BIODIVERSITY ASSESSMENT LETTER REPORT

PROPOSED REZONING FOR VARIOUS LOTS IN GULGONG, NSW



- CLIENT: de Witt Consulting c/- Melinda Westaway
- DATE: 8 May 2025
- PREPARED BY: Alan Midgley & Lauren Cockbain



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- NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW), for access to the BioNet Atlas of NSW Wildlife.

de Witt Ecology staff involved in this project were:

- Alan Midgley (Fieldwork and Reporting)
- Lauren Cockbain (GIS)
- Alejandro Barreto (Report Review)

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8 May 2025

de Witt Consulting c/- Melinda Westaway 2794 Henry Lawson Drive Gulgong, NSW 2852 Email: <u>melwestaway23@gmail.com</u>

Dear Melinda,

Re: Preparation of a Biodiversity Assessment Letter Report for a Proposed Rezoning for Various Lots in Gulgong, NSW

BACKGROUND

de Witt Ecology has been engaged by de Witt Consulting c/- Melinda Westaway to undertake a biodiversity assessment for a rezoning proposal. The proposal is to rezone land from RU1 Primary Production to R5 Large Lot Residential and amend the minimum lot size from 100ha to 12ha at the following locations:

- 2794 Henry Lawson Drive, Gulgong NSW 2852 (Lot 415 DP755433) (northern site),
- 2787 Henry Lawson Drive, Gulgong NSW 2852 (Lot 56 DP755433) (central site), and
- 94 Canadian Lead Road, Gulgong NSW 2852 (Lot 129 DP755433) (southern site).

Refer to Figure 1 for the area of the proposed rezoning and the current working subdivision concept plan. The subdivision concept plan is also provided in Appendix 5.

The study area is within the Mid-Western Local Government Area (LGA) and is zoned RU1 Primary Production, under the Mid-Western Regional Local Environmental Plan (LEP) 2012. The surrounding land uses consist of rural activities such as stock management and grazing. Further west of the study area exists the township of Gulgong.

The planning proposal has progressed past Gateway and Department of Planning, Housing and Infrastructure (DPHI) have issued their Gateway Determination. Prior to exhibition, the planning proposal is to be amended to include the findings of a biodiversity assessment report.

Initial advice from Council was that the Planning Proposal could be submitted without a biodiversity assessment report due to the generally cleared nature of vegetation/obvious ability to avoid but would need a form of assessment prior to finalisation.

The Planning Proposal states that it is unlikely to cause impact to native vegetation (being areas of Biodiversity Values (BV) mapping, terrestrial biodiversity mapping or pockets of native vegetation such as the grassy woodlands PCTs). It was stated that future subdivision can avoid these areas and minimise vegetation removal.

The objective of this biodiversity assessment is to determine the presence of common and threatened flora, fauna or ecological communities (biota) within the study area. This data will assist in indicating whether the proposed rezoning / concept subdivision is considered appropriate from a biodiversity perspective.



METHOD

DATABASE AND LITERATURE REVIEW

Prior to completing the field investigation, information provided by Liberty Pannowitz of de Witt Consulting as well as other key information was reviewed, including:

- Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW) Protected Matters Search Tool, for matters protected by the EPBC Act
- NSW BioNet the database for the BioNet Atlas and BioNet Vegetation Classification (NSW Department of Climate Change, Energy, the Environment and Water), for items listed under the BC Act.
- NSW Department of Primary Industries (DPI) Spatial Data Portal for NSW *Fisheries Management Act* 1994 listed threatened species, populations and communities.
- NSW Department of Primary Industries (DPI) *Biosecurity Act 2015* (Biosecurity Act) for Prioritylisted weeds for the Central Tablelands Local Land Services (LLS) region.
- NSW State Vegetation Type Map (SVTM) (NSW Government 2025).

FIELD INVESTIGATION

A field investigation of the study area was undertaken on 1st and 2nd April 2025 by Senior Ecologist Alan Midgley. Vegetation within the study area was surveyed using a combination of vegetation rapid data points (RDPs), random meander technique (Cropper 1993) and BAM plots over approximately twelve (12) person hours. Locations of site features including hollow-bearing trees (HBTs), nests, notable weed occurrences, dams, RDPs, BAM plots, Plant Community Types (PCTs) and Threatened Ecological Communities (TECs) were recorded using a GPS-enabled tablet.

A habitat-based assessment was completed to determine the presence of suitable habitat for common species as well as threatened species previously recorded (NSW DCCEEW 2025a) or predicted to occur (Commonwealth DCCEEW 2025) within a 50 kilometre buffer of the study area. The likelihood of occurrence of common and threatened species most likely to be present within the study area were determined according to species descriptions, life history, habitat preference and soil preference.

RESULTS

Based on preliminary ecological research, the study area has nearby records of threatened flora, fauna and ecological communities (biota) listed under the EPBC Act and BC Act. Threatened flora and fauna species records have not been previously recorded specifically within the study area.

VEGETATION COMMUNITIES

The field investigation identified four vegetation communities within the study area. The structure, floristic composition and condition of these communities is described in Table 1-4 along with an indicative photograph of this community. A list of flora recorded within the study area is provided in Appendix 3.



Brigalow Belt So	
	tern Grey Box - cypress pine shrub grass shrub tall woodland in the Brigalow Belt South
Bioregion	Western Orea Days - Madazata - 1 - 191
PCT (NSW DCCEEW 2025)	Western Grey Box - cypress pine shrub grass shrub tall woodland in the Brigalow Belt South Bioregion
PCT ID	81 B1 Low condition:
Conservation	BC Act: Inland Grey Box Woodland in the Riverina, NSW South Western Slopes, Cobar
significance	Peneplain, Nandewar and Brigalow Belt South Bioregions – Listed as Endangered EPBC Act: Grey Box (<i>Eucalyptus microcarpa</i>) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia – Listed as Endangered.
Condition	Within the study area, this PCT occurs in two separate conditions. Low condition areas consist of native grassland with occasional remnant and regrowth Eucalypt trees. Moderate-Good condition areas consist of isolated grassy woodland with a more intact tree canopy layer.
Landscape Position (extract from PCT profile)	Occurs on well drained alluvial brown sandy loam to loam soil derived from sedimentary and volcanic substrates in valley flats and drainage depressions on alluvial plains or rises.
Structure (extract from PCT profile)	Tall Western Grey Box (<i>Eucalyptus microcarpa</i>) woodland commonly 20 m high, often with scattered White Cypress Pine (<i>Callitris glaucophylla</i>), Buloak (<i>Allocasuarina luehmanni</i>) and Kurrajong (<i>Brachychiton populneus</i>). Other trees may include Black Cypress Pine (<i>Callitris endlicheri</i>), Narrow-leaved Ironbark (<i>Eucalyptus crebra</i>), Yellow Box (<i>Eucalyptus melliodora</i>) and Rough-barked Apple (<i>Angophora floribunda</i>). Usually contains a very sparse shrub layer composed of Small-leaf Bluebush (<i>Maireana microphylla</i>) with wattle species such as Hakea Wattle (<i>Acacia hakeoides</i>), Western Silver Wattle (<i>Acacia decora</i>) and Green Wattle (<i>Acacia deanei</i>) along with <i>Cassinia</i> spp., <i>Dodonaea</i> spp., Senna form taxon 'zygophylla' and Blackthorn (<i>Bursaria spinosa</i>). The ground cover is mid-dense to dense and is dominated by grass and forb species. Native grass species include Speargrass (<i>Austrostipa scabra</i>), Slender Bamboo Grass (<i>Austrostipa verticillata</i>), Wallaby Grass (<i>Rytidosperma fulvum</i>) and <i>Enteropogon acicularis</i> . The decumbent shrub Winter Apple (<i>Eremophila debilis</i>) may be a common species in the ground cover. Forbs include Climbing Saltbush (<i>Einadia nutans</i> subsp. <i>nutans</i>), Kidney Weed (<i>Dichondra repens</i>), Purple Burr-daisy (<i>Calotis cuneifolia</i>), Yellow Burr-daisy (<i>Calotis lappulacea</i>), Common Everlasting (<i>Chrysocephalum apiculatum</i>), <i>Oxalis perennans</i> , Corrugated Sida (<i>Sida corrugata</i>), <i>Senecio pinnatifolius</i> var. <i>Ianceolatus</i>), Showy Copper-wire Daisy

 Table 1: Description of PCT 81 - Western Grey Box - cypress pine shrub grass shrub tall woodland in the Brigalow Belt South Bioregion



r	
	(<i>Podolepis jaceoides</i>), <i>Solanum parvifolium</i> , Pale Vanilla-lily (<i>Arthropodium milleflorum</i>) and Slender Violet-bush (<i>Hybanthus monopetalus</i>). The climbers Purple Coral Pea (<i>Hardenbergia</i>)
	violacea) and Glycine tabacina are often present.
Over storey	Where this PCT occurs in the study area in moderate-good condition it consists of remnant
	native trees in the over-storey, including Grey Box (Eucalyptus microcarpa) and infrequent
	Yellow Box (Eucalyptus melliodora). In low condition areas, occasional remnant trees of the
	equivalent species occurs.
Mid storey	Where this PCT occurs in the study area in moderate-good condition it consists of remnant
	native trees in the mid-storey, including Grey Box (<i>Eucalyptus microcarpa</i>) and infrequent
	Yellow Box (Eucalyptus melliodora) and Kurrajong (Brachychiton populneus). In low condition
	areas, occasional remnant trees of the equivalent species occurs.
Groundcover	Where this PCT occurs in the study area in moderate-good and low condition it consists of a
	groundcover composed of a mix of native species including Red Grass (Bothriochloa macra),
	Slender Rat's Tail Grass (Sporobolus creber), Common Couch (Cynodon dactylon), Kangaroo
	Grass (Themeda triandra), Paddock Lovegrass (Eragrostis leptostachya), Paspalidium distans,
	Climbing Saltbush (Einadia nutans), Small-leaf Bluebush (Maireana microphylla), Rytidosperma
	spp., Oxalis perennans, Purple Wiregrass (Aristida ramosa), Speargrass (Austrostipa scabra)
	and Warrego Grass (Paspalidium jubiflorum).
Exotic	Where this PCT occurs in the study area, the groundcover is composed of a low-moderate cover
	of exotic species including Greater Beggar's Ticks (Bidens subalternans), St. Johns Wort,
	(Hypericum perforatum), Khaki Weed (Alternanthera pungens), Catsear (Hypochaeris radicata),
	Bathurst Burr (Xanthium spinosum), Red-flowered Mallow (Modiola caroliniana), Summer Grass
	(Digitaria ciliaris), Blackberry complex (Rubus fruticosus sp. agg.), African Boxthorn (Lycium
	ferocissimum) and Purpletop (Verbena bonariensis).



Table 2: Description of PCT 276 Yellow Box grassy tall woodland on alluvium or parna loams and clays on flats in NSW South Western Slopes Bioregion

PCT 276 Yellov		woodland on alluvium or parna loams and clays on flats in NSW South
Western Slope		
PCT (NSW DCCEEW 2025)	Yellow Box grassy tall woodland on alluvium or parna loams and clays on flats in NSW South Western Slopes	Moderate-good condition:
PCT ID	Bioregion 276	Low condition:
		Poor condition:
Conservation significance	Grassland in the N Sydney Basin, So Riverina Bioregior EPBC Act: White	 x – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native VSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, uth Eastern Highlands, NSW South Western Slopes, South East Corner and is – Listed as Critically Endangered Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native I as Critically Endangered.
Condition	Within the study a in currently or rece grassland with occ	rea, this PCT occurs in three separate conditions. Poor condition areas occur ently grazed paddocks lacking trees. Low condition areas consist of native casional remnant and regrowth Eucalypt trees. Moderate-Good condition areas grassy woodland with a more intact tree canopy layer.



Landasani				
Landscape	Occurs on alluvial or aelian (parna) red-brown loam or clay soils on flats on floodplains or plains			
Position	in the NSW South-western Slopes Bioregion generally west of the Hume Highway around			
(extract from	Wagga Wagga to Temora and north to Wellington.			
PCT profile) Structure	Tall grocey woodland dominated by Vallow Day (Eugelyntyc malliadare) generally without			
	Tall grassy woodland dominated by Yellow Box (<i>Eucalyptus melliodora</i>) generally without			
(extract from	another tree species or if present they are in low numbers. The shrub layer is either absent or			
PCT profile)	very sparse and includes wattles such as Western Silver Wattle (<i>Acacia decora</i>), Hickory Wattle			
	(Acacia implexa) and Golden Wattle (Acacia pycnantha). The ground cover is generally dense			
	and dominated by grasses including Red Grass (<i>Bothriochloa macra</i>), <i>Austrostipa bigeniculata</i> ,			
	Wheatgrass (<i>Elymus scaber</i> var. <i>scaber</i>) and Windmill Grass (<i>Chloris truncata</i>). Forbs include			
0	Corrugated Sida (<i>Sida corrugata</i>), <i>Goodenia pinnatifida</i> and Fuzzweed (<i>Vittadinia cuneata</i>).			
Over storey	Where this PCT occurs in the study area in moderate-good condition it consists of remnant			
	native trees in the over-storey, including Yellow Box (Eucalyptus melliodora), Eucalyptus albens			
	(White Box) and infrequent Grey Box (<i>Eucalyptus microcarpa</i>) and Fuzzy Box (<i>Eucalyptus</i>			
	conica). In low condition areas, occasional remnant trees of the equivalent species occurs. Poor			
Mislatana	condition grassland areas lack trees in the over storey.			
Mid storey	Where this PCT occurs in the study area in moderate-good condition it consists of remnant			
	native trees in the mid-storey, including Yellow Box (Eucalyptus melliodora), Eucalyptus albens			
	(White Box), Kurrajong (Brachychiton populneus) and infrequent Grey Box (Eucalyptus			
	microcarpa) and Fuzzy Box (Eucalyptus conica). In low condition areas, occasional remnant			
	trees of the equivalent species occurs in the mid-storey. Poor condition grassland areas lack			
	trees in the mid-storey.			
Groundcover	Where this PCT occurs in the study area in moderate-good and low condition it consists of a			
	groundcover composed of a mix of native species including Red Grass (<i>Bothriochloa macra</i>),			
	Slender Rat's Tail Grass (<i>Sporobolus creber</i>), Common Couch (<i>Cynodon dactylon</i>), Kangaroo			
	Grass (Themeda triandra), Paddock Lovegrass (Eragrostis leptostachya), Paspalidium distans,			
	Awnless Barnyard Grass (<i>Echinochloa colona</i>), Climbing Saltbush (<i>Einadia nutans</i>), Small-leaf			
	Bluebush (<i>Maireana microphylla</i>), <i>Rytidosperma</i> spp., <i>Oxalis perennans</i> , Purple Wiregrass			
	(Aristida ramosa), Speargrass (Austrostipa scabra) and Warrego Grass (Paspalidium			
	jubiflorum).			
	Poor condition areas are dominated by Red Grass (<i>Bothriochloa macra</i>), Warrego Grass			
	(Paspalidium jubiflorum), Slender Rat's Tail Grass (Sporobolus creber), Common Couch			
Evotio	(<i>Cynodon dactylon</i>), Pigweed (<i>Portulaca oleracea</i>) and Small Crumbweed (<i>Dysphania pumilio</i>).			
Exotic	Where this PCT occurs in the study area, the groundcover is composed of a low-moderate cover of exotic species including Greater Beggar's Ticks (<i>Bidens subalternans</i>), St. Johns Wort,			
	(Hypericum perforatum), Urochloa Grass (Urochloa panicoides), Khaki Weed (Alternanthera			
	pungens), Catsear (Hypochaeris radicata), Bathurst Burr (Xanthium spinosum), Red-flowered			
	Mallow (<i>Modiola caroliniana</i>), Summer Grass (<i>Digitaria ciliaris</i>), Blackberry complex (<i>Rubus</i>			
	fruticosus sp. agg.), African Boxthorn (Lycium ferocissimum) and Purpletop (Verbena			
	bonariensis).			
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Table 3: Description of PCT 426 - Red Box - White Box +/- Red Stringybark hill woodland in the NSW South Western Slopes Bioregion

PCT 426 - Rec	Box - White Box +/- Red Stringybark hill woodland in the NSW South Western Slopes				
Bioregion					
PCT (NSW DCCEEW 2025)	Red Box - White Box +/- Red Stringybark hill woodland in the NSW South Western Slopes Bioregion				
PCT ID	426				
Conservation	BC Act: Not listed				
significance	EPBC Act: Not listed				
Condition	Within the study area, this PCT consists of isolated grassy woodland with sparse remnant trees in Moderate-Good condition.				
Landscape	Occurs on shallow loam to clay soils often derived from shale or phyllite substrates on hills from				
Position	north of Wellington in the north to around Cootamundra in the south in the NSW South-western				
(extract from PCT profile)	Slopes Bioregion.				
Structure (extract from PCT profile)	Tall to mid-high woodland dominated by Red Box (<i>Eucalyptus polyanthemos</i> subsp. <i>polyanthemos</i>) often with White Box (<i>Eucalyptus albens</i>), Kurrajong (<i>Brachychiton populneus</i> subsp. <i>populneus</i>) or Red Stringybark (<i>Eucalyptus macrorhyncha</i>). Mugga Ironbark (<i>Eucalyptus sideroxylon</i>) may be present. The mistletoe Box Mistletoe (<i>Amyema miquelii</i>) is often abundant. The shrub layer is sparse to very sparse and includes species such as Hickory Wattle (<i>Acacia implexa</i>), Peach Heath (<i>Lissanthe strigosa</i> subsp. strigose), Hoary Guinea Flower (<i>Hibbertia obtusifolia</i>) or Showy Parrot-pea (<i>Dillwynia sericea</i>). The ground is often bare or mostly covered with litter. Grass species include Speargrass (<i>Austrostipa scabra</i> subsp. <i>falcata</i>), Purple Wire-Grass (<i>Aristida personata</i>), <i>Austrostipa densiflora</i> , <i>Rytidosperma racemosum var. racemosum</i> , Kangaroo Grass (<i>Themeda triandra</i>) and Weeping Grass (<i>Microlaena stipoides</i> var. <i>stipoides</i>). The sedge <i>Carex inversa</i> may be present along with species of Juncus. Forb species include Native Carrot (<i>Daucus glochidiatus</i>), Ivy Goodenia (<i>Goodenia hederacea</i> subsp. <i>hederacea</i>), <i>Einadia polygonoides</i> , <i>Euchiton sphaericus</i> , Blue Bottle-daisy (<i>Lagenifera stipitata</i>), <i>Oxalis radicosa</i> , Swamp Dock (<i>Rumex brownii</i>) and Trailing Speedwell (<i>Veronica plebeia</i>).				
Over storey	The over-storey consists of remnant native trees, composed of Red Box (<i>Eucalyptus polyanthemos</i>).				
Mid storey	The mid-storey consists of regrowth native trees, composed of Red Box (<i>Eucalyptus polyanthemos</i>).				
Groundcover	<i>Dolyanthemos).</i> The groundcover is composed of a mix of native species including Slender Rat's Tail Grass (<i>Sporobolus creber</i>), Paddock Lovegrass (<i>Eragrostis leptostachya</i>), Small-leaf Bluebush (<i>Maireana microphylla</i>), Purple Wiregrass (<i>Aristida ramosa</i>), Purple Burr-Daisy (<i>Calotis cuneifolia</i>) and Rock Fern (<i>Cheilanthes sieberl</i>).				
Exotic	Where this PCT occurs in the study area, the groundcover is composed of a low cover of exotic species including St. Johns Wort (<i>Hypericum perforatum</i>) and Red-flowered Mallow (<i>Modiola caroliniana</i>).				



	s, gardens, exotic trees, structures and occasional native trees		
PCT (NSW DCCEEW 2025)	Managed areas, gardens, exotic trees, structures and occasional native trees		
PCT ID	N/A		
Conservation	BC Act: Not listed		
significance	EPBC Act: Not listed		
Condition	Managed areas, gardens, exotic trees, structures and occasional native trees		
Landscape position	N/A		
Structure	N/A		
Over storey	The remaining native over-storey consists of the occasional remnant native tree Red Box (<i>Eucalyptus polyanthemos</i>). The planted native River Red Gum (<i>Eucalyptus camaldulensis</i>) also occurs infrequently.		
Mid storey	The remaining native mid-storey consists of the occasional remnant native trees Red Box (<i>Eucalyptus polyanthemos</i>) and Kurrajong (<i>Brachychiton populneus</i>). The planted native Silky Oak (<i>Grevillea robusta</i>) also occurs infrequently.		
Groundcover	This area is comprised of a highly disturbed groundcover layer with few remaining native species including <i>Paspalidium distans</i> and <i>Oxalis perennans</i> .		
Exotic	This area is comprised of a high diversity of exotic species, including Honey Locust (<i>Gleditsia triacanthos</i>), <i>Cupressus</i> spp., Patula Pine (<i>Pinus patula</i>), Radiata Pine (<i>Pinus radiata</i>), Greater Beggar's Ticks (<i>Bidens subalternans</i>), Red-flowered Mallow (<i>Modiola caroliniana</i>), Blackberry complex (<i>Rubus fruticosus</i> sp. agg.), African Boxthorn (<i>Lycium ferocissimum</i>), Kikuyu Grass (<i>Cenchrus clandestinus</i>) and Red-flowered Mallow (<i>Modiola caroliniana</i>)		

Table 4: Description of Managed areas, gardens, exotic trees, structures and occasional native trees

THREATENED ECOLOGICAL COMMUNITIES

Four separate Threatened Ecological Communities (TECs) were recorded throughout most of the study area (Figure 2):

- Inland Grey Box Woodland in the Riverina, NSW South Western Slopes, Cobar Peneplain, Nandewar and Brigalow Belt South Bioregions (Endangered; *Biodiversity Conservation Act 2016* [BC Act])
- Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-Eastern Australia (Endangered; *Environment Protection and Biodiversity Conservation Act 1999* [EPBC Act]).

These Two TECs are mapped to occur in both grassland and woodland environments, where an overstorey of Grey Box (*Eucalyptus microcarpa*) either dominates or is assumed to have dominated the overstorey prior to historical tree clearing. A groundcover of native grasses and herbs typically dominates these areas.

Similarly, the below two TECs are mapped to occur in both grassland and woodland environments, where an overstorey of Yellow Box (*Eucalyptus melliodora*) and White Box (*Eucalyptus albens*) either dominates or is assumed to have dominated the overstorey prior to historical tree clearing. A groundcover of native grasses and herbs typically dominates these areas.

• White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin,



South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions (Critically Endangered; BC Act)

• White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland (Critically Endangered; EPBC Act).

THREATENED FLORA

Background searches identified 21 threatened flora species recorded (NSW DCCEEW 2025a) or predicted to occur (Commonwealth DCCEEW 2025) within 50 kilometres of the study area. The species considered most likely to have habitat within the study area include Ausfeld's Wattle (*Acacia ausfeldii*), Austral Toadflax (*Thesium australe*) and Pine Donkey Orchid (*Diuris tricolor*).

Threatened flora species were not detected during the field investigation.

FAUNA HABITAT

Vegetation contained within the study area, including grassland and grassy woodland environments, provides suitable habitat for threatened and non-threatened native fauna known to occur in the wider locality. However, the condition of much of the vegetation is considered as being in poor-low condition, with the tree layer predominantly absent. Mistletoe species present provide foraging opportunities for fauna. Seven hollow-bearing trees were recorded within or fringing the study area, providing potential breeding habitat for fauna.

Fauna species recorded during the field investigation are listed in Appendix 4.

THREATENED FAUNA

Two suspected nests of Grey-crowned Babbler (*Pomatostomus temporalis*) (Vulnerable; BC Act) were recorded within the study area (Figure 1).

Otherwise, threatened fauna species were not recorded during the field investigation. Refer to Appendix 4 for common fauna species recorded during the field investigation. Background searches identified 66 threatened fauna species recorded or predicted to occur (NSW DCCEEW 2025a, Commonwealth DCCEEW 2025) within 50 kilometres of the study area.

Based on the background research and the habitat values identified during the field investigation, suitable potential habitat for a subset of these species is considered to occur within the study area, including:

- Grey-crowned Babbler (*Pomatostomus temporalis*) suspected nests recorded within the study area
- White-throated Needletail (*Hirundapus caudacutus*)
- Little Eagle (*Hieraaetus morphnoides*)
- Black Falcon (*Falco subniger*)
- Little Lorikeet (*Parvipsitta pusilla*)
- Brown Treecreeper (eastern subspecies) (Climacteris picumnus victoriae)
- Painted Honeyeater (*Grantiella picta*)
- Dusky Woodswallow (Artamus cyanopterus cyanopterus)
- Diamond Firetail (Stagonopleura guttata)
- Grey-headed Flying-fox (*Pteropus poliocephalus*)
- Yellow-bellied Sheathtail-bat (Saccolaimus flaviventris)
- Large-eared Pied Bat (*Chalinolobus dwyeri*)
- Large Bent-winged Bat (Miniopterus orianae oceanensis)

BIODIVERSITY OFFSETS SHEME ENTRY

The concept subdivision provided (Figure 1) has been considered in understanding potential entry into the Biodiversity Offsets Scheme (BOS).



If the concept subdivision impacts on Biodiversity Values Mapping (Figure 1) OR more than 1 hectare of native vegetation, then it is likely this would trigger entry into the BOS, necessitating the need for a Biodiversity Development Assessment Report (BDAR) and the purchase of biodiversity offset credits. All areas mapped as PCTs in Figure 1 are considered as native vegetation and impact to these areas will contribute to this total. Even poor condition areas in the northern portion of the study area, while heavily degraded by clearing and grazing, are still dominated by native grasses.

However, it is important to note that most of the site is mapped as 'Category 1-exempt land' on the Draft Native Vegetation Regulatory Map (Figure 3). As such, native vegetation on category 1 land is <u>not included</u> <u>in any area clearing calculations</u> when deciding whether a BDAR should be prepared, <u>unless the native</u> <u>vegetation is assessed as a Critically Endangered Ecological Community (CEEC)</u>. The northern portion of the study area is mapped as a CEEC and needs to be considered in area clearing calculations related to the concept subdivision. Remaining areas of exempt land can be excluded from area clearing calculations.

Therefore, it is assumed that the concept subdivision will not result in impact to more than 1 hectare of native vegetation when calculated from sources that would contribute to entering the BOS (i.e. CEECs and native vegetation within Category 2-regulated land).

The proposed concept subdivision avoids area of Biodiversity Values Mapping, excluding a small portion in the northern extent of Lot 415 DP755433, where there is marginal overlap (Figure 1). It is assumed that any infrastructure (i.e. fences) within this area will not require clearing of native vegetation, and therefore not trigger the BOS through this pathway.

PRIORITY WEEDS

The primary object of this Act is to provide a framework for the prevention, elimination and minimisation of biosecurity risks posed by biosecurity matter, dealing with biosecurity matter, carriers and potential carriers, and other activities that involve biosecurity matter, carriers or potential carriers.

The other relevant objects of this Act are as follows:

- To provide a framework for the timely and effective management of the following—
 - pests, diseases, contaminants and other biosecurity matter that are economically significant for primary production industries,
 - threats to terrestrial and aquatic environments arising from pests, diseases, contaminants and other biosecurity matter,
 - o public health and safety risks arising from contaminants, non-indigenous animals, bees, weeds and other biosecurity matter known to contribute to human health problems,
 - o pests, diseases, contaminants and other biosecurity matter that may have an adverse effect on community activities and infrastructure.

The Biosecurity Act covers pest animals and disease and pathogens potentially harmful to flora and/or fauna, and while not discounting the importance of these components, of particular relevance to the current assessment includes those risks and impacts associated with weeds. A biosecurity risk is defined as the risk of a biosecurity impact occurring, which for weeds includes:

- The introduction, presence, spread or increase of a pest into or within the State or any part of the State.
- A pest plant has the potential to:
 - out-compete other organisms for resources, including food, water, nutrients, habitat and sunlight.
 - o harm or reduce biodiversity.

The Biosecurity Act introduces the concept of Priority Weeds. A priority weed is any weed identified in a local strategic plan, for a region that includes that land or area, as a weed that is or should be prevented, managed, controlled or eradicated in the region. A local strategic plan here refers to a local strategic plan approved by the Minister under Division 2 of Part 4 of the *Local Land Services Act 2013*.



The Biosecurity Act also introduces the General Biosecurity Duty, which states:

All plants are regulated with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. Any person who deals with any plant, who knows (or ought to know) of any biosecurity risk, has a duty to ensure the risk is prevented, eliminated or minimised, so far as is reasonably practicable.

Four Priority Weeds identified in the Central Tablelands Regional Strategic Weed Management Plan 2023-2027 (Central Tablelands LLS 2022), have been recorded in the Study Area, and are listed in Table 5, along with their associated Duty. Where these species occur in more discrete locations they are referred to in Figure 1 where relevant.

Scientific Name	Common	General Biosecurity Duty
	Name	
Lycium ferocissimum	African boxthorn	Prohibition on certain dealings Must not be imported into the state, sold, bartered, exchanged or offered for sale.
		Regional Recommended Measure Land managers should mitigate the risk of the plant being introduced to their land. Land managers should mitigate spread of the plant from their land. A person should not buy, sell, move, carry or release the plant into the environment. Land managers should reduce the impact of the plant on assets of high economic, environmental and/or social value.
Rubus fruticosus species aggregate	Blackberry	 Prohibition on certain dealings Must not be imported into the state, sold, bartered, exchanged or offered for sale. All species in the <i>Rubus fruiticosus</i> species aggregate have this requirement, except for the varietals Black Satin, Chehalem, Chester Thornless, Dirksen Thornless, Loch Ness, Murrindindi, Silvan, Smooth Stem, and Thornfree
		Regional Recommended Measure Land managers should mitigate the risk of the plant being introduced to their land. Land managers should mitigate spread of the plant from their land. A person should not buy, sell, move, carry or release the plant into the environment. Land managers should reduce the impact of the plant on assets of high economic, environmental and/or social value.
Gleditsia triacanthos	Honey Locust	Regional Recommended Measure Contain recorded populations across the Central Tablelands region. Whole of region: Land managers should mitigate the risk of the plant being introduced to their land. Land managers should mitigate spread of the plant from their land. A person should not buy, sell, move, carry or release the plant into the environment. Land managers should reduce the impact of the plant on assets of high economic, environmental and/or social value. Garden varieties derived from <i>Gleditsia triacanthos</i> var. <i>inermis</i> cultivars are not included in this listing. However, if the grafted top dies then the root stock wildings should be controlled.
Hypericum perforatum	St. John's Wort	Regional Recommended Measure Land managers should mitigate the risk of the plant being introduced to their land. Land managers should mitigate spread of the plant from their land. A person should not buy, sell, move, carry or release the plant into the environment. Land managers should reduce the impact of the plant on assets of high economic, environmental and/or social value.

Table 5: Priority weeds within the study area



RECOMMENDATIONS AND CONCLUSION

This Biodiversity Assessment Letter Report provides a fit-for-purpose scope for a rezoning proposal. A Concept Subdivision Plan has been prepared and considered as part of this BALR. Whilst the Concept is indicative in nature, it illustrates the potential layout of future lots and boundaries. We can define a conclusion based on the concept provided, understanding that that any future subdivision that might differ from that plan would need to consider entry into the BOS and the various triggers. This is both important for Council/the rezoning but also the proponent and any future works proposed on site.

No threatened flora species were recorded during the field surveys, however, two suspected nests of Greycrowned Babbler (Vulnerable; BC Act) were recorded within the study area. Seven hollow-bearing trees were recorded within or fringing the study area, providing potential breeding habitat for fauna. Equivalent or better-quality areas of habitat occur in the surrounding locality. Four (4) priority weeds were identified within the study area.

While it is not anticipated that areas of BV mapping, terrestrial biodiversity mapping or areas of treed native vegetation will be impacted by the concept subdivision, it still traverses areas which consist predominantly of EECs and CEECs, even where areas of open grassland occur.

However, the provided Concept Subdivision Plan is consistent with the following:

- Avoids impacts to any BV Mapping (assuming it can be avoided in the northern extent of the study area)
- Retain hollow-bearing trees and nests
- Limits impacts to native vegetation (where PCTs are mapped), where practicable
- Limits impacts to areas of CEECs and EECs, where practicable, particularly where treed moderategood condition occurs
- Avoids triggering entry into the BOS based on the 1ha native vegetation impact trigger.

Any future works (i.e. any future subdivision modification and / or future development applications) within the study area will be required to consider potential entry into the BOS. This will need to factor in BV mapping and native vegetation clearing thresholds in consideration of CEECs and areas of Category 1-exempt land.

We trust this Letter Report provides a fit-for-purpose scope for the current rezoning proposal and informs direction to any works in relation to biodiversity considerations.

Yours sincerely,

de Witt Ecology

Alan Midgley Senior Ecologist



REFERENCES

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APPENDICES

Biodiversity Assessment Letter Report – Proposed Rezoning for Various Lots in Gulgong, NSW May 2025 | Our Ref: EC356 Page 15



APPENDIX 1 – FIGURES

LEGEND

- ____ Study Area
 - Subdivision Layout
- Biodiveristy Values Mapping

Survey Locations

- African Boxthorn & Blackberry Weed polygon
- A Hollow-bearing Tree
- Grey-crowned Babbler Nest x2
- + Rapid Data Point

Weed point

- African boxthorn
- Bathurst burr patch
- Marrabium vulgare

BAM Plot

- Start
- End
- BAM 20x20m Plot
- --- BAM Plot

Vegetation Mapping

Dam

RDP6

- Managed areas, gardens, exotic trees,
- structures & occasional native Eucalypts
- PCT 276 Yellow Box grassy tall woodland on alluvium or parna loams and clays on flats in NSW South Western Slopes Bioregion - Low Condition
- PCT 276 Yellow Box grassy tall woodland on alluvium or parna loams and clays on flats in NSW South Western Slopes Bioregion - Moderate-Good Condition
- PCT 276 Yellow Box grassy tall woodland on alluvium or parna loams and clays on flats in NSW South Western Slopes Bioregion - Poor Condition
- PCT 426 Red Box White Box +/- Red Stringybark hill woodland in the NSW South Western Slopes Bioregion - Low-Moderate Condition
- PCT 81 Western Grey Box cypress pine shrub grass shrub tall woodland in the Brigalow Belt South Bioregion - Low Condition
- PCT 81 Western Grey Box cypress pine shrub grass shrub tall woodland in the Brigalow Belt South Bioregion
 Moderate-Good Condition
- PCT 81 Western Grey Box cypress pine shrub grass shrub tall woodland in the Brigalow Belt South Bioregion - Poor Condition



RDP9

RDP7

RDP10

RDP4

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			FIGURE 1	ECOLOGICAL V	ALUES				
	7 Canberra Street	87 Herbert Street	JOB ADDRESS:	HENRY LAWSON	DRIVE & CANA	DIAN LEAD ROAD	, GULGONG		
	PO Box 850 Charlestown NSW 2290	PO Box 232 Gulgong NSW 2852	CLIENT:	DE WITT CONSUL	TING c/- MELIN	IDA WESTAWAY			
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LEGEND

____ Study Area

Subdivision Layout

Threatened Ecological Communities

 Inland Grey Box Woodland in the Riverina, NSW South Western Slopes, Cobar Peneplain, Nandewar and Brigalow Belt South Bioregions (Endangered; BC Act 2016) Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia (Endangered; EPBC Act 1999)
 White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland (Critically Endangered; BC Act 2016) White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland

(Critically Endangered; EPBC Act 1999)



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LEGEND

Study Area

Subdivision Layout

Threatened Ecological Communities

White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland (Critically Endangered; BC Act 2016) White Box-Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland (Critically Endangered; EPBC Act 1999)

Draft Native Vegetation Regulatory Map

- Category 1-exempt land (draft)
- Category 2-regulated land (draft)
- Land excluded from the LLS Act

Aerometrex 2025: LPI NSW Imagery: NSW Spatial Services 2025)

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FIGURE 3	DRAFT NATIV	E VEGETATION	REGULA	FORY MAP		
JOB ADDRESS:	HENRY LAWSO	N DRIVE & CANA	DIAN LEAD	ROAD, GULGONG		
CLIENT:	DE WITT CONS	ULTING c/- MELIN	DA WESTA	WAY		
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APPENDIX 2 – PLATES





Plate 1: Looking southeast along the northern fence line of Lot 56 DP755433 at mature treed vegetation (*Eucalyptus microcarpa*).



Plate 2: Looking west in Lot 129 DP755433 at mature treed vegetation.





Plate 3: Looking north along the eastern fence line of Lot 415 DP755433 at mature treed vegetation (*Eucalyptus albens*) within low condition native grassland.



Plate 4: Looking west in Lot 56 DP755433 at low condition native grassland.





Plate 5: Mistletoes on mature Eucalypts in Lot 56 DP755433.



Plate 6: Looking east in Lot 56 DP755433 at mature treed vegetation (*Eucalyptus polyanthemos*) surrounded by low condition native grassland.





Plate 7: Planted exotic and native trees within Lot 56 DP755433.



Plate 8: Looking south in Lot 129 DP755433 at recently mown low condition native grassland.





Plate 9: Looking southwest from the southern fence line of Lot 129 DP755433 at the interface between recently mown and unmown low condition native grassland.



Plate 10: Looking west along the road reserve / northern fence line of Lot 415 DP755433 at mature treed vegetation (*Eucalyptus melliodora*).





Plate 11: Looking south in Lot 415 DP755433 at poor condition native grassland.



Plate 12: Looking south in Lot 415 DP755433 at exotic lawn, gardens, planted trees and structures.





Plate 13: Exotic vegetation in Lot 415 DP755433.



Plate 14: Notable infestation of exotic vegetation in Lot 415 DP755433, dominated by African Boxthorn and Blackberry.





Plate 15: Moderate-Good condition treed native vegetation in the southern extent of Lot 415 DP755433.

APPENDIX 3 – FLORA

Appendix 1.1 Flora species recorded from the study area

Notes to tables:

Status – EPBC Act:	Status – BC Act:
CE – Critically Endangered	E1 – endangered species (Part 1, Schedule 1)
EN – Endangered	E2 – endangered population (Part 2, Schedule 1)
VU – Vulnerable	E4 – presumed extinct (Part 4, Schedule 1)
	E4A – critically endangered
	V – vulnerable (Part 1, Schedule 2)

Table A.1 Flora species recorded from the study area

Family	Scientific Name	Common Name	Exotic	BC EF	EPBC	BA	BAM1		RDP2	RDP3	RDP4	RDP5	RDP6	RDP7	RDP8	RDP9	RDP10
				Act	Act	Cover	Abun.										
Amaranthaceae	Alternanthera denticulata	Lesser Joyweed				0.1	2.0										
Amaranthaceae	Alternanthera pungens	Khaki Weed	*			0.3	30.0				3.0						
Asteraceae	Bidens subalternans	Greater Beggar's Ticks	*									5.0		40		20	0.3
Asteraceae	Calotis cuneifolia	Purple Burr-Daisy						0.5									
Asteraceae	Calotis lappulacea	Yellow Burr-daisy													0.3		
Asteraceae	Cirsium vulgare	Spear Thistle	*			0.3	20.0							1			0.2
Asteraceae	Conyza bonariensis	Flaxleaf Fleabane	*											2			
Asteraceae	Conyza spp.		*						0.5								1.0
Asteraceae	Gamochaeta purpurea	Purple Cudweed	*														0.1
Asteraceae	Hypochaeris radicata	Catsear	*			0.3	30.0		0.5				3.0				
Asteraceae	Xanthium spinosum	Bathurst Burr	*			1.0	20.0										0.5
Boraginaceae	Echium plantagineum	Patterson's Curse	*			0.2	2.0										
Brassicaceae	Brassica spp.	Brassica	*			0.2	10.0							3			0.3
Chenopodiaceae	Chenopodium album	Fat Hen	*			0.1	2.0							3			
Chenopodiaceae	Dysphania pumilio	Small Crumbweed				2.0	50.0										
Chenopodiaceae	Einadia nutans	Climbing Saltbush									10.0						0.2
Chenopodiaceae	Maireana microphylla	Small-leaf Bluebush						2.0			0.0					2	
Clusiaceae	Hypericum perforatum	St. Johns Wort	*			0.3	20.0	0.5	3.0				8.0		5.0		
Convolvulaceae	Dichondra repens	Kidney Weed						0.2				1.0					
Cupressaceae	Cupressus spp.		*							0.0							
Fabaceae (Caesalpinioideae)	Gleditsia triacanthos	Honey Locust	*							0.0							
Fabaceae (Faboideae)	Glycine tabacina	Variable Glycine													0.3		
Lamiaceae	Marrubium vulgare	White Horehound	*								4.0						
Malvaceae	Brachychiton populneus	Kurrajong								0.0		3.0				2	
Malvaceae	Modiola caroliniana	Red-flowered Mallow	*			1.0	300.0	0.5			2.0			4			0.3
Malvaceae	Sida corrugata	Corrugated Sida						0.3							0.3		
Myrtaceae	Angophora floribunda	Rough-barked Apple									15.0						
Myrtaceae	Eucalyptus melliodora	Yellow Box									20.0					30	
Myrtaceae	Eucalyptus microcarpa	Western Grey Box									10.0	60.0			30.0	5	
Myrtaceae	Eucalyptus polyanthemos	Red Box						10.0		0.0							
Oxalidaceae	Oxalis perennans					0.3	200.0							1			
Pinaceae	Pinus patula	Patula Pine	*							0.0							
Pinaceae	Pinus radiata	Radiata Pine	*							0.0							
Poaceae	Aristida ramosa	Purple Wiregrass						60.0								10	
Poaceae	Austrostipa scabra	Speargrass										3.0					
Poaceae	Bothriochloa macra	Red Grass				15.0	300.0		20.0		1		20.0				60.0
Poaceae	Bromus catharticus	Praire Grass	*			0.3	20.0				0.0			5		15	
Poaceae	Cenchrus clandestinus	Kikuyu Grass	*											30			



Family	Scientific Name	Common Name	Exotic	BC	EPBC	BAM1		RDP1	RDP2	RDP3	RDP4	RDP5	RDP6	RDP7	RDP8	RDP9	RDP10
				Act	t Act	Cover	Abun.	1									
Poaceae	Chloris truncata	Windmill Grass				0.3	20.0										
Poaceae	Cynodon dactylon	Common Couch				5.0	200.0										
Poaceae	Digitaria ciliaris	Summer Grass	*			10.0	300.0										
Poaceae	Echinochloa colona	Awnless Barnyard Grass				20.0	500.0										
Poaceae	Eragrostis cilianensis	Stinkgrass	*														1.0
Poaceae	Eragrostis curvula	African Lovegrass	*									3.0					
Poaceae	Eragrostis leptostachya	Paddock Lovegrass				0.5	30.0	10.0	10.0		3.0		3.0				2.0
Poaceae	Paspalidium distans													10			
Poaceae	Paspalidium jubiflorum	Warrego Grass				25.0	500.0				10.0	2.0				2	20.0
Poaceae	Rytidosperma spp.											4.0				10	
Poaceae	Sporobolus creber	Slender Rat's Tail Grass				3.0	100.0	20.0	70.0		5.0		60.0		1.0	10	30.0
Poaceae	Themeda triandra														70.0	10	
Poaceae	Urochloa panicoides	Urochloa Grass	*			15.0	300.0										
Portulacaceae	Portulaca oleracea	Pigweed				2.0	200.0										
Proteaceae	Grevillea robusta	Silky Oak								0.0							
Pteridaceae	Cheilanthes sieberi	Rock Fern						0.5									
Rosaceae	Rubus fruticosus sp. agg.	Blackberry complex	*											3			
Rubiaceae	Asperula conferta	Common Woodruff				1.0	200.0										
Scrophulariaceae	Verbascum virgatum	Twiggy Mullein	*			0.8	20.0										
Solanaceae	Lycium ferocissimum	African Boxthorn	*											4			
Verbenaceae	Verbena bonariensis	Purpletop	*			0.5	30.0						2.0	5			





APPENDIX 4 – FAUNA

Appendix 2.1 Fauna species recorded from the study area

Below is a list of fauna species recorded from the study area during the present assessment.

Notes to tables:

Status – EPBC Act:	Status – BC Act:
CE – Critically Endangered	E1 – endangered species (Part 1, Schedule 1)
EN – Endangered	E2 – endangered population (Part 2, Schedule 1)
VU – Vulnerable	E4 – presumed extinct (Part 4, Schedule 1)
	E4A – critically endangered
	V – vulnerable (Part 1, Schedule 2)
Status – FM Act:	Status – Non-indigenous species
C1 – critically endangered	* pest species not native to the area
E1 – endangered	
E2 – endangered	
E4 – presumed extinct	
V1 – vulnerable	

Table A.4: Vertebrate fauna recorded from the study area (current assessment)

Scientific name	Common name	Exotic	Comm. status	NSW status
Anthochaera carunculata	Red Wattlebird	-	-	-
Corvus coronoides	Australian Raven	-	-	-
Cracticus nigrogularis	Pied Butcherbird	-	-	-
Cracticus tibicen	Australian Magpie	-	-	-
Falco cenchroides cenchroides	Nankeen Kestrel	-	-	-
Grallina cyanoleuca	Magpie-lark	-	-	-
Eolophus roseicapilla	Galah	-	-	-
Manorina melanocephala	Noisy Miner	-	-	-
Oryctolagus cuniculus	Rabbit	*	-	-
Ocyphaps lophotes	Crested Pigeon	-	-	-
Platycercus eximius	Eastern Rosella	-	-	-
Psephotus haematonotus	Red-rumped Parrot	-	-	-
Strepera graculina	Pied Currawong	-	-	-
Threskiornis spinicollis	Straw-necked Ibis	-	-	-
Trichoglossus haematodus	Rainbow Lorikeet	-	-	-
Turdus merula	Eurasian Blackbird	*	-	-



APPENDIX 5 - CONCEPT SUBDIVISION



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E admin@dewittconsulting.com.au	ABN 23 104 067 405

TITLE

CONCEPT SUBDIVISION LOTS 56, 104, 129 & 415 D.P.755433

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