



**Flora & Fauna Study and
Ecological Assessment
for a Proposed Rezoning
Lot 1, DP 541048
@ 177 Wrights Road,
Castle Hill**

Prepared for
Mr Trevor Lam

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Prepared by
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Executive Summary

UBM Ecological Consultants Pty Ltd has been retained by Mr Trevor Lam to undertake a flora and fauna survey and to assess the ecological values of vegetation on Lot 1 in DP 541048 at 177 Wrights Road, Castle Hill. The Subject Property is currently zoned Rural 1(a), with a small area zoned as Residential 2(b). The current Proposal seeks to change the present zoning in its entirety.

The Subject Property comprises an existing single-dwelling residential development with a number of outbuildings sited within a predominantly cleared area. Small groups of native trees and some understorey vegetation are located along the western property boundary, while a strip of degraded (weedy) bushland ~30-35 metres width is located to the east adjoining good quality bushland in the Castle Hill STP. As the central part of the Lot has been cleared and grassed, the Property may have been used at one time for agricultural purposes.

Previous studies undertaken for the Locality have recorded four (4) threatened flora and three (3) threatened fauna species in nearby bushland (UBM 2009) and two (2) plant communities in the adjoining Castle Hill Sewage Treatment Plant and along nearby Cattai Creek has been identified as 'endangered plant communities' listed under the NSW *Threatened Species Conservation Act 1995*. Accordingly, The Hills Shire Council has required the Proponents to carry out ecological investigations and prepare an assessment of the potential impacts of the proposed rezoning and any future subdivision on the local flora and fauna or their habitats.

Survey Results

Flora

Vegetation mapping by the NSW Department of Environment, Climate Change and Water (Tozer *et al.* 2006) and ground truthing undertaken as part of this survey, confirms that the vegetation community in the eastern part of the Study Area is **Sydney Hinterland Transition Woodland**. This community is not currently listed as 'endangered' under the environmental legislation.

During the current survey a total of 83 flora species were recorded in the Study Area, of which only 44 were species considered to represent naturally occurring, locally indigenous flora (~53%). A large number of introduced or weed species were recorded. Eight (8) species are declared as 'noxious weeds' in The Hills Local Government Area. Further, a number of generally 'Australian' and/or non-indigenous native species, believed to have been planted, were also recorded.

Although no species listed under the NSW *TSC Act* or Commonwealth *EPBC Act* were located within the Study Area during the current (August/September 09) survey, the vegetation adjacent to the Study Area (within the STP) provides potential habitat for a number of threatened species, including *Eucalyptus* sp. Cattai, *Epacris purpurascens* var. *purpurascens*, *Persoonia hirsuta*, and *Acacia bynoeana*, all of which have been recorded nearby (DECCW 2009).

The bushland on eastern slopes adjoining the STP have been greatly disturbed by the deposition of fill soils and rubble and its subsequent colonisation by woody weeds such as Lantana and Privet. Control of noxious weeds is the responsibility of the landowner.



Fauna

The location of the Study Area adjacent to extensive areas of bushland in the Castle Hill STP and along the Cattai Creek Corridor has enhanced the conservation value of the remnant bushland for native fauna. Four (4) threatened fauna species were recorded utilising the resources of the Study Area during recent site investigations: **Grey-headed Flying-fox, Eastern False Pipistrelle, Powerful Owl and Cumberland Land Snail.**

Assessments of Significance for each of these fauna species have been carried out, but only the Assessment for the **Cumberland Land Snail** was considered to be significant should development be proposed on this site in the future; thus requiring further consideration through the preparation of a **Species Impact Statement.**

While the Proposal to rezone the Subject Property does not in itself, trigger a Species Impact Statement for the Cumberland Land Snail, the preparation of such a document will quite possibly be required for any future development of the Subject Property.



Table of Contents

1	INTRODUCTION.....	1
1.1	BACKGROUND INFORMATION.....	1
1.2	SITE DESCRIPTION.....	3
1.2.1	Physical Environment.....	5
1.2.2	Vegetation.....	6
1.3	LEGISLATIVE CONTEXT.....	8
2	FLORA ASSESSMENT.....	11
2.1	METHODOLOGY.....	11
2.1.1	Literature Review.....	11
2.1.2	Flora Field Survey.....	12
2.2	RESULTS.....	13
2.2.1	Indigenous Flora Species.....	13
2.2.2	Indigenous Plant Species.....	14
2.2.3	Non-Indigenous Flora Species.....	16
2.2.4	Vegetation Communities.....	18
2.3	CONSERVATION VALUE OF THE VEGETATION IN THE STUDY AREA.....	21
2.4	ASSESSMENT OF SIGNIFICANCE.....	22
3	FAUNA ASSESSMENT.....	23
3.1	METHODOLOGY.....	23
3.1.1	Literature Review and Field Guides.....	23
3.1.2	Fauna Field Survey.....	24
3.1.3	Limitations to field surveys.....	26
3.2	RESULTS.....	26
3.2.1	Literature Review Results.....	26
3.2.2	Fauna Species Recorded.....	26
3.3	CONSERVATION VALUE OF THE STUDY AREA TO NATIVE FAUNA.....	27
3.4	ASSESSMENTS OF SIGNIFICANCE.....	32
3.4.1	Cumberland Plain Land Snail.....	32
3.4.2	Powerful Owl.....	34
3.4.3	Powerful Owl – Seven part test.....	35



Expected Impact on the Powerful Owl	36
3.4.4 Eastern False Pipistrelle	37
3.4.5 Eastern False Pipistrelle (<i>Falsistrellus tasmaniensis</i>) – Seven-part test.....	37
7.2.2. (h) Expected impact on the Eastern False Pipistrelle.....	39
3.4.6 Grey-headed Flying-fox (<i>Pteropus poliocephalus</i>)	39
4 RECOMMENDATIONS.....	43
4.1 FLORA/ VEGETATION	43
4.2 FAUNA.....	43
5 CONCLUSION & RECOMMENDATIONS.....	45
6 BIBLIOGRAPHY	46
7 APPENDICES	49

List of Figures

Figure 1.1: Regional Positioning of Subject Property	2
Figure 1.2: Site Details	4
Figure 1.3: Native vegetation communities for the Locality (Tozer et al. 2006)	7
Figure 2.1: Condition of Vegetation.....	17
Figure 3.1: Threatened species locations	Error! Bookmark not defined.

List of Tables

Table 1.1: Summary of Legal Description	3
Table 1.2: Summary of Policies, Local Planning & Legislative Requirements.....	8
Table 2.1: Regionally Significant/ROTAP listed Flora Species Recorded for the Study Area	13
Table 2.2: Flora Species of State or National Conservation Significance occurring in the Region	15
Table 2.3: Noxious Weeds Listed for THSC & Recorded in the Study Area at Wrights Road	16
Table 3.1: Threatened species potentially present within the Study Area.....	29

List of Appendices

Appendix 1: Indigenous Flora List for 177 Wrights Road, Castle Hill.....	49
Appendix 2: Introduced Species and Weeds at 177 Wrights Road, Castle Hill.....	51
Appendix 3: List of Fauna Species previously recorded within the Study Region	53



Certification

I, Judith Rawling Managing Director of UBM Ecological Consultants Pty Ltd hereby state that the **Flora & Fauna Study and Ecological Assessment undertaken in support of a proposed subdivision at 177 Wrights Road, Castle Hill** has been prepared in consideration of the NSW *Threatened Species Conservation Act 1995* and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.

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Draft 22 April 2010



Definition of Terms

THSC: The Hills Shire Council (formerly Baulkham Hills Shire Council)

CSSTF: Cumberland Shale Sandstone Transition Forest in the Sydney Bioregion; a component of the Endangered Ecological Community Shale Sandstone Transition Forest in the Sydney Bioregion and listed under the NSW Threatened Species Conservation Act 1995.

DECCW: NSW Department of Environment, Climate Change and Water (formerly DECC)

DWE: NSW Department of Water & Energy (formerly Department of Natural Resources)

Ecological Community: described as an assemblage of species occupying a particular area.

Endangered Ecological Community: an ecological community which in the opinion of the NSW Scientific Committee is at risk of local extinction.

Habitat: an area or areas occupied, or periodically or occasionally occupied, by a species, population or ecological community, and including any biotic or abiotic components present.

HSGF: Hinterland Sandstone Gully Forest, a vegetation community not currently listed under the environmental legislation.

Direct Impacts are those that directly affect the habitat and individuals therein. Such impacts include, but are not limited to, death through predation, trampling, poisoning of the animal/plant itself and the removal of suitable habitat. When applying each factor, consideration must be given to all of the likely direct impacts of the proposed activity or development.

Indirect Impacts occur when project-related activities affect species, populations or ecological communities in a manner other than direct loss. Indirect impacts can include loss of individuals through starvation, exposure, predation by domestic and/or feral animals, loss of breeding opportunities, loss of shade/shelter, deleterious hydrological changes, increased soil salinity, erosion, inhibition of nitrogen fixation, weed invasion, fertiliser drift, or increased human activity within or directly adjacent to sensitive habitat areas. As with direct impacts, consideration must be given, when applying each factor, to all of the likely indirect impacts of the proposed activity or development.

LGA: Local Government Area

NPWS: National Parks & Wildlife Unit of DECCW

Proposal: to rezone existing Lot 1 in DP 541048 from part Rural 1(c) and part Residential 2(b) to Residential 2(b) in its entirety.

Region is defined as an area 10km in diameter, centred on the Subject Property



SCIVI: Southeast NSW Native Vegetation Classification and Mapping by NSW Department of Environment, Climate Change and Water (Tozer *et al.* 2006).

SHTF: Sydney Hinterland Transition Forest, a vegetation community not currently listed under the environmental legislation.

Study Area: being those vegetated parts of Lot 1 surveyed as part of this Report

Subject Property: being Lot 1 in DP 541048 @ 177 Wrights Road, Castle Hill, at five (5) acres in size

UBM: UBM Ecological Consultants Pty Ltd: formerly trading as Urban Bushland Management Consultants ('UBMC')



1 INTRODUCTION

1.1 BACKGROUND INFORMATION

UBM Ecological Consultants Pty Ltd (**'UBM'**) has been retained by the Proponents to undertake flora and fauna surveys and to assess the ecological values of the vegetation within the **Subject Property** Lot 1 in DP 541048 at 177 Wrights Road Castle Hill. The Property is owned by Mr Trevor Lam.

Under Baulkham Hills Local Environmental Plan 2005, the Subject Property is zoned Rural 1(a), with a small area zoned as Residential 2(b), and is currently leased for residential purposes. The current Proposal seeks to rezone the Subject Property to Residential 1(b) in its entirety, with a similar density to other residential properties on the western edge of the site.

The Subject Property comprises an existing single-dwelling residential development with a number of outbuildings sited within a predominantly cleared central area, although small groups of native trees have been retained, predominantly around the site perimeters. It is understood that the Property may have been used at one time for agricultural purposes.

A narrow (~30-35 metre) strip of degraded native vegetation (**'bushland'**) occurs on the eastern property boundary, extending downslope into an area of good quality bushland within the Castle Hill Sewage Treatment Plant (**'STP'**); this adjoining the Subject Property to the east.

For the purpose of this Report, all parts of the Subject Property outside the area developed for residential living have been surveyed, including the existing residence and gardens, the central grassed area, Lot perimeters, and the bushland on the eastern slopes (hereafter collectively, **'the Study Area'**).

This Report comprise an assessment of the conservation significance of the flora and fauna populations known to occur in the Locality in regards to current State *Threatened Species Conservation Act 1995* and Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* environmental legislation. The occurrence of flora and fauna species, and populations with regional significance within the district and Region¹ are also addressed.

The regional positioning of the Subject Property and its location in relation to bushland in the Locality is provided in Figure 1.1.

¹ Region is defined as an area within an approximate 10 kilometre radius of the Study Area.



Figure 1.1: Regional Positioning of Subject Property





1.2 SITE DESCRIPTION

The Subject Property is a large (5 acre) rectangular Lot located at the far eastern end of Wrights Road in Castle Hill. The Lot is relatively flat, but drops away steeply to the east where it adjoins bushland in the Castle Hill STP (see Figure 1.2). The vegetation on this slope has been badly degraded by woody weeds and has been subject to the dumping of fill soils and rubble; presumably scraped from the central flat area at some time in the past.

The Property comprises an existing single-dwelling residential development with a number of outbuildings sited towards the front (northern) part of the Lot, within a cleared and landscaped area. The central part of the Lot has been cleared, possibly for past agricultural purposes, with stands of native trees occurring along the western and eastern boundaries (see Plates). Although the Property retains only a small area of degraded native bushland *per se*, it is located next to an extensive area of bushland within the Castle Hills STP, which adjoins the Property to the north-east.

A permanent watercourse Cattai Creek flows through the STP, providing a vegetated wildlife corridor through a predominantly suburban landscape. The Creek is located approximately 60 metres downslope from the eastern property boundary. The Cattai Creek sub-catchment is part of the greater Hawkesbury-Nepean Catchment.

A summary of the Study Area's legal status, zoning and ownership are set out in Table 1.1, below.

Table 1.1: Summary of Legal Description

TITLE INFORMATION	Lot 1 in DP 541048
LOCATION	177 Wrights Road, Kellyville
TOTAL AREA	Estimated to be ~20,000 m ² (5 acres/2 hectares)
TOPOGRAPHIC MAP	Riverstone 1: 25 000
GRID REFERENCE	Easting 313034 Northing 6267884
OWNERSHIP	Mr Trevor Lam
LOCAL GOVERNMENT AREA	The Hills Shire
CATCHMENT	Cattai Creek Sub-catchment, which is part of the greater Hawkesbury-Nepean Catchment
ZONING	Rural 1 (c) and a small area of Residential 1(a)
CURRENT LAND USE	Residential