calculation of highest credit yield (assuming the species occurs across the entire potential habitat areas), based on the surveyed condition of the PCTs within the Maxwell Project biodiversity assessment development footprint, is provided in Table 1. The maximum number of credits that could potentially be generated is significantly less (1,631 credits, 20%) than the maximum number of credits assumed by the BCD (i.e. 7,675 credits).

Further, over 60% of the credits in Table 1 (i.e. 1,055 ha) are associated with grazing paddocks (DNG) and only 576 credits are actually associated with woodland. While *Diuris tricolor* is known to occur elsewhere in areas cleared of the former woodland it is not optimum habitat.

In addition to the above, the values in Table 1 are a maximum credit liability based on BCD's assumption that the species could occur throughout the habitat. This is an unrealistic assumption, given the species was absent during previous surveys in more favourable conditions, meaning that if any credits were to be generated there would be considerably less than those presented in Table 1.

Table 1
Offset Credit Estimate for *Diuris tricolor*

Vegetation Community (Hunter Eco, 2019)	Form (Hunter Eco, 2019)	Area (Hunter Eco, 2019)	Vegetation Integrity Score (Hunter Eco, 2019)	Biodiversity Risk Weighting (DPIE, 2020)	Credits (as per BAM)
Stage 1					
PCT 201	Woodland	0.5	47.5	2	12
PCT 201	DNG	1.0	23.1	2	12
PCT 1604	Woodland	1.3	68.4	2	45
PCT 1606	Woodland	9.5	45.4	2	216
PCT 1606	DNG	122.7	15.8	2	970
PCT 1655	Woodland	1.2	46.5	2	28
PCT 1691	Woodland	7.6	48.3	2	184
PCT 1691	DNG	0.3	40.7	2	7
Stage 2					
PCT 201	DNG	1.8	23.1	2	21
PCT 1606	Woodland	0.1	46.6	2	3
PCT 1606	DNG	2.9	31.0	2	45
PCT 1655	Woodland	2.4	26.5	2	32
PCT 1655	Planted Trees	0.2	31.2	2	4
PCT 1691	Woodland	2.0	51.4	2	52
TOTAL	-	**153.5**	**-**	**-**	**1,631**

Tarengo Leek Orchid (*Prasophyllum petilum*) (syn *Prasophyllum* sp. Wybong)
BCD should not have identified this species as requiring further consideration. ***This species is not identified in the BAMC as a relevant candidate species for the Project (Attachment B), which means that this species is not required to be targeted by surveys.***

Hunter Eco very conservatively assessed that there could potentially be marginal potential habitat in Fuzzy Box Woodland (PCT 201), however only 0.5 ha of this habitat occurs in the Development Footprint and the species is unlikely to be present due to it being highly susceptible to grazing impacts as there has been long-term cattle grazing (i.e. more than 100 years) in the area.

There were no previous records for Tarengo Leek Orchid in the Study Area with the nearest being at Mangoola, 17 km north west of the Maxwell Project. This species has not been previously recorded during previous surveys in the Study Area (i.e. Cumberland Ecology, 2015) or during any surveys in the surrounds in offset areas or other mine sites (i.e. Dames and Moore 2000; Umwelt 2006; Hansen Bailey 2007; Umwelt 2007; Cumberland Ecology 2009b; Umwelt 2011; Cumberland Ecology 2012; Hunter Eco 2013).

Given the above, this species does not warrant further consideration.

Rusty Greenhood (*Pterostylis chaetophora*)

BCD should not have identified this species as requiring further consideration. ***This species is not identified in the BAMC as a relevant candidate species for the Project (Attachment B), which means that this species is not required to be targeted by surveys.***

This species has not been recorded as far inland as the Project (Figure 1). There were no previous records for *Pterostylis chaetophora* in the Study Area or within 20 km of the Study Area.

Given the above, this species does not warrant further consideration.

Yours Faithfully
HUNTER ECO

Colin Driscoll

Dr Colin Driscoll
Environmental Biologist

Figures
Attachment A – Biodiversity Assessment Method Extract
Attachment B – Biodiversity Assessment Method Calculator – Species Candidate List
Attachment C – EPBC Act Protected Matters Search

References

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Figures

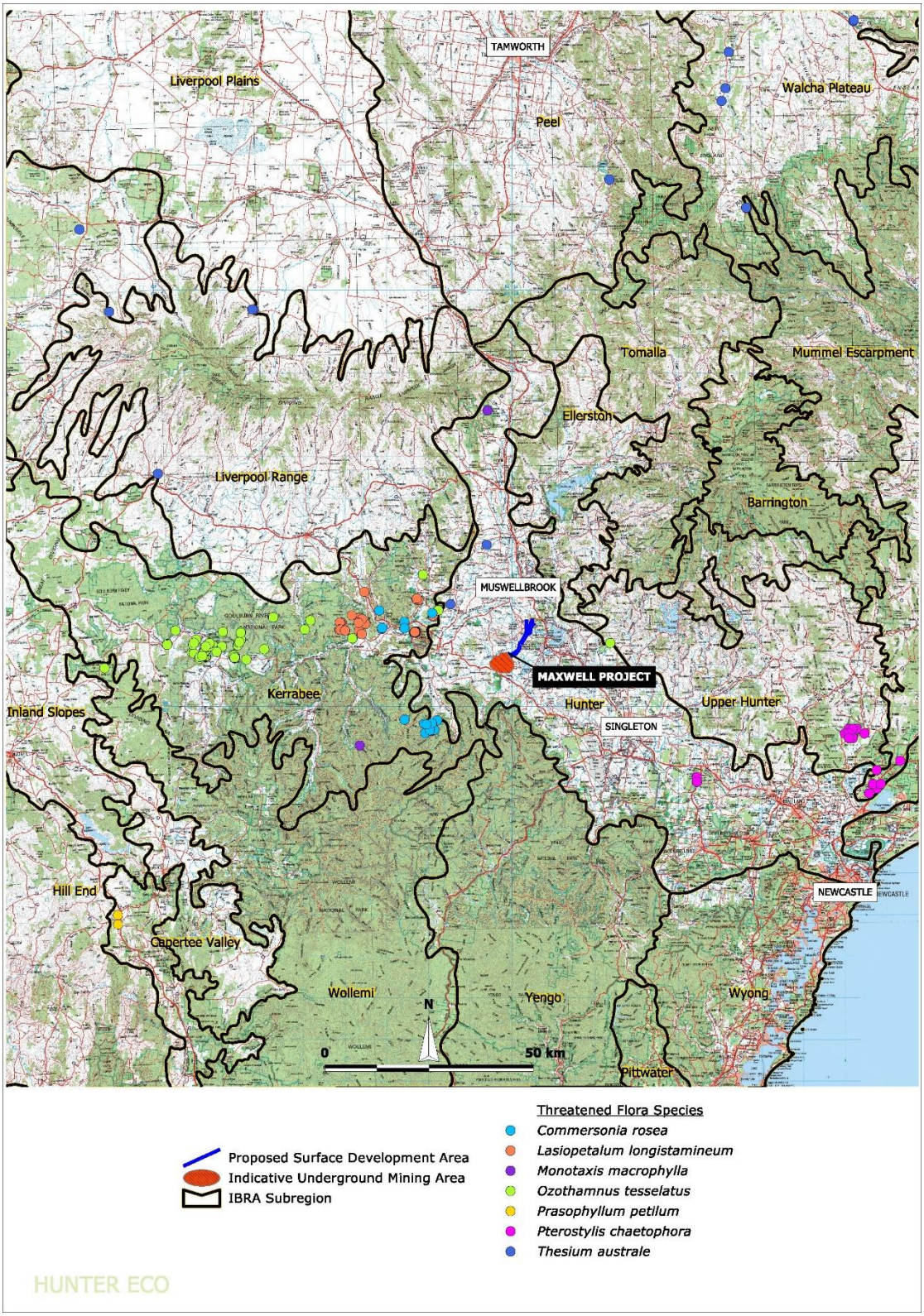


Figure 1 BioNet Records

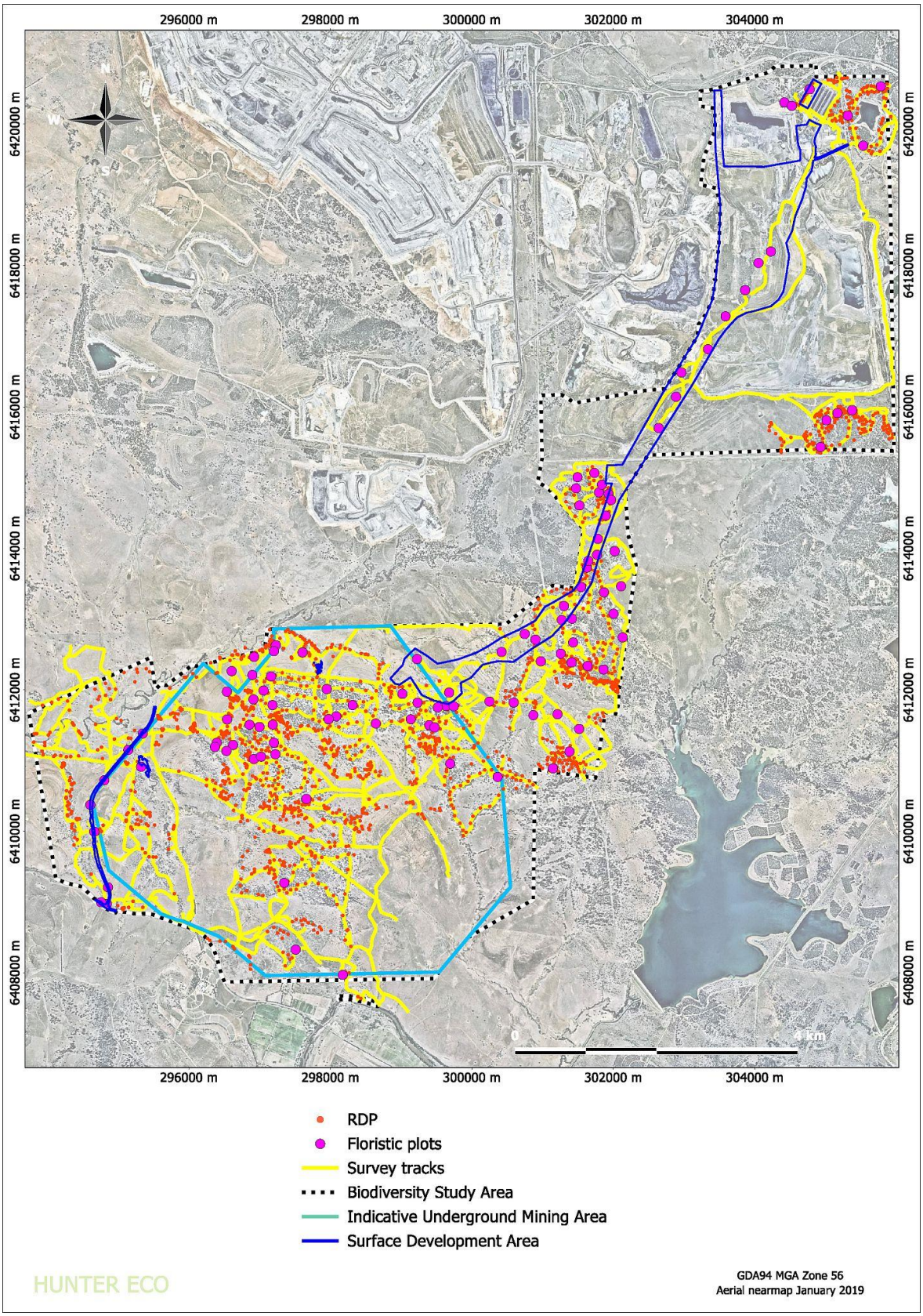


Figure 2 Field Survey Details

Attachment A – Biodiversity Assessment Method Extract

Data Collection in Section 6.1 and from assessing the subject land in Chapter 4 and Chapter 5.

6.4.1.3 The assessor must first use the following criteria to predict the threatened species that require assessment at the site:

(a) the distribution of the species includes the IBRA subregion which the subject land is, in the opinion of the assessor, mostly located within, and

(b) the subject land is within any geographic constraints of the distribution of the species within the IBRA subregion, and

(c) the species is associated with any of the PCTs identified by the assessor under Chapter 5 as occurring within the subject land, and

(d) the native vegetation cover within an assessment area 1500m wide surrounding the boundary of the subject site as determined by the assessor in accordance with Subsection 4.3.2 is equal to or greater than the minimum class that is required for the species (unless the development is, or is part of, a linear shaped development), and

(e) the patch size which the vegetation zone is part of, as identified in Subsection 5.3.2 is equal to or greater than the minimum specified for that species, and

(f) the species is identified as an ecosystem or species credit species in the Threatened Biodiversity Data Collection.

6.4.1.4 A threatened species is predicted as requiring assessment if that species meets *all* of the criteria a) – f) that are relevant to the species. A criterion is not relevant to a species if the species' profile in the Threatened Biodiversity Data Collection does not contain information for that criterion.

6.4.1.5 If any past surveys undertaken on the subject land, regardless of whether or not the data is within BioNet, have recorded the presence of a threatened species, this species must be identified as being a species that requires assessment at the subject land.

6.4.1.6 Where a vegetation zone is across one or more IBRA subregions, the IBRA subregion in which most of the proposal occurs must be used. This provision is not applicable to linear shaped developments.

6.4.1.7 For linear shaped developments, the assessor must carry out a separate habitat suitability assessment for each IBRA subregion.

6.4.1.8 If any one of the criteria relevant to the species in Paragraph 6.4.1.3 a) – f) is not met, the subject land is considered not suitable habitat for the threatened species. No further assessment is required for that species at a development site, clearing site, land subject to biodiversity certification or at a biodiversity stewardship site.

Step 2: Assessment of the habitat constraints and vagrant species on the subject land

6.4.1.9 The assessor may opt to undertake an additional assessment of the habitat constraints on the subject land for the threatened species predicted for assessment.

6.4.1.10 The assessor must use the habitat constraints identified in the Threatened Biodiversity Data Collection to assess the habitat on the subject land for each threatened species predicted for assessment. Step 2 is not applicable to a species where no habitat constraints are listed for that species in the Threatened Biodiversity Data Collection.

HUNTER ECO · ABN 25 112 984 240
PO Box 1047, Toronto, NSW 2283 **P** +61 2 4959 8016 **M** 0438 773 029 **E** cd_enviro@bigpond.com

Attachment B – Biodiversity Assessment Method Calculator – Species Candidate List

Stage 1

Candidate threatened species (Species credits)

Species	Habitat constraints	Habitat degraded	Geographic limitations	Species is vagrant	Confirmed candidate species	Sensitivity to gain class	BC Act listing status	EPBC Act listing status.
Acacia bynoeana Bynoe's Wattle	--	☐	--	☐	Yes	High Sensitivity to Potential Gain	Endangered	Vulnerable
Acacia pendula - endangered population Acacia pendula population in the Hunter catchment	--	☐	--	☐	Yes	N/A	Endangered Population	Not Listed
Callistemon linearifolius Netted Bottle Brush	--	☐	--	☐	Yes	High Sensitivity to Potential Gain	Vulnerable	Not Listed
Cryptostylis hunteriana Leafless Tongue Orchid	--	☐	--	☐	Yes	High Sensitivity to Potential Gain	Vulnerable	Vulnerable
Cymbidium canaliculatum - endangered population Cymbidium canaliculatum population in the Hunter Catchment	--	☐	☑ Must be within Hunter catchment as defined by Australias River Basins (Geoscience Australia 1997))	☐	Yes	N/A	Endangered Population	Not Listed
Cynanchum elegans White-flowered Wax Plant	--	☐	--	☐	Yes	High Sensitivity to Potential Gain	Endangered	Endangered
Diuris praecox Rough Doubletail	--	☐	☐ East of Maitland	☐	No	Moderate Sensitivity to Potential Gain	Vulnerable	Vulnerable
Diuris tricolor Pine Donkey Orchid	--	☐	--	☐	Yes	Moderate Sensitivity to Potential Gain	Vulnerable	Not Listed
Diuris tricolor - endangered population Pine Donkey Orchid population in the Muswellbrook local government area	--	☐	☑ Within Muswellbrook LGA	☐	Yes	Moderate Sensitivity to Potential Gain	Endangered Population	Not Listed
Eucalyptus castrensis						N/A	Endangered	Not Listed

Eucalyptus glaucina Slaty Red Gum	--	☐	--	☐	Yes	High Sensitivity to Potential Gain	Vulnerable	Vulnerable
Eucalyptus parramattensis subsp. decadens Eucalyptus parramattensis subsp. decadens	--	☐	--	☐	Yes	High Sensitivity to Potential Gain	Vulnerable	Vulnerable
Eucalyptus pumila Pokolbin Mallee	☐ Other ☐ Sandstone slopes	☐	--	☐	No	High Sensitivity to Potential Gain	Vulnerable	Vulnerable
Grevillea parviflora subsp. parviflora Small-flower Grevillea	--	☐	--	☐	Yes	High Sensitivity to Potential Gain	Vulnerable	Vulnerable
Monotaxis macrophylla Large-leafed Monotaxis	--	☑	--	☐	No	High Sensitivity to Potential Gain	Endangered	Not Listed
Ozothamnus tesselatus Ozothamnus tesselatus	--	☐	--	☐	Yes	High Sensitivity to Potential Gain	Vulnerable	Vulnerable
Persoonia pauciflora North Rothbury Persoonia	--	☐	☐ Within 10 km of North Rothbury	☐	No	High Sensitivity to Potential Gain	Critically Endangered	Critically Endangered
Pomaderris bodalla Bodalla Pomaderris	--	☐	--	☐	Yes	High Sensitivity to Potential Gain	Vulnerable	Not Listed
Pomaderris queenslandica Scant Pomaderris	--	☐	--	☐	Yes	High Sensitivity to Potential Gain	Endangered	Not Listed
Pomaderris reperta Denman Pomaderris	--	☐	--	☐	Yes	High Sensitivity to Potential Gain	Critically Endangered	Critically Endangered
Prostanthera cineolifera Singleton Mint Bush	--	☐	--	☐	Yes	High Sensitivity to Potential Gain	Vulnerable	Vulnerable
Prostanthera cryptandroides subsp. cryptandroides Wollemi Mint-bush	--	☐	--	☐	Yes	High Sensitivity to Potential Gain	Vulnerable	Vulnerable
Rutidosis heterogama Heath Wrinklewort	--	☐	☐ South and east of Jerrys Plains	☐	No	High Sensitivity to Potential Gain	Vulnerable	Vulnerable

Stage 2

Candidate threatened species (Species credits)

Species	Habitat constraints	Habitat degraded	Geographic limitations	Species is vagrant	Confirmed candidate species	Sensitivity to gain class	BC Act listing status	EPBC Act listing status.
***Acacia pendula* - endangered population** Acacia pendula population in the Hunter catchment	--	☐	--	☐	Yes	N/A	Endangered Population	Not Listed
Leafless Tongue Orchid	--	☐	--	☐	Yes	Potential Gain		
***Cymbidium canaliculatum* - endangered population** Cymbidium canaliculatum population in the Hunter Catchment	--	☐	☑ Must be within Hunter catchment as defined by Australias River Basins (Geoscience Australia 1997))	☐	Yes	N/A	Endangered Population	Not Listed
Cynanchum elegans White-flowered Wax Plant	--	☐	--	☐	Yes	High Sensitivity to Potential Gain	Endangered	Endangered
Diuris tricolor Pine Donkey Orchid	--	☐	--	☐	Yes	Moderate Sensitivity to Potential Gain	Vulnerable	Not Listed
***Diuris tricolor* - endangered population** Pine Donkey Orchid population in the Muswellbrook local government area	--	☐	☑ Within Muswellbrook LGA	☐	Yes	Moderate Sensitivity to Potential Gain	Endangered Population	Not Listed
Eucalyptus glaucina Slaty Red Gum	--	☐	--	☐	Yes	High Sensitivity to Potential Gain	Vulnerable	Vulnerable
Eucalyptus pumila Pokolbin Mallee	☐ Other ☐ Sandstone slopes	☐	--	☐	No	High Sensitivity to Potential Gain	Vulnerable	Vulnerable
Monotaxis macrophylla Large-leafed Monotaxis	--	☐	--	☐	No	High Sensitivity to Potential Gain	Endangered	Not Listed
Ozothamnus tesselatus Ozothamnus tesselatus	--	☐	--	☐	Yes	High Sensitivity to Potential Gain	Vulnerable	Vulnerable
Persicaria elatior Tall Knotweed	--	☐	--	☐	Yes	Moderate Sensitivity to Potential Gain	Vulnerable	Vulnerable

Pomaderris bodalla Bodalla Pomaderris	--	☐	--	☐	Yes	High Sensitivity to Potential Gain	Vulnerable	Not Listed
Pomaderris queenslandica Scant Pomaderris	--	☐	--	☐	Yes	High Sensitivity to Potential Gain	Endangered	Not Listed
Pomaderris reperta Denman Pomaderris	--	☐	--	☐	Yes	High Sensitivity to Potential Gain	Critically Endangered	Critically Endangered
Prostanthera cineolifera						High Sensitivity to	Vulnerable	Vulnerable
Prostanthera cryptandroides subsp. cryptandroides Wollemi Mint-bush	--	☐	--	☐	Yes	High Sensitivity to Potential Gain	Vulnerable	Vulnerable

Attachment C – EPBC Act Protected Matters Search

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about Environment Assessments and the EPBC Act including significance guidelines, forms and application process details.

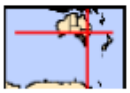
Report created: 11/06/20 13:43:49

Summary
Details
- Matters of NES
- Other Matters Protected by the EPBC Act
- Extra Information

Caveat
Acknowledgements

This map may contain data which are ©Commonwealth of Australia (Geoscience Australia), ©PSMA 2010

Coordinates
Buffer: 1.0Km



		within area
Plants		
Cynanchum elegans White-flowered Wax Plant [12533]	Endangered	Species or species habitat may occur within area
Eucalyptus glaucina Slaty Red Gum [5670]	Vulnerable	Species or species habitat likely to occur within area
Euphrasia arguta [4325]	Critically Endangered	Species or species habitat may occur within area
Prasophyllum sp. Wybong (C.Phelps ORG 5269) a leek-orchid [81964]	Critically Endangered	Species or species habitat may occur within area
Prostanthera cryptandroides subsp. cryptandroides Wollemi Mint-bush [68496]	Vulnerable	Species or species habitat may occur within area
Pterostylis gibbosa Illawarra Greenhood, Rufa Greenhood, Pouched Greenhood [4562]	Endangered	Species or species habitat may occur within area
Thesium australe Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat may occur within area