

Plan of Management **OXLEY HILL RESERVE**

Lot 10 DP 701530 & Lot 1 DP 583992 **Oxley Hill Road, Bowral**

Adopted 28 October 2009



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Your comment is now sought on the Lot 10 Deposited Plan (DP) 701530 & Lot 1 Deposited Plan 583992 (Oxley Hill Reserve) Oxley Hill Road Bowral, Draft Plan of Management.

The *Local Government Act 1993* requires a Plan of Management to be prepared for all Public Open Space classified Community Land.

A Plan of Management is a legal document that outlines how Community Land will be managed in the years ahead.

The procedure for the adoption of this Plan of Management, as specified in the *Local Government Act 1993*, includes;

- After Wingecarribee Shire Council considers all the submissions it receives it may decide to amend the draft plan or to adopt it without amendment as the Plan of Management for Oxley Hill Reserve.
- If Council decides to amend the draft plan it must either:
 - Publicly exhibit the amended draft plan in accordance with the provisions of the Act relating to the public exhibition of draft plans, or
 - Adopt the amended draft plan without public exhibition as the Plan of Management for Oxley Hill Reserve, if it is of the opinion that the amendments are not substantial.
- If Council adopts an amended plan without public exhibition of the amended draft plan, it must give public notice of that adoption and of the terms of the amended Plan of Management, as soon as practicable after the adoption.

Once Council has adopted the plan, no operations may be undertaken Oxley Hill Reserve except those which are in accordance with the plan. The plan may also apply to any future additions to the Reserve. Where management strategies or works are proposed for any additions that are not consistent with the plan, an amendment to the plan will be required.

A copy of this draft plan may be viewed at:

www.wsc.nsw.gov.au

Your Environment
Plans of Management
Oxley Hill Reserve

Written submissions on this draft plan of management for the site are now sought.
Submissions should be forwarded to:

Oxley Hill Reserve – Draft Plan of Management
The General Manager
Wingecarribee Shire Council
Civic Centre,
Elizabeth Street,
MOSS VALE NSW 2577

Attention Scott Hayes
Assistant Property Officer
File Number 7124/2

The closing date for comments on this draft plan is 30 September 2009.

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Acknowledgements

This Plan of Management has been prepared by Wingecarribee Shire Council's Administration Branch. In its preparation, various individuals and groups have contributed assistance, knowledge and skills.

The plan was drafted in consultation with key user groups, stakeholders and the local community and their input and submissions are an integral part of the plan.

Disclaimer

This document relies upon existing documentation and data, surveys and site inspections taken at or under the particular time/date or conditions specified herein.

Legislation, guidelines and other documentation is revised regularly and readers should check for currency and/or obtain up to date information.

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Executive Summary

Oxley Hill Reserve is comprised of two parcels, Lot 10 Deposited Plan (DP) 701530 & Lot 1 Deposited Plan 583992 Oxley Hill Road, Bowral, New South Wales.

Wingecarribee Shire Council is the owner and is responsible for the care, control and management of the Reserve.

This plan aims to ensure that the environmental values of Oxley Hill Reserve (or the Reserve) be protected and improved, while enabling Council to lease a small area of the Reserve for a communications tower and make an economic return on that lease.

Reserve Summary

Name of Land and Location	Oxley Hill Reserve Lot 10 DP 701530 & Lot 1 DP 583992 Oxley Hill Road, Bowral, New South Wales.
Property Number	Lot 10 DP 701530 is Property Number 1132600 Lot 1 DP 583992 is Property Number 1132900
Public Purpose	6(a) Existing Recreation 1(c) Rural "smallholding"
Owner	Wingecarribee Shire Council
Purpose of Plan	To balance the continued existing uses of the land with improving the Reserve facilities within budgetary constraints.
Outcomes	Management strategies developed with all stakeholders with the aim of addressing the community's issues and expectations. Protect, manage and restore the area's ecological, scientific, cultural and aesthetic values. Improvements in the Reserve while maintaining the desirable aspects of the Reserve. Lease area available for communications tower. A quarter of the revenue from the proposed lease to contribute towards the ongoing management of the land.

Permissible uses

Uses permissible in a 6(a) zone (existing recreation) for Lot 10 & 1(c) zone (rural small holding) for Lot 1 under the Wingecarribee Local Environment Plan 1989.

The Reserve is proposed to be zoned E2 Environmental Conservation under the Draft Local Environmental Plan 2009 with uses restricted to comply with this zoning.

Permissible Tenures

Leases and Licences for any purpose consistent with the purpose of the Reserve are permissible under this Plan of Management.

1.0 INTRODUCTION

Oxley Hill Reserve (Lot 10 DP 701530 & Lot 1 DP 583992) is located along Oxley Hill Road, Bowral, New South Wales.

The Reserve is situated on the left hand side on the crest of Oxley Hill Road in the direction away from the township of Bowral between Minnows Drive and Orchard Road.

The Lots are bounded to the north-east by Oxley Hill Road, with private property adjoining all other boundaries.

The Reserve is public land owned by Wingecarribee Shire Council and has been classified “Community” Land under the provisions of the *Local Government Act 1993*.

The *Local Government Act 1993* (‘the Act’) requires that Councils must classify public land as “operational” or “community” and that Plans of Management must be prepared for Community Land.

The Reserve is public land owned by Wingecarribee Shire Council and has been classified “Community” Land under the provisions of the *Local Government Act 1993*. All public land must be managed in accordance with the *Local Government Act 1993*, including the *Local Government Amendment (Community Land Management) Act 1998*.

The ways in which Community Land can be used and managed are strictly governed in accordance with the Plan of Management and any law permitting the use of the land for a specified purpose or otherwise regulating the use of the land.

1.1 Plans of Management

The Act requires that Council prepare a Plan of Management to identify the important features of the Reserve, clarify how Council will manage it and how it may be used or developed.

These plans become regulatory instruments, which bind the land owner and can give statutory authority to other types of plans, such as conservation management plans for heritage components.

Following preparation, a draft Plan of Management for Community Land needs to be placed on public exhibition for not less than twenty eight days. Public comments are taken into account before Council considers adopting the plan.

1.2 Purpose of the Plan of Management

Wingecarribee Shire Council has resolved to prepare a Plan of Management for Lot 10 DP 701530 & Lot 1 DP 583992 Oxley Hill Road to meet legislative requirements of the *Local Government Act 1993*, reinforce and conserve the Reserve’s values and gain acceptance through public consultation for the proposed works.

The Plan of Management will identify the important features of the Reserve, clarify how Council will manage it and how it may be used or developed.

The plan will result in clear and achievable management strategies that reflect the Council’s and the community’s expectations.

Specific objectives of the plan are to:

- Identify the values of the Reserve to the community.
- Address issues, including leases and licences, conflict between users, and the needs of residents.
- Identify potential opportunities for sustainable future development of the Reserve based on community priorities and budgetary considerations.
- Recommend performance measures by which the objectives of the Plan shall be achieved, and the manner in which those measures will be assessed.
- Prepare guidelines for future management and maintenance of the Reserve.

The plan evaluates the various issues and challenges associated with competing uses, management of the Reserve and its ongoing protection.

1.3 Location

Oxley Hill Reserve (Lot 10 DP 701530 & Lot 1 DP 583992) is located along Oxley Hill Road, Bowral, New South Wales. (See figure 1 & 2)

1.4 Land covered by the Plan

Town:	Bowral
Parish:	Berrima
County:	Camden
Local Government Area:	Wingecarribee Shire
Area:	9.291 Hectares
Zoning:	6(a) Open Space “Existing Recreation” 1(c) Rural “smallholding”

Property description:

LOT	SECTION	DEPOSITED PLAN	AREA	PROPERTY NUMBER	LAND NUMBER
10	-	701530	6.212ha	1132600	151820
1	-	583992	3.079ha	1132900	151850

Figure 1 Location Map



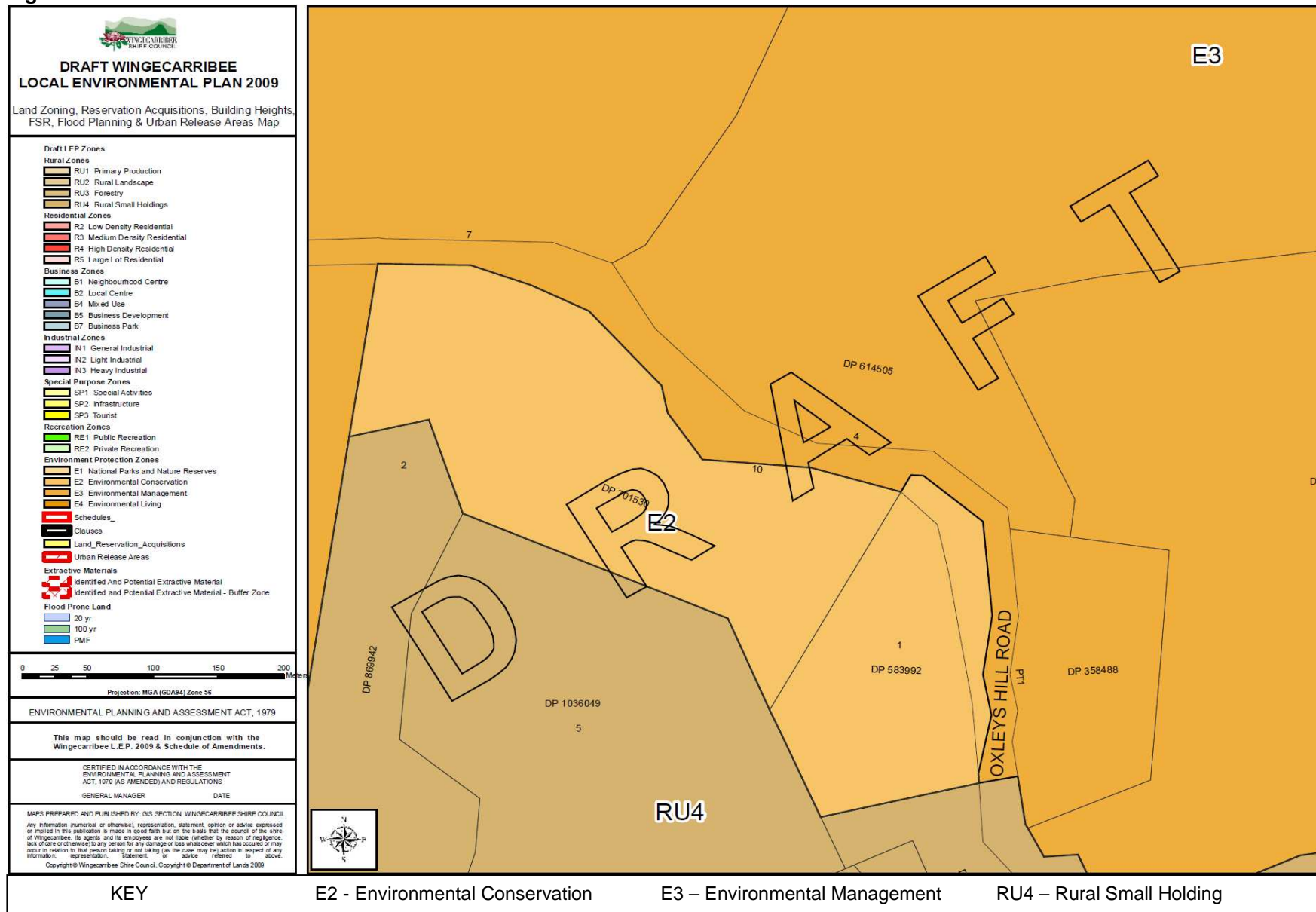
Figure 2 Reserve Location



FIGURE 3 ZONING MAP - WINGECARRIBEE LOCAL ENVIRONMENTAL PLAN 1989



Figure 4 Draft Local Environmental Plan 2009



1.5 Zoning

In the Wingecarribee Shire Council Local Environmental Plan 1989 Lot 10 DP 701530 is zoned 6(a) open space 'existing recreation' and Lot 1 DP583992 is zoned 1(c) rural 'rural smallholding'.

In the Wingecarribee Shire Council Draft Local Environmental Plan 2009 the proposed zoning is Zone E2 Environmental Conservation. A description of the proposed LEP 2009 zoning and conditions follows:

Zone E2 Environmental Conservation

1 Objectives of zone

- To protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values.
- To prevent development that could destroy, damage or otherwise have an adverse effect on those values.

2 Permitted without consent

Environmental protection works

3 Permitted with consent

Environmental facilities; Public utility undertakings; Roads

4 Prohibited

Business premises; Hotel or motel accommodation; Home based childcare; Home occupations; Industries; Multi dwelling housing; Recreation facilities (major); Residential flat buildings; Retail premises; Seniors housing; Service stations; Warehouse or distribution centres; Any other development not specified in item 2 or 3

Zone E3 Environmental Management

1 Objectives of zone

- To protect, manage and restore areas with special ecological, scientific, cultural or aesthetic values.
- To provide for a limited range of development that does not have an adverse effect on those values.
- To encourage the retention of the remaining evidence of significant historic and social values expressed in existing landscape and land use patterns.
- To minimise the proliferation of buildings and other structures in these sensitive landscape areas.
- To prevent the further clearing of remnant native vegetation and further modification of the natural landform except in a limited number of prescribed circumstances.
- To provide for a restricted range of development and land use activities that provide for rural settlement, sustainable agriculture, other types of economic and employment development, recreation and community amenity in identified drinking water catchment areas.
- To protect significant agricultural resources (soil, water and vegetation) in recognition of their value to Wingecarribee's longer term economic sustainability.
- To conserve and enhance the quality of potentially valuable environmental assets, including waterways, riparian land, wetlands and other surface and groundwater resources, remnant native vegetation and fauna movement corridors as part of all new development and land use.
- To maintain native vegetation and wildlife corridors that occupy land in the zone, ensuring that development minimises any off and on site impacts on biodiversity, water resources and natural landforms.
- To retain, protect and enhance fauna movement corridors across rural lands linking fragmented core fauna habitat areas.
- To provide for the effective management of remnant native vegetation, including native vegetation regeneration, noxious and environmental weed eradication, and bush fire hazard reduction.

- To manage land in a way that minimises impacts on its environmental and scenic value from adjacent and nearby development and land use activity.

2 Permitted without consent

Beekeeping; Dairy (pasture-based); Environmental protection works; Grazing of livestock; Home based child care; Home occupations; Production of crops or fodder; Roads

3 Permitted with consent

Airstrip; Aquaculture; Bed and breakfast establishments; Building identification sign; Business identification sign;; Cellar door premises; Community facilities; Cultivation of irrigated crops; Dual occupancies (attached); Dwelling houses; Earthworks; Environmental facilities; Farm buildings; Farm stay accommodation; Flood mitigation works; Health consulting rooms; Helipad; Home business; Home industry; Horticulture; Information and education facilities; Landscape and garden supplies; Mining; Permanent group homes; Places of public worship;; Recreation areas; Recreation facilities (outdoor); Roadside stalls; Secondary dwellings; Transitional group homes; Turf farming; Viticulture; Water storage facilities

4 Prohibited

Industries; Multi dwelling housing; Residential flat buildings; Retail premises; Seniors housing; Service stations; Warehouse or distribution centres; Any other development not specified in item 2 or 3

1.6 Classification and Categories of Land

The Act requires that Councils must classify public land as “operational” or “community” and that Plans of Management must be prepared for Community Land.

All the Land included in this plan is classified as “Community Land” under the *Local Government Act, 1993*.

Under Section 36(4) of the *Local Government Act* all Community Land must be categorised.

How are the categories decided?

A category describes the land and each category has a set of core objectives with which the uses of the Reserve must comply.

The Local Government (General) Regulation 2005 provides guidelines for each of the categories. A council that is preparing a draft plan of management must have regard to these guidelines:

The following categories have been identified in Lot 10 DP 701530 & Lot 1 DP 583992 Oxley Hill Road:

Category 1 Natural Area – Bushland

- All of the Reserve except Area ‘C’ which is listed as general community use

Category 2 General Community Use

- Area ‘C’

The area proposed for General Community Use is to enable the construction and subsequent lease of a 10 Metre square footprint for a communication tower. The area is indicated as area ‘C’ in Figure 5 Categorisation Map and Appendix 9.

Also noted are the access road indicated ‘A’ and possible electrical easement indicated ‘B’.

These categories reflect the proposed uses of the site and have been identified in accordance with Local Government (General) Regulation 2005.

Guidelines for categorisation of land as general community use

Land should be categorised as general community use under *Section 36 (4) of the Act* if the land:

- (a) may be made available for use for any purpose for which community land may be used, whether by the public at large or by specific sections of the public, and
- (b) is not required to be categorised as a natural area under *Section 36A, 36B or 36C of the Act* and does not satisfy the guidelines under clauses 102–105 for categorisation as a natural area, a sportsground, a land or an area of cultural significance.

Guidelines for categorisation of land as a natural area

Land should be categorised as a natural area under section 36 (4) of the Act if the land, whether or not in an undisturbed state, possesses a significant geological feature, geomorphological feature, landform, representative system or other natural feature or attribute that would be sufficient to further categorise the land as bushland, wetland, escarpment, watercourse or foreshore under section 36 (5) of the Act.

Note. Section 36A of the Act provides that community land that has been declared a critical habitat under the *Threatened Species Conservation Act 1995* or the *Fisheries Management Act 1994* must be categorised as a natural area.

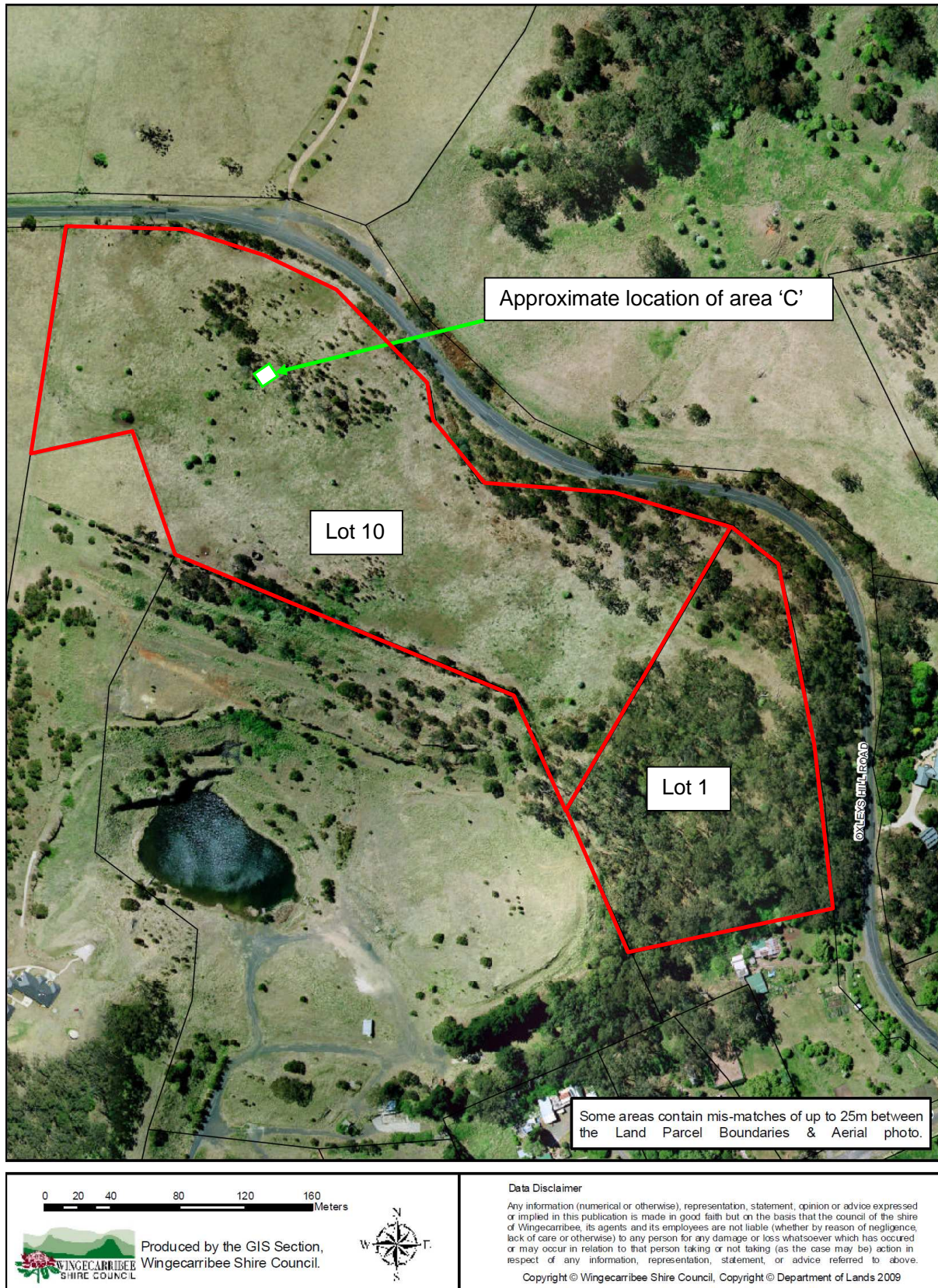
Section 36B of the Act provides that community land all or part of which is directly affected by a recovery plan or threat abatement plan under the *Threatened Species Conservation Act 1995* or the *Fisheries Management Act 1994* must be categorised as a natural area.

Section 36C of the Act provides that community land that is the site of a known natural, geological, geomorphological, scenic or other feature that is considered by the council to warrant protection or special management considerations, or that is the site of a wildlife corridor, must be categorised as a natural area.

Guidelines for categorisation of land as bushland

- (1) Land that is categorised as a natural area should be further categorised as bushland under section 36 (5) of the Act if the land contains primarily native vegetation and that vegetation:
 - (a) is the natural vegetation or a remainder of the natural vegetation of the land, or
 - (b) although not the natural vegetation of the land, is still representative of the structure or floristics, or structure and floristics, of the natural vegetation in the locality.
- (2) Such land includes:
 - (a) bushland that is mostly undisturbed with a good mix of tree ages, and natural regeneration, where the understorey is comprised of native grasses and herbs or native shrubs, and that contains a range of habitats for native fauna (such as logs, shrubs, tree hollows and leaf litter), or
 - (b) moderately disturbed bushland with some regeneration of trees and shrubs, where there may be a regrowth area with trees of even age, where native shrubs and grasses are present in the understorey even though there may be some weed invasion, or
 - (c) highly disturbed bushland where the native understorey has been removed, where there may be significant weed invasion and where dead and dying trees are present, where there is no natural regeneration of trees or shrubs, but where the land is still capable of being rehabilitated.

Figure 5 Categorisation Map



- Lots 10/701530 & 1/583992 to be categorised as Natural Area, Bushland except for
- Area 'C' to be categorised as General community use. For detailed location of area 'C' see drawing 200134-LEASE.

1.7 Public Consultation

A public hearing was held on Thursday 11 June 2009 to categorise Lot 10 DP 701530 & Lot 1 DP 583992 Oxley Hill Road. Members of the public, key user groups and adjoining land holders attended the meeting which also included an information session on the proposed communication tower and discussion of Reserve Issues.

(A summary of this information can be found in Appendix 3).

2.0 DESCRIPTION AND LAND VALUES

2.1 Topography, Geology and Soil

The Reserve is located on the upper slopes of Oxley Hill. Lot 1 contains the precipice leading towards Lot 10. Lot 10 forms part of the crown of Oxley Hill.

From the lower end of Lot 1 to the high point on Lot 10 the parcels lie between the 740 metre <-> 810 metre contours.

The Reserve contains two soil landscapes and geology groups (Sydney Catchment Authority, 2004):

Soil Landscape: ERav Avoca

“Undulating rises to rolling low hills on Tertiary Basalt, Basanites and Dolerite outliers with minor occurrence on Wianamatta group shales. Surface conditions vary with land use. In native woodlands surface condition is soft to self mulching. Cleared areas where stock and pasture varieties have been introduced result in firm to hard-setting surface conditions due to compaction.”

Dominant lithology: Basalt

Soil Landscape: COpn Picton

“Steep to very steep sideslopes on Triassic sediments on the Moss Vale Tablelands. Sideslopes are characterised by mass movement and terracettes on Wianamatta Group and derived colluvial materials, usually having a southerly aspect.”

Dominant lithology: Shale

(See appendix 5)

2.2 Vegetation

The area now used as Lot 10 DP 701530 & Lot 1 DP 583992 Oxley Hill Road was originally classified as having Robertson Basalt Tall Open Forest & Southern Highlands Shale Woodland (Wingecarribee Shire Council Mapping System 2008).

The Reserve still contains some remnant vegetation of these two Endangered Ecological Communities with some good biodiversity values. An assessment of the remnant vegetation was recently completed with a view to determining a rehabilitation plan for the site and has been included below.

With Lot 10 the original forest vegetation has been extensively cleared for various agricultural practices including grazing. Lot 1 in comparison is in a relatively unmodified state. A vegetation map showing both Endangered Ecological Communities is given in Appendix 7 and a site assessment following in 2.5.1.

Both vegetation types found on site are listed as Endangered Ecological Communities under the *NSW Threatened Species Conservation Act 1995*. With limited continuously connected remnant vegetation in the immediate area, this land should be considered as a 'stepping stone' in the landscape. This allows the movement of fauna through the landscape by moving from one remnant to the next. This remnant vegetation forms part of the local corridor identified in the Wingecarribee Biodiversity Strategy as a priority for conservation.

2.2.1 Remnant vegetation assessment for Oxley Hill Reserve

File No:

VEGETATION CONSERVATION PROGRAM SITE ASSESSMENT AND DESCRIPTION

Property Name: Oxley Hill Reserve **Lot 1 DP 583992**
Lot 10 DP 701530

Vegetation Type: Robertson Basalt Tall Open Forest & Southern Highlands Shale Woodland

Area of vegetation for conservation: approx. 9 Ha

Physical characteristics underlying the vegetation type being described

Geology Basalt and Shale

Soil Landscape / Soil Type/ Land system _____

SITE 1

Native Vegetation

Structure of vegetation

Closed Forest	<u>Open Forest</u>	Woodland	<u>Open Woodland</u>	Isolated Trees
Heath Land	Shrub Land	Open Shrub Land	Grassland	Wetland
Riparian	Other			

Composition of Vegetation – (Name dominant species in each layer)

Canopy

Eucalyptus elata, Eucalyptus cypellocarpa, Eucalyptus fastigata, Acacia melanoxylon

Climbers

Tylophora barbata, Clematis aristata, Eustrephus latifolius, Smilax glyciphylla

Shrub Layer

Acacia decurrens, Acacia mearnsii, Pteridium esculentum, Pellaea falcate, Pomaderis aspera, Senecio quadridentatus

Ground cover

Poa labillardiera, Doodia aspera, Geranium neglectum, Veronica plebia, Stellaria flaccida, Wahlenbergia gracilis, Glycine clandestine, Rubus parvifolia, Dichondra repens,

Condition of native vegetation – e.g. very good, good, moderate, poor. (Include indicators of disturbance).

Moderate – previous clearing and grazing evident. Moderate weed infestation of area.

Macrohabitat

Habitat features present (show abundance: 0 – absent, 1-sparse, 2-common, 3-abundant):

2 Hollows in trees 2 Fallen logs 2 mature or overmature trees 1 Leaf litter
 1 mistletoe 2 native grasses, rushes & sedges
 1 Flowering trees & shrubs 2 Seasonal cracks in the soil 1 Wet or damp areas
 0 watercourses 2 rocks & boulders 0 caves & overhangs 0 riparian

Threatened species – List species and indicate E – evidence / sighting or P- potential habitat.

Degrading influences – e.g. weeds, grazing, fire, timber cutting, salinity, and soil erosion.

Weeds and previous grazing

Weeds – (List species and indicate 1-sparse, 2-common, 3-abundant)

Ivy 2, Paterson's curse 1, Pasture grasses 3, Euonymos 2, Hawthorne 2, Spear thistle 2, Forget-me-nots 1, Galium 1, Ink weed 1, Dolichos pea 1, Thistle – variegated 1, Blackberry 1, Holly 1, Large leaf privet 2, fireweed 1, Pyracantha 1, Clover 2, Blackberry night shade 1, honeysuckle 1, Canadian fleabane 1, Iris 1, Ehrharta 2.

Any other relevant issues (e.g. corridor significance, EEC)

Both vegetation types found on site are listed as Endangered Ecological Communities under the *NSW Threatened Species Conservation Act 1995*. With limited continuously connected remnant vegetation in the immediate area, this land should be considered as a 'stepping stone' in the landscape. This allows the movement of fauna through the landscape by moving from one remnant to the next. This remnant vegetation forms part of the local corridor identified in the Wingecarribee Biodiversity Strategy as a priority for conservation.

General Comments

Swamp wallabies and eastern grey kangaroos sighted during site visit.
 Numerous active wombat holes present on site.

2.2.2 What is an Ecological Community?

An ecological community is a group of species that occur together in a particular area of the landscape. Whilst most ecological communities are recognised by the plant species that occur within them, the community includes *all* the organisms that occur in that particular area.

The survival of each species relies on complex interactions amongst all of the inhabitants of an ecological community, through biotic mechanisms such as food webs, mutualisms and pollination, as well as abiotic mechanisms such as water, nitrogen and carbon cycles. Consequently, the loss of any species may have detrimental flow-on effects for the ecological functioning of the whole community.

2.2.3 What is a Threatened Ecological Community?

In NSW, ecological communities can be listed as Threatened Ecological Communities under the *Threatened Species Conservation Act, 1995*, in the categories of, Critically Endangered, Endangered or Vulnerable, depending on their risk of extinction. Ecological communities can also be listed as nationally threatened under the Commonwealths *Environment Protection and Biodiversity Conservation Act, 1999*.

2.2.4 How do Ecological Communities become threatened?

An ecological community may become threatened if it:

1. Undergoes a very large to moderate reduction in its geographic distribution;
2. Is geographically restricted and under pressure from a threatening process; or
3. Undergoes a very large to moderate reduction in ecological functioning.

2.2.5 Threatened Species

(See Appendix 7)

Southern Highlands Shale Woodlands in the Sydney Basin Bioregion – profile

Information from the NSW Government Department of Environment and Climate Change (DECC) website: [DEC | NSW threatened species - Home](#)

Conservation status in NSW: [Endangered Ecological Community](#)

Description

Southern Highlands Shale Woodland is a variable community in terms of both structure and composition. The community may exist as tall open forest, grassy woodland or scrub; though it originally existed as woodland. The dominant canopy species vary across the distribution of the community. Common species throughout much of the community's range are Mountain Grey Gum *Eucalyptus cypellocarpa*, Sydney Peppermint *E. piperita*, Swamp Gum *E. ovata*, Narrow-leafed Peppermint *E. radiata* and White Stringybark *E. globoidea*. Brittle Gum *E. mannifera*, Snow Gum *E. pauciflora*, Cabbage Gum *E. amplifolia* and Rough-barked Apple *Angophora floribunda* are less common. Camden Woollybutt *E. macarthurii* occurs throughout, but appears to be most common in the south-west of the distribution of the community, around Bundanoon. The shrub layer is usually open, though there may be denser patches of shrubs in some areas. As with the canopy layer, the shrub layer of this community varies (eg. typical species in the north-eastern parts of the distribution of the community include *Oxylobium ilicifolium*, *Melaleuca thymifolia* and *Olearia microphylla*, while in south-western areas these species are rare or absent and *Daviesia ulicifolia* may be locally common). The groundlayer is usually diverse and dominated by native grasses such as *Themeda australis*, *Austrostipa rudis*, *Microlaena stipoides* and *Austrodanthonia* species. Common herb species include *Gonocarpus tetragynus*, *Veronica plebeia*, *Hypericum gramineum*, *Poranthera microphylla* and *Viola hederacea*.

Location and habitat

Distribution

Southern Highlands Shale Woodland is confined to a small area in the Southern Highlands. It occurs roughly within an area bounded by the Illawarra Escarpment in the east, Burrawang and Bundanoon in the south, Canyonleigh in the west and Berrima and Colo Vale in the north. Occurs in the Wingecarribee local government area, but may occur elsewhere in the Sydney Basin Bioregion.

Habitat and ecology

- Restricted to clay soils derived from Wianamatta Shale.
- Occurs at elevations of between 600 to 800 m.
- Generally found on gently rolling hills, though sometimes on steeper slopes in some areas.
- Found in areas where rainfall ranges from 1400 mm in the east to 900 mm in the west.
- Occurs mostly in scattered patches of less than 5 hectares in area, remnants are extensively fragmented; about 2000 hectares, or less than 5% of the original extent now remains.

- Disturbed remnants are considered to form part of the community, including where the vegetation would respond to assisted natural regeneration.
- Fauna species that may occur in remnants include Giant Burrowing Frog, (*Heleioporus australiacus*), Rosenberg's Goanna (*Varanus rosenbergi*), Glossy Black Cockatoo (*Calyptrorhynchus lathamii*), Powerful Owl (*Ninox strenua*), Regent Honeyeater (*Xanthomyza phrygia*) and Yellow-bellied Glider (*Petaurus australis*).

Regional information

This species is found in the following catchment management authority regions. Click on a region name to see more details about the distribution, vegetation types and habitat preference of the species in that region.

- [Hawkesbury/Nepean](#)
- [Southern Rivers](#)

Threats

- Continued clearing, degradation and fragmentation of remnants for agricultural activities (including pine plantations), and infrastructure and residential development.
- Degradation of condition, with aging trees, lack of regeneration and weed invasion.
- Continuous heavy grazing and trampling of remnants by grazing stock, resulting in ringbarking and losses of plant species (simplification of the understorey and groundlayer and suppression of overstorey), erosion and other soil changes (including increased nutrient status).
- Harvesting of firewood (either living or standing dead, including material on the ground).
- Invasion of remnants by non-native plant species, including noxious weeds, pasture species and environmental weeds.
- Disturbance and clearance of remnants during road maintenance and upgrades.

Recovery strategies

Priority actions are the specific, practical things that must be done to recover a threatened species, population or ecological community. The Department of Environment and Conservation has identified [6 priority actions](#) to help recover the Southern Highlands Shale Woodlands in the Sydney Basin Bioregion in New South Wales.

What needs to be done to recover this species?

- Do not harvest firewood from remnants (this includes living or standing dead trees and fallen material).
- Erect on-site markers to alert maintenance staff to the presence of a high quality remnant.
- Encourage regeneration by fencing remnants, controlling stock grazing and undertaking supplementary planting, if necessary.
- Undertake weed control (taking care to remove only target species).
- Protect all sites from further clearing and disturbance.
- Mark remnants onto maps (of the farm, shire, region, etc) and use to plan activities (e.g. remnant protection, rehabilitation or road, rail and infrastructure maintenance work).

References

- Benson, D. & Howell, J. (1994) Hawkesbury-Nepean Catchment Vegetation Mapping - Moss Vale - Kiama draft 1:100 000 vegetation map sheets. (Royal Botanic Gardens Sydney).
- Eco Logical Australia Pty Ltd (2003). Wingecarribee Biodiversity Study: Vegetation Mapping, Threatened Species, Corridors and Conservation Assessment. Unpublished report prepared for Wingecarribee Shire Council.
- Eddy, D. (2002). Managing Native Grassland: a guide to management for conservation, production and landscape protection. World Wide Fund for Nature Australia. Sydney, NSW.
- Eddy, D., Mallinson, D., Rehwinkel, R & Sharp, S. (1998). Grassland Flora: a field guide for the Southern Tablelands (NSW & ACT). Environment ACT, NSW National Parks and Wildlife Service, World Wide Fund for Nature Australia, Australian National Botanic Gardens, Natural Heritage Trust. Canberra, ACT.

- Fisher, M., Ryan, K. & Lembit, R. (1995) The natural vegetation of the Burragarang 1:100 000 map sheet. *Cunninghamia* 4(2): 143-215.
- NSW Scientific Committee (2001) Southern Highlands shale woodlands in the Sydney Basin Bioregion - Endangered ecological community determination - final. DEC (NSW), Sydney.

Robertson Basalt Tall Open-forest in the Sydney Basin Bioregion - profile

Information from the NSW Government Department of Environment and Climate Change (DECC) website: [DEC | NSW threatened species - Home](#)

Conservation status in NSW: [Endangered Ecological Community](#)

Description

Robertson Basalt Tall Open Forest is an open forest or woodland reaching to 30 m tall with a sparse to moderately dense shrub layer and a dense herbaceous ground layer. Dominant tree species include Brown Barrel *Eucalyptus fastigata*, Manna Gum *E. viminalis*, Narrow-leafed Peppermint *E. radiata* and Mountain Grey Gum *E. cypellocarpa*. Blackwood *Acacia melanoxylon* is a common small tree species in this community. Common shrubs include *Coprosma quadrifida* and *Senecio linearifolius*. The composition of the community varies across its distribution, largely reflecting a rainfall gradient from east (near the Illawarra Escarpment) to west (near Bundanoon).

Location and habitat

Distribution

Robertson Basalt Tall Open Forest is restricted chiefly to occurrences of Robertson Basalt on the Southern Highlands of NSW but also found on the Cambewarra Range to the south. It is found in the Wingecarribee and Shoalhaven local government areas, but may occur elsewhere in the Sydney Basin Bioregion.

Habitat and ecology

- Found on highly fertile soils derived from basalt.
- Found mostly on rolling hills on gentle to steep slopes.
- Occurs in areas with rainfall between 1000 mm to 1600 mm.
- Disturbed remnants are considered to form part of the community if the vegetation is likely to respond to assisted natural regeneration.
- About 400 hectares, or less than 15% of this community's original occurrence has been estimated to remain.
- Most remnants are small and isolated pockets on private land.

Regional information

This species is found in the following catchment management authority regions. Click on a region name to see more details about the distribution, vegetation types and habitat preference of the species in that region.

- [Hawkesbury/Nepean](#)
- [Southern Rivers](#)

Threats

- Continued clearing, degradation and fragmentation of remnants for agricultural activities and the development of small holdings.
- Logging of remnants.
- Inappropriate burning of remnants.

- Invasion of remnants by non-native plant species, including noxious weeds, pasture species and environmental weeds.
- Grazing and trampling of remnants by grazing stock, resulting in losses of plant species (simplification of the understorey and groundlayer and suppression of overstorey), erosion and other soil changes (including increased nutrient status).
- Harvesting of firewood (either living or standing dead, including material on the ground).

Recovery strategies

Priority actions are the specific, practical things that must be done to recover a threatened species, population or ecological community. The Department of Environment and Conservation has identified **6 priority actions** to help recover the Robertson Basalt Tall Open-forest in the Sydney Basin Bioregion in New South Wales.

What needs to be done to recover this species?

- Do not burn remnants.
- Do not harvest firewood from remnants (this includes living or standing dead trees and fallen material).
- Fence remnants and exclude stock grazing.
- Fence around sites and revegetate to increase the size of remnants.
- Undertake weed control (taking care to remove only target species).
- Protect all sites from further clearing and disturbance.
- Ensure remnants remain connected or linked to each other; in cases where remnants have lost connective links, re-establish them by revegetating sites to act as stepping stones for fauna, and flora (pollen and seed dispersal).
- Mark remnants onto maps (of the property, shire, region, etc) and use to plan activities (e.g. remnant protection, rehabilitation or road, development proposals).

References

- Fisher, M., Ryan, K. & Lembit, R. (1995) The natural vegetation of the Burratorang 1:100 000 map sheet. *Cunninghamia* 4(2): 143-215.
- Kodala, P.G. (1990) Modern pollen rain from forest communities. *Australian Journal of Botany* 38:1-24.
- NSW Scientific Committee (2001) Robertson basalt tall open-forest in the Sydney Basin Bioregion - Endangered ecological community determination - final. DEC (NSW), Sydney.

Threats

Key threatening processes are the things that threaten - or could threaten - the survival or evolutionary development of species, populations or ecological communities. They are listed in the [Threatened Species Conservation Act](#), and include:

- Pest animals. Introduced animal species can compete with, and prey upon, native animals. They can also damage native plants and degrade natural habitats.
- Weeds. Weeds compete with native plants for resources such as light and nutrients. They can aggressively invade areas, displacing native plants and animals.
- Diseases. Exotic fungal infections, viruses and other pathogens can weaken and kill native species.
- Habitat loss/change. From large-scale land clearing to the gathering of bushrock for suburban gardens, humans have degraded many native environments across the state.

For more details on the key threatening processes please refer to the DEEC website: [DEC | NSW threatened species - threats](#)

2.2.6 Regeneration and Revegetation Plan for Oxley Hill Reserve

The following is Council's proposed regeneration and revegetation plan for Oxley Hill Reserve, as discussed at Council's Environment & Sustainability Committee.

Project Location: DP 701530 lot 10 and DP583992 lot 1

Project Description:

- A. Oxley Hill Reserve is approximately 9 Ha in size and is comprised of 2ha of Robertson Basalt Tall Open Forest and 2ha of Southern Highlands Shale Woodland. Both of these vegetation communities are state listed Endangered Ecological Communities. Given the degraded nature of the site this project will fund a contract bush regeneration team to undertake weed control and revegetation works. This is a five year project proposal, to ensure on-going and long term maintenance of the site.
- B. Contractors will be engaged to undertake removal of environmental and noxious weeds including: Hawthorn, Blackberry, Firethorn, Privet, Holly, Ivy, Patersons curse, Fireweed, Blackberry nightshade, Inkweed and pasture grasses from the project area. Bush regeneration methods will follow best practice management as set out in The National Trust – "Bush Regenerators Handbook". Primary weed control will be undertaken during the first 6 months of the project followed by Secondary Weed Control and maintenance weeding for the next 4 ½ years.
- C. Re-vegetation of the North western portion of the land will take place from year 3-5 and will link with the existing vegetation to form a habitat corridor.
Provenance seed will be sourced for the project. The Revegetation site will be maintained for 18 months following revegetation.

Project Timetable

YEAR 1

Comprehensive primary and secondary weed removal in 2009

Primary bush regeneration

10 days

Secondary bush regeneration

5 days

YEAR 2

Maintenance bush regeneration

7 days

Preparation for Revegetation

Spraying and ripping

YEAR 3 - 5

Maintenance bush regeneration

Revegetation - 2000 tubestock including bags & stakes

Maintenance of revegetation

All green waste is to remain on site.

This project will ensure that the Endangered Ecological Communities; Robertson Basalt Tall Open Forest and Southern Highlands Shale Woodland found within the Oxley Hill Reserve are protected and managed. This project will protect and enhance the remnant vegetation by undertaking essential bush regeneration works as well as increasing the remnant by revegetating cleared areas of the land with provenance plants.

2.3 Native Animals

The following is an unconfirmed list of animal sightings on the reserve by adjoining land owners.

Mammals & Marsupials:

Grey kangaroo, Brown wallaby, wombat, echidna, koalas (during drought)

Birds:

Corella, rosella, sacred kingfisher, eastern rosella, koel, pallid cuckoo, black cockatoo, galahs, bronze wing cuckoo, cuckoo shrike, various wrens, wedge-tail eagle, peregrine falcon, kookaburra, various hawks, frog-mouthed owl, sulphur-crested cockatoo, diamond firetail & brown tree creeper.

Reptiles:

Snakes: brown, copperhead, red 7 yellow bellied, tiger, deathadder.

Frogs: various species of ground and tree frogs

2.4 Heritage and Culture

2.4.1 Aboriginal Heritage

Aboriginal Heritage Information Management System (AHIMS) Searches

AHIMS contains details of Aboriginal objects, places and other heritage values across NSW.

AHIMS includes:

- a database and recording cards for all Aboriginal objects, Aboriginal places and other Aboriginal heritage values in NSW that have been reported to the NPWS
- a database index of archaeological reports and a library of these reports.

A search of the NSW Department of Environment and Climate Change (DECC) Aboriginal Heritage Information Management System for Lot 10 DP 701530 & Lot 1 DP 583992 has shown that 0 Aboriginal objects and Aboriginal places are recorded in or near the above location.

It is essential to note that a report from AHIMS does not represent a comprehensive list of all Aboriginal objects or Aboriginal places in a specified area. A report lists recorded sites only. In any given area there may be a number of undiscovered and/or unrecorded Aboriginal objects. It is important to know that all Aboriginal objects and Aboriginal places are protected under NSW legislation.

2.4.2 Post Settlement Heritage

Due to its links with John Oxley, Oxley Hill is of heritage significance.

Heritage Consultant Terry Brooks has advised "This land is very important from a heritage conservation point of view for the following reasons:

The cultural rural landscape of Bowral was very much shaped by the early rural settlers in the area and "Wingecarribee" the property settled by John Oxley, located to the North West of the Township of Bowral is one of the most significant properties existing in the area today.

The visual heritage significant curtilage of “Wingecarribee” comprises the land holding adjacent to the house, the foreground to the property and the rural backdrop, the foreground curtilage has been seriously compromised by light industrial development along Kirkham Road, while the background curtilage has been conserved over the decades as a green belt along the ridge of Oxley Hill.

“Wingecarribee” can be viewed from numerous vantage points within the township of Bowral with Oxley Hill being a very important element in the visual landscape that allows one to read this important heritage property in a rural context”

2.4.2 Cultural Landscape

In a previous Historic & Cultural Landscape Assessment and the 1989 LEP it was recommended that the area encompassing Oxley Hill Reserve be classed “ as a landscape conservation zone to protect the setting of “Wingecarribee “ and the urban–rural edge of Bowral. Culturally and visually the rural landscape pattern of paddocks and trees...is regarded as significant to the character and morphology of Bowral and should be protected.”

2.5 Access and circulation

There is only one formed entrance to the Reserve. All pedestrian and vehicular access is via this entrance on Oxley Hill Road.

There is currently an unformed track over lot 10 providing for 4WD access only.

The design and construction of the proposed upgraded access road to the tower is to follow the existing track as closely as possible. Vehicular access is only permitted on this proposed access road.

Due to the nature and location of the access on Oxley Hill Road it is suggested any works involve a risk assessment regarding safe access into the Reserve.

2.6 Current Management

Wingecarribee Shire Council is responsible for management of the Reserve. The Parks and Property Branch are the asset managers and as such responsible for such items as general maintenance.

A Regeneration and Revegetation Plan for Oxley Hill Reserve has been completed see page 23.

From the Environment & Sustainability Committee Minutes of 8 April 2009 it is recommended the land be designated a Bushland Reserve.

On Wednesday 13 may 2009, Council resolved;

7. THAT the Development Application be assessed in consultation with Council’s Natural Resource Manager to ensure that the tower, access to the tower or any future development will not impact upon the endangered ecological community of vegetation on the Reserve.
9. THAT upon lease of the land and any further leases of the subject land, 25% of all rentals from the site be set aside annually to contribute towards the restoration and maintenance of this endangered community of vegetation and bushland Reserve.

2.7 Current uses and condition

As there are no improvements to the Reserve the current condition is covered in the vegetation assessment on page 17 and in other sections.

Other Items

Item	No.	Condition
Access Road	1	Poor

3.0 COUNCIL'S OVERALL PLANNING FRAMEWORK

3.1 Aim of this Plan of Management

The aim of this Plan of Management is to develop a Plan of Management for Lot 10 DP 701530 & Lot 1 DP 583992 Oxley Hill Road which complies with the *Local Government Act 1993* and which is consistent with Council's corporate goals and policies. These goals and policies are set out in various Council planning documents and assist in providing a consistent approach to the management of Oxley Hill Reserve.

3.2 Relevant Council Planning Documents

3.2.1 Wingecarribee Shire Council Local Environment Plan 1989

A Local Environmental Plan is an important instrument prepared by the Council which determines where future development and structures can and cannot be built, where future population growth and economic development such as new industrial areas and commercial development will be located and it also protects important heritage buildings and landscapes features locations across the Shire.

A Local Environmental Plan is a legally binding plan created under the provisions of the New South Wales *Environmental Planning and Assessment Act, 1979*. It is used by Council to control development. It does this by zoning land for a particular use and establishing standards and controls to regulate the permissibility and extent of new development.

The current Local Environmental Plan for the Wingecarribee Shire will be superseded by the proposed adoption of the Draft Local Environment Plan 2009.

3.2.2 Wingecarribee Shire Council Draft Local Environment Plan 2009

Aims of Plan

(1) This Plan aims to make local environmental planning provisions for land in Wingecarribee in accordance with the relevant standard environmental planning instrument under section 33A of the Act.

(2) The particular aims of this Plan are as follows:

- (a) to conserve and enhance, for current and future generations, the ecological integrity, environmental heritage and environmental significance of special areas such as the Berrima village and surrounding locality and Wingecarribee Shire as a whole,
- (b) to maintain Wingecarribee's original settlement pattern of towns and villages dispersed throughout a rural and native vegetation landscape,
- (c) to encourage the efficient use and development of urban land, minimising the spread of urban areas into rural and native vegetation environments, thereby increasing the accessibility of the population to urban facilities and services,
- (d) to provide opportunities for development and land use activities that:
 - (i) make an effective contribution towards the economic well being of the community in a socially and environmentally responsible manner, and
 - (ii) do not adversely impact on natural systems and processes and the overall quality of Wingecarribee's natural environment, and
 - (iii) result in high quality private and civic architectural and engineering spaces and solutions, and
 - (iv) retain the critical natural, rural and built environmental landscape elements that make up the scenic and cultural heritage value of Wingecarribee,
- (e) to provide opportunities for a range of new housing and housing choice in locations that have good access to public transport, community facilities and services, retail and commercial services, employment opportunities, including opportunities for the provision of adaptable and affordable housing,
- (f) to provide for a range of living opportunities that address differing lifestyle needs without compromising the environmental quality of Wingecarribee, and the value of its natural resources such as water, biodiversity and agricultural land,
- (g) to strengthen the viability of Wingecarribee's zoned local centres as central places for investment, employment and cultural activity, and encourage a majority of future housing opportunities to be located in relatively close proximity to these centres,
- (h) to promote the economic well being of the community in a socially and environmentally responsible way, focusing new employment growth at identified employment hubs like business centres and enterprise zones that can be better accessed by public and private transport,
- (i) to protect suitable primary production potential of rural land, and prevent the fragmentation of agricultural holdings,
- (j) to conserve the Aboriginal and European cultural and environmental heritage of Wingecarribee,
- (k) to protect areas of high scenic landscape value,
- (l) to develop an ecologically sustainable future for Wingecarribee through the conservation, rehabilitation and regeneration of native vegetation (particularly threatened species, populations and ecological communities), soil, waterways, riparian land and water quality (surface and groundwater),
- (m) to prevent loss of life and property by bush fires, by discouraging the establishment of incompatible uses in bush fire prone areas and incorporating as part of compatible developments protective measures that minimise bush fire risk without unacceptable environmental degradation,
- (n) to provide for a range of sustainable development opportunities that respond to recreation and lifestyle choices, emerging markets and changes in technology, and capitalise on Wingecarribee's regional distinctiveness and existing tourism asset base,
- (o) to ensure that extractive resources and mineral deposits are not rendered sterile by future development, but at the same time ensure that subsequent extraction, mining and transportation activities are undertaken in a way that maintains residential amenity,
- (p) to protect and enhance waterways, riparian land and water quality in the drinking water catchments of Wingecarribee so as to enable the achievement of the water quality objectives within the meaning of the *Drinking Water Catchments Regional Environmental Plan No 1*.

3.2.3 Wingecarribee Our Future- Strategic Plan, 2002

The Strategic Plan's mission statement is to:

"Make the Shire a better place in which to live and, in doing so, ensure that the unique character of the Shire is retained."

Its Key Strategic Directions and Outcomes for Future Planning include:

- Retain the Shire's environmental and cultural place character and settlement pattern
- Protect the Shire's key ecological resources
- Provide for a range of opportunities for employment development and wealth generation that match with 'environmental, cultural and place fit'.
- Support and encourage a culturally rich environment across the Shire
- Plan in anticipation of a diverse community (including an increasing aged person's component) structure and strengthening demands forwidened access to.... support facilities and services.

3.2.4 Wingecarribee Shire Council Corporate Plan 2008

The aims of that Corporate Plan which are of particular relevance to this plan are:

'Wingecarribee will:

- Maintain the richness and diversity of its existing natural, historical and built environment to improve the lifestyle it affords residents and visitors
- Rationalise and upgrade existing community facilities, ensuring the continuing availability of a basic infrastructure to meet community needs
- Encourage ecologically sustainable development
- Promote and encourage cultural activity.

This plan forms the basis for long term planning within the Wingecarribee Shire.

3.2.5 Wingecarribee Shire Council Management Plan 2009 - 2012

The Management Plan provides a summary of the strategic thinking of Council, outlines a medium term (3 year) plan as well as operational detail for the next financial year. The Plan provides information to the community about Council's future activities

The Management Plan is a tool used to develop structured approaches for managing our Council in the four main program areas of;

- Governance and Management
- Business Enterprise and Economic Development
- Lifestyle and Community
- Environmental Sustainability

Council is now looking at the quadruple bottom line, which means the decisions Council makes, take into account not only the financial implications, but also the long term social, environmental and governance impacts on the sustainability of the shire.

OUR MISSION

To augment the economic, environmental and social quality of life in the Wingecarribee Shire by serving the community well.

OUR VISION

- Enhance transparency and accountability in all decision making processes and outcomes
- Gain the trust and confidence of our community by keeping our communities informed and respect their input
- Enhance the services and civic and natural assets of the Shire for this and future generations
- Promote a live locally, work locally sustainability focus
- Support and encourage the Shire's tourism industry and character

OUR VALUES

- Trust and integrity
- Respect and responsibility
- Communication
- Service quality

The following priority areas are to be addressed within and by the organisation over the next few years:

Governance

- Attracting and retaining a motivated workforce to achieve our plans
- Improving procedures and processes for improved efficiency and effectiveness
- Adopting communication methods between our staff and Councillors that promote clarity and trust
- Improving transparency and accountability of Council's finances

Economic

- Facilitating the growth of new business within the Shire that provides local jobs across a wide range of skills and professions
- Supporting the Moss Vale Enterprise Zone and the tourism industry to develop sustainable environmentally responsible business development.

Environmental

- Reaffirming our commitment to preserving and improving our natural environment
- Retaining rural, village and town character with appropriate planning controls

Social

- Adjusting service provision to community priorities with particular emphasis on the projected aging of our community
- Increasing support services to members of our community

Its *Social Focus* includes:

- Develop plans to ensure local reserves, gardens, playing fields and open space areas continue to be enhanced to accommodate future needs.

Specific Objectives include:

- A connected community where residents participate in community life and have a sense of belonging and a strong interest in local issues.
- A community that has opportunities to pursue leisure time activities suitable to their age, interests and physical abilities.
- To promote the historical attributes of the Shire, (including) European heritage and ensure future generations are provided with an opportunity to understand and appreciate the historical development of the Shire.

Its *Economic Focus* includes:

- Develop tourism marketing opportunities with the local tourism operators and government agencies.
Specifically:
- Promote the Southern Highlands as a “must see, must do tourist destination within Australia.”
- Continue to attract more visitors to the shire.

Its *Environmental Focus* includes:

- Apply policies that ensure protection of biodiversity and enhancement of the Shire’s aesthetic qualities.

Its *Governance Focus* includes:

- Invite consultation and participation in Council’s decision making processes.
- Improve the strategic operational planning systems that set priorities, allocate resources and manage resources.

Specific Objectives include:

- Ensure Council’s assets are managed effectively and efficiently, with pre-determined levels of service and well-defined maintenance, replacement and upgrade programs in place.

3.2.6 Wingecarribee Social Plan 2005-2010

The Wingecarribee Social Plan contains the following commitments relevant to this Plan of Management:

“Over 2006-2010 Council will promote healthy environments and lifestyles through:

- Improving and maintaining to a high standard sports and recreational facilities

3.2.7 Wingecarribee Open Space, Recreation, Cultural and Community Facilities Needs – Study, Strategy and Action Plan, 2004.

Key Conclusions

Key conclusions in relation to existing ‘natural areas’ include:

- overall the Shire has good provision of natural areas (much of it non-Council), particularly bushland;
- Council has limited funds for maintenance/pest control within those natural areas it owns/manages;
- much of the Shire is no longer natural and has been cleared of bush, such that remaining areas are highly valued and most residents have to travel to visit natural areas; and the shire’s natural areas comprise a significant passive and active recreation resource.

Recreational walking is a popular activity within the community and therefore there was a particular focus during consultations on the quality of local parks and lands. The maintenance of these

spaces was a key issue and the implementation of adequate seating for the elderly and disabled was seen as a priority for the Shire.

Key findings from survey responses were that:

- passive recreational activities such as walking and gardening are more popular than active recreational activities in Wingecarribee;
- close to 50 percent of the general community survey respondents use the Shire's natural areas, parks and gardens, hiking trails/cycle paths;

Natural Areas

Council's Role

Under the Council's charter and the Local Government and Shire's Associated Policy Statements (2003), Council has an important role in protecting, enhancing and rehabilitating natural environments (including networks of bushland lands, endangered ecological communities, linear road and river lands and flora/fauna corridors), in order to achieve ecologically sustainable development. *The Local Government Act 1993* as amended specifically requires that Council provide natural areas on community land for community use and access in such a manner as will minimise and mitigate any disturbance caused by human intrusion. Similar requirements relate specifically to bushland, escarpments, wetlands and watercourses on community land.

Scenic/cultural landscapes within natural areas also warrant protection and enhancement under Council's Historic, Cultural landscape Assessment (Landsan Pty Ltd, 1992) and the Wingecarribee Our Future Strategic Plan.

Protection and enhancement of Council's bushland and scenic/cultural landscapes areas would undoubtedly lead to substantial improvements in the passive and recreation value of these natural areas. Walkways (and associated viewing platforms/seats etc) within natural areas are essentially recreation 'facilities', and Council also has a responsibility to properly manage, maintain and enhance those located on land it manages or owns. However in doing so, Council needs to balance community recreation needs against environmental effects associated with provision of access to sensitive natural environments.

Key trends identified in this study in regard to Council's natural areas (based on research and community consultations) are as follows:

- bushwalking is a popular recreation activity Australia-wide, and there are many bushwalking groups in Wingecarribee that regularly use walking trails within Council and non-Council natural areas – subsequently, there is demand for an expansion of Council's existing trail network;
- Council's existing walking trails need maintenance, and there is more funding needed for targeted pest and weed control, fencing and signage (including recognition of cultural features).

Needs Analysis

- Overall there is a good supply of natural areas in Wingecarribee, and most needs relate to improving the quality of existing areas.
- Safety risks associated with provision of public access to natural areas need to be better addressed by Council. A risk assessment focusing on public access to Council's natural areas is needed to determine detailed needs and appropriate actions.
- to better promote and upgrade existing walkways, improve signage, weed control, fencing and pest control in Council owned/managed natural areas.

The Wingecarribee Our Future Environment Strategy already proposes rehabilitation, re-vegetation and enhancement of a number of existing natural areas in the Shire and this project is fully endorsed by this study. The Environment Levy provides a sensible funding solution to these needs, but does not cover walkways improvements or safety fencing.

Key Issues:

- There is a need to enhance and promote the passive recreational value of the Council owned/managed natural areas in the Shire, whilst also managing potential safety risks.
- There is a need to act on opportunities for partnerships and resource sharing with other government agencies in regard to passive recreational resources in the Shire. It is recommended that Council enhance its liaison with these bodies to make better use of these opportunities.

3.2.8 Wingecarribee Shire Council Environment Policy, 2007

Parts of the policy relevant to this Plan of Management are:

“Council is committed to protection of our local environment, the prevention of pollution and improving the sustainability of our operations; (and) will demonstrate this commitment by

- Implementing effective environmental management practices for our sites and activities under our control to protect the environment and prevent pollution;
- Working cooperatively with stakeholders, including government, organizations and the community and availing ourselves of knowledge, programs and educational initiatives that will improve and maintain the local environment.”

3.3 NSW Threatened Species Legislation

The *NSW Threatened Species Conservation Act 1995* identifies and protects native plants and animals in danger of becoming extinct. The Act also provides for species recovery and threat abatement programs. More than 80 species of native plants and animals have recently become extinct in NSW and around 1000 more are threatened with extinction.

The purpose of the Act is to:

- conserve biological diversity and promote ecologically sustainable development
- prevent the extinction and promote the recovery of threatened species, populations and ecological communities
- protect the critical habitat of those species, populations and ecological communities that are endangered
- eliminate or manage certain processes that threaten the survival or evolutionary development of threatened species, populations and ecological communities
- ensure that the impact of any action affecting threatened species, populations and ecological communities is properly assessed, and
- encourage the conservation of threatened species, populations and ecological communities through co-operative management.

3.4 Other Relevant Legislation

The Plan must also be in accordance with the provisions contained within relevant state and federal legislation including (but not limited to) the *Local Government Act 1993*, *Local Government Regulation 2005*, *Environmental Planning and Assessment Act 1979*, *Noxious Weeds Act 1993*, *Water Management Act 2001*, *Threatened Species Conservation Act 1995* and the *(Federal) Disability Discrimination Act 1992*, *New South Wales Heritage Act 1977*. Other sources of relevant information can be found listed in the reference section.

4.0 BASIS FOR MANAGEMENT

Key users of the Reserve, neighbours, managers, and Council staff were consulted in the process of identifying the management values and issues. A report of the Public Hearing for categorisation of Oxley Hill land is shown in Appendix 3.

4.1 *Current and permitted uses*

This Plan of Management provides for and authorizes the following current and permitted uses for the land identified as general community use in this Plan:

Telecommunications Tower

Description: Telecommunications Tower (approximately 27m high)
Equipment shed
Located inside a 10m x 10m fenced enclosure

Uses: Telecommunications including;

- Internet services
- Telephone services
- Paging services
- Two way radio services
- Security monitoring services
- Fire monitoring services

This use is contingent on approval of the Lease for the proposed site for construction and operation of the proposed Telecommunications Tower.

This Plan of Management provides for and authorises the following current and permitted uses for the remainder of the Reserve identified as bushland in this Plan:

All activities permissible and consistent with the core objectives for community land categorised bushland.

4.2 *Management Principles*

The management principles of the Reserve should reflect protect and enhance the values attributed to it by the community.

The principles provide the direction for the management of Oxley Hill Reserve. They have been developed taking into account Council's existing planning framework (see Section 3), *Local Government Act* Core Objectives, community values and community issues.

The following principles are to provide a framework for the management and use of the land. They should be referred to when decision making and have formed the basis for setting out the Management Objectives and the Management Strategies to achieve them.

That:

- The Reserve is historically, environmentally and aesthetically significant;

- Environmental protection principles be observed in relation to the management and administration of the Reserve;
- The remnant endangered ecological communities are to be mapped, enhanced and protected;
- The natural resources of the Reserve be conserved wherever possible;
- The Reserve's historical and cultural items and resources be protected and sustained in perpetuity where appropriate;
- Appropriate multi-use of the Reserve be encouraged;
- Encourage appropriate public use and enjoyment of the Reserve;
- Manage the Reserve with the safety of all users in mind as a priority;
- Manage the Reserve to provide equal physical access to all users;
- Maintain the Reserve to a level consistent with its categorisation as a Bushland Reserve;
- Community involvement and user understanding of the Reserve be encouraged.
- To ensure the Reserve contributes to community wellbeing, education and cohesion.
- The Reserve is to be occupied, used, licensed or otherwise dealt with in the best interests of the community, and
- Any use of the Reserve is to be consistent with the core objectives of the land categorisation.

4.3 Core Management Objectives

The core objectives are listed in Section 36 of the *Local Government Act 1993* and vary according to the category of the land.

Core objectives for management of community land categorised as general community use

The core objectives for community land categorised for general community use are to promote, encourage and provide for the use of the land, and to provide facilities on the land, to meet the current and future needs of the local community and of the wider public:

- a. in relation to public recreation and the physical, cultural, social and intellectual welfare or development of individual members of the public, and,
- b. in relation to purposes for which a lease, licence or other estate may be granted in respect of the land (other than the provision of public utilities and works associated with or ancillary to public utilities).

Core objectives for management of community land categorised as a natural area

The core objectives for management of community land categorised as a natural area are:

- a. to conserve biodiversity and maintain ecosystem function in respect of the land, or the feature or habitat in respect of which the land is categorised as a natural area, and
- b. to maintain the land, or that feature or habitat, in its natural state and setting, and
- c. to provide for the restoration and regeneration of the land, and

- d. to provide for community use of and access to the land in such a manner as will minimise and mitigate any disturbance caused by human intrusion, and
- e. to assist in and facilitate the implementation of any provisions restricting the use and management of the land that are set out in a recovery plan or threat abatement plan prepared under the *Threatened Species Conservation Act 1995* or the *Fisheries Management Act 1994*.

Core objectives for management of community land categorised as bushland

The core objectives for management of community land categorised as bushland are:

- a. to ensure the ongoing ecological viability of the land by protecting the ecological biodiversity and habitat values of the land, the flora and fauna (including invertebrates, fungi and micro-organisms) of the land and other ecological values of the land, and
- b. to protect the aesthetic, heritage, recreational, educational and scientific values of the land, and
- c. to promote the management of the land in a manner that protects and enhances the values and quality of the land and facilitates public enjoyment of the land, and to implement measures directed to minimising or mitigating any disturbance caused by human intrusion, and
- d. to restore degraded bushland, and
- e. to protect existing landforms such as natural drainage lines, watercourses and foreshores, and
- f. to retain bushland in parcels of a size and configuration that will enable the existing plant and animal communities to survive in the long term, and
- g. to protect bushland as a natural stabiliser of the soil surface.

5.0 MANAGEMENT ISSUES AND ACTION PLAN

5.1 *Underlying premise*

The premise underlying the Plan of Management is that Lot 10 DP 701530 & Lot 1 DP 583992 Oxley Hill Road belongs to the community and any formal or informal arrangements relating to any part of the land must make adequate provision for use of the land by the community.

5.2 *Management Issues*

The following major issues have been identified:

5.2.1 Condition of the Reserve in general

Wingecarribee Shire Council needs to address various issues to improve the general condition, appearance and maintenance of the Reserve.

This can be achieved by implementation of the Regeneration and Revegetation Plan as shown in 2.5.2 and completion of the actions as set out in the action tables of section 6.

5.2.2 Maintenance of the Reserve

The Reserve will be maintained in accordance with its status as a Bushland Reserve. (See proposed Revegetation Plan as shown in 2.5.2)

5.2.3 Vandalism

Vandalism is a significant problem in the Shire which negatively impacts on the communities use and enjoyment of public infrastructure and areas. Vandalism within the Shire is an ongoing issue that requires constant monitoring and review.

Council will address issues as resources permit and in accordance with adopted Budgets and Management Plan which are reviewed annually.

Budgets and strategies are developed taking the following in to consideration;

- Location and type of damage,
- Level of risk and potential for further damage,
- Consultation with stakeholders,
- The history and frequency of damage.

5.2.4 Risk management

Council is concerned with ensuring the safety of all users of Community Land. The community is actively encouraged to report any safety concerns immediately to Council to minimize the risk of injury and litigation.

The on-going assessment of risk and liabilities is a critical element of land management. A risk assessment process needs to be used in implementation of this plan. This process will form an important risk management tool. Key risk areas for the Council to address include;

- Occupational Health & Safety
- Environmental management including
 - Erosion
 - Water quality
 - Dangerous trees
- Liability including visitor safety and signage
- Emergency management including evacuation planning
- Contract management and authorisation of volunteers
- Asset management including management and maintenance of facilities.

5.2.5 Bush Fire Management

There is an Asset Protection Zone established on the lower boundary of the site. The zone is located at the southern end of Lot 1. (See bush fire map Appendix 8).

The asset protection zone is identified on the following certificate;

Bush Fire Hazard Reduction Certificate HR09020235530-1
in accordance with section 100G of the *Rural Fires Act 1997*

Proposer Name: Local Government Authority
Certificate End Date: 1 February 2010
Location Description: OXLEY HILL ROAD BOWRAL 2576 - 1/ /583992
Method Mechanical Polygon 1 - Slashing/Trittering
Dimensions 21.29m x 85.00m

To protect a residential building this certificate provides authority to carry out bush fire hazard reduction work on the Reserve described above in accordance with:

- the Bush Fire Management Plan for Wingecarribee Shire Council ;
- the Bush Fire Environmental Assessment Code February 2006; and
- conditions specified on the Bush Fire Hazard Reduction Certificate Environmental Approval for work. Authorisation under the *Rural Fires Act 1997*.

5.2.6 Financial Management

As noted in 2.6 Council has adopted a motion for 25 % of all lessor income is retained for restoration and maintenance of the endangered ecological communities and the land.

5.3 Authorisation of Leases / Licences

Leases and licences can be granted by council in respect to community land pursuant to the *Local Government Act 1993 Sec 46 & 47* and the *Local Government (General) Regulation 2005 Division 3 Sec 116-119*.

This Plan of Management expressly authorises Council to enter into a lease, licence or other agreement with an appropriate organisation, of its choice currently as follows:

Area	Activity	Purpose	Agreement	Maximum Permissible Term	Advertise
General Community Use Area 'C'	Construction and operation of communication tower.	To enable provision of internet and telephone services	Lease/licence agreement	21 years	No

5.4 Hire

This Plan of Management authorises short or long-term hire of Public Open Space and facilities at Lot 10 DP 701530 & Lot 1 DP 583992 Oxley Hill Road as long as the terms and conditions comply with Wingecarribee Shire Council requirements and do not impact on the Reserve values.

5.5 Easements

This Plan of Management authorises the granting of easements as required for utilities and access over the Reserve provided appropriate impact assessment and best practice environmental management is in place.

This Plan authorises the proposed easement as shown in Appendix 9 area 'B' for the provision of electrical services. The proposed electrical pole and meter box are to be placed just inside the boundary with the remaining cable to be concealed underground.

5.6 Authorised Developments

In accordance with the *Local Government Amendment (Community Land Management) Act 1989*, a Plan of Management must expressly authorise any proposed developments on community land.

This Plan of Management authorises the proposed construction and operation of the communication tower within the area defined general community use. This Plan of Management also authorises the developments proposed in the following Action Plan.

This authorisation gives 'in principle' support for an activity to proceed to the development assessment stage. This Plan does not grant consent. Proposed developments are still subject to the normal development consent process of Council.

5.7 Lifespan and Review of plan

This Plan of Management for Lot 10 DP 701530 & Lot 1 DP 583992 Oxley Hill Road should be regarded as a dynamic document requiring review and modification over time. The catalyst for change could include alterations in the availability of funding and budget, shifting community perceptions and values, legislative change, changes to permissible uses or the areas planning strategies.

The Plan of Management will be reviewed on a needs basis as a result of organisational or legislative changes. In any event, a thorough review every 10 years is required as a minimum, to ensure the ongoing relevance of Oxley Hill Reserve Plan of Management.

5.8 Action Plan

The following action plans set out the requirements under *Section 36(3)* of the *Local Government Act 1993* in respect to:

- The objectives and performance targets of the plan
- The proposed means in which to achieve the objectives and performance targets.
- The proposed manner in which the objectives and performance targets are assessed for performance.

A priority has been given to each action with the following time frames.

- High – commenced within 2 years
- Medium – commenced within 2-5 years
- Low – commenced after 5 years
- Ongoing – Throughout time as the Plan of Management is in operation

Responsibility;

WSC Wingecarribee Shire Council

Note: The implementation of these actions is dependent on available funding and resources allocated, which will impact on for the ability to commence and complete the actions.

No.	Performance Target	Action	Priority	Performance Indicator	Responsibility
1.	Plan and enhance the significant environmental values of the land	Map and protect all remnant native vegetation and habitat	High	Native vegetation and habitat mapped and protected	Wingecarribee Shire Council (WSC)
2.		Prepare a bushland management and regeneration plan	High	Plan completed	WSC
3.		Maintain reserve in accordance with categorisation as bushland reserve.	High	Maintenance Plan prepared and implemented	WSC
4.		Use provenance species when undertaking revegetation and landscaping works	Medium	Provenance	WSC
5.		Minimise public access to sensitive vegetation or wildlife habitat areas	High	Sensitive vegetation and habitat protected	WSC
6.		Restrict vehicular access to bushland areas except for emergency or maintenance purposes	High	Vehicular access restricted	WSC
7.		Incorporate retention of logs, breeding hollows and roosting habitat into the design and management of revegetation projects to suit endemic fauna	High	Natural habitat incorporated in design and management	WSC
8.	Minimise bush fire hazard on the land to protect life and property	Prepare a bushfire management plan for the site	High	Bushfire management plan	WSC
9.	Foster community awareness and involvement with the land	Promote and expand community involvement in the Bushcare program	Medium	Program promoted and expanded	WSC

No.	Performance Target	Action	Priority	Performance Indicator	Responsibility
10.	Increase community appreciation of the land values	Promote wildlife awareness and appreciation to local residents	Medium	Positive community and visitor response	WSC
11.		Encourage responsible management of companion animals on site	High	Companion animals managed	WSC
12.	Provide an appropriate level of public facilities	Review potential seating areas on the Reserve	Medium	Positive community and visitor response	WSC
13.	Minimise the visual impacts of the proposed tower	Consider location from the point of visual impact and ensure screen planting.	High	Visual impact minimised	WSC Lessee
14.	Manage environmental and user safety	Consider less toxic chemicals for pest control, fertilising and general ground maintenance	Ongoing	Options considered	WSC
15.	Sustainability to be considered for all works and plans	All works to consider sustainability including: - energy efficiency - water efficiency - use of recycled materials and/or - materials sourced from sustainable resources	High	Increased level of sustainability. Positive community and visitor response	WSC

Priority

High	– commenced within 2 years
Medium	– commenced within 2-5 years
Low	– commenced after 5 years
Ongoing	– Throughout time as the Plan of Management is in operation

Responsibility

WSC - Wingecarribee Shire Council

6.0 REFERENCES

- 1) *Local Government Act 1993*
- 2) *Environmental Planning and Assessment Act 1979*
- 3) *Threatened Species Conservation Act 1995 No 101*
- 4) *Nature Conservation Trust Act 2001 No 10*
- 5) *Water Management Act 2000 No 92*
- 6) *Native Vegetation Act 2003 No 103*
- 7) *National Parks and Wildlife Act 1974* - Conservation of native fauna and flora.
- 8) *National Parks and Wildlife Regulation 2002*
- 9) Sydney Catchment Authority, Moss Vale, Soil Landscapes Summary Report, 8/7/2004.
- 10) Wingecarribee Shire Council Pre 1750 Modelled Vegetation, 2008
- 11) *Protection of the Environment Operations Act 1997 No 156*
- 12) *Rural Fires Act, 1997*
- 13) *Rural Fire Regulation, 1997*
- 14) *Protection of the Environment Operations Act 1997 No 156*
- 15) *Noxious Weeds Act 1993*
- 16) Department of Environment and Climate Change www.dnr.nsw.gov.au
- 17) Department of Lands (various documents and the Trust handbook) www.lands.nsw.gov.au
- 18) National Parks and Wildlife Service www.nationalparks.nsw.gov.au
- 19) NSW Rural Fire Service www.rfs.nsw.gov.au
- 20) The Department of the Environment and Water www.environment.gov.au

Various Wingecarribee Shire Council documents were consulted, a summary of these is listed in the planning framework.

7.0 APPENDICES

Appendix 1 Lot 1 Deposited Plan 583992

[illegible]

Appendix 2 Lot 10 Deposited Plan 701530

[illegible]

Appendix 3 Categorisation Report

Report from Public Hearing to categorise Community Land at Lot 10 DP 701530 and Lot 1 DP 583992 (Oxley Hill Reserve) Oxley Hill Road, Bowral.

Under Section 40A of the *Local Government Act 1993* a Public Hearing was held on Thursday 11th June 2009 at 5.00 pm at Wingecarribee Shire Council Civic Centre to categorise Community Land covered by the proposed Draft Plan of Management.

The hearing opened at 5.00 pm. In attendance were:

Melanie McGrane, Consultant and Meeting Convenor
Scott Hayes, WSC
Jane Lemann
Jan Hainke
Ron Wade (neighbour)
Jenny Harper (neighbour)
David Clarke (neighbour)
Maureen Clarke (neighbour)
Jan Bell ("Panorama")
Deborah Brembrick (Parry Drive)
Julie Miller (neighbour)
Eric Savage (National Trust)

An information pack and map showing the proposed categorisation were available. Also included was a detailed plan showing the proposed footprint and location of the proposed communication tower.

The attendees expressed concern that the Community Land in question was going to be reclassified Operational.

Ms. McGrane outlined the Plan of Management process and explained the role of the hearing and the proposed categorisation.

Scott Hayes outlined the reasoning behind the proposed categorisation.

A record of the main points raised by the attendees was made.

Ms. McGrane reiterated that these issues would be considered in the draft Plan of Management, yet to be prepared.

The hearing closed at 6.00 pm.

Appendix 4 Local Government (General) Regulation 2005

Reprint No 1 18 July 2007

Part 4 Community Land

Division 1 Guidelines for the categorisation of community land

101 Application of this Division

- (1) This Division sets out guidelines for the categorisation of community land.
- (2) A council that is preparing a draft plan of management under section 36 of the Act must have regard to the guidelines set out in this Division.

102 Guidelines for categorisation of land as a natural area

Land should be categorised as a natural area under section 36 (4) of the Act if the land, whether or not in an undisturbed state, possesses a significant geological feature, geomorphological feature, landform, representative system or other natural feature or attribute that would be sufficient to further categorise the land as bushland, wetland, escarpment, watercourse or foreshore under section 36 (5) of the Act.

Note. Section 36A of the Act provides that community land that has been declared a critical habitat under the *Threatened Species Conservation Act 1995* or the *Fisheries Management Act 1994* must be categorised as a natural area.

Section 36B of the Act provides that community land all or part of which is directly affected by a recovery plan or threat abatement plan under the *Threatened Species Conservation Act 1995* or the *Fisheries Management Act 1994* must be categorised as a natural area.

Section 36C of the Act provides that community land that is the site of a known natural, geological, geomorphological, scenic or other feature that is considered by the council to warrant protection or special management considerations, or that is the site of a wildlife corridor, must be categorised as a natural area.

107 Guidelines for categorisation of land as bushland

- (1) Land that is categorised as a natural area should be further categorised as bushland under section 36 (5) of the Act if the land contains primarily native vegetation and that vegetation:
 - (a) is the natural vegetation or a remainder of the natural vegetation of the land, or
 - (b) although not the natural vegetation of the land, is still representative of the structure or floristics, or structure and floristics, of the natural vegetation in the locality.
- (2) Such land includes:
 - (a) bushland that is mostly undisturbed with a good mix of tree ages, and natural regeneration, where the understorey is comprised of native grasses and herbs or native shrubs, and that contains a range of habitats for native fauna (such as logs, shrubs, tree hollows and leaf litter), or
 - (b) moderately disturbed bushland with some regeneration of trees and shrubs, where there may be a regrowth area with trees of even age, where native shrubs and grasses are present in the understorey even though there may be some weed invasion, or
 - (c) highly disturbed bushland where the native understorey has been removed, where there may be significant weed invasion and where dead and dying trees are

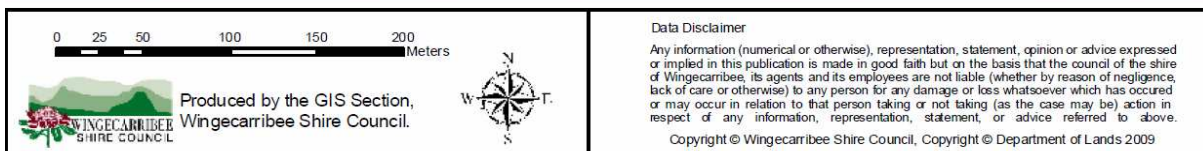
present, where there is no natural regeneration of trees or shrubs, but where the land is still capable of being rehabilitated.

106 Guidelines for categorisation of land as general community use



Land should be categorised as general community use under section 36 (4) of the Act if the land:

- (a) may be made available for use for any purpose for which community land may be used, whether by the public at large or by specific sections of the public, and
- (b) is not required to be categorised as a natural area under section 36A, 36B or 36C of the Act and does not satisfy the guidelines under clauses 102–105 for categorisation as a natural area, a sportsground, a park or an area of cultural significance.

Appendix 5 Soil Landscape

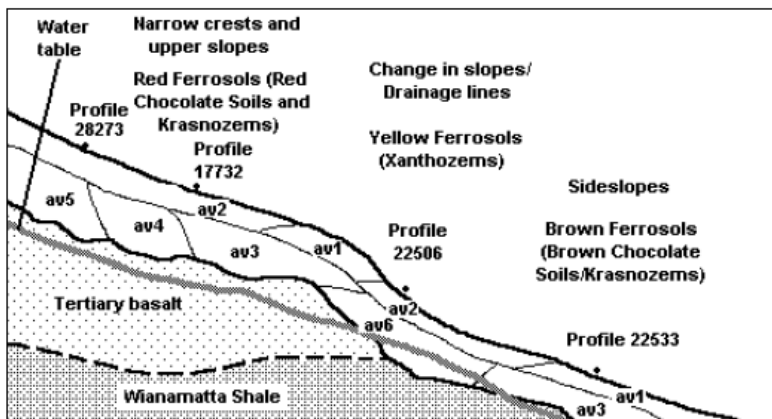


Key

	Light purple – Erav Avoca
	Dark purple – Copn Picton

Avoca - ERav

ERav
Avoca
Erosional



Landscape summary:

Undulating rises to rolling low hills on Tertiary Basalt, Basanites and Dolerite outliers with minor occurrence on Wianamatta group shales. Hillcrests are narrow to moderately broad (50 - 200m), sideslopes long (200 - 600m), occasionally benched. Rock outcrop is rare, occurring mainly on crests. Drainage lines are broad and rarely incised. Surface conditions vary with land use. In native woodlands surface condition is soft to self mulching. Cleared areas where stock and pasture varieties have been introduced result in firm to hard-setting surface conditions due to compaction.

Undulating rises to Rolling low hills		Min		Max		Variant <input type="checkbox"/>	
Dominant Landform Pattern		Slope		Relief		Associated <input type="checkbox"/>	
Dominant Landform Element		3%		10m			
		600m		1047m			
Physiographic Region		Moss Vale Tablelands		Rock outcrop		<2%	
Geology Code		Tob, Tod, T-Rb		Dominant Lithology		basalt	
Geological Unit		Tob - Basalts and basanites.					
Included Landscapes		Kinnoull Hill (kh) on steeper slopes. Glen Quarry (gq) on flat residual hilltops.					
Variants		No variants.					
Typical Location		Oxley's Hill Road, Bowral.		Map Ref.		259***E, 6181***N	
Dominant Land Use		improved pasture		Subdominant Land Use		orchard/vineyard	
Vegetation Unit		Open forest		Dominant Vegetation Community		wet sclerophyll forest	
Hydrology and Climate Notes		Summer dominant rainfall. Rainfall increases to the east resulting in a higher occurrence of Red Ferrosol (Kraznozom) soil types. At Robertson (1600m a.r.r.) Kraznozems are the dominant soil type. Water tables at poorly drained sites 0.6m below surface.				Veg. % Cleared: 80	

Landscape Limitations

L=Localised within the landscape

W=Widespread across the landscape

	L	W		L	W		L	W		L	W
Steep slopes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Wind erosion hazard	<input type="checkbox"/>	<input type="checkbox"/>	Wave erosion hazard	<input type="checkbox"/>	<input type="checkbox"/>	Salinity hazard	<input type="checkbox"/>	<input type="checkbox"/>
Mass movement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	High run-on	<input type="checkbox"/>	<input type="checkbox"/>	Gully erosion hazard	<input type="checkbox"/>	<input type="checkbox"/>	Seepage scalds	<input type="checkbox"/>	<input type="checkbox"/>
Rock fall hazard	<input type="checkbox"/>	<input type="checkbox"/>	Shallow soils	<input type="checkbox"/>	<input type="checkbox"/>	Sheet erosion hazard	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Woody weeds	<input type="checkbox"/>	<input type="checkbox"/>
Flood hazard	<input type="checkbox"/>	<input type="checkbox"/>	Non-cohesive soils	<input type="checkbox"/>	<input type="checkbox"/>	Complex soils	<input type="checkbox"/>	<input type="checkbox"/>	Complex terrain	<input type="checkbox"/>	<input type="checkbox"/>
Poor drainage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Rock outcrop	<input type="checkbox"/>	<input type="checkbox"/>	Periodically frozen soils	<input type="checkbox"/>	<input type="checkbox"/>	Poor moisture availability	<input type="checkbox"/>	<input type="checkbox"/>
High water tables	<input checked="" type="checkbox"/>	<input type="checkbox"/>	High foundation hazard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Potential saline recharge	<input type="checkbox"/>	<input type="checkbox"/>	Dieback	<input type="checkbox"/>	<input type="checkbox"/>
Waterlogging	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Groundwater pollution haz	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Saline discharge zone	<input type="checkbox"/>	<input type="checkbox"/>	Soil fire hazard	<input type="checkbox"/>	<input type="checkbox"/>

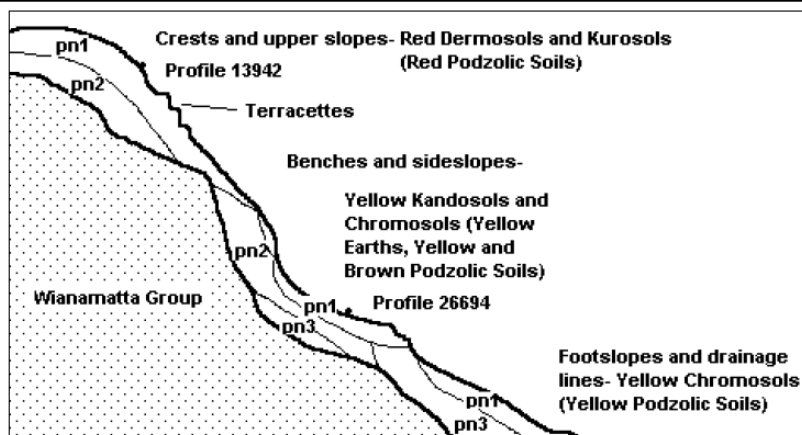
Landscape described by Fletcher Townsend

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Burragorang 1:100 00 Soil Landscapes

Picton - COpn

COpn **Picton** **Colluvial**



Landscape summary: Steep to very steep sideslopes on Triassic sediments on the Moss Vale Tablelands in the south of the area. Sideslopes are characterised by mass movement and terracettes on Wianamatta Group and derived colluvial materials, usually having a southerly aspect.

Rolling rises to Steep hills	Slope	Min	Max	Variant <input type="checkbox"/>
Dominant Landform Pattern hills	Relief	20%	40%	Associated <input checked="" type="checkbox"/>
Dominant Landform Element hillslope	Elevation	40m	200m	
		65m	780m	
Physiographic Region Moss Vale Tablelands	Rock outcrop	<2%		
Geology Code Rw	Dominant Lithology	shale		
Geological Unit	Wianamatta Shale.			
Included Landscapes	No significant included landscapes.			
Variants	No variants.			
Typical Location	Mount Gibraltar near Bowral.	Map Ref.	2 63***E, 6183***N	
Dominant Land Use	improved pasture	Subdominant Land Use	orchard/vineyard	
Vegetation Unit	Open forest	Dominant Vegetation Community	wet sclerophyll forest	
Hydrology and Climate Notes	N/A.	Veg. % Cleared:	80	

Landscape Limitations

L=Localised within the landscape W=Widespread across the landscape

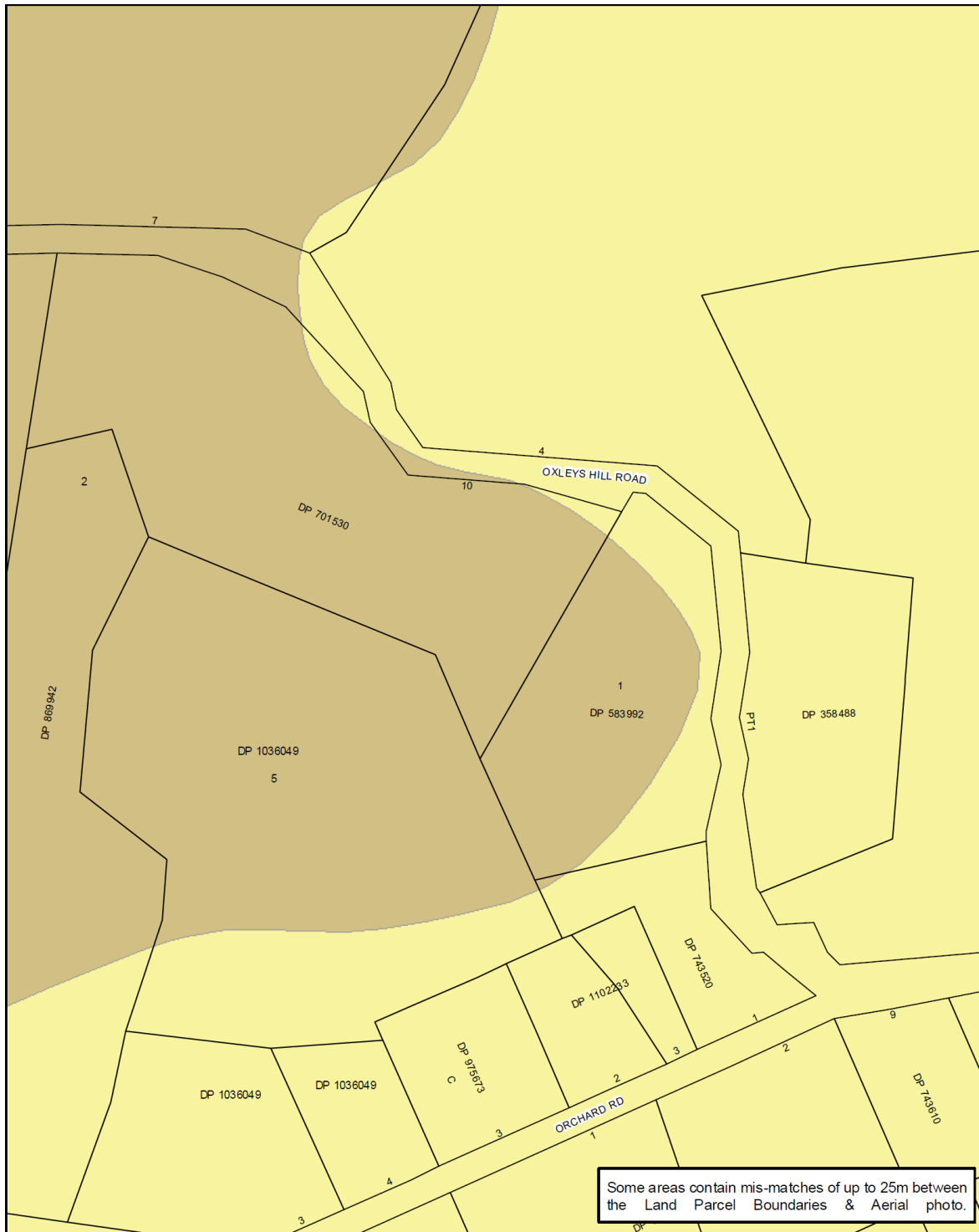
	L	W		L	W		L	W		L	W
Steep slopes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Wind erosion hazard	<input type="checkbox"/>	<input type="checkbox"/>	Wave erosion hazard	<input type="checkbox"/>	<input type="checkbox"/>	Salinity hazard	<input type="checkbox"/>	<input type="checkbox"/>
Mass movement	<input type="checkbox"/>	<input checked="" type="checkbox"/>	High run-on	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Gully erosion hazard	<input type="checkbox"/>	<input type="checkbox"/>	Seepage scalds	<input type="checkbox"/>	<input type="checkbox"/>
Rock fall hazard	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Shallow soils	<input type="checkbox"/>	<input type="checkbox"/>	Sheet erosion hazard	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Woody weeds	<input type="checkbox"/>	<input type="checkbox"/>
Flood hazard	<input type="checkbox"/>	<input type="checkbox"/>	Non-cohesive soils	<input type="checkbox"/>	<input type="checkbox"/>	Complex soils	<input type="checkbox"/>	<input type="checkbox"/>	Complex terrain	<input type="checkbox"/>	<input type="checkbox"/>
Poor drainage	<input type="checkbox"/>	<input type="checkbox"/>	Rock outcrop	<input type="checkbox"/>	<input type="checkbox"/>	Periodically frozen soils	<input type="checkbox"/>	<input type="checkbox"/>	Poor moisture availability	<input type="checkbox"/>	<input type="checkbox"/>
High water tables	<input type="checkbox"/>	<input type="checkbox"/>	High foundation hazard	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Potential saline recharge	<input type="checkbox"/>	<input type="checkbox"/>	Dieback	<input type="checkbox"/>	<input type="checkbox"/>
Waterlogging	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Groundwater pollution haz	<input type="checkbox"/>	<input type="checkbox"/>	Saline discharge zone	<input type="checkbox"/>	<input type="checkbox"/>	Soil fire hazard	<input type="checkbox"/>	<input type="checkbox"/>



Landscape described by Pam A Hazelton

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Soils of the Wollongong-Port Hacking Sheet

Appendix 6 Soil geology



 <p>Produced by the GIS Section, Wingecarribee Shire Council.</p> 	<p>Data Disclaimer</p> <p>Any information (numerical or otherwise), representation, statement, opinion or advice expressed or implied in this publication is made in good faith but on the basis that the council of the shire of Wingecarribee, its agents and its employees are not liable (whether by reason of negligence, lack of care or otherwise) to any person for any damage or loss whatsoever which has occurred or may occur in relation to that person taking or not taking (as the case may be) action in respect of any information, representation, statement, or advice referred to above.</p> <p>Copyright © Wingecarribee Shire Council, Copyright © Department of Lands 2009</p>
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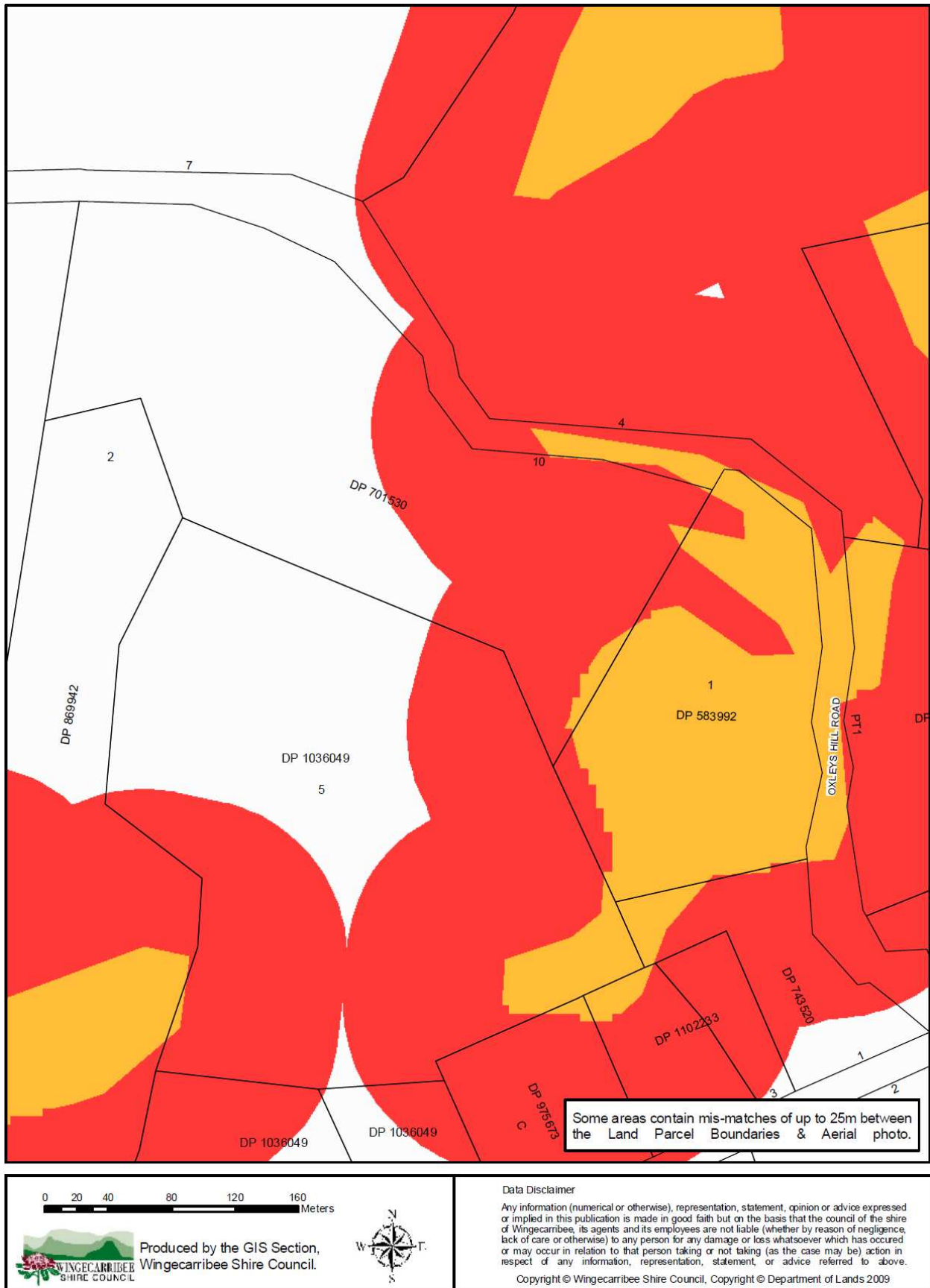
Key

	Light brown - Basalt
	Yellow brown - Shale

Appendix 7 Natural Vegetation 2002

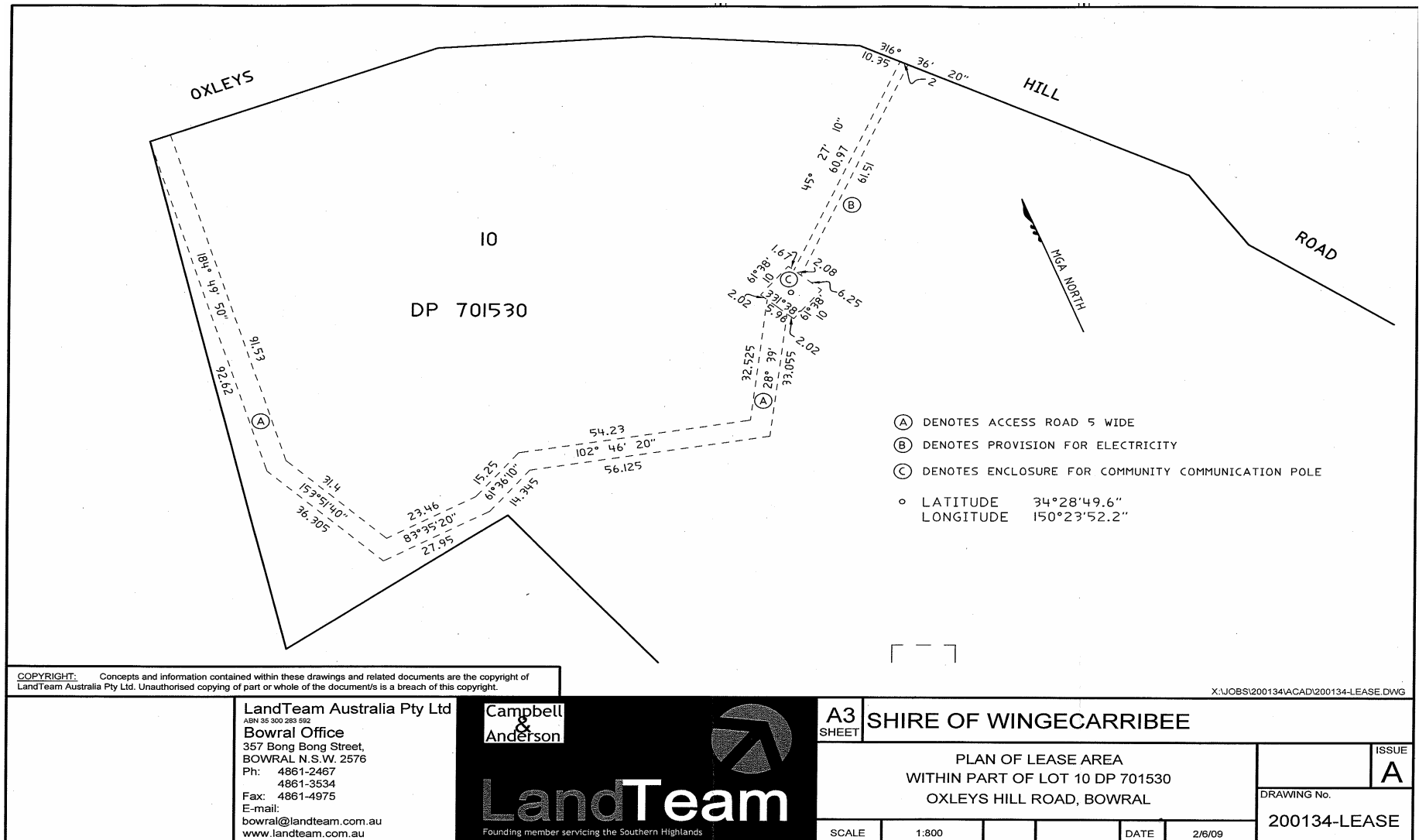


Appendix 8 Bush Fire Map

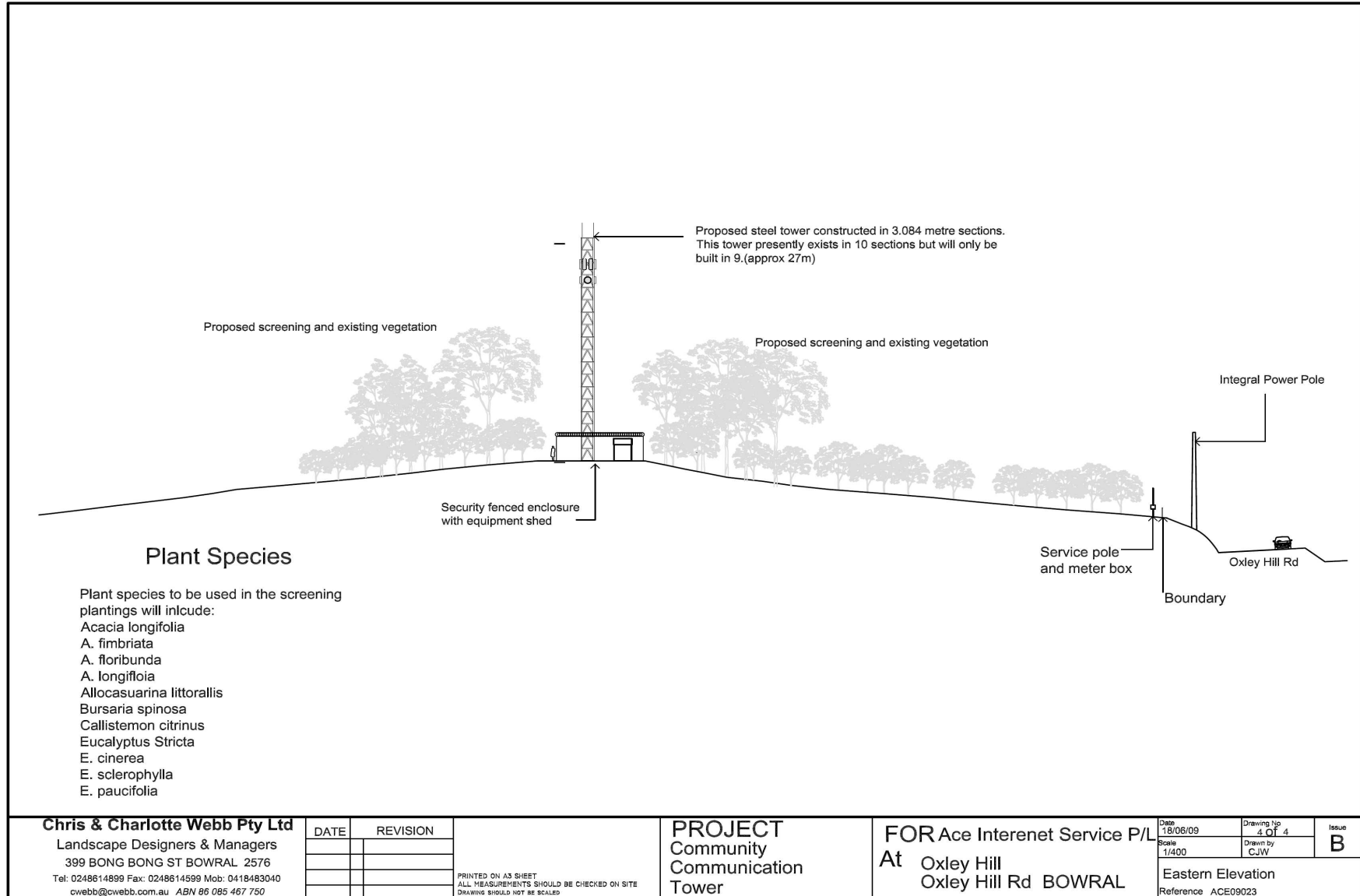


Key: Bush fire prone land **Red**: Buffer **Yellow**: Vegetation Category 1

Appendix 9 Proposed Lease Area



Appendix 10 Communication Tower Elevation (Draft)



Appendix 11 Communication Tower Site Plan (Draft)

