

Threatened Species Potential Habitat Report Tallong Village

Goulburn Mulwaree Council
NSW



Office of
Environment
& Heritage

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1) Introduction

This threatened species habitat assessment has been prepared by the Office of Environment and Heritage (OEH) to help regulators, developers and land owners to better manage the potential impacts of development in the Tallong district NSW.

The Tallong district occurs at the southern end of the Southern Highlands between Sydney and Goulburn NSW, as shown in Map 1 below. Tallong is a small village occurring in the Goulburn Mulwaree Local Government Area. The district supports unique floristics and important habitat for several threatened species. Increased pressure for residential development following a past of poor land management practices has resulted in increased vulnerability of these threatened species.

Effectively managing development in the Tallong district has become crucial to the long-term viability of threatened biota in the district. It is the responsibility of Goulburn Mulwaree Council (Council) and the OEH to ensure that measures are taken to prevent significant impacts to threatened biota in the Tallong district. This report will help regulators make decisions and provide advice regarding future development in Tallong.

2) Background

The Tallong Village is characterised by small residential lots or ‘bush blocks’ in a semi-cleared landscape. Within the village itself, relatively intact native vegetation is dominant and most lots are largely undeveloped. The geology is sedimentary, soils are shallow and outcropping sandstone sheets are frequent, dry sclerophyll forest with a shrubby understorey dominates native vegetation. In places trees have been removed leaving shrubby or grassy vegetation. The Tallong area provides biodiversity links between Morton National Park to the south, Wingello State Forest to the southeast, several small crown reserves close to the village, the Barbers Creek Corridor that links to the Shoalhaven River and large tracts of remnant native vegetation occurring on private lands particularly to the north of the village. Two transport corridors, the Highlands Way and the Sydney to Goulburn Railway Line pass through the Tallong village in an east west direction. These corridors are well vegetated with regenerating native vegetation and provide good biodiversity links through the Southern Highlands.

The unique environment of the Tallong area supports a distinctive range of flora. Of particular interest are the threatened species Tallong Midge Orchid (*Genoplesium plumosum*) and the Dwarf Kerrawang (*Rulingia prostrata*). The Tallong district is also important for the threatened Glossy Black Cockatoo (*Calyptorhynchus lathami lathami*) providing good stands of an essential feed tree for this species, the Black She-oak (*Allocasuarina littoralis*).

2.1 Tallong Midge Orchid (*Genoplesium plumosum*)

The Tallong Midge Orchid is a small inconspicuous terrestrial orchid; it has flower spikes up to 20 cm tall, with one to eight flowers on each spike. Individual flowers are approximately 8 mm across and are green with pink-purple stripes. The orchid flowers in late summer to autumn and while little is known about its ecology it appears to be highly dependant on specific rainfall regimes. *Genoplesium plumosum* occurs in shallow soils on sandstone sheets, often among mosses or *Themeda australis* (Kangaroo Grass). It is closely associated with the heathland shrubs *Kunzea parvifolia* (Violet Kunzea) and *Calytrix tetragona* (Common Fringe-myrtle). It is only known to occur in the Tallong area in the Southern Highlands of NSW where it is represented in less than 10 small colonies.

Genoplesium plumosum is listed as Critically Endangered under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 and Endangered under the NSW Threatened Species Conservation Act 1995.

2.2 Dwarf Kerrawang (*Rulingia prostrata*)

Rulingia prostrata is a prostrate groundcover that forms mats over 1m wide, leaves are ovate to lanceolate, mostly 2–6 cm long and 5–20 mm wide. The upper surface is green and lower surface hairy, flowers are pinkish. Only one individual of this species has been recorded in the Tallong area, it is rare elsewhere with few other occurrences between the Southern Tablelands, the South Coast and the Newcastle area. It occurs in a variety of woodland and forest habitats.

This species is listed as Endangered under both the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 and the NSW Threatened Species Conservation Act 1995.

2.3 Glossy Black Cockatoo (*Calyptorhynchus lathami lathami*)

The Glossy Black-cockatoo tends to occur in pairs feeding quietly in Black She-oak, they are dusky brown to black with a large bill and a broad, red band through the tail barred black and edged with yellow. The female typically has irregular pale-yellow markings on the head and neck and yellow flecks on the underparts and underwing.

Open forests and woodlands with trees large enough to support hollows for nesting as well as She-oak trees for feeding are essential for the Glossy Black Cockatoo. This species almost exclusively feeds on the seeds of several species of she-oak (*Casuarina* and *Allocasuarina* species). In the Tallong area many of the rural residential blocks support good regeneration as well as mature stands of Black She-oak (*Allocasurina littoralis*), some areas in the district also support suitable hollow bearing trees for nesting cockatoos. The combination of Glossy Black Cockatoo habitat components in the Tallong District make it an important area for this cockatoo and the protection of these habitat components is important to the long term survival of this species.

The eastern subspecies of the Glossy Black-cockatoo (*Calyptorhynchus lathami lathami*) is listed as vulnerable under the NSW Threatened Species Conservation Act 1995.

3) Objectives

This document aims to provide a tool to the Goulburn Mulwaree Council and other regulatory authorities that can be used to help manage the Impact of development on threatened flora and fauna in the Tallong Village.

A simple to use table of lots and threatened species constraints as well as a threatened species constraints map are provided that will enable Council to quickly look up a lot under question and check opportunities, constraints and recommendations specific to each lot.

4) Methodology

Any relevant data that could be accessed were collated to inform this project, the most significant sources of information were surveys undertaken by Isobel Crawford (*Australian Botanical Surveys*) in 2004 and presented in a draft report provided to the Department in February 2005 and several surveys undertaken by John Briggs of the Department annually since the late 1990s.

Crawford 2005

This work was commissioned by the Department in partnership with Council (then Greater Argyle Council). It involved survey work throughout the village of Tallong including most private lands and road reserves except in places where native vegetation had been completely removed in the past, where sufficient survey had been conducted in the past or where access to private lands was denied. Crawford mapped potential threatened species habitat and recorded the following;

- i. Population size (number of individuals) of any threatened species,
- ii. The population, age and condition of stands of Black She-oak and of individual trees and the presence of chewed She-oak cones or fruits on the ground.
- iii. The location and extent of threatened species' habitat.
- iv. The quality and extent of other remnant native vegetation.

Unfortunately a completed report and digital mapping information were not available at the time this report was prepared.

John Briggs surveys

John Briggs of the Office of Environment and Heritage has been working on Tallong Midge Orchid recovery for over 10 years. During this time the Department has made several records of the Tallong Midge Orchid in the Tallong Village area, several of these records are available in the NSW Wildlife Atlas database and have been included in this report. John Briggs has also contributed other advice regarding *Genoplesium plumosum* habitat and records in the preparation of this report.

Site visit

The study area was visited on the 23rd and 29th of March 2011 to clarify notes and mapping provided by Crawford 2005 and to confirm areas of potential habitat. This involved a visual assessment of the areas of habitat mapped or described in previous work and a comparison of these areas with known habitat areas. Any new areas of potential habitat were also mapped.

5) Summary of findings

This report has considered the 124 lots that make up the village area of Tallong and has identified potential threatened species habitat on 61 of these lots.

Suitable habitat for the Tallong Midge Orchid occurs on 26 lots and 40 lots support potential Glossy Black Cockatoo habitat.

Specific notes for each lot in the study area are provided in Appendix A of this report “*Tallong Lot Constraints Table*”.






No lots surveyed were considered likely to support populations of Dwarf Kerrawang.

Map 2 below shows areas of potential habitat identified as part of this report along with known recordings of the Tallong Midge Orchid.



Threatened Species Habitat Report 2011 Tallong NSW

Legend

-  Known Tallong Midge Orchid Occurances
-  Casuarina vegetation (Potential Glossy Black Cockatoo Habitat)
-  Tallong Midge Orchid Habitat
-  Study Area
-  Cadastre

0 50 100 200 300 400 500
Meters



1:8,000

6) Discussion

The village of Tallong presents some difficult biodiversity conservation issues. The area supports habitat for threatened species that is poorly represented in conservation reserves and that occurs almost exclusively on private lands. Further to this, small lot sizes in the village and the difficulty of surveying flora species, specifically the Tallong Midge Orchid, creates a great deal of frustration for planning authorities and landholders managing conservation and development in the village.

In response to these difficulties and uncertainty regarding the occurrence of threatened flora, the Department has produced this report and associated mapping of threatened biodiversity values.

The key issue in the village is the occurrence of potential Tallong Midge Orchid habitat and uncertainty about where this orchid is likely to occur. The mapping provided here is an accumulation of all available information concerning recordings and potential habitat of the Tallong Midge Orchid. This information was then confirmed through on site inspections to ensure its currency and was reproduced in a digital format. The mapping provided by this report is a good guide as to where the Tallong Midge Orchid may occur. If impacts of any potential development are kept out of these areas, with an appropriate buffer distance for the development, it can be considered that the potential development is unlikely to have a significant impact on the Tallong Midge Orchid.

Appropriate buffer distances between potential habitat and any potential development will vary depending on the slope and nature of the development. As a guide 5 metres is a suitable buffer distance to landscaped areas and effluent management areas down slope of mapped potential habitat. Activities that add nutrients or water to the soil including effluent management areas and gardens upstream of potential habitat should be at least 20m upslope or incorporate suitable drainage structures so as to prevent any potential impact to the Tallong Midge Orchid habitat.

For areas mapped as Potential Tallong Midge Orchid Habitat, many typical “back yard” uses should be excluded including; gardening and driving or parking of vehicles. The vegetation in these areas should not be damaged and Grazing of introduced animals or stock must be excluded.

Potential Glossy Black Cockatoo habitat occurs much more frequently and over a wider area than potential Tallong Midge Orchid habitat. There is likely to be potential Glossy Black Cockatoo habitat in the village of Tallong that has not been mapped by this report as it could not be accessed by the Department. Similar habitat also occurs in patches throughout the wider Tallong District. Despite this, Casuarina vegetation mapped by this report is important habitat for the Glossy Black Cockatoo and should be conserved. Of particular concern are the clearing and thinning of trees for development or for bushfire hazard reduction. These activities should not occur on areas of mapped Casuarina vegetation without suitable environmental assessment.

7) Recommendations

7.1 Private Development Recommendations

Threatened species habitat in the Tallong area is threatened by residential development specifically subdivision of land, construction of access tracks, buildings, fences and gardens and bushfire hazard reduction. It is critical that these impacts are managed carefully in order to prevent significant impacts to threatened species habitat. In order to address this, the following recommendations are made;

- 7.1.1 Goulburn Mulwaree Council will consult the Lot Constraints Table provided in Appendix A of this report and use this advice including its lot specific recommendations in determining any application for development in the Tallong district.
- 7.1.2 Goulburn Mulwaree Council will consult the Threatened Species Constraints Map provided in Appendix B of this report and use this advice including its lot specific recommendations in determining any application for development in the Tallong district.
- 7.1.3 Any applications for the development of lands where the footprint of the development proposal or the impacts of a development proposal occurs on an area mapped in this report as being potential threatened species habitat will require a flora and fauna assessment and an assessment of significance under section 5A of the Environmental Planning and Assessment Act 1979 assessing the potential impacts of the proposal on any potential threatened species habitat.
- 7.1.4 Any applications to Council for the installation, operation or alteration of an onsite sewage/ wastewater management facility for lands in the study area of this report are to be accompanied by an onsite wastewater management report that has considered the potential impact of the proposal on habitat of the Tallong Midge Orchid. This report should be prepared by a person or persons with an understanding of both onsite wastewater disposal and management of threatened species habitat.

Impacts to the Tallong Midge Orchid should be closely considered for applications using lands within 40m of potential Tallong Midge Orchid habitat for onsite effluent disposal. Such applications should be accompanied by a flora and fauna assessment.

- 7.1.5 Unless a suitable flora and fauna assessment and an assessment of significance under section 5A of the Environmental Planning and Assessment Act 1979 has been prepared and recommends otherwise for the development, any approvals for development of lands where mapping provided by this report has indicated that the land includes areas of Potential Tallong Midge Orchid habitat are to include a consent condition that protects the area of Potential Tallong Midge Orchid from damage. An example consent condition follows and is to include an extract from the Threatened Species Constraints map provided by this report.

A restriction as to user covenant will be applied to the land under the provisions of Section 88 B of the Conveyancing Act 1919, burdening the owners of the lot and with an interest vested in Goulburn Mulwaree Council restricting the following activities on lands identified as potential Tallong Midge Orchid Habitat in the attached plan.

- 1. Grazing of domestic stock*
- 2. Removal of native vegetation*

- 7.1.6 The impacts of proposed developments that may involve areas Casuarina vegetation (Glossy Black Cockatoo Habitat) as mapped by this report should be assessed through a flora and fauna assessment and an assessment of significance under section 5A of the Environmental Planning and Assessment Act 1979.
- 7.1.7 Any applications for development of lands outside the study area for this report that are in the Tallong district will require a flora and fauna assessment and an assessment of significance under section 5A of the Environmental Planning and Assessment Act 1979 assessing the potential impacts of the proposal on any potential threatened species or threatened species habitat.

7.2 Public Infrastructure Recommendations

Known and potential Tallong Midge Orchid habitat occurs on Crown Land managed by Goulburn Mulwaree Council including crown reserve land and crown road land. It also occurs close to railway land and in several power easements. To help prevent significant impacts to these potential habitat areas the following recommendations are made;

- 7.2.1 Council will require a threatened species habitat survey and assessments of significance as part of a flora and fauna assessment included in a review of environmental factors carried out under Part V of the Environmental Planning and Assessment Act 1979 for any proposed works in the Tallong District.

Despite past surveys it is critically important for any proposed works to consider recent threatened species survey and assessment work even for minor widening, construction of lot accesses or hazard reduction or weed control works.

If such an assessment considers threatened species to be at risk of impact a species impact statement will be required under section 94 of the Threatened Species Conservation Act 1995.

- 7.2.2 Any utility or transport authority undertaking developments in the Tallong District will require a threatened species habitat survey and assessments of significance included in a flora and fauna assessment as part of a review of environmental factors carried out under Part V of the Environmental Planning and Assessment Act 1979 for any proposed works.

If this assessment considers threatened species to be at risk of impact a species impact statement will be required under section 94 of the Threatened Species Conservation Act 1995.

- 7.2.3 Before any maintenance works being undertaken by a public infrastructure provider commences, the subject area will be suitably assessed for impact to threatened species habitat. Recent threatened species habitat mapping will be used to inform this assessment; if any potential habitat occurs or is likely to be impacted upon by works further assessment will be required. This includes minor works such as widening, construction of lot accesses or hazard reduction, weed control works.

7.3 General Recommendations

- 7.3.1 This report will be provided to the following land management authorities;

1. Goulburn Mulwaree Council

General Manager
Locked Bag 22
Goulburn NSW 2580

Attention to;

- i. Director of Planning and Community Services.
- ii. Senior Town Planner.
- iii. Environmental Officer.
- iv. Works Coordinator.

2. South East Local Land Services

Locked Bag 2048
Goulburn NSW 2580

3. Essential Energy

PO Box 718
Queanbeyan NSW 2620

4. The Australian Rail Track Corporation

Regional Property Manager
GVerdon@artc.com.au

8) Appendix A, Tallong Lot Constraints Table

Deposited Plan	Lot	Section	Tenure	Area (Ha)	Tallong Midge Orchid Habitat	Glossy Black Cockatoo Habitat
DP8536	1	1	Freehold	0.20	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP8536	3	1	Freehold	0.19	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP8536	3	2	Freehold	0.16	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP8536	4	2	Freehold	0.17	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP8536	4	1	Freehold	0.19	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP8536	5	1	Freehold	0.19	Potential Tallong Midge Orchid habitat occurs on the northern quarter of lot. See map.	No significant Glossy Black Cockatoo habitat identified on this site however any proposed development must be environmentally sensitive.
DP8536	5	2	Freehold	0.16	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP8536	6	2	Freehold	0.16	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	Very good quality Glossy Black Cockatoo habitat, Glossy Black Cockatoos recorded feeding in this area in the past. See Map.
DP8536	6		Freehold	2.78	Northeast corner supports some Tallong Midge Orchid habitat. See map.	No significant Glossy Black Cockatoo habitat identified on this site however any proposed development must be environmentally sensitive.
DP8536	7	2	Freehold	0.17	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.

Tallong Lot constraints Table continued

Deposited Plan	Lot	Section	Tenure	Area (Ha)	Tallong Midge Orchid Habitat	Glossy Black Cockatoo Habitat
DP8536	8	3	Freehold	0.16	Tallong Midge Orchid habitat across northern two thirds of lot. See map.	No significant Glossy Black Cockatoo habitat identified on this site however any proposed development must be environmentally sensitive.
DP8536	8	2	Freehold	0.13	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	Eucalyptus woodland with Black She-oak understorey occurs over parts of lot. See map.
DP8536	9	2	Freehold	0.17	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	Eucalyptus woodland with Black She-oak understorey occurs over much of lot. See map.
DP8536	9	3	Freehold	0.18	Tallong Midge Orchid habitat across northern two thirds of lot. See map.	No significant Glossy Black Cockatoo habitat identified on this site however any proposed development must be environmentally sensitive.
DP8536	10	3	Freehold	0.15	Tallong Midge Orchid habitat occurs on much of the northwest third of lot. See map.	No significant Glossy Black Cockatoo habitat identified on this site however any proposed development must be environmentally sensitive.
DP8536	10	2	Freehold	0.19	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	Eucalyptus woodland with Black She-oak understorey occurs over much of lot. See map.
DP8536	11	2	Freehold	0.20	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	Eucalyptus woodland with Black She-oak understorey occurs over much of lot. See map.
DP8536	12	2	Freehold	0.18	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	Eucalyptus woodland with Black She-oak understorey occurs over much of lot. See map.
DP8536	15	2	Freehold	0.17	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	Eucalyptus woodland with Black She-oak understorey occurs over much of lot. See map.
DP8536	16	2	Freehold	0.20	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	Eucalyptus woodland with Black She-oak understorey occurs over much of lot. See map.
DP8536	16	3	Freehold	0.12	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP8536	17	3	Freehold	0.12	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.

Tallong Lot constraints Table continued

Deposited Plan	Lot	Section	Tenure	Area (Ha)	Tallong Midge Orchid Habitat	Glossy Black Cockatoo Habitat
DP8536	17	2	Freehold	0.16	Potential Tallong Midge Orchid occurs in the northwest quarter of lot. See map.	No significant Glossy Black Cockatoo habitat identified on this site however any proposed development must be environmentally sensitive.
DP8536	18	2	Freehold	0.11	Potential Tallong Midge Orchid occurs in the northeast corner and northern boundary of lot. See map.	No significant Glossy Black Cockatoo habitat identified on this site however any proposed development must be environmentally sensitive.
DP8536	18	3	Freehold	0.11	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP8536	19	3	Freehold	0.12	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP8536	20	3	Freehold	0.12	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP8536	20	2	Freehold	0.12	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP8536	21	3	Freehold	0.21	A small area of potential Tallong Midge Orchid habitat occurs in the northwest corner. See map.	No significant Glossy Black Cockatoo habitat identified on this site however any proposed development must be environmentally sensitive.
DP8536	22	3	Freehold	0.19	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP8536	23	3	Freehold	0.19	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP8536	24	3	Freehold	0.20	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.

Tallong Lot constraints Table continued

Deposited Plan	Lot	Section	Tenure	Area (Ha)	Tallong Midge Orchid Habitat	Glossy Black Cockatoo Habitat
DP8536	25	3	Freehold	0.19	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP8536	26	3	Freehold	0.21	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP8536	27	3	Freehold	0.20	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP18706	1		Freehold	0.09	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP18706	2		Freehold	0.18	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP18706	3		Freehold	0.28	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP18706	4		Freehold	0.29	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP18706	5		Freehold	0.16	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP165645	1		Freehold	0.12	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP165646	1		Freehold	0.11	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.

Tallong Lot constraints Table continued

Deposited Plan	Lot	Section	Tenure	Area (Ha)	Tallong Midge Orchid Habitat	Glossy Black Cockatoo Habitat
DP223027	1		Freehold	0.20	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP223027	2		Freehold	24.23	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP236707	28		Freehold	0.07	Tallong Midge Orchid Habitat occurs on western half of lot. See map.	No significant Glossy Black Cockatoo habitat identified on this site however any proposed development must be environmentally sensitive.
DP236707	29		Freehold	0.08	Potential Tallong Midge Orchid habitat occurs along northern boundary.	No significant Glossy Black Cockatoo habitat identified on this site however any proposed development must be environmentally sensitive.
DP236707	30		Freehold	0.10	Tallong Midge Orchid Habitat occurs to the east of lot. See Map.	No significant Glossy Black Cockatoo habitat identified on this site however any proposed development must be environmentally sensitive.
DP236707	31		Freehold	0.08	Tallong Midge Orchid Habitat across northern three quarters of lot. See Map.	No significant Glossy Black Cockatoo habitat identified on this site however any proposed development must be environmentally sensitive.
DP236707	32		Freehold	0.12	Tallong Midge Orchid Habitat across northern two thirds of lot. See Map.	No significant Glossy Black Cockatoo habitat identified on this site however any proposed development must be environmentally sensitive.
DP236707	33		Freehold	0.15	Tallong Midge Orchid Habitat across northern two thirds of lot. See Map.	No significant Glossy Black Cockatoo habitat identified on this site however any proposed development must be environmentally sensitive.
DP236707	34		Freehold	0.13	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP236707	35		Freehold	0.08	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.

Tallong Lot constraints Table continued

Deposited Plan	Lot	Section	Tenure	Area (Ha)	Tallong Midge Orchid Habitat	Glossy Black Cockatoo Habitat
DP236707	36		Freehold	0.08	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP236707	37		Freehold	0.11	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP236707	38		Freehold	0.27	Potential Tallong Midge Orchid Habitat occurs on northern quarter of lot. See Map.	Dense Black She-oak regeneration occurs.
DP246443	5		Freehold	0.04	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	Regenerating Black She-oak understorey occurs on much of lot. See map.
DP246443	6		Freehold	0.13	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	Regenerating Black She-oak understorey occurs on much of lot. See map.
DP301120	1		Freehold	0.80	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP305843	1		Freehold	0.21	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP342719	1		Freehold	0.17	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP368862	A		Freehold	0.23	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP368862	B		Freehold	0.22	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP368862	C		Freehold	0.21	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.

Tallong Lot constraints Table continued

Deposited Plan	Lot	Section	Tenure	Area (Ha)	Tallong Midge Orchid Habitat	Glossy Black Cockatoo Habitat
DP512970	1		Freehold	3.28	Tallong Midge Orchid Habitat occurs in patches. See Map.	No significant Glossy Black Cockatoo habitat identified on this site however any proposed development must be environmentally sensitive.
DP575879	2		Freehold (Council)	0.32	Tallong Midge Orchid recorded. Important habitat area over whole site.	No significant Glossy Black Cockatoo habitat identified on this site however any proposed development must be environmentally sensitive.
DP665976	143		Freehold	0.11	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP751298	134		Freehold	16.32	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP789258	51		Freehold	0.19	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP789258	52		Freehold	0.18	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP808095	101		Freehold	0.22	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP808095	102		Freehold	0.10	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP827118	1		Freehold	0.14	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP827118	2		Freehold	0.15	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP827118	3		Freehold	0.19	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	Regenerating Black She-oak understorey occurs along Caoura Road along west of lot. See map.

Tallong Lot constraints Table continued

Deposited Plan	Lot	Section	Tenure	Area (Ha)	Tallong Midge Orchid Habitat	Glossy Black Cockatoo Habitat
DP827118	4		Freehold	0.19	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	Regenerating Black She-oak understorey occurs along Caoura Road along west of lot. See map.
DP827118	5		Freehold	0.15	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	Regenerating Black She-oak understorey occurs along Caoura Road along west of lot. See map.
DP827118	6		Freehold	0.15	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP827118	7		Freehold	0.20	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP834905	720		Freehold	0.98	Tallong Midge Orchid recorded Habitat occurs on southern half See Map.	No significant Glossy Black Cockatoo habitat identified on this site however any proposed development must be environmentally sensitive.
DP834905	721		Freehold	2.38	Tallong Midge Orchid recorded Habitat occurs on southern quarter. See Map.	No significant Glossy Black Cockatoo habitat identified on this site however any proposed development must be environmentally sensitive.
DP852388	2		Freehold	2.78	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP865877	1		Freehold	0.77	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP865877	2		Freehold	1.59	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP865877	3		Freehold	2.21	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	Regenerating Black She-oak understorey occurs over much of lot. See map.
DP944873	1		Freehold	0.10	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.

Tallong Lot constraints Table continued

Deposited Plan	Lot	Section	Tenure	Area (Ha)	Tallong Midge Orchid Habitat	Glossy Black Cockatoo Habitat
DP945438	1		Freehold	0.81	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP954011	19	2	Freehold	0.12	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP958346	1		Freehold	0.35	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	Eucalyptus woodland with Black She-oak understorey occurs over much of lot. See map.
DP961407	1		Crown	0.10	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP971177	1		Freehold	0.11	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP1015834	1		Freehold	0.14	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP1015834	2		Freehold	0.94	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP1029561	7004		Crown	0.59	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP1032252	7003		Crown	0.05	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP1049582	90		Freehold	1.11	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	Regenerating Black She-oak understorey occurs along Caoura Road along west of lot. See map.
DP1049582	91		Freehold	0.70	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	Regenerating Black She-oak understorey occurs along Caoura Road along west of lot. See map.

Tallong Lot constraints Table continued

Deposited Plan	Lot	Section	Tenure	Area (Ha)	Tallong Midge Orchid Habitat	Glossy Black Cockatoo Habitat
DP1049582	92		Freehold	1.10	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP1059532	6		Freehold	0.23	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP1059532	7		Freehold	0.79	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	Glossy Black Cockatoo habitat occurs on southern half of lot.
DP1059532	8		Freehold	0.22	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP1059532	9		Freehold	0.57	Tallong Midge Orchid Habitat northern end middle of lot. See Map.	Glossy Black Cockatoo habitat occurs on southern quarter of lot.
DP1086058	1		Freehold	0.19	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	Regenerating Black She-oak understorey occurs over much of lot. See map.
DP1086058	2		Freehold	0.19	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	Regenerating Black She-oak understorey occurs over much of lot. See map.
DP1086058	3		Freehold	0.37	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	Regenerating Black She-oak understorey occurs over much of lot. See map.
DP1086058	4		Freehold	0.32	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	Regenerating Black She-oak understorey occurs over much of lot. See map.
DP1086058	5		Freehold	0.38	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	Regenerating Black She-oak understorey occurs over much of lot. See map.
DP1086058	6		Freehold	0.38	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	Regenerating Black She-oak understorey occurs over much of lot. See map.
DP1086058	7		Freehold	0.35	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	Regenerating Black She-oak understorey occurs over much of lot. See map.
DP1086058	8		Freehold	0.31	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	Regenerating Black She-oak understorey occurs over much of lot. See map.

Tallong Lot constraints Table continued

Deposited Plan	Lot	Section	Tenure	Area (Ha)	Tallong Midge Orchid Habitat	Glossy Black Cockatoo Habitat
DP1086058	9		Freehold	0.32	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	Regenerating Black She-oak understorey occurs over much of lot. See map.
DP1086058	10		Freehold	0.30	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	Regenerating Black She-oak understorey occurs over much of lot. See map.
DP1086058	11		Freehold	0.30	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	Regenerating Black She-oak understorey occurs over much of lot. See map.
DP1086058	12		Freehold	0.19	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	Regenerating Black She-oak understorey occurs over much of lot. See map.
DP1086058	13		Freehold	0.19	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	Regenerating Black She-oak understorey occurs over much of lot. See map.
DP1096456	1		Freehold	1.74	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	Regenerating Black She-oak understorey occurs over much of lot. See map.
DP1096997	1		Freehold	0.52	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP1096997	2		Freehold	4.39	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP1097027	10		Freehold	4.61	Potential Tallong Midge Orchid habitat occurs on rock platform to west of lot. See map.	Regenerating Black She-oak understorey occurs over much of lot. See map.
DP1104394	1		Freehold	1.81	An area of potential Tallong Midge Orchid habitat occurs in southeast corner of lot.	No significant Glossy Black Cockatoo habitat identified on this site however any proposed development must be environmentally sensitive.
DP1104394	2		Freehold	3.61	Tallong Midge Orchid recorded. Habitat occurs through middle and south of lot including much of the road frontage to Bumballa Road. See Map.	Some Glossy Black Cockatoo feed trees regenerating.
DP1108715	8		Freehold	1.15	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	Regenerating Black She-oak understorey occurs along Caoura Road along west of lot. See map.





Tallong Lot constraints Table continued

Deposited Plan	Lot	Section	Tenure	Area (Ha)	Tallong Midge Orchid Habitat	Glossy Black Cockatoo Habitat
DP1108715	9		Freehold	0.61	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	Regenerating Black She-oak understorey occurs northwest of lot. See map.
DP1122083	1		Freehold	1.39	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.
DP1122083	2		Freehold	1.03	No Tallong Midge Orchid habitat identified, this species is unlikely to occur on this lot.	No significant Glossy Black Cockatoo habitat identified, removal of native vegetation to be kept to a minimum.

9) Appendix B Threatened Species Constraints Map



Legend

-  Casuarina vegetation (Potential Glossy Black Cockatoo Habitat)
-  Potential Tallong Midge Orchid Habitat
-  Study Area
-  Cadastre

**Threatened Species Habitat Map
Tallong NSW**



1:5,000

