



Department of Lands



Dungog Shire Council

Plan of Management

Pilchers Reserve

Adopted by Council 17 March 2009

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- A List of Flora Species Identified in the Reserve
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Pilchers Reserve

Crown Reserve No.: 1002990 (dedicated for Environmental protection on the 15 December 2000)

Land Information: Lot 338 DP 1009839

Size: 30.07 hectares

Description of the Reserve:

Pilchers Reserve is a regionally significant stand of remnant dry rainforest, with deep sandstone gorges and caves. The Reserve is at the southern limit of the normal distribution of this vegetation sub alliance and is particularly rich in species diversity, which may be the result of the variability in the topography in the Reserve.

Access to the Reserve is restricted as it is surrounded by privately owned land.

Current Uses of the Reserve:

The Reserve is currently used by various community groups for passive recreational activities and exploring. Individuals also visit the Reserve to explore the caves and gorges. The site is also of indigenous cultural significance.

1. Introduction

1.1 Background

Pilchers Reserve (the Reserve) is a regionally significant stand of remnant dry rainforest with distinct topographic features located in the Wallarobba Range, approximately 5 kilometres south west of Dungog, within the Dungog Local Government Area (LGA). The Reserve is located on the southern face of Pilchers Mountain.

The Reserve is Crown Land and was dedicated for Environmental Protection under the *Crown Lands Act 1989* in 2000 and gazetted under the care and control of Dungog Shire Council (the Council) in 2003. Council is the appointed Trust Manager of the Reserve.

To ensure that the future management of the Reserve is in accordance with the Environmental Protection dedication, the Council resolved to prepare a Plan of Management (PoM) for the Reserve.

Council resolved to form the Pilchers Reserve Committee (the Committee) to oversee the development of the PoM and aid in the implementation of any of recommendations, which may arise from the preparation of the PoM. The Committee comprises adjacent landholders, representatives from the community, Department of Environment and Conservation (National Parks and Wildlife Service), Department of Lands, the local Aboriginal Community and the Council.

The PoM is being prepared in accordance with the provisions of the *Crown Lands Act 1989* and will establish a strategic framework for the future management and use of the Reserve.

The PoM aims to provide a balanced and coordinated approach for the future management, protection and enhancement of Pilchers Reserve.

1.2 Property and Reserve Description

The land covered by this PoM is described as Lot 338, DP 1009839, Wallaringa Road, Dungog. The Reserve was dedicated for Environmental Protection under the *Crown Lands Act 1989* on 15 December 2000 (Reserve No. 1002990). The Reserve is 30.07 hectares in area.

Grazing land owned by private landholders surrounds the Reserve.

Figure 1.1 shows the location of the Reserve.

1.3 Purpose of the Plan of Management

The purpose of this PoM as confirmed by the project brief is to:

- ▶ *Satisfy the requirements of the Crown Lands Act 1989 (refer to page 6);*
- ▶ *Ensure that the natural and cultural values of the Reserve are conserved and enhanced;*
- ▶ *Allow for and manage continued use of the Reserve for passive recreation, education and research; and*
- ▶ *Balance the issues of conservation, public access, recreation and business opportunities and landholders' interests in the future management of the Reserve.*

To achieve this, the Reserve requires the production of a Plan of Management in accordance with Part 5 Division 6 Section 112 to 114 of the *Crown Lands Act 1989*, for the future management of the Reserve.

1.4 Structure of the Plan of Management

The Plan of Management is presented in four main sections:

- ▶ **Section 1 – Introduction and Background Information**

Section 1 outlines the purpose of the PoM, property description, relevant legislative controls and activities undertaken to date for the PoM.

- ▶ **Section 2 – Context for Management**

Section 2 outlines the physical description of the Reserve, current access arrangements, cultural heritage of the area and biological features of the Reserve.

- ▶ **Section 3 – Basis for Management**

Section 3 provides an outline of the issues and concerns raised during the consultation process, the current uses of the Reserve and the vision adopted for the management of the Reserve.

- ▶ **Section 4 – Managing Pilchers Reserve**

Section 4 outlines the strategies, action plans, funding sources and implementation and review of the PoM.

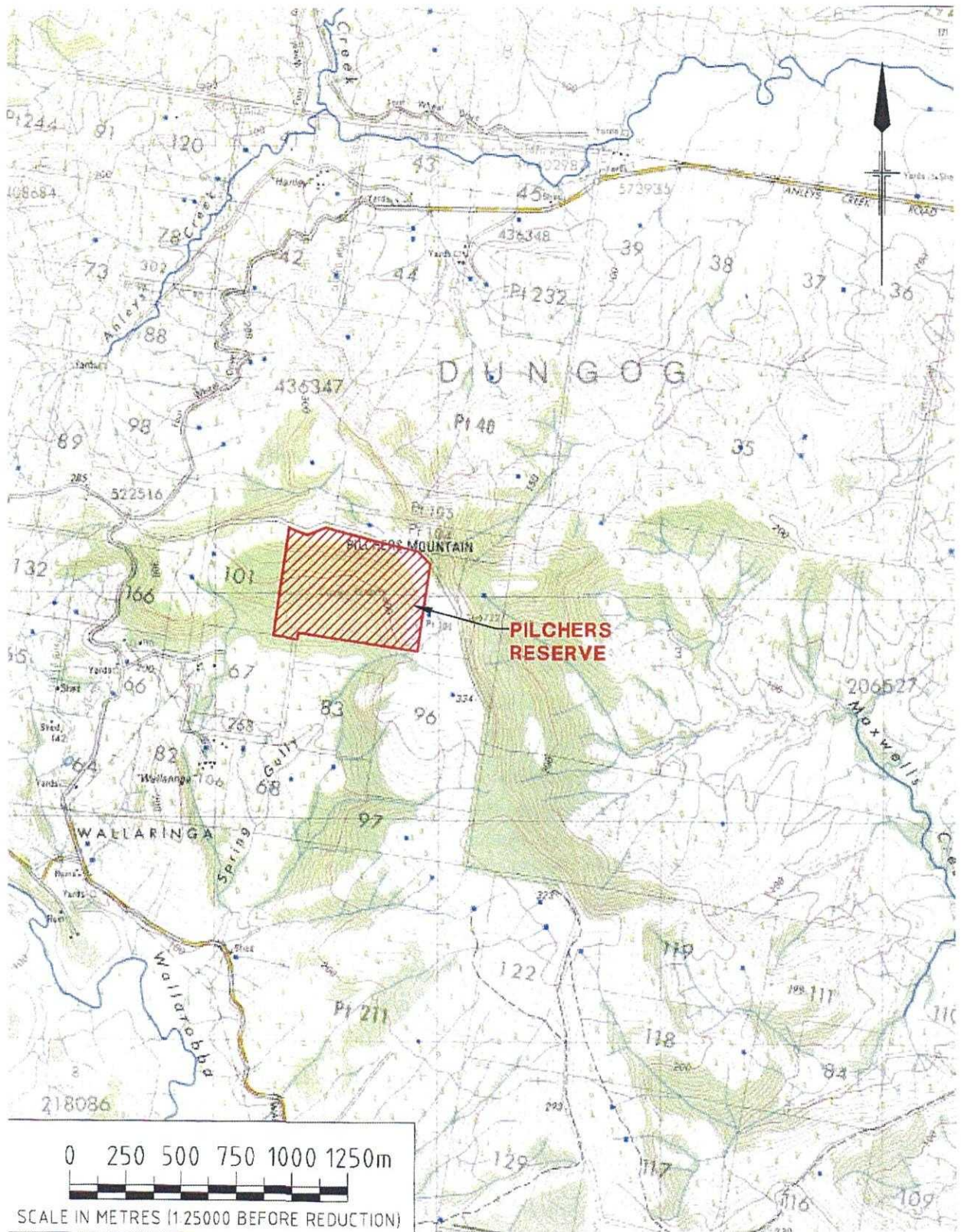


Figure 1.1 Location of the Reserve

1.5 Management Plan Framework

1.5.1 Planning Context

Local and State legislative requirements direct the development of the PoM:

Crown Lands Act 1989

The Department of Lands is responsible for the management of Crown Reserves under the *Crown Lands Act 1989* along with the community of NSW. Dungog Shire Council is the trustee manager of Pilchers Reserve.

Section 11 of the *Crown Lands Act 1989* outlines the principles by which Crown lands are to be managed:

- (a) *that environmental protection principles be observed in relation to the management and administration of Crown land;*
- (b) *that the natural resources of Crown land (including water, soil, flora, fauna and scenic quality) be conserved wherever possible;*
- (c) *that public use and enjoyment of appropriate Crown land be encouraged;*
- (d) *that, where appropriate, multiple use of Crown land be encouraged;*
- (e) *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*
- (f) *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.*

Dungog Local Environmental Plan 2006

The Local Environmental Plan (LEP) for the Dungog Shire Area has recently been replaced with a new plan gazetted early in 2006. The Pilchers Reserve Plan of Management will need to comply with the zone objectives of the new LEP.

Under the *Dungog Local Environmental Plan 2006*, the Reserve is zoned 7(a) Environment

The objectives of Zone 7(a)1 are to identify and protect:

- (a) environmentally sensitive lands having special aesthetic, scenic, ecological or conservational value, and
- (b) key ecological habitats and wildlife corridors, and
- (c) land within water catchment areas, by regulating development so as to avoid uses of land that would destroy or damage the quality and quantity of raw drinking water, and
- (d) flood prone areas.

1.5.2 Plan of Management Process

Development of the Plan of Management that complies with the *Crown Lands Act 1989* included the following key phases:

Issues Identification

The issues and concerns relevant to the Reserve were sourced from a variety of activities undertaken by the consultants. These include:

- ▶ Discussions with Dungog Shire Council and Department of Lands;
- ▶ Site visit/field investigation;
 - Assessment of current uses; and
 - Identification of access to the site.
- ▶ Letters to Authorities and the Local Aboriginal Land Councils;
- ▶ Discussions with the Pilchers Reserve Committee; and
- ▶ Invitation to comment by public notice in the Dungog Chronicle.

Community Consultation

Community consultation is a significant component in the development of the PoM as it is integral to identifying the values and issues relevant to the Reserve. Key stakeholders associated with Pilchers Reserve include:

- ▶ Surrounding Landholders;
- ▶ The Aboriginal community;
- ▶ Statutory authorities;
- ▶ Those responsible for the management of the Reserve; and
- ▶ Those that use the Reserve.

Community consultation undertaken during the preparation of the draft PoM includes:

Pilchers Reserve Committee Meetings

At the commencement of the project, GHD (the consultants preparing this Plan of Management) met with the Pilchers Reserve Committee at Dungog Shire Council to identify potential issues. Additional meetings have been held during the development of the Issues Paper and the draft PoM.

An Issues Paper was provided to the Committee in August 2004 and a meeting to discuss this paper and the preparation of the Draft Plan of management was held soon after in September.

The Draft POM was placed on public exhibition by Council in March/April 2005 and submissions on the draft were considered by the Committee at a meeting in April.

A significant number of changes were made at this and subsequent meetings in response to submission received and a revised version will need to be considered by Council, the Department of Lands and released for further comment prior to being finalised.

The Karuah Aboriginal Land Council provided a submission on Aboriginal heritage in relation to the reserve and its future management. Meetings between members of the Committee and KLALC representatives were also held in 2006 and 2007.

A final draft of the POM was adopted by the Committee in December 2007. This draft was considered by Dungog Shire Council in February 2008 and forwarded to the Department of Lands prior to being placed on public exhibition.

Invitation for Comment – Media Release

An advertisement inviting the community to identify issues to be addressed in the draft Plan of Management was placed in the *Dungog Chronicle* on 4 and 11 August 2004.

Concerns and suggestions for the Reserve received from the advertisement formed the basis of the Issues Paper.

Public comment was again invited and submissions considered when Draft POMs were placed on exhibition for a minimum of 28 days in March/April 2005 and again in December, January 2008/2009

Authority Consultation

Authority consultation was undertaken during the preparation of the draft PoM. The following authorities were invited to comment on the issues and future management of the Reserve:

- Department of Environment and Climate Change (formerly National Parks and Wildlife Service);
- Department of Lands;
- Department of Infrastructure, Planning and Natural Resources;
- Dungog Shire Council; and
- Department of Primary Industries.

Representatives from the NPWS, Department of Lands and Council were also represented on the Pilchers Reserve Committee.

Issues Paper

Using the issues identified in the issues identification phase and the community and authority consultation process, an Issues Paper was developed that compiled the key issues and concerns, and established the management framework for the Draft Plan of Management.

Plan of Management

The Plan of Management was prepared in accordance with the Department of Lands (formerly DLWC) document "Succeeding with Plans of Management" (DLWC, 1996), which states that a plan of management needs to address the following key topics:

- Basis For Management: What is the environmental, social and cultural significance of the reserve that need to be reflected in or maintained by the Plan of Management;
- Management Strategies: The objectives and overall strategies to be implemented to ensure that these significant characteristics are maintained; and
- Action Plan: The specific actions to be implemented to ensure the objectives and overall strategies are achieved.

1.5.3 Land Assessment

A Land Assessment was undertaken of the Reserve by the former Department of Land and Water Conservation (DLWC) in 1995. The assessment examined the land capability and suitability and determined that suitable land uses for the Reserve were:

- ▶ Environmental Protection (regional significance);
- ▶ Nature Conservation (local significance); and
- ▶ Recreation (passive nature).

Notwithstanding timeframes, the Land Assessment is considered relevant; and the suitable land uses it determined form the basis for current and future management of the Reserve.

1.5.4 Implementation and Review

It is anticipated that the PoM management actions will be implemented within the next 10 years. Following the adoption of the PoM by the Minister for Lands, pursuant to Section 114 of the *Crown Lands Act 1989*, the Council is obligated to implement the PoM and ensure uses of the Reserve, are consistent with the PoM. Pursuant to Section 115 of the *Crown Lands Act 1989*, the PoM may be altered from time to time to reflect the changing wants and needs of the community -- subject to the above principles of Crown land management -- to ensure the PoM continues to be applicable to the Reserve.

1.5.5 Accountability

The accountability of Council in terms of the management of the Reserve is to be undertaken pursuant to Section 33 and 34 of the *Crown Lands Regulation 2000*. Section 33 requests Council to report annually to the Minister for Lands detailing income, expenditure, assets, liabilities, improvements effected, licences or leases granted or in force by Council.

Section 34 directs that Council must keep the following record as detailed in Schedule 4 of the *Crown Lands Regulation 2000*:

- (1) *Monetary details in respect of each reserve from which the Council receives revenue of any nature;*
- (2) *Details of improvements effected the Reserve; and*
- (3) *Details of all leases and licences granted or in force.*

1.5.6 Compliance and Enforcement

Crown Lands Act 1989

The Act permits an authorised person (a police officer, someone approved by the Minister for Lands or a person holding an office, rank or position "*prescribed for the purposes of this definition*" – (the *Crown Lands Regulation 2000* prescribed Department of Lands personnel) to issue a penalty notice for committing an offence under the Act prescribed by the *Crown Lands Regulation 2000*, provided their

prohibition is identified on a sign located *"in a conspicuous place or near the land"*. These include:

- "(a) conducting any entertainment, instruction or performance for money or consideration of any kind,*
- (b) operating television, cinematographic or photographic equipment for commercial purposes,*
- (c) conducting or taking part in any sporting activity that forms part of an organised competition,*
- (d) selling, offering for sale or distributing any article or thing,*
- (e) affixing any sign, bill, poster, banner or bunting on, or to, any tree or any post, building, fence, seat, table, enclosure or other structure,*
- (f) camping,*
- (g) lighting of fires other than in a properly constructed fire place,*
- (h) driving a vehicle or riding a horse,*
- (i) carrying or using firearms,*
- (j) discharging fireworks,*
- (k) using any bow and arrow or throwing any stone or other dangerous missile,*
- (l) drinking alcohol,*
- (m) selling, offering for sale or otherwise providing alcohol to a person."*

Local Government Act 1993

Section 679 of the Local Government Act 1993 states that:

- (1) An authorised person may serve a penalty notice on a person if it appears to the authorised person that the person has committed an offence under this Act (other than an offence under section 312, 642, 650 or 651), being an offence prescribed by the regulations.*
- (2) A penalty notice is a notice to the effect that, if the person served does not wish to have the matter determined by a court, the person may pay, within the time and to the person specified in the notice, the amount of penalty prescribed by the regulations for the offence if dealt with under this section.*

An "authorised person" under the *Local Government Act 1993* includes:

- "(a) an employee of a council generally or specially authorised by the council in respect of or whose duty it is to deal with, or to act in regard to, any acts, matters or things in relation to which the expression is used, or*
- (b) a police officer."*

The Local Government Regulation 1999 lists a range of penalty notice offences for which offenders can be fined for, including unauthorised trade, littering, vandalism, unauthorised consumption of alcohol and unauthorised use of vehicle and parking.

1.6 Liability Context

In addition to addressing the planning requirements of the *Crown Lands Act 1989* and the Dungog Local Environmental Plan, the Plan of Management also needs to be prepared with consideration of the protection of the public liability risks of the Committee, Council and the adjoining private property owners.

1.6.1 Liability Responsibility Legislation

The *Civil Liability (Personal Responsibility) Act 2002* was developed and implemented by the State government with the objective to reform the civil liability system.

The general principles of the Act are:

- (1) *A person is not negligent in failing to take precautions against a risk of harm unless:*
- (a) *the risk was foreseeable (that is, it is a risk of which the person knew ought to have known), and*
 - (b) *the risk was not insignificant, and*
 - (c) *in the circumstances, a reasonable person in the person's position would have taken those precautions.*

Section 5H of the Act states that “A person (the defendant) does not owe a duty of care to another person (the plaintiff) to warn of an obvious risk to the plaintiff”.

1.6.2 Crown Land Risk Management Procedures

According to Department of Lands guidelines; Trust Boards (in this case via Dungog Council appointed representatives) are expected to adopt good management and risk management practises” (DoL 1998) to ensure the Reserve is safe for the public to use. These procedures include regular inspections of the Reserve to ensure safety hazards do not arise. The Committee is expected to comply with a written inspection program, specifying how often the Reserve is to be inspected, with close attention to infrastructure and potentially hazardous natural features; and how any hazards or risks are to be managed.

1.6.3 Public Liability Coverage

Where corporations (including local government Councils) are trust managers (Section 95 of the *Crown Lands Act 1989*) the corporation or Council is responsible for public liability cover.

Pilchers Reserve Committee is a 355 Committee of Council and not covered by the NSW Government Treasury Managed Fund.

2. Context for Management

2.1 Physical Environment

2.1.1 Topography

The topography of the Reserve has formed through a large sandstone bed moving downhill under the force of gravity on groundwater-lubricated shale beds (England, 1982).

The Reserve is dominated by five (5) main disjointed gorges and several smaller gorges that dissect the surrounding undulating landscape. The gorges generally run east to west for approximately one kilometre, over a width of approximately half a kilometre (refer to Plate 2.1). The gorges are composed of thick-bedded sandstone with conglomerate sections. The base and sides of the wider gorge contain large angular sandstone blocks. The open gorges reach a depth of 90 metres and typically have vertical walls, with widths ranging from approximately one metre to over 50 metres. Large blocks wedged between the gorge walls have created several large caves. Smaller caves have also formed where angular boulders have fallen into the wider gorges (Smith, 2003).

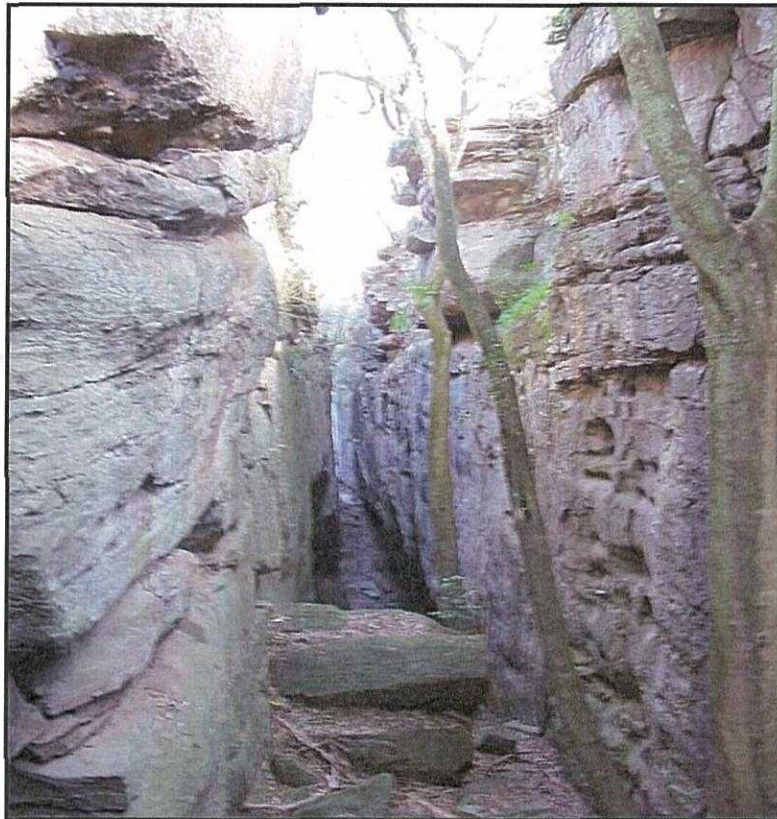


Plate 2.1 The Main Gorge within the Reserve.

There are about 14 known caves within the Reserve. The largest chamber is within a cave known as the "Bat Cave", whilst the deepest known cave is known as "Rebel Cave", which has a vertical depth of 46 metres, a 6 metre pitch and 27.5 metre free hang (Smith, 2003).

The Reserve is located at an altitude ranging from 245 - 335 metres above sea level.

2.1.2 Soils

The Reserve is underlain by Carboniferous sediments. The soils existing in Pilchers Reserve are shallow to moderately deep, drained Brown Sodosols (Soloths) and also shallow, well-drained Bleached-Leptic Tenosols (Lithosols). The soils are of low fertility and are highly erodible when disturbed (Henderson, 2000).

2.2 Biological Values

2.2.1 Flora

The large depressions in the Reserve have created a microclimate that supports a dry rainforest stand (also referred to as Monsoon Rainforest) and as such the flora within the Reserve is representative of the flora found within a dry rainforest community (refer to Plate 2.2). The dry rainforest community at the Reserve is classified as Suballiance No. 23 *Ficus-Streblus-Dendrocnide-Cassine*. The Reserve is at the southern limit of the normal distribution of this suballiance (Floyd 1990) and is particularly rich in species diversity. Turner and Vernon (1994) suggests that this may be the result of the variability in the topography.

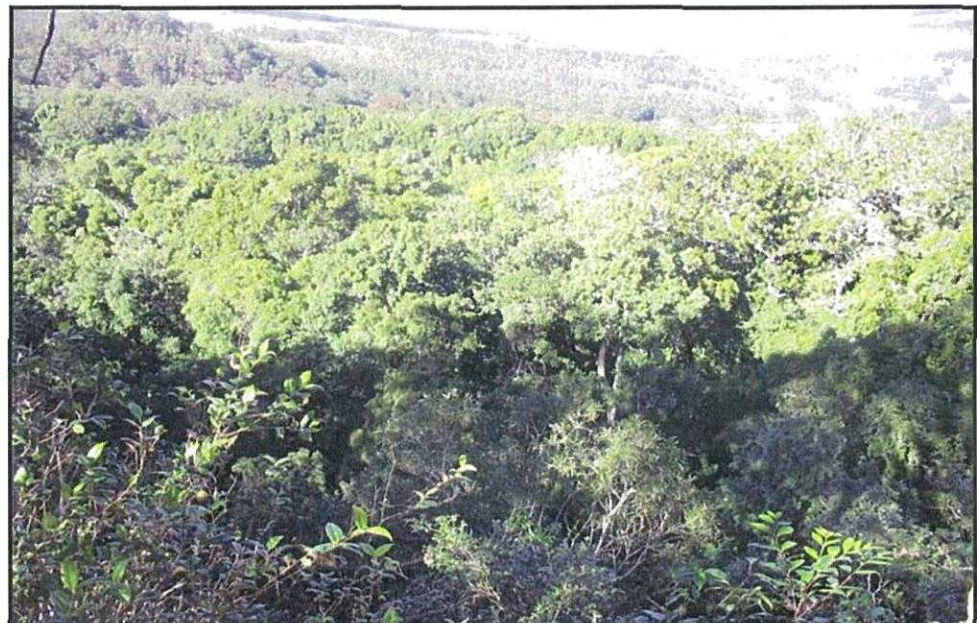


Plate 2.2 View across Pilchers Reserve from the Crown Road located along the northern boundary.

The vegetation in the Reserve consists of well-defined vegetation layers characteristic of dry rainforest communities. Vernon and Turner (1994) recorded 141 species within

the Reserve (refer to Appendix A for flora species list). The Reserve has a well-developed small tree layer dominated by:

Whalebone (*Streblus brunonianus*), Red Kamala (*Mallotus philippensis*),
Native Olive (*Olea paniculata*), Beetroot (*Elattostachys nervosa*),
Native Pomegranate (*Capparis arborea*), Yellow Tulipwood (*Drypetes australasica*)
Brush Bloodwood (*Baloghia inophylla*).

The shrub layer is dominated by species such as: Actephila, Cleistanthus, Native Green Cascarilla (*Croton verreauxii*).

Emergent species include Rusty Fig (*Ficus rubignosa*), Deciduous Fig (*Ficus superba* var. *henneana*), Moreton Bay Fig (*Ficus macrophylla*), Small-leaved Fig (*Ficus oblique*), Laceback (*B. discolor*) and the Giant Stringing tree (*Dendrocnide excelsa*).

The herb layer is typically very sparse and rocky. Sub tropical species such as Maidens Blush (*Sloanea australis*), Brown Beech (*Pennantia cunninghamii*) and Native Tamarind (*Diploglottis australis*) are located in the gorge and lower slopes.

The understorey consists of Cunjevoi (*Alocasia macrorrhizos*), Giant Maidenhair Fern (*Adiantum formosum*) and Pollia (*Pollia crispata*).

Along the rock ledges, large epiphytes such as Bird's Nest Ferns (*Asplenium australasicum*) are present. In the open sections of the gorge are moss-covered rocks.

A distinct vegetation boundary is present at the edge of the Reserve in all directions as the vegetation changes to dry sclerophyll forest, which has largely been cleared for grazing by surrounding landowners.

2.2.2 Weed Species

Due to the nature of the surrounding landscape, a number of introduced weeds are found in small pockets near the boundary of the Reserve. Table 2.1 outlines the weeds found within the Reserve. As the list was recorded in 1994, it is assumed that the number of weeds within the Reserve would have increased.

Table 2.1 Introduced Flora Species Recorded within Pilchers Reserve (adapted from Turner and Vernon (1994) and Dowling (unknown))

Common Name	Species Name	Occurrence within the Reserve
Senna	<i>Senna floribunda</i>	Rare
Pink Lantana	<i>Lantana camara</i>	Common
White Passionfruit	<i>Passiflora subpeltata</i>	Rare
Lemon or Orange	<i>Citrus sp.</i>	?

2.2.3 Fauna

The Reserve supports a diverse range of habitat niches and animal species. These records are mainly derived from opportunistic sightings by neighbours and visitors – a formal fauna survey has not been undertaken of the Reserve. The underground network of caves provides significant habitat for micro-bats and moths. The natural rock crevices provide habitat for cave dwelling bats. The Bat Cave (also referred to as Wallaringa, Pilchers or Main Cave) is the roosting site for a large colony of Large Bent-wing Bats (*Miniopterus schreibersii*) and a smaller population of Eastern Horseshoe Bat (*Rhinolophus megaphyllus*) (Smith, 2003).

A number of species listed under the Threatened Species Conservation Act 1995 (TSC Act) have been observed within the Reserve, including the Koala (*Pascolarctus cunerus*), Brush-tailed Phascogale (*Phascogale tapoatafa*) and Spotted-tailed Quoll (*Dasyurus maculatus*).

The Reserve also supports populations of possums, bandicoots, wallabies, echidna, skinks, molluscs and snakes and up to 50 species of birds (refer to Appendix B for fauna species list).

It is reasonable to assume the presence of Fox (*Vulpes vulpes*) and European Wild Rabbit (*Oryctolagus cuniculus*) given their broad distribution in the area.

2.3 Access

Access to the Reserve involves a combination of driving and walking. The current access arrangements are integral to restricting visitation numbers to the Reserve. There is no public transport in close proximity to the Reserve.

2.3.1 Vehicular

Access to the Reserve is via Wallaringa Road from Dungog Road, then along a privately maintained Council Public Road (refer to Plate 2.3). Most visitors to the Reserve park their vehicles at a gate approximately one kilometre from the Reserve (refer to Figure 2.1 for location of the gate). The road is poorly formed from this point on, with most visitors walking from the gate into the Reserve. However, local residents advised that some visitors continue to drive along part of this road.

There is no designated car parking area along the Council Public Road. Visitors tend to park their vehicles in an area near the gate (refer to Figure 2.1 for location and Plate 2.4).

2.3.2 Pedestrian

There is no formalised pedestrian access path to the Reserve from the undesignated vehicle parking area.

Visitors walk along the Council Public "Road" (a corridor of legal public access) to the entrance of the gorge. The Council Public Road borders the northern and western boundaries of the Reserve. Access along the Council Public Road to the Reserve is not clearly defined in several areas and as a result, adjoining landholders have raised concerns about visitors walking through their private property in an attempt to find the Reserve.



Plate 2.3 The Public Road used to access the Reserve.



Plate 2.4 The main vehicle parking area for Pilchers Reserve.

2.4 Cultural Heritage

2.4.1 Indigenous Culture and Heritage*

The following is a submission from Bev Manton of the Karuah Local Aboriginal Land Council on the indigenous culture and heritage of the Pilchers Reserve.

"The passed generations of Worimi people and the Worimi people of today belong to this part of country and have done so for many thousands of years. It was cared for and the exclusive responsibility of (belonged to) the Nurras of the Doorabang (now Williams Valley) to protect and to look after in perpetuity according to Worimi law, custom and traditions.

The Pilchers Reserve has survived the ravages of land clearing, soil erosion, introduction of pasture grasses, the silting up of waterholes and loss of the native habitat. In more recent times European loggers, graziers and farmers drove the Aboriginal people from their land, their capital base, breaking the laws of the land and the cultural traditions, and rendering the survivors refugees in their homeland.

The reserve provides a refuge for a remnant of landscape, its plants and animals once in abundance; a sight still recognizable to the old people. A uniquely beautiful place has always been visited, admired, revered by Aboriginal people. It contains a connection with the past, the spiritual and cultural way of life of the Traditional Owners, the site is still thought of as a sacred place, where we can feel close to and connect with the generations who went before.

It is a fragile landscape needing special care and protection so as to preserve it for the enjoyment of generations to come. Since the beginning of time Aboriginal people have had special respect and connection with everything that is natural and a part of nature.

The gorge is a sacred place to the Worimi Nation. The murmurs from the Old People who were once a part of it's presence can still be heard, reminding Aboriginal people of its great importance and their obligation to protect it.

A summary of documented historical narrative can be obtained from reading Williams River. The Land and its people R.L. Ford ISB No. 646.16829, submissions from Dept. of Lands and representations from Worimi community representative, committee member Lionel Ridgeway as well as the oral narrative passed down to today's Worimi Community.

**Bev Manton, CEO of the Karuah Local Aboriginal Land Council (2007)*

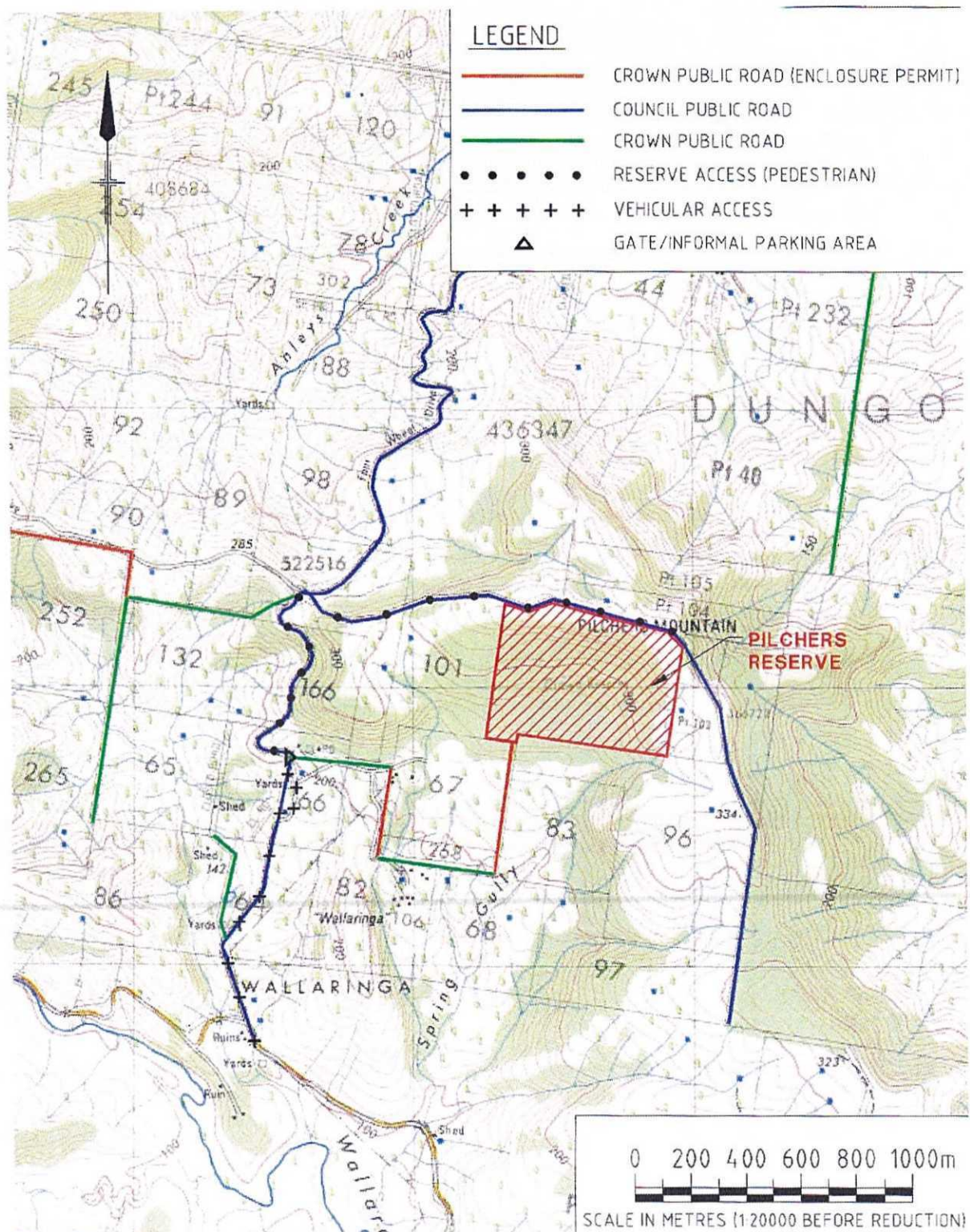


Figure 2.1 Site Access Plan

2.4.2 European Heritage

Pilchers Mountain has a long association with European exploration and early settlement of the Hunter Region.

It is believed that Pilchers Mountain was named after Mr Henry Incledon Pilcher who arrived in NSW during 1830 and was an attorney and solicitor of the Supreme Court (Smith 2003). He was given a large estate called Wallaringa, near the Reserve.

The Reserve was described by Mrs F.D Kent in the 1930's reminiscing of a day trip to Pilchers Mountain in the 1880's as follows:

"On the top of the side to which we had climbed the bank broke away, leaving a stony path which lead straight downwards, between ever heightening walls of rock on either side, until they were so high that we were in a cool gloom at the bottom. Being in the month of September, the rock lilies were coming out along the edge of the cliffs overhead, so that looking up one saw a ribbon of brilliantly blue sky, and against it, hanging over on either sides were great trusses of golden blooms.

When we reached the end of the stony path, the cliffs disappeared on either side in the slope of the hill and we found ourselves in a steamy hollow, full of huge staghorns and birds-nest ferns" (Kent 1930's).

In 1889, the then Governor of the day gazetted an initial area of Pilchers Mountain covering 26.3 hectares as Crown Reserve (no. 8894) for Public Recreation. Dungog Shire Council was appointed as Trustee of the Reserve on 18th February 1916.

In 1990 Dungog Shire Council zoned the Reserve for Habitat Protection 7(a) under the Dungog Local Environmental Plan 1990. In 1995 the Department of Land and Water Conservation (DLWC) released for public exhibition a Draft Assessment of Crown Land at Pilchers Mountain as a requirement under the *Crown Lands Act 1989*, seeking public comment prior to the changes in Reserve classification. The assessment found that the conservation status of the area should be upgraded to Environmental Protection (DLWC 1995).

Subsequently, the Reserve (Reserve No. 1002990) Lot 338, DP 1009839, covering 30.07 hectares was dedicated for Environmental Protection on 15 December 2000 and the earlier classification of Crown Reserve for Public Recreation was revoked. Dungog Shire Council was appointed to manage the Reserve.

The reserve is used by local bushwalkers and members of the Newcastle Speleological Society and Scouting Association have made regular visits to the site since the late 1960s. The reserve is not formally identified for recreational use and no facilities are provided for tourists.

2.5 Liability Issues

As discussed in Sections 1.5.1 and 1.5.7, the public liability associated with injury to Reserve users, as well as injury to people accessing the adjoining private properties without authorisation are important issues to the Committee.

Compliance by the Committee with the legislation discussed in Section 1.5.7 is important to ensure that the liability of the Committee and Council, as well as the adjoining property owners, is minimised. The management objectives and actions will need to reflect the need to protect the Reserve's ecological, cultural, educational and recreational values, while minimising the liability risk to the Committee and to adjoining property owners.

3. Basis for Management

3.1 Vision Statement

The Vision Statement provides a concise description of the direction that management activities (through the implementation of the PoM) should take. The statement has been determined based on consideration of community values and background investigations. The Vision Statement was formed during the consultation process for the draft Plan of Management. The Vision Statement adopted for the draft PoM for Pilchers Reserve is:

To respect and protect the intrinsic natural, cultural and heritage values of Pilchers Reserve in perpetuity in co-operation with Council, landowners, the Karuah Local Aboriginal Land Council, the Gooreenggai People and the wider community.

3.2 Current Uses

Activities undertaken at Pilchers Reserve include:

- ▶ The gorge is a sacred place to the Worimi Nation. The reserve provides a refuge for a remnant of landscape, its plants and animals once in abundance; a sight still recognizable to the old people. It is a uniquely beautiful place that has always been visited, admired, revered by Aboriginal people. It contains a connection with the past, the spiritual and cultural way of life of the Traditional Owners, the site is still thought of as a sacred place, where we can feel close to and connect with the generations who went before.

- ▶ Caving: The Newcastle and Hunter Valley Speleological Society regularly visit the Reserve to explore the network of caves to undertake research projects and teach caving techniques to beginners.

The Scouting Association also takes groups into the Reserve to explore the caves on a regular basis and also teach caving techniques to beginners.

Individual cavers visit the Reserve to explore the network of caves.

- ▶ Abseiling: Individuals, the Scouting Association, the Newcastle and Hunter Valley Speleological Society and Tocal use the walls of the main gorge within the Reserve for abseiling.
- ▶ Hiking: Several guided walking/hiking groups organised by local tourist accommodation facilities visit the Reserve. Unguided walkers/tourists also visit the Reserve.
- ▶ Ecological studies: Occasionally ecological studies are undertaken at the Reserve by research biologists and the Department of Environment and Climate Change.

3.3 Issues and Future Demands

Management actions to achieve this vision will need to satisfy a number of objectives formulated according to several management areas. The objectives provided below provide the framework for management.

Environmental

- Protect and conserve the native fauna and flora of the Reserve;
- Preserve the network of caves and natural rock forms;
- Protect and conserve the bat populations;
- Maintain exclusion of livestock to the Reserve;
- Restrict access through the Reserve to minimise damage to native vegetation;
- Control and manage graffiti within the Reserve;
- Prohibit the removal of native vegetation from within the Reserve;
- Prevent campfires and other unauthorised fires in the Reserve;
- Control feral animals within the Reserve;
- Ensure visitors do not litter in the Reserve; and
- Minimise the potential environmental impacts from recreational activities.

Access

- Maintain limited access arrangements to the Reserve;
- Minimise disruption to the surrounding agricultural activity and nearby residents caused by visitation to the Reserve; and
- Clearly identify the boundary of the Reserve.

Cultural Heritage

- Ensure the spiritual and cultural significance of the Reserve to local Aboriginal people is respected and not compromised.

Safety and Risk

- Minimise the risk to indemnify the Reserve managers from any potential liability claims from reserve users;
- Ensure visitors to the Reserve are aware of the safety risks associated with use of the Reserve;
- Mitigate the potential for the Reserve visitors to enter adjoining private property and minimise the liability of adjoining landowners; and
- Protect the health and safety of reserve users in the event of an emergency.

Land Status

- Encourage owners of adjoining natural areas to manage their land in a compatible manner to the Reserve; and
- Consider selling the Crown Road to the south of the Reserve to adjoining landholders.

Regulation of Activities

- ▶ Ensure Council regulations on the Reserve are adhered to; and
- ▶ Ensure Reserve visitors are aware of access requirements and restrictions.

4. Managing Pilchers Reserve

4.1 Objectives and Actions

This section of the PoM identifies the management actions that should be implemented to meet the objectives for Reserve management and ensure the vision for the Reserve is achieved. These actions were identified and developed through consultation with the Committee, community and authority representatives.

The following points are addressed in Tables 4.1 to 4.7:

- The management objectives applicable to key management areas (as described in Section 3.2);
- The management actions that should be implemented to meet these objectives;
- The criteria that indicates that the action has been successfully completed;
- The level of importance for implementation:
 - **High Priority:** Actions that are critical to the management of the Reserve and are necessary to occur prior to other strategies;
 - **Moderate Priority:** Actions which are necessary to manage potential or future threats to the Reserve; and
 - **Low Priority:** Actions that are not immediately required to efficiently manage the Reserve but would contribute to attaining the management vision for the Reserve.
- An indication of when the action should be implemented:
 - **Short Term** – 1 year;
 - **Medium Term** – 5 years;
 - **Long Term** – 10 years; and
 - **Ongoing:** Actions that are continuing.
- An estimate of any implementation costs; and
- Agencies responsible for the actions.

4.2 Action Plan:

Table 4.1 Environmental

Objectives	Action No.	Actions	Performance Assessment	Priority	Timeframe	Costs	Agency responsible
Protect and conserve the native fauna and flora of the Reserve.	1.1	Undertake a flora and fauna survey (including introduced species) in the Reserve to increase knowledge of species composition, abundance, distribution and ecology within the Reserve.	Up to date list of fauna and flora species within the Reserve.	Medium	Medium	\$10,000 plus Actions 1.2, 1.6 and	Committee
	1.2	Prepare and implement a vegetation management plan, including a bush regeneration plan and weed management plan for the Reserve. Plan will include: <ul style="list-style-type: none"> ▶ A baseline assessment of the existing conditions, including species (including weeds) distribution and abundance; ▶ Develop and implement management strategies to control weed species. ▶ Ongoing monitoring of the vegetation; and 	Decrease in weed species. Increase in indigenous plant species.	Medium	Medium term/ ongoing	\$7,500	Committee
	1.3	Remove weed species from the Reserve.	Decrease in weed species.	Medium	Medium term/ ongoing	\$1,000/ year	Committee and Council.

Objectives	Action No.	Actions	Performance Assessment	Priority	Timeframe	Costs	Agency responsible
	1.4	Promote and support research opportunities and encourage academics, research institutions, consultants and specialist groups to base appropriate research projects in the Reserve to improve knowledge of the natural and cultural heritage of the Reserve and identify any threatening process.	Identification of key threatening processes and improve knowledge of the natural and cultural heritage of the Reserve.	High/ongoing	ongoing	N/A	Committee. Educational institutions include the University of Newcastle, TAFE, Tocal and caving groups affiliated with the ASF, Scout Association and Bat Society.
Preserve the network of caves and natural rock forms.	1.5	Assess and manage the impact of abseiling though: <ul style="list-style-type: none"> ▶ A baseline assessment of the existing conditions; ▶ Develop and implement management strategies as required to minimise impacts ▶ Ongoing monitoring of the condition of the gorge and caves; and 	No damage from abseiling or caving.	High	Short-Term/ Ongoing	N/A	Committee
Protect and Conserve the bat populations within the Reserve	1.6	Assess and manage the impact of caving on local bat populations though: <ul style="list-style-type: none"> ▶ A baseline assessment of the existing conditions; ▶ Develop and implement management strategies in accordance with baseline assessment findings and recommendations ▶ Ongoing monitoring of the condition of the gorge and caves; and 	Impact of caving on the bat population known.	High	Short term/ ongoing	\$7,500	Committee. Educational institutions include the University of Newcastle, TAFE, Tocal and caving groups affiliated with the ASF, Scout Association and Bat Society.

Objectives	Action No.	Actions	Performance Assessment	Priority	Timeframe	Costs	Agency responsible
	1.7	Manage access to bat-inhabited caves in accordance with recommendations from the baseline assessment and adopted management strategies (1.6) Notify known caving groups of management strategies. Installation of signage where appropriate informing visitors of management strategies (To be considered in signage strategy)	Minimal impact from activities within caves and improvement in conditions for bat population	High	Short-term/ ongoing	N/A	Council and Committee.
Maintain exclusion of livestock to the Reserve with the exception of the southeast corner to allow the movement of cattle between paddocks.	1.8	Negotiate with adjoining landholders to maintain existing fences and strategies to prevent stock from entering the Reserve.	Livestock prevented from entering the Reserve with exception of the southeast corner.	Medium/ ongoing	Medium term	N/A	Surrounding landholders and the Committee.
Restrict access through the Reserve to minimise damage to native vegetation.	1.9	Provide signage that informs visitors of the damage caused by walking away from walking trails including damage to moss/ lichen covered rocks. (To be considered in signage strategy)	Minimal damage to reserve through recreational use	High	Short term	Refer to Action No. 6.3	Committee.
Control and manage graffiti in the Reserve.	1.10	Investigate methods for the removal of graffiti within the Reserve that minimise visual impacts.	Visual impacts from graffiti within the Reserve are minimised.	Medium	Medium term	N/A	Committee
	1.11	Remove new graffiti as soon as possible where practical.	Visual impacts from graffiti within the Reserve are minimised.	High	Medium term/ongoing	\$500/ year	Council

Objectives	Action No.	Actions	Performance Assessment	Priority	Timeframe	Costs	Agency responsible
Prohibit the removal of native vegetation from the Reserve.	1.12	Liaise with neighbours to detect the presence of illegal activities.	Reduction in damage to native vegetation.	Medium	Medium term	N/A	Council, Committee and surrounding landholders.
Prohibit campfires and other unauthorised fires in the Reserve.	1.13	Provide signage which informs visitors that fires of any kind are prohibited. (To be considered in signage strategy)	No fires within the Reserve.	High	Short term	Refer to Act 6.3.	Committee.
	1.14	Develop and implement a fire management strategy in conjunction with neighbouring property owners	No fires within the Reserve.	Medium/ongoing	Medium term	N/A	Council and surrounding landholders.
Control feral animals within the Reserve.	1.15	Assess and manage the impact of feral animals on the Reserve through the following:	Abundance, distribution and impacts of feral animals within the Reserve known.	Medium	Medium term	\$10,000	Committee.
		<ul style="list-style-type: none"> ▶ A baseline assessment of the species distribution and abundance, and their impacts; 					
		<ul style="list-style-type: none"> ▶ Develop and implement management strategies to minimise impacts. Encourage involvement of surrounding landholders and the Rural Lands Protection Board. 	Reduction in abundance, distribution and impacts of feral animals within the Reserve.	Medium	Medium term	Refer to Action 1.1	Committee, surrounding landholders and Rural Lands Protection Board.
		<ul style="list-style-type: none"> ▶ Ongoing monitoring of the condition of the distribution and abundance, and their impacts; 					
Ensure visitors do not litter in the Reserve.	1.16	Provide signage that requests Reserve visitors to take litter with them. (To be considered in signage strategy)	Absence of litter in the Reserve.	Medium	Medium term	Refer to Act 6.3	Committee.

Objectives	Action No.	Actions	Performance Assessment	Priority	Timeframe	Costs	Agency responsible
Minimise the potential environmental impacts from recreational activities.	1.17	<p>Assess and manage the impact of recreational activities on the Reserve through the following:</p> <ul style="list-style-type: none"> ▶ A baseline assessment of the existing Reserve conditions; ▶ Develop and implement management strategies to minimise impacts. And ▶ Ongoing monitoring of the condition of the Reserve; 	Impacts on the Reserve from recreational activities minimised.	High	Short term	Refer to Action 1.5 & 1.6	Committee. Educational institutions include the University of Newcastle, Tocal and TAFE.

Table 4.2 Access

Objectives	Action No.	Actions	Performance Assessment	Priority	Timeframe	Costs	Agency Responsible
Maintain limited access arrangements to the Reserve	2.1	Monitor the level of use of the Reserve.	Number of people accessing the Reserve known.	High	Long Term/ ongoing	\$500	Committee.
	2.2	Liaise with the neighbouring landowners to maintain the existing access arrangements into the Reserve.	Existing access arrangements maintained.	High	Short term/ ongoing	N/A	Committee and local landholders.
	2.3	Overnight recreational camping will not be permitted	No overnight recreational camping.	Medium	Medium term/ ongoing	N/A	Council.
	2.4	Sign at car park area that identifies: <ul style="list-style-type: none"> ▶ Parking requirements; ▶ No Camping permitted in Reserve; and ▶ Description of Reserve/ access boundary identification markers. (To be considered in signage strategy)	Sign directions followed.	High	Short-term	Refer to Act 6.3	Committee.
	2.5	Provide a map sign for visitors at the Reserve boundary that clearly defines the access within the Reserve and rules when accessing the Reserve. (To be considered in signage strategy)	Visitors remain within Reserve boundary when walking within the Reserve.	High/ongoing	Short term	Refer to Act 6.3	Council.
	2.6	Visitor facilities and public vehicle access will not be provided in the Reserve.	No public facilities and vehicle access to the Reserve.	Low/ongoing	Long term	N/A	Committee.
	2.7	Access trails to the Reserve will be maintained in consultation with surrounding landholders.	Access trails remain accessible.	High	Short-term/ ongoing	\$1,000/yr	Committee and

Objectives	Action No.	Actions	Performance Assessment	Priority	Timeframe	Costs	Agency Responsible
	2.8	Consider closure and addition of unformed Council road reserve (used for pedestrian access to the Reserve) to Pilchers Reserve as a designated pedestrian access.	Feasibility resolved.	Low	Short-term	N/A	Council.
Minimise disruption to surrounding agricultural activity and nearby residents caused by visitation to the Reserve.	2.9	Maintain pegs along the access trail to the Reserve that indicates the direction to the Reserve to minimise the potential for visitors to walk into private property to find the entrance to the Reserve. (To be considered in signage strategy)	Visitors walking within the Reserve area and designated access trail at all times.	High	Short term	\$500/yr	Committee.
	2.10	Provide signage on private gates, which are to be used to access the Reserve to remind visitors to leave the gates as found. (To be considered in signage strategy)	All gates closed properly.	High	Short term	Refer to Act 6.3	Committee.
Clearly identify the boundary of the Reserve	2.11	Survey to be completed of Reserve and unformed Council road boundaries.	Boundary identified and mapped	High	Short-term	\$10,000 to include markers as in 2.12	Committee
	2.12	Boundary signage and markers will be located around the perimeter of the Reserve and access roads. (To be considered in signage strategy)	The boundary and access to the Reserve is clearly defined.	High	Short term	Refer to Act 6.3	Committee and Council.
	2.13	Maintain any existing fences along the Reserve boundaries where appropriate.	As above.	High/ongoing	Short term	\$500	Committee and surrounding landholders.

Table 4.3 Cultural Heritage

Objectives	Action No.	Actions	Performance Assessment	Priority	Timeframe	Costs	Agency Responsible
Ensure the spiritual and cultural significance of the Reserve to the local Aboriginal people is respected and not compromised.	3.1	Consider appropriate signage that outlines the cultural and spiritual significance of the Reserve to the Aboriginal people. (To be considered in signage strategy)	Visitors to the Reserve are aware of the significance of the Reserve to the Aboriginal people.	High	Short term	Refer to Action 6.3	Committee. Liaise with local Aboriginal community groups and Department of Lands regarding signage.
	3.2	Undertake investigation of the cultural heritage significance of the Reserve to ensure that Aboriginal heritage and spiritual significance is adequately identified and managed.	Greater knowledge on the cultural significance of the Reserve to the Aboriginal community.	High	Short term	\$10,000	Committee, Council, DECC and local Aboriginal community groups.

Table 4.4 Safety and Risks

Objectives	Action No.	Actions	Performance Assessment	Priority	Timeframe	Costs	Agency Responsible
Minimise the risks to indemnify the Reserve managers from any potential liability claims from Reserve users.	4.1	Council to erect signage that informs visitors of foreseeable risks and hazards as per Civil Liability Amendment (Personal Responsibility) Act 2002 (To be considered in signage strategy)	Council indemnified from any liability claims.	High/ongoing	Short term	Refer to Action 6.3	Committee. Liaise with Department of Lands and State Wide Insurance regarding signage.

Objectives	Action No.	Actions	Performance Assessment	Priority	Timeframe	Costs	Agency Responsible
Ensure visitors to the Reserve are aware of the safety risk associated with the use of Reserve.	4.2	Install signage around the perimeter of the Reserve, and at the vehicle parking area, which informs visitors of the safety risk with using the Reserve. (To be considered in signage strategy)	Visitors are aware of the risks associated with entering the Reserve.	High/ongoing	Short term	Refer to Act 6.3	Committee. Liaise with Department of Lands and State Wide Insurance regarding template for signage.
Minimise potential for the Reserve visitors to enter adjoining private property and minimise the liability of adjoining landowners.	4.3	Install signage and boundary markers that clearly indicate property boundary and makes visitors aware of risks of entering private property. (To be considered in signage strategy)	Visitors are aware of boundaries between Reserve and adjoining private property.	High	Short term /ongoing	Refer to Act 6.3 and 2.12	Committee and adjoining property owners.
Protect the health and safety of Reserve users in the event of an emergency	4.4	Develop and implement an Emergency Evacuation Plan.	Plan and developed and implemented as appropriate	High	Short term /ongoing	\$2,000	Committee SES and RFS

Table 4.5 Land Status

Objectives	Action No.	Actions	Performance Assessment	Priority	Timeframe	Costs	Agency responsible
Encourage owners of adjoining natural areas to manage their land in a compatible manner to the Reserve.	5.1	Encourage and assist the development of voluntary conservation agreements for protection of conservation values of bushland and rainforest on adjacent lands.	Reserve is managed efficiently.	Medium	Medium term/ongoing	N/A	Committee and surrounding landholders. Liaise with DEC.
Consider closing unnecessary Crown Roads	5.2	Investigate disposal of Crown Road to the south of the Reserve	The feasibility of selling of land held under Crown Road is known.	Low	Long term/ongoing	N/A	Council.

All areas of Pilchers Gorge are protected under the one plan of management	5.3	Subject to consultation with neighbouring land holders; Investigate inclusion of privately owned high conservation areas adjacent to the reserve in the Pilchers Reserve Plan of management.	Adjacent high conservation areas are managed under this plan	Medium	Long term	N/A	Council/Department of Lands/adjoining Land holders
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Table 4.6 Regulation of Activities

Objectives	Action No.	Actions	Performance Assessment	Priority	Timing	Costs	Agency responsible
Ensure regulations on the Reserve are adhered to.	6.1	Council to confirm and use its powers under the <i>Local Government Act 1993</i> and <i>Crown Lands Act 1989</i> as Trust Manager to enforce regulations and implement notices.	Reduction in the occurrence of prohibited activities within the Reserve.	Medium	Medium-term/ ongoing	\$500/ year	Council and Department of Lands
	6.2	Ensure the Reserve is regularly inspected to ensure regulations are adhered to.	No increase in damage to the Reserve. Reduction in the occurrence of prohibited activities within the Reserve.	High	Short-term/ ongoing	\$500/ year	Council, volunteers, aboriginal community, Committee and Police.
Ensure Reserve visitors are aware of heritage and conservation values, potential hazards, access requirements and restrictions	6.3	Develop and implement a signage strategy for the reserve in accordance with actions and priorities identified in the plan	Compliance with signage requirements and restrictions	High	Short-term	\$15,000	Committee

4.3 Funding Sources

The extent to which the Action Plan can be implemented is dependent on the level of funding available. There are a number of funding sources that may be available to implement the Action Plan for the Reserve.

Potential sources of funding include:

- ▀ Council revenue;
- ▀ Department of Lands (Public Reserves Management Fund);
- ▀ NSW Heritage Office (Heritage Funds);
- ▀ National Heritage Trust; and
- ▀ Opportunities under the Hunter Central Rivers Catchment Management Authority;
- ▀ Environmental Trust.

4.4 Plan Implementation and Review

The PoM should be reviewed every 5 years to ensure the management actions remain relevant to the Reserve. Implementation of the PoM should be monitored annually by Council with the preparation of annual performance standards.

It is recommended pursuant to Section 115 of *Crown Lands Act 1989*, that the PoM be altered if necessary after a period of five years to keep up to date with changing community values and expectations, subject to the principles of Crown land management outlined in Section 1.5.1 above regarding the Crown Lands Act.

Pursuant to Section 113 of the *Crown Lands Act 1989*, this Plan of Management will be on public exhibition for 28 days. Following the exhibition period, the Minister shall consider any representations on the Plan of Management prior to adopting the Plan of Management.

5. References

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Kent F.D. (1930's) *A Picnic to Pilcher's Caves*, a personal account of a picnic to the area in the 1880's.

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Appendix A

List of Flora Species Identified in the
Reserve

Flora Species identified within Pilchers Reserve

Species Name	Common Name	Occurrence
<i>Abutilon oxycarpum</i>	Lantern bush	O
<i>Acacia falcata</i>	Sickle wattle	O
<i>Acacia implexa</i>	Lightwood	O
<i>Acacia irrorata</i> subsp. <i>irrorata</i>	Blueskin	O
<i>Acacia maidenii</i>	Maidens wattle	R
<i>Acacia melanoxylon</i>	Blackwood	O
<i>Acacia ulicifolia</i>	Prickly moses	R
<i>Acronychia oblongifolia</i>	Yellowwood	O
<i>Actephila lindleyi</i>	Actephila	O
<i>Adelopetalum exiguum</i>	Tiny strand orchid	O
<i>Adiantum formosum</i>	Giant maidenhair	R
<i>Adiantum hispidulum</i>	Rough maidenhair	R
<i>Ajuga australis</i>	Austral bugle	O
<i>Alangium villosum</i> ssp. <i>polyosmoides</i>	Muskwood	C
<i>Alchornea ilicifolia</i>	Native holly	O
<i>Alectryon subcinereus</i>	Native quince	O
<i>Alectryon tomentosus</i>	Bed jacket	R
<i>Allocasuarina torulosa</i>	Forest oak	O
<i>Alocasia brisbanensis</i>	Spoon lilly	O
<i>Alphitonia excelsa</i>	Red ash	R
<i>Angophora floribunda</i>	Rough barked apple	O
<i>Aphanopetalum resinsum</i>	Gum vine	C
<i>Arthropodium minus</i>	Vanilla lilly	C
<i>Arthropteris tenella</i>	Forest green fern	R
<i>Asplenium australasicum</i>	Birds nest fern	O
<i>Austrosteenisia blackii</i>	Blood vine	C
<i>Backhousia myrtifolia</i>	Grey myrtle	O
<i>Backhousia sciadophora</i>	Shatterwood	O
<i>Balogia inophylla</i>	Bloodwood	C
<i>Billardiera scandens</i>	Apple berry	O
<i>Bothriochloa macra</i>	Red leg grass	C
<i>Brachychiton acerifolius</i>	Flame tree	O
<i>Brachychiton discolor</i>	Lacebark	O
<i>Brachychiton populneus</i>	Kurrajong	O
<i>Bracteantha bracteata</i>	Everlasting	O

<i>Breynia oblongifolia</i>	Coffee bush	O
<i>Bursaria spinosa</i>	Blackthorn	O
<i>Callistemon salignus</i>	Pink tipped bottlebrush	O
<i>Calystegia marginata</i>	Forest bindweed	C
<i>Capparis arborea</i>	Native caperberry	C
<i>Carex longebrachiata</i>	Tassel sedge	C
<i>Cassinia uncata</i>	Sticky cassinia	O
<i>Cayratia clematidea</i>	Native grape	O
<i>Celastrus australis</i>	Staff vine	R
<i>Celtis paniculata</i>	Native celtis	C
<i>Centella asiatica</i>	Pennywort	C
<i>Cestichis coelogynoides</i>	Fairy sphinx orchid	C
<i>Cheilanthes</i> spp (probably <i>sieberi</i>)	Rock fern	O
<i>Cissus antarctica</i>	Kangaroo vine	C
<i>Cissus hypoglauca</i>	Water vine	O
<i>Citronella moorei</i>	Churnwood	R
<i>Claoxylon australe</i>	Brittlewood	O
<i>Cleistanthus cunninghamii</i>	Omega	O
<i>Clematis glycinoides</i>	Forest clematis	C
<i>Clerodendrum tomentosum</i>	Hairy clerodendrum	O
<i>Commelina cyanea</i>	Blue wandering jew	C
<i>Commersonia fraseri</i>	Black kurrajong	O
<i>Corysanthes fimbriata</i>	Fringed helmet orchid	O
<i>Croton insularis</i>	Silver croton	R
<i>Croton vereauxii</i>	Green cascarilla	O
<i>Cryptocarya glaucescens</i>	Jackwood	O
<i>Cryptocarya microneura</i>	Murrogun	R
<i>Cyanicula caerulea</i>	Eastern tiny blue china orchid	O
<i>Cymbidium suave</i>	Grassy boat-lip orchid	R
<i>Cymbopogon refractus</i>	Barb wire grass	C
<i>Danthonia setacea</i>	Bristly wallaby grass	O
<i>Daphnandra micrantha</i>	Socketwood	O
<i>Davallia pyxidata</i>	Hares foot fern	R
<i>Daviesia ulicifolia</i>	Gorse bitter pea	O
<i>Deeringia amaranthoides</i>	Climber	C
<i>Dendrocide excelsa</i>	Giant stinging tree	C
<i>Dendrocide photinophylla</i>	Shiny leafed stinging tree	R
<i>Dianella caerulea</i>	Paroo lilly	O

<i>Dianella longifolia</i> var <i>longifolia</i>	Smooth flax lilly	C
<i>Dianella revoluta</i>	Spreading flax lilly	O
<i>Dichelachne micrantha</i>	Shorthair plume grass	C
<i>Dichondra repens</i>	Kidney weed	C
<i>Dioscorea transversa</i>	Native yam	C
<i>Diospyros australis</i>	Native olive /	O
<i>Diospyros pentamera</i>	Myrtle ebony /	O
<i>Diplazium australe</i>	Austral lady fern	O
<i>Diploglottis australis</i>	Native tamarind	O
<i>Dipodium punctatum</i>	Blotched hyacinth orchid	R
<i>Diuris punctata</i> var. <i>punctata</i>	Purple donkey orchid	C
<i>Dockrillia fairfaxii</i>	Blue Mountains pencil orchid	O
<i>Dockrillia linguiformis</i> var. <i>linguiformis</i>	Thumbnail orchid	O
<i>Doodia aspera</i>	Prickly rasp fern	O
<i>Drypetes deplanchei</i>	Yellow tulip	C
<i>Duboisia myoporoides</i>	Corkwood	R
<i>Dictymia brownii</i>	Creeping fern	R
<i>Dysoxylum fraserianum</i>	Rosewood /	C
<i>Ehretia acuminata</i>	Koda	O
<i>Elaeocarpus obovatus</i>	Hard quandong	R
<i>Elaeodendron australe</i>	Red olive plum	R
<i>Elatostema reticulatum</i>	Rainforest spinach	O
<i>Elattostachys nervosa</i>	Beetroot tree	C
<i>Embelia australiana</i>	Embelia	O
<i>Emmenosperma alphitonioides</i>	Yellow ash	O
<i>Endiandra discolor</i>	Rose walnut	R
<i>Endiandra sieberii</i>	Pink walnut	R
<i>Entolasia stricta</i>	Forest grass	C
<i>Eucalyptus acmenoides</i>	White mahogany	O
<i>Eucalyptus canaliculata</i>	Dungog grey gum	O
<i>Eucalyptus molucanna</i>	Grey box	O
<i>Eucalyptus paniculata</i>	Northern grey iron bark	O
<i>Eucalyptus placita</i>	Corky iron bark	O
<i>Eucalyptus tereticornis</i>	Forest red gum	O
<i>Eupomatia laurina</i>	Bolwarra	R
<i>Euroschinus falcata</i>	Ribbonwood	O
<i>Eustrephus latifolius</i>	Wombat berry	O
<i>Exocarpus cupressiformis</i>	Ballart	O

<i>Ficus coronata</i>	Sandpaper fig	O
<i>Ficus macrophylla</i>	Moreton Bay fig	C
<i>Ficus obliqua</i>	Small-leaved fig	R
<i>Ficus rubiginosa</i>	Port Jackson fig	O
<i>Ficus superba</i> var. <i>henneana</i>	Deciduous fig	O
<i>Gahnia aspera</i>	Rough saw sedge	O
<i>Geijera latifolia</i>	Scrub wilga	O
<i>Geijera salicifolia</i>	Narrow leafed scrub wilga	O
<i>Geitonoplesium cymosum</i>	Scrambling lilly	C
<i>Geranium solanderi</i>	Creeping cranesbill	C
<i>Glochidion ferdinandii</i>	Cheese tree	O
<i>Glycine clandestina</i>	Twining glycine	C
<i>Gossia acmenoides</i>	Scrub ironwood	O
<i>Guioa semi glauca</i>	Guioa	O
<i>Gymnostachys anceps</i>	Settlers flax	O
<i>Hardenbergia violacea</i>	False sarsparilla	C
<i>Hibbertia pedunculata</i>	Guinea flower	O
<i>Hibbertia scandens</i> sbsp <i>scandens</i>	Snake vine	O
<i>Hibiscus heterophyllus</i>	Native rosella	O
<i>Homalanthus populifolius</i>	Native bleeding-heart	R
<i>Hymenathera dentata</i>	Tree violet	O
<i>Hymenosporum flavum</i>	Native frangipanni	R
<i>Imperata cylindrica</i>	Blady grass	C
<i>Indigofera australis</i>	Austral indigo	O
<i>Jacksonia scoparia</i>	Dogwood	O
<i>Lagenifera stipitata</i>	Common lagenifera	O
<i>Lastreopsis microsora</i>	Shield fern	O
<i>Legnephora moorei</i>	Big leaf vine	C
<i>Lepidosperma laterale</i>	Variable sword sedge	O
<i>Leucopogon juniperinus</i>	Prickly beard heath	O
<i>Litsea reticulata</i>	Bolly gum	R
<i>Lomandra longifolia</i>	Spiny mat rush	C
<i>Lomandra multiflora</i>	Many flowered mat rush	O
<i>Lomandra spicata</i>	Forest mat rush	C
<i>Maclura cochinchinensis</i>	Cockspur thorn	C
<i>Malaisia scandens</i>	Burny vine	C
<i>Mallotus phillipensis</i>	Red kamala	C
<i>Maytenus sylvestris</i>	Orange bush	R

Melaleuca stypheloides	Prickly paperbark	O
Melia azedarach var. australasica	White cedar	O
Melicope micrococca	Hairy leafed doughwood	O
Microlaena stipoides	Weeping grass	C
Microsorium scandens	Fragrant fern	C
Microtis parviflora	Slender onion orchid	C
Mischocarpus australis	Orange pear fruit	O
Morinda jasminoides	Morinda	O
Myoporum montanum	Boobialla	O
Myrsine howittiana	Brush mutton wood	R
Myrsine variabilis	Muttonwood	R
Nyssanthus diffusa	Barbed wire bush	R
Olea paniculata	Native olive	O
Oplismenus aemulus	Forest grass	C
Ozothamnus diosmifolius	Rice everlasting	O
Pararchidendron pruinosum	Snow-wood	O
Parsonsia straminea	Common silkpod	C
Pellaea falcata	Sickle fern	O
Pellaea nana	Small sickle fern	C
Pellaea paradoxa	Broad sickle fern	O
Pennantia cunninghamii	Brown beech	O
Peperomia blanda var floribunda	Many flowered peperomia	C
Peperomia tetraphylla	Four leafed peperomia	C
Persoonia linearis	Narrow leafed geebung	O
Petalochilus carneus	Pink fingers	O
Piper novae-hollandiae	Giant pepper vine	R
Pittosporum multiflorum	Orange thorn	C
Pittosporum revolutum	Yellow pittosporum	O
Pittosporum undulatum	Sweet pittosporum	O
Platycerium bifurcatum	Elkhorn	O
Platycerium superbum	Staghorn	O
Plectorrhiza tridentata	Tangle orchid	O
Plectranthus graveolens	Native coleus	C
Poa labillardieri	Common tussock grass	C
Polia crispata		R
Polyscias elegans	Celerywood	O
Polyscias sambucifolia	Elderberry panax	O
Pouteria australis	Black apple	O

<i>Pseuderanthemum variable</i>	Pastel flower	R
<i>Psychotria loniceroides</i>	Hairy psychotria	R
<i>Pteris tremula</i>	Tender brake	O
<i>Pteris umbrosa</i>	Jungle brake	R
<i>Pterostylis nutans</i>	Nodding greenhood	C
<i>Pyrrosia confluens</i>	Robber fern	O
<i>Rhinerrhiza divitiflora</i>	Raspy root orchid	R
<i>Rhodamnia rubescens</i>	Brush turpentine	O
<i>Rhysotoechia bifoliolata</i>	Twin leafed tuckeroo	O
<i>Ripogonum album</i>	White supplejack	O
<i>Rubus moluccanus</i> var <i>trilobus</i>	Molucca bramble	O
<i>Rubus nebulosus</i>	Bush lawyer	O
<i>Rubus rosifolius</i>	Rose leafed bramble	O
<i>Sambuccus australasica</i>	Native elderberry	R
<i>Sarcochilus falcatus</i>	Orange blossom orchid	C
<i>Sarcochilus hillii</i>	Myrtle bells	O
<i>Sarcomelicope simplicifolia</i>	Bauerella	R
<i>Sarcopetalum harveyanum</i>	Pearl vine	R
<i>Scaevaola aemula</i>	Fairy fan flower	R
<i>Scaevola albida</i>	Fan flower	O
<i>Scolopia braunii</i>	Flintwood	R
<i>Senna clavigera</i>	Senna	O
<i>Sloanea australis</i>	Maidens blush	R
<i>Smilax australis</i>	Sarsparilla	O
<i>Solanum aviculare</i>	Kamgaroo apple	O
<i>Spiranthes australis</i>	Pink spiral orchid	C
<i>Stenocarpus salignus</i>	Scrub beefwood	O
<i>Stephania japonica</i> var <i>discolor</i>	Snake vine	C
<i>Streblus brunonianus</i>	Whalebone tree	C
<i>Stypandra glauca</i>	Blue tinsel lilly	C
<i>Syncarpia glomulifera</i>	Turpentine	O
<i>Synoum glandulosum</i>	Scentless rosewood	O
<i>Syzygium australe</i>	Brush cherry	R
<i>Syzygium smithii</i>	Lilly pilly	R
<i>Thelychiton gracilicaulis</i>	Blotched cane orchid	O
<i>Thelychiton tarberi</i>	Pale king orchid	C
<i>Thelymitra pauciflora</i>	Slender sun orchid	C
<i>Themeda triandra</i>	Kangaroo grass	C

<i>Toona ciliata</i>	Red cedar	O
<i>Trema tomentosa</i> var <i>viridus</i>	Native or poison peach	O
<i>Trochocarpa laurina</i>	Tree health	O
<i>Urtica incisa</i>	Stinging nettle	C
<i>Wahlenbergia gracilis</i>	Bluebell	C
<i>Wilkiea huegeliana</i>	Veiny wilkiea	O
<i>Xanthorrhoea glauca</i> ssp <i>angustifolia</i>	Grass tree	C

(Adapted from Turner and Vernon (1994) Dowling (2007) and Jupp (2007), where R - Rare; O - Occasional; C - Common; VC - Very Common)

Appendix B

List of Fauna Species

Fauna Species Recorded Within Pilchers Reserve		
Family	Common Name	Scientific Name
ANATIDAE	Australian wood duck	<i>Chenonetta jubata</i>
PHALACROCORACIDAE	Little pied cormorant	<i>Phalacrocorax melanoleucos</i>
PELECANIDAE	Australian pelican	<i>Pelecanus conspicillatus</i>
ARDEIDAE	White-faced heron	<i>Egretta novaehollandiae</i>
	Cattle egret	<i>Ardea ibis</i>
THRESKIORNITHIDAE	Straw-necked ibis	<i>Threskiornis spinicollis</i>
ACCIPITRIDAE	Whistling kite	<i>Haliastur sphenurus</i>
	Brown goshawk	<i>Accipiter fasciatus</i>
	Grey goshawk	<i>Accipiter novaehollandiae</i>
	Wedge-tailed eagle	<i>Aquila audax</i>
FALCONIDAE	Australian hobby	<i>Falco longipennis</i>
	Peregrine falcon	<i>Falco peregrinus</i>
	Nankeen kestrel	<i>Falco cenchroides</i>
COLUMBIDAE	Brown cuckoo-dove	<i>Macropygia amboinensis</i>
	Crested pigeon	<i>Ocyphaps lonphotes</i>
	Wonga pigeon	<i>Leucosarcia melanoleuca</i>
	Wompoo fruit dove	<i>Ptilinopus magnificus</i>
	Topknot pigeon	<i>Lopholaimus antarcticus</i>
CACATUIDAE	Sulphur-crested cockatoo	<i>Cacatua galerita</i>
PSITTACIDAE	Australian king parrot	<i>Alisterus scapularis</i>
	Crimson rosella	<i>Platycercus elegans</i>
	Eastern rosella	<i>Platycercus eximius</i>
CUCULIDAE	Fan-tailed cuckoo	<i>Cacomantis flabelliformis</i>
	Horsfield's bronze cuckoo	<i>Chrysococcys basalis</i>
	Shining bronze cuckoo	<i>Chrysococcys lucidus</i>
STRIGIDAE	Southern boobook	<i>Ninox novaeseelandiae</i>
HALCYONIDAE	Laughing kookaburra	<i>Dacelo novaeguineae</i>
CLIMATERIDAE	White-throated tree-creeper	<i>Cormobates leucophaea</i>
MALURIDAE	Superb fairy wren	<i>Malurus cyaneus</i>
	Variegated fairy wren	<i>Malurus lamberti</i>

Family	Common Name	Scientific Name
PARDALOTIDAE	Spotted pardalote	<i>Pardalotus quadragintus</i>
	Striated pardalote	<i>Pardalotus striatus</i>
	White-browed scrubwren	<i>Sericornis frontalis</i>
	White-throated gerygone	<i>Gerygone olivacea</i>
	Weebill	<i>Smicrornis brevirostris</i>
	Yellow-rumped thornbill	<i>Acanthiza chrysorrhoa</i>
MELIPHAGIDAE	Red wattlebird	<i>Anthochaera carunculata</i>
	Noisy miner	<i>Phileman corniculatus</i>
	Lewin's honeyeater	<i>Meliphago lewinii</i>
	Yellow-faced honeyeater	<i>Lichenostamus chrysops</i>
	White-naped honeyeater	<i>Melithreptus lunatus</i>
	Eastern spinebill	<i>Acanthorhynchus tenuirostris</i>
	Scarlet honeyeater	<i>Myzomela sanguinolenta</i>
PETROICIDAE	Rose robin	<i>Petroica rosea</i>
	Eastern yellow robin	<i>Eopsaltria australis</i>
CINCLOSOMATIDAE	Eastern whipbird	<i>Psophodes olivaceus</i>
NEOSITTIDAE	Varied sittella	<i>Dapdoenositta chrysoptera</i>
PACHYCEPHALIDAE	Golden whistler	<i>Pachycephala pectorlis</i>
	Grey shrike-thrush	<i>Colluricincla harmonica</i>
DICRURIDAE	Black-faced monarch	<i>Monarcha melanopsis</i>
	Grey fantail	<i>Rhipidura falginosa</i>
	Willie wagtail	<i>Rhipidura leucophrys</i>
ARTAMIDAE	Grey butcherbird	<i>Cracticus torquatus</i>
PTILONORHYNCHIDAE	Regent bower bird	<i>Sericulus chrysocephalus</i>
	Satin bowerbird	<i>Ptilinorhynchus violaceus</i>
PASSERIDAE	Red-browed finch	<i>Neochemia temporalis</i>
HIRUNDINIDAE	Welcome swallow	<i>Hirundo neoxena</i>
ZOSTEROPIDAE	Silvereye	<i>Zosterops lateralis</i>
NOT DETERMINED	Molluscs	<i>Species unknown</i>
SCINCIDAE	Skinks	<i>Species unknown</i>
ELAPIDAE	Snakes	<i>Species unknown</i>

Family	Common Name	Scientific Name
BOIDAE	Diamond python	<i>Morelia spilota spilota</i>
TACHYGLOSSIDAE	Short-beaked echidna	<i>Tachyglossus aculeatus</i>
DASYURIDAE	Spotted-tailed quoll	<i>Dasyurus maculatus</i>
	Brush-tailed phascogale	<i>Phascogale tapoatafa</i>
PHASCOLARCTIDAE	Koala	<i>Phascolarctos cinereus</i>
PHALANGERIDAE	Possum	<i>Species unknown</i>
MACROPODIDAE	Wallaby	<i>Species unknown</i>
PTEROPODIDAE	Grey-headed flying fox	<i>Pteropus poliocephalus</i>
RHINOLOPHIDAE	Eastern horseshoe bat	<i>Rhinolophus megaphyllus</i>
VESPERTILIONIDAE	Common bent-wing bat	<i>Miniopterus schreibersii</i>
	Little bent-wing bat	<i>Miniopterus australis</i>

(Bill Dowling (2007) *Hunter Bird Observers Club Record Sheets*, Smith 2003 and DEC data 2004).