



# CROWN LANDS DIVISION

## DEPARTMENT OF PRIMARY INDUSTRIES

### OLINDA RESERVE PLAN OF MANAGEMENT

ADOPTED JUNE 2011

---

Olinda Reserve Plan of Management

JUNE 2011

---





# TABLE OF CONTENTS

## Contents

<b>TABLE OF CONTENTS .....</b>	<b>2</b>
<b>1.0 INTRODUCTION.....</b>	<b>4</b>
<b>1.1 Land to which the Plan of Management Applies .....</b>	<b>4</b>
<b>1.2 Objectives.....</b>	<b>4</b>
<b>1.3 Managing Crown Land .....</b>	<b>4</b>
1.3.1 Crown Lands Act 1989 .....	4
1.3.2 Requirements of a Plan of Management for a Crown Reserve .....	9
<b>RESERVE ASSESSMENT .....</b>	<b>11</b>
<b>Reserve Location and Description .....</b>	<b>11</b>
<b>2.2 Background and History .....</b>	<b>12</b>
2.2.1 Purpose of Reservation .....	12
2.2.2 Current Leases and Licences .....	12
<b>2.3 Surrounding Land Use and Regional Context .....</b>	<b>12</b>
<b>2.4 Cultural Values.....</b>	<b>12</b>
2.4.1 Aboriginal Heritage.....	12
2.4.2 European Heritage .....	13
<b>2.5 Climate .....</b>	<b>14</b>
<b>2.6 Landform, Geology and Soils .....</b>	<b>14</b>
<b>2.7 Vegetation.....</b>	<b>15</b>
2.7.1 Native Plants .....	13
2.7.2 Connectivity .....	17
<b>2.8 Fauna.....</b>	<b>18</b>
<b>2.9 Bushfire .....</b>	<b>18</b>
<b>3.0 BASIS FOR MANAGEMENT.....</b>	<b>20</b>



**3.1 Current Impacts and Uses .....20**

3.1.1 Reserve Access ..... 20

3.1.2 Grazing Licences ..... 20

3.1.3 Introduced species ..... 20

3.1.4 Erosion and catchment/water quality..... 20

3.1.5 Bushfire ..... 21

3.1.6 Timber Felling/Removal ..... 21

3.1.7 Management ..... 21

**4.0 MAIN ISSUES, STRATEGIES AND ACTIONS ..... 22**

**4.1 Identification, Access and Recreation .....22**

**4.2 Grazing Licences.....22**

**4.3 Introduced Species.....22**

**4.4 Erosion and Catchment/Water Quality.....23**

**4.5 Bushfire .....23**

**5.0 IMPLEMENTATION..... 25**

**6.0 REFERENCES..... 27**

© Epacris Environmental Consultants

[www.epacrisenviro.com.au](http://www.epacrisenviro.com.au)

PO Box 193, Katoomba, NSW 2780

Tel. 4782 1177 [info@epacrisenviro.com.au](mailto:info@epacrisenviro.com.au)

Photographs taken by Epacris Environmental unless otherwise noted.



## 1.0 INTRODUCTION

### 1.1 Land to which the Plan of Management Applies

Olinda Reserve is comprised of 16 separate land titles which take in a large component of the escarpment between the Capertee and the Cudgegong Rivers. The 16 Lots are comprised of Crown Land which is classified as Reserve 69627 and Reserve 755762 (of which 2 lots are currently under grazing licence), in addition to 4 additional Lots, 3 of which are under grazing licence. The lands that make up Olinda Reserve are shown on Map 1 and listed in Table 1.

These 16 lots together make up the reserve of approximately 1,412.59 hectares. The majority of the lots are contiguous, however a few lots are outliers and do not connect to the main body of the reserve. The reserve links to Wollemi National Park on its eastern boundary.

### 1.2 Objectives

This plan of management provides policy recommendations for:

- short and long term management of Olinda Reserve;
- procedures for compliance with statutory instruments.

The management objectives for the reserve are:

- to conserve the reserve's natural values and manage the reserve to maintain its conservation values;
- to pursue further opportunities for more sustainable management of the reserve.

### 1.3 Managing Crown Land

#### 1.3.1 Crown Lands Act 1989

Olinda Reserve is comprised of lots that are classified as Crown land reserve and the Crown Lands Act 1989 (CL Act) is the primary act applying to its management. The CL Act governs the planning, management and use of Crown land, including reservation or dedication for a range of public purposes, and leasing and licensing.

All reserved Crown land is subject to the general land management objectives and provisions of the CL Act.

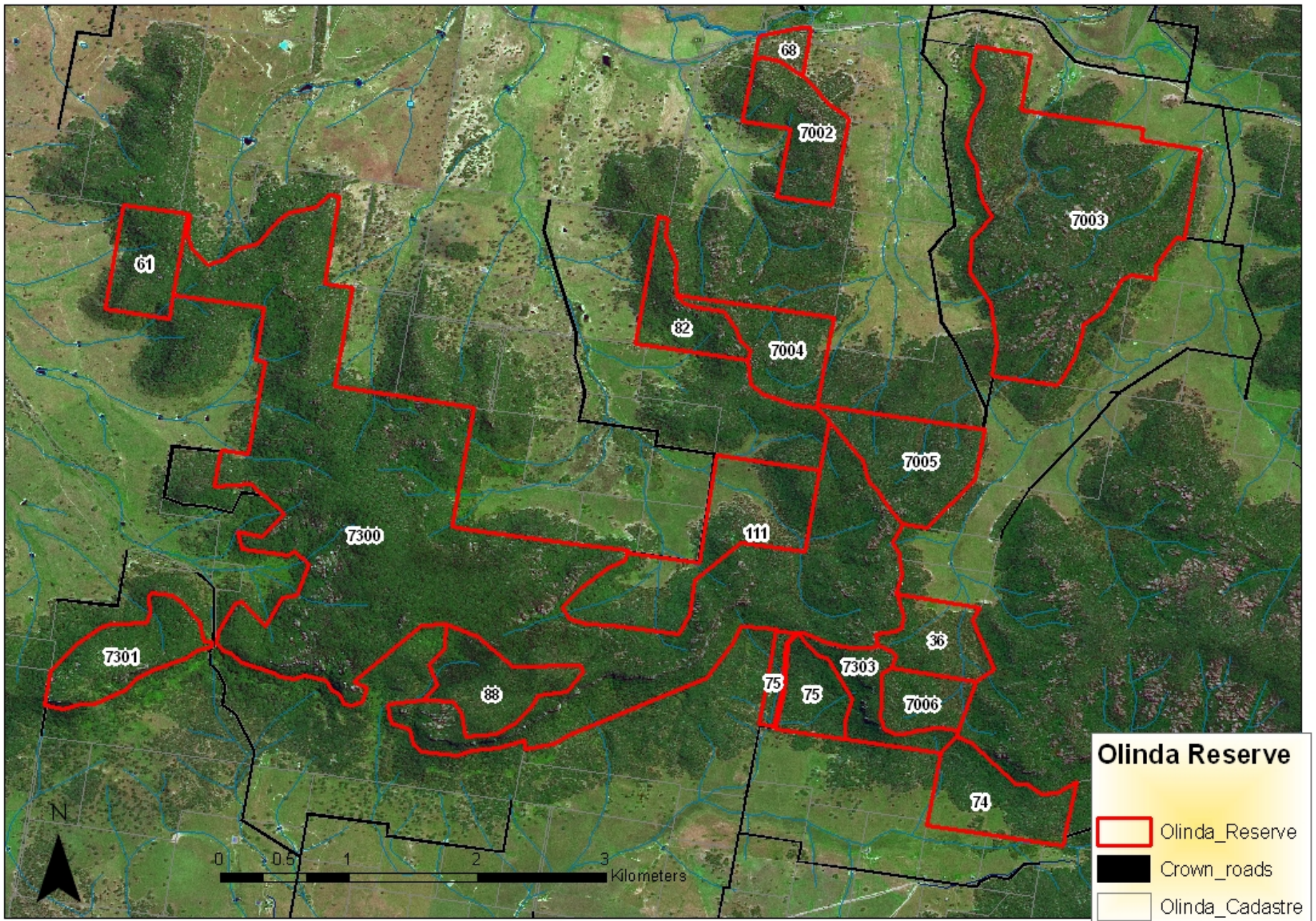


Lot	Deposited Plan	Parish	County	Land District	LGA	Reserve Number	Reserve Purpose	Management	Approximate Area
7300	1130046	Burrowoury	Roxburgh	Rylstone	Mid-western regional	755762	Future public requirements	LPMA	643.3 ha
7301	1130046	Burrowoury	Roxburgh	Rylstone	Mid-western regional	755762	Future public requirements	LPMA	45.95 ha
7303	1130228	Goongal	Roxburgh	Rylstone	Mid-western regional	-	Future public requirements	LPMA	28 ha
82	755762	Burrowoury	Roxburgh	Rylstone	Mid-western regional	755762	Grazing	Licence	31.3 ha
88	755762	Burrowoury	Roxburgh	Rylstone	Mid-western regional	755762	Future public requirements	LPMA	42.18 ha
61	755762	Burrowoury	Roxburgh	Rylstone	Mid-western regional	755762	Future public requirements	LPMA	33.89 ha
68	726941	Ganguddy	Roxburgh	Rylstone	Mid-western regional	69627	Soil Conservation	Licence	8.3 ha
7002	1069233	Ganguddy	Roxburgh	Rylstone	Mid-western regional	69627	Soil Conservation	LPMA	43.7 ha
7003	1096177	Ganguddy	Roxburgh	Rylstone	Mid-western regional	69627	Soil Conservation	LPMA	224 ha

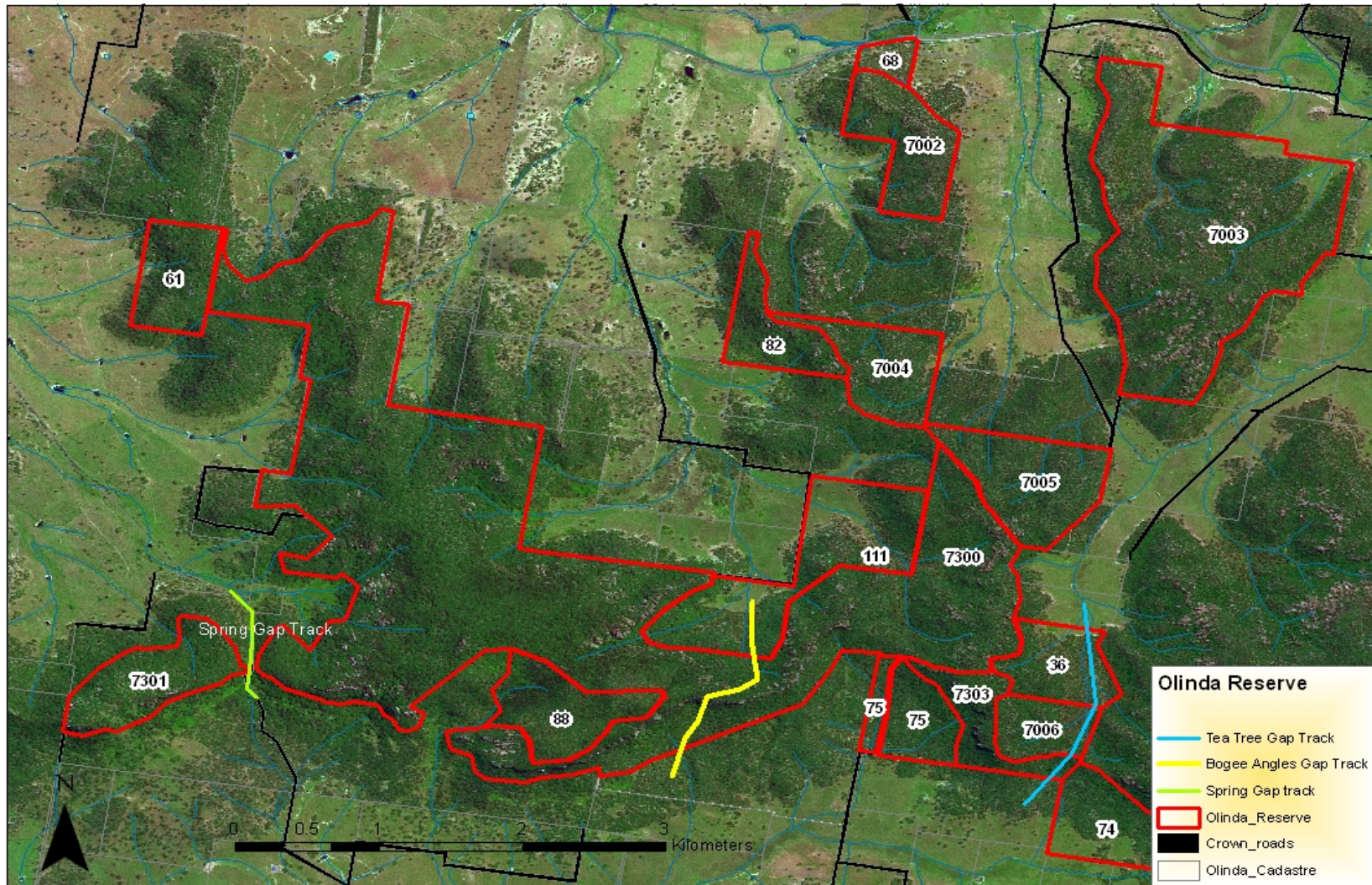


<b>7004</b>	1116176	Ganguddy	Roxburgh	Rylstone	Mid-western regional	69627	Soil Conservation	LPMA	39.5 ha
<b>7005</b>	1116935	Ganguddy	Roxburgh	Rylstone	Mid-western regional	69627	Soil Conservation	LPMA	55 ha
<b>7006</b>	1051446	Ganguddy	Roxburgh	Rylstone	Mid-western regional	69627	Soil Conservation	LPMA	24 ha
<b>36</b>	755775	Ganguddy	Roxburgh	Rylstone	Mid-western regional	69627	Soil Conservation	LPMA	32.37 ha
<b>74</b>	755777	Goongal	Roxburgh	Rylstone	Lithgow	-	Grazing	Licence	45.7 ha
<b>75</b>	755777	Goongal	Roxburgh	Rylstone	Lithgow	-	Grazing	Licence	32.4 ha
<b>111</b>	725918	Burrowoury	Roxburgh	Rylstone	Mid-western regional	-	Grazing	Licence	83 ha

Table 1. Land parcels within Olinda Reserve



Map 1. Olinda Reserve



Map 2. Traditional stock routes across Olinda Reserve





The objectives and principles of Crown land management are listed in Section 11 of the CL Act, these principles are:

- that environmental protection principles be observed in relation to the management and administration of Crown land;
- that the natural resources of Crown land (including water, soil, flora, fauna and scenic quality) be conserved wherever possible;
- that public use and enjoyment of appropriate Crown land be encouraged;
- that, where appropriate, multiple use of Crown land be encouraged;
- that, where appropriate, Crown land should be used and managed in such a way that both the land and its resources are sustained in perpetuity, and
- that Crown land be occupied, used, sold, leased, licensed or otherwise dealt with in the best interests of the State consistent with the above principles.

In July 2005, the Crown Land Legislation Amendment Act 2005 was passed and introduced a comprehensive body of amendments to the CL Act. These amendments allow flexibility in the granting of leases, permits, easements or right of way provisions over a Crown reserve. Section 112 allows that a Crown reserve may be used for a purpose that is additional to the purpose for which the land has been reserved or dedicated if the additional purpose is authorised by a plan of management for the reserve.

### **1.3.2 Requirements of a Plan of Management for a Crown Reserve**

This plan of management has been prepared according to the requirements of the CL Act.

Specific objectives of a plan of management for Crown land are to:

- Identify the values of the reserve to the community.
- Identify potential opportunities for future development of the reserve based on community priorities.
- Identify threats to the ecological quality of the bushland.
- Address issues, including leases and licences, the preferred mix of recreational facilities, conflict between users, weed invasion in bushland and the recreational needs of residents.
- Prepare a concept plan showing practical future developments.
- 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 the future management and maintenance of the reserve. (Trust Handbook)

## 2. Reserve Assessment

Site investigations were carried out during September and October 2008 and included discussions with Land & Property Management Authority (LPMA) staff, a review of existing literature and aerial imagery. Orthophoto maps and topographic maps were also used to determine the physical character and context of the site.

### 2.1 Reserve Location and Description

Olinda Reserve is 1,412.59 hectares in size and located approximately 17 kilometres east of Rylstone, NSW. The land is predominantly comprised of intact bushland on top of plateaus edged with cliffs.

The reserve is within the traditional lands of the Wiradjuri language group and is located within the South Eastern Highlands Biogeographic Region.

Olinda Reserve is located on the Great Dividing Range in the Central Tablelands of NSW. The reserve is comprised of a forested ridge dividing the Capertee and the Olinda Valleys and adjoins Wollemi National Park at its easterly extent. The topography of the reserve is steep with areas of cliff escarpment, pagodas and ridges. The altitude ranges from 700 to 910 m.s.l. The area features diverse vegetation communities and spectacular rock outcrops called pagodas. The reserve offers spectacular views over the surrounding country, and provides a stunning backdrop to both the Capertee and Olinda Valleys.



*Figure 1. Olinda Reserve seen from Dunville*

The main portion of the reserve (69627) is located on the main ridgeline. Lots 7002, 7003 and 68 are separated from the main section of the reserve by a distance of 300 to 800 metres, with private properties in between.

As the reserve is located on the Great Dividing Range, the creeks arising from the southern side of the reserve flow into the Capertee River, which flows into the Hawkesbury - Nepean River system, while the creeks originating on the northern side of the catchment flow into the Cudgegong River and eventually into the Murray - Darling River system. Therefore the reserve feeds into two water catchment areas.

The geology of the area is represented by the Triassic Narrabeen Group, comprised of sandstone, conglomerate, shale and red and green claystone. Basalt remnants are also present as shown by areas of grassy ridges and slopes in a few areas.

## 2.2 Background and History

### 2.2.1 Purpose of Reservation

The notified purposes of the two original reserves which make up most of Olinda Reserve are 'future public requirements' and 'soil conservation'.

### 2.2.2 Current Leases and Licences

Several parcels within the reserve are leased for grazing purposes, as follows:

**Grazing Licence 204251** – Norma Ida Ann Dunn over Lots 74 and 75 and Lot 111;

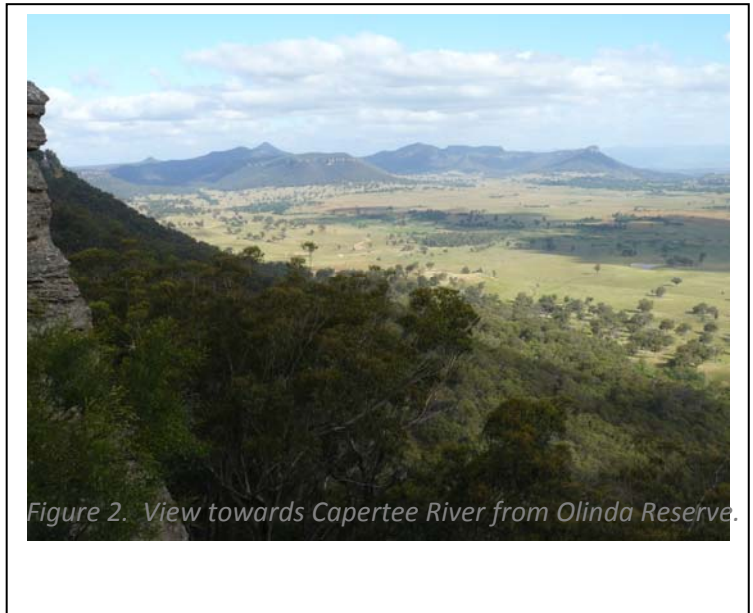
**Grazing Licence 307330** – Olinda Pastoral Co Pty Ltd over Lot 82;

**Grazing Licence 307012** – Olinda Pastoral Co Pty Ltd over Lot 68.

## 2.3 Surrounding Land Use and Regional Context

Olinda Reserve is bordered primarily by private lands including small rural blocks and larger landholdings. Beef cattle grazing is the main industry. Wollemi National Park is located to the east of the reserve.

The Capertee Valley is becoming an important tourist attraction in its own right, due to its magnificent scenery and rare and threatened animal and plant species. The proximity of Wollemi National Park and the heritage town of Glen Davis adds to the area's attractions. The nearby towns of Rylstone and Kandos are located approximately 17 kilometres away, and the larger regional centre of Mudgee is approximately 70 kilometres away.



## 2.4 Cultural Values

### 2.4.1 Aboriginal Heritage

A data search of DECCW's Aboriginal Heritage Information Management System (AHIMS) and Historic Heritage Information Management System (HHIMS) found one recorded Aboriginal site adjacent to the reserve, located on private land (see Map 3). The site is comprised of a rock shelter with hand stencils. There would undoubtedly be other Aboriginal sites nearby due to extensive rock shelters and outcrops. Recent surveys in parts of Wollemi National Park have uncovered many outstanding Aboriginal art sites.

The area would most definitely have been used traditionally by Aboriginal people and would have value for contemporary Aboriginal people. The reserve is within the territory of the Wiradjuri language group.



Map 3. Location of Aboriginal site

#### 2.4.2 European Heritage

Historically, the passes over the ranges (Spring Gap, Bogee Angles Gap and Teatree Gap – see Map 2) would have been used for moving stock from property to property.

Logging has also occurred in the past, with locals mentioning that bullock drays were used to remove the timber from the ridge-tops. Some very old remnant tree stumps can still be found from this past logging. Grazing of stock is likely to have occurred in the area in the early 1900's, in particular on the grassy, basalt influenced areas.



Figure 3. Looking north from Spring Gap

In the 1800s, there were also a few bushrangers in this area. It is possible that they utilised the areas of rough, inaccessible country as hideouts.

The valleys in this area have been settled since the early 1800s. Many of the descendents of the first settlers still reside in the area. Notable early families includes the Dunns, the Clarkes and the Farrers.

## 2.5 Climate

The climate of the region is temperate. Summers are warm to hot, generally ranging from 16°C to 33°C. Extreme temperatures into the high 30's also occur sporadically. Winters are cool to cold with the average daily temperature varying from 2°C to 15°C, with frequent morning frosts.

The area's topography as valley areas surrounded by higher plateaus creates a rainshadow effect, with decreased rainfall in some areas.

Average annual rainfall recorded at Glen Davis is 634 mm.

## 2.6 Landform, Geology and Soils

The sandstone plateaus in this region are predominantly formed of bedrock from the Triassic Narrabeen Group, comprised of sandstone, conglomerate, shale and red and green claystone. These in turn overlay the Permian era coal measures. Some areas of sandstone exhibit leached iron deposits and stone formations (known as pagodas) which are a spectacular feature of these landforms.

The Narrabeen sandstone produces shallow, infertile sandy soils which drains well. Sheltered creeklines have the benefit of added organic matter which can produce more fertile soils.

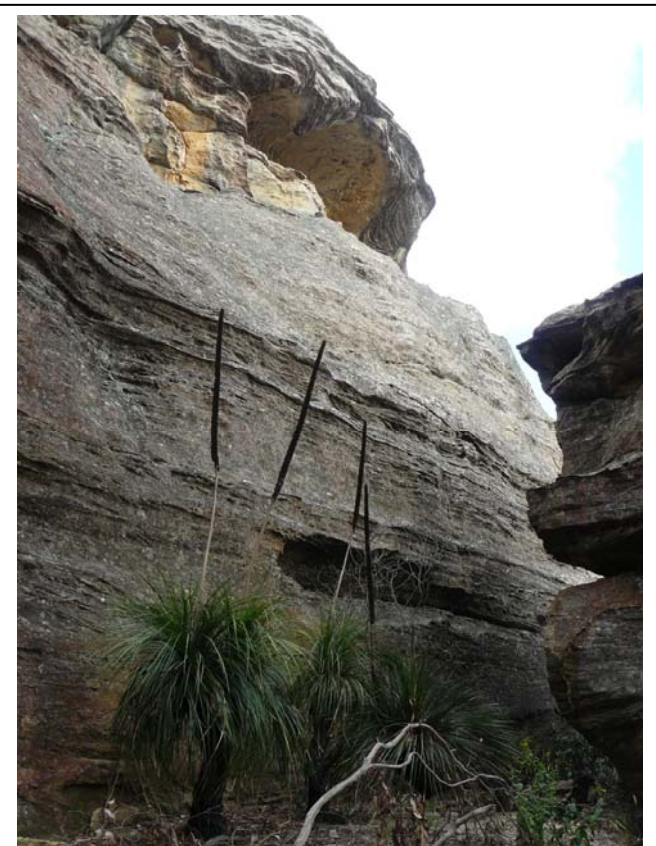


Figure 4. Pagoda rock formations

Remnant basalt is also present on the plateau as shown by the presence of some fertile areas of grassy ridges and slopes.

The reserve ranges in elevation from approx 600 m.s.l in the valleys to 871 m.s.l on the plateau.



## 2.7 Vegetation

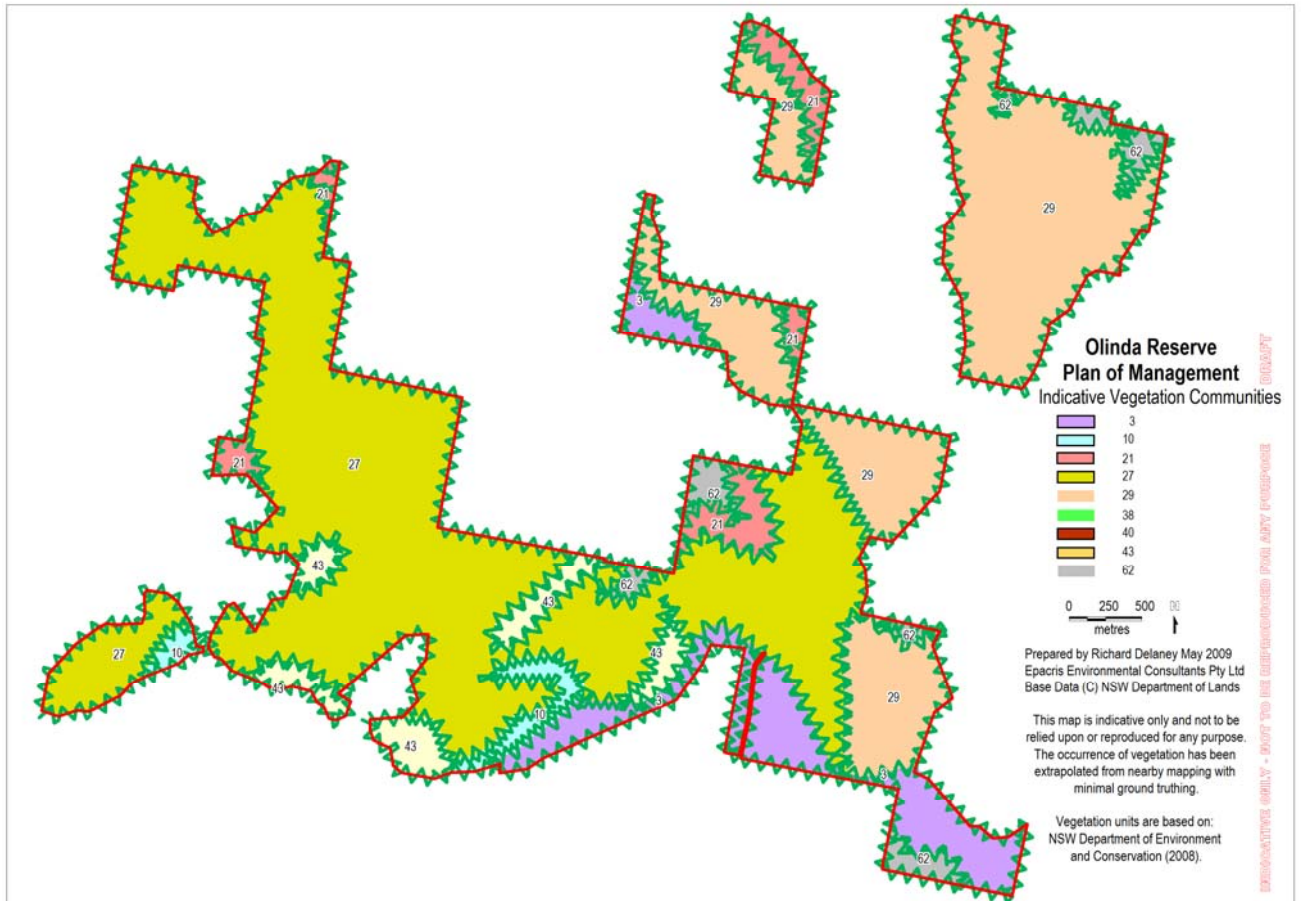
### 2.7.1 Native Plants

Vegetation mapping of the western Blue Mountains was carried out by the Department of Environment and Climate Change and Water (DECCW) in 2006. A small portion of the reserve is covered by the mapped area, and assists in indicating the vegetation that may occur on site. Site inspection of the Spring Gap area has confirmed the vegetation communities mapped by DECCW are present in that area.

The vegetation communities that occur through the reserve are represented by the following vegetation units:

- Hillslope Talus Mountain Grey Gum – Brown Stringybark – Grey Gum – Broadleaved Hickory Moist Forest;
- Capertee Residual Basalt Brittle Gum – Stringybark Layered Open Forest;
- Capertee – Wolgan Slopes Red Box – Grey Gum – Stringybark Grassy Woodland;
- Mount Airly Sydney Peppermint – Narrow Leaved Stringybark – Grey Gum Shrubby Open Forest;
- Sandstone Slopes Sydney Peppermint Shrubby Forest;
- Pagoda Rock Sparse Shrubland.

The indicative distribution of vegetation communities within the reserve is shown in Map 4.



Map 4. Indicative vegetation communities

Vegetation communities indicated on map:

- 3. Hillslope Talus Mountain Grey Gum – Brown Stringybark – Grey Gum– Broadleaved Hickory Moist Forest
- 10. Capertee Residual Basalt Brittle Gum – Stringybark Layered Open Forest
- 21. Capertee – Wolgan Slopes Red Box – Grey Gum – Stringybark Grassy Woodland
- 27. Mount Airly Sydney Peppermint – Narrow Leaved Stringybark – Grey Gum Shrubby Open Forest
- 29. Sandstone Slopes Sydney Peppermint Shrubby Forest
- 43. Pagoda Rock Sparse Shrubland
- 62. Cleared



Several threatened plant species have been recorded within 10 km of the reserve, as listed below:

Evan's Grevillea	<i>Grevillea evansiana</i>	Vulnerable
Capertee Stringybark	<i>Eucalyptus cannonii</i>	Vulnerable
Brown Pomaderris	<i>Pomaderris brunnea</i>	Vulnerable
Rylstone Bell	<i>Leionema sympatelum</i>	Vulnerable
	<i>Pultenaea</i> sp. Olinda	Endangered
	<i>Baeckea kandos</i>	Endangered

It is highly likely that further investigation will reveal some of these endangered flora species within the reserve lands.

Olinda Reserve is considered to be of high conservation value. The reserve adjoins Wollemi National Park and is valuable as a corridor connecting to this very large wilderness area. The reserve plays an important part in maintaining catchment health in two water catchments, and provides spectacular backdrop scenery to a large region. The reserve is appreciated for its natural values by neighbouring residents.



Figure 5. Vegetation – Olinda Reserve

### 2.7.2 Connectivity

The connectivity value of the reserve is high as it adjoins Wollemi National Park, and other escarpment areas. As much of the land surrounding the reserve has largely been cleared for grazing, the undisturbed, intact value of this reserve is high.

## 2.8 Fauna

The reserve provides very important corridor and habitat values within a largely cleared rural landscape. A variety of habitat types are present, in the form of hollows, pagodas and rock crevices and caves, gullies and dense vegetation.

As the reserve is comprised of rugged, largely inaccessible country, it provides an excellent refuge area for fauna.

Several threatened bird species have been recorded within 10 km of the reserve, as listed below:

Regent Honeyeater	<i>Xanthomyza phrygia</i>	<i>Endangered</i>
Speckled Warbler	<i>Chthonicola saggitatus</i>	<i>Vulnerable</i>
Diamond Firetail	<i>Stagonopleura guttata</i>	<i>Vulnerable</i>
Gang Gang Cockatoo	<i>Callocephalon fimbriatum</i>	<i>Vulnerable</i>
Powerful Owl	<i>Ninox strenua</i>	<i>Vulnerable</i>

Fauna observed during the site visit are listed below:

Several lyrebird (*Menura novaehollandiae*) nests were observed.

Wallaroo	<i>Macropus robustus</i>
Swamp Wallaby	<i>Wallabia bicolor</i>
Grey Kangaroo	<i>Macropus giganteus</i>

Local residents also recalled past occurrences of Spotted-tailed Quoll (*Dasyurus maculatus*) and possibly Brush-tailed Rock Wallaby (*Petrogale penicillata*).



Figure 6. Lyrebird nest in rock crevice

## 2.9 Bushfire

Fire is a naturally occurring process in the Australian environment, and many native plants and animals are adapted to occasional fire events. Too frequent fire events, however, have the ability to alter the vegetation communities within an area, and also impact upon the species that live there.

Most fire events in this area either start off the reserve and then burn onto the reserve, or are started through lightning strikes within the reserve. A fire that



originated on private land burnt through parts of the reserve in 2006. Fire control is usually implemented speedily due to the presence of private properties surrounding the reserve and the proximity to roads and tracks.

The local fire district is the Cudgegong District Rural Fire District, and there are local brigades based at Bogee and Olinda.

## 3.0 Basis for Management

### 3.1 Current Impacts and Uses

This section aims to identify the known activities occurring within Olinda Reserve, and the uses of the reserve.

#### 3.1.1 Reserve Access

Although a dominant feature of the landscape, the tenure of the reserve would probably only be known to adjoining landholders and it is likely that many people think it is national park. The neighbours that live in the properties adjacent to the reserve value its natural and scenic qualities.

Access to the reserve is very limited, as it is enclosed by private properties. Access on foot would be possible through Wollemi National Park, however this route would entail a bushwalk of several hours and good navigation skills. Access to Lot 68 and Lot 7002 is possible from the road, however this section of reserve is an 'island' within developed rural land, and does not connect onto the main portion of the reserve. Several Crown roads do access the reserve, however these pass through private property, and most have locked gates on them.

Three passes are known to be present over the main range – these are: Spring Gap; Bogee Angles Gap and Tea Tree Gap (see Map 2). The passes are potentially navigable by four wheel drive, however are generally unmaintained, therefore fallen timber may block the tracks from time to time. Entry to these passes is through private property. These tracks are likely to all be utilised during fire events, for access to the plateau.

Due to the rugged terrain, and the inaccessibility, the reserve is currently used only rarely by adjoining landholders who may bushwalk or horse-ride in the area.

#### 3.1.2 Grazing Licences

Five lots within the reserve are currently under grazing licence arrangements. These are Lots 68, 82, 75, 74 and 111.

#### 3.1.3 Introduced species

Due to the reserve predominantly being located on the tops of an undeveloped escarpment area, little in the way of weed species have become established.

A few vertebrate feral species are likely to be present, i.e. foxes, goats and wild dogs. Pigs are becoming more of a problem in the area, but tend to prefer the more fertile alluvial flats.

#### 3.1.4 Erosion and catchment/water quality

Little erosion is present however with any increase in use, some tracks on steep slopes have the potential to erode. Fire can also result in increased erosion through the removal of the vegetation and subsequent increased mobility of the soil.

Maintenance of erosion in the area is essential due to the importance it plays in the maintenance of water quality in two catchments, the Hawkesbury/Nepean (via the Capertee River) and the Murray/Darling (via the Cudgegong River) systems.

### 3.1.5 Bushfire

There are no significant built or cultural heritage assets which are at risk from fire within the reserve, but vegetation and fauna may be adversely affected by inappropriate fire regimes.

Wildfires commencing on or burning into the reserve pose a potential threat to private lands and assets which adjoin the reserve. Severe fire weather is likely to involve winds from the north to south-west, so the threat to neighbours is greatest on the northern, eastern and southern boundaries of the reserve. Adjoining lands are predominantly downslope from the reserve.

Under the Rural Fires Act 1997, the LPMA is responsible for managing fire on Olinda Reserve. The LPMA works closely with the Rural Fire Service, other agencies and reserve neighbours to manage fire on the reserve.

Parts of the reserve were severely burnt in 2006, by a fire that originated in farmland. Discussion with local residents indicate that fire frequency for the reserve is low.

### 3.1.6 Timber Felling/Removal

There are signs that timber was collected historically on the reserve. Landholders mentioned that timber was collected and transported by bullock dray in the early 1900's. No recent timber collection has occurred.



*Figure 7. Evidence of old timber collecting in area*

### 3.1.7 Management

Due to the values of the site as a large area of intact vegetation in an otherwise largely cleared landscape, any potential uses of the reserve must be consistent with conservation. There is potential for the reserve to be added to the national parks estate, however due to the fragmented nature of the lots, surrounded by cleared lands, this may not be tenable.

Due to the largely untouched bushland, and spectacular views, the reserve provides excellent opportunities for bushwalking. However the limited access makes this activity difficult for any except adjoining landholders.

The value of this reserve lies in its inaccessibility, its remoteness and its untouched condition. There is high potential for threatened flora and fauna species to be present within the reserve lands.



## 4.0 Main Issues, Strategies and Actions

There are very few issues within this reserve due to its inaccessibility.

### 4.1 Identification, Access and Recreation

Currently there is no signage to identify the reserve or its purpose, and this is not considered to be required for the majority of the reserve. A Crown reserve sign could be erected on Lot 68.

Several Crown roads do access the reserve, however these pass through private property, and most have locked gates on them.

Consideration should be given to establishing a Conservation Agreement through the Department of Environment, Climate Change and Water (DECCW) over the reserve, this will enhance its conservation security now and into the future.

#### Strategies and Actions

- Inform all neighbours and the local community of the reserve's status and that certain activities are illegal (unauthorised vehicle access, timber collection).
- Maintain the reserve for its natural and scenic values.
- Establish a Conservation Agreement over the reserve to enhance the conservation security of the reserve.

### 4.2 Grazing Licences

Six lots within the reserve are currently under grazing licence arrangements. These are Lots 68, 82, 7303, 75, 74 and 111. Continuation of these licences is recommended along with greater liaison with the LPMA to implement a co-ordinated approach to management.

#### Strategies and Actions

- Continue the existing grazing licences with a co-ordinated approach to management.
- Do not re-issue grazing licences if they are cancelled by either party.

### 4.3 Introduced Species

Few introduced weed species occur on the reserve. Feral animal control should be carried out in conjunction with current control programs throughout the district.

#### Strategies and Actions

- Implement feral animal control in conjunction with programs run by the Livestock Health and Pest Authority (LHPA).



#### 4.4 Erosion and Catchment/Water Quality

Erosion is not an issue at this stage within the reserve.

##### Strategies and Actions

- Assess the condition of tracks bi-annually, and rectify any identified erosion issues.

#### 4.5 Bushfire

Fire is an event that will occur from time to time in the reserve. The predominant aim is to protect the adjoining properties and to maintain the reserve's natural values.

A hazard reduction burn has been scheduled by the Rural Fire Service for Lot 7003 during the 2009/2010 period.

##### Strategies and Actions

- Develop a simple fire plan for the reserve in conjunction with the local Rural Fire Service, neighbours, National Parks and Wildlife Service and other stakeholders.
- Apply within the fire plan, biodiversity threshold guidelines for plant communities that are consistent with the best available ecological knowledge. Initially, apply the thresholds from the Fire Management Strategy for Wollemi National Park (NSW NPWS, 2005) as follows (thresholds, if exceeded, indicate when plant species decline is possible):
  - Sandstone Sheltered Forests and Sandstone Rocky Heath:
    - avoid two or more successive fires each less than 10 years apart
    - no fire for more than 30 years
    - two or more successive fires with 100 per cent canopy scorch.
  - Major Sandstone Plateau Forests and Woodlands, Arid Sandstone Plateau Forests and Woodlands:
    - avoid two or more successive fires each less than 10 years apart
    - no fire for more than 25 years
    - two or more successive fires with 100 per cent canopy scorch.
  - Permian Talus Woodland:
    - avoid two or more successive fires each less than 15 years apart
    - no fire for more than 25 years
    - two or more successive fires with 100 per cent canopy scorch.



- Dry Basalt Forests and Woodlands:
  - two or more successive fires each less than 5 years apart
  - no fire for more than 20 years
  - two or more successive fires with 100% canopy scorch.



## 5.0 Implementation

The management actions specified in Section 4.0 above will be implemented by the LPMA, or any subsequent managing authority, according to the resources available and the broad priorities indicated in Table 1.

The LPMA will monitor and assess the implementation of this plan according to the criteria shown in Table 1.

Table 2. Management priorities and performance criteria

Strategy/Action	Priority	Performance Criteria
<b>4.1 Identification, Access and Recreation</b>		
<b>Inform all neighbours and the local community of the reserve's status and that certain activities are illegal (unauthorised vehicle access, timber collection).</b>	High Ongoing	- Human impacts and illegal activity are reduced.  - Neighbours & community are involved in reserve management.
<b>Maintain the reserve for its natural and scenic values.</b>	High Ongoing	- No significant impact on natural and scenic values.
<b>Establish a Conservation Agreement over the reserve to enhance the conservation security of the reserve.</b>	Medium	- Conservation Agreement is established.
<b>4.2 Grazing Licences</b>		
<b>Continue the existing grazing licences with a co-ordinated approach to management.</b>	Medium	- Grazing is properly managed to minimise impacts on the reserve.
<b>Do not re-issue grazing licences if they are cancelled by either party.</b>	Medium	- Grazing licences are not re-issued on termination.
<b>4.3 Introduced Species</b>		
<b>Implement feral animal control in conjunction with programs run by the Livestock Health and Pest Authority (LHPA).</b>	High Ongoing	- Occurrence of feral animals is steadily reduced.  - No new feral animal species become established.
<b>4.4 Erosion and Catchment/Water Quality</b>		
<b>Assess the condition of tracks bi-</b>	High	- Roads and trails are



<b>annually, and rectify any identified erosion issues.</b>	Ongoing	effectively maintained with minimal erosion.
<b>4.5 Bushfire</b>		
<b>Develop a simple fire plan for the reserve in conjunction with the local Rural Fire Service, neighbours, National Parks and Wildlife Service and other stakeholders. Include appropriate fire management zones and biodiversity threshold guidelines.</b>	Medium	<ul style="list-style-type: none"><li>- Reserve fire plan is adopted.</li><li>- Fire is managed according to fire plan.</li><li>- Vegetation communities remain within identified fire thresholds.</li><li>- Neighbours are satisfied with fire management in the reserve.</li></ul>



## 6.0 References

Atlas of NSW Wildlife database

Department of Environment and Climate Change (2006) *The Vegetation of the Western Blue Mountains*. DECC/Hawkesbury Nepean CMA.

Department of Lands Trust Handbook 2005. [www.lpma.nsw.gov.au](http://www.lpma.nsw.gov.au)

*A guide to the Local Government Act and Crown Lands Act*. DLWC Sydney

Department of Lands.

Department of Mineral Resources (1991) *Geological Mapping Series Sheets, 1:250,000*, 1st edition, Department of Mineral Resources.

Keith, D (2004) *Ocean Shores to Desert Dunes – The Native Vegetation of New South Wales and the ACT*. NSW National Parks and Wildlife Act.