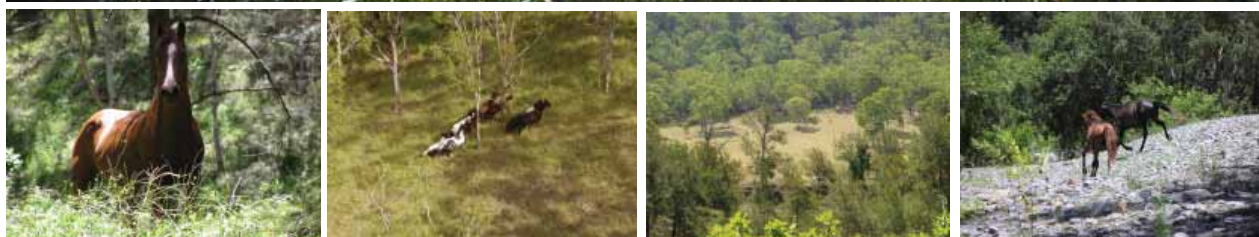




NSW **National Parks
and Wildlife Service**

Feral Horse Management Plan

OXLEY WILD RIVERS NATIONAL PARK, NORTHERN TABLELANDS REGION



MAY 2006

Department of **Environment & Climate Change** NSW



Feral Horse Management Plan

OXLEY WILD RIVERS NATIONAL PARK, NORTHERN TABLELANDS REGION

For further information contact:

Regional Manager
National Parks and Wildlife Service
PO Box 402
Armidale NSW 2350
Telephone: 02 6776 0000
Fax: 02 6771 1894

Additional copies of this plan may be obtained from:

NSW National Parks and Wildlife Service
85 Faulkner St
PO Box 402
Armidale NSW 2350

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This plan was prepared by:

Ken Pines
Pest Management Officer
National Parks and Wildlife Service
Northern Tablelands Region
Armidale NSW 2350

This plan should be cited as follows:

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Executive Summary

Oxley Wild Rivers National Park (OWRNP), covering in excess of 142,000 hectares, protects an area of international and national significance for its biological and landscape values and of regional significance for cultural heritage and recreation. The majority of the park is inscribed on the World Heritage List.

Two areas within OWRNP, totalling over 81,000 ha, have been declared wilderness under the Wilderness Act 1987. Wilderness areas are large natural areas of land that, together with their native plant and animal communities, are essentially unchanged by human activity. These areas contribute to the long-term protection of biological diversity and serve as scientific reference areas.

Feral horses occur in the gorges of OWRNP and on some adjoining private properties, primarily along the river flats but also on adjacent gullies and ridges. The horses have been identified as posing a threat to the conservation values of the park, water quality and public safety as well as impacting on the agricultural enterprises of adjoining landholders.

The key objectives of the plan are to:

- Conserve and protect the natural values of Oxley Wild Rivers National Park by removing all feral horses and ensuring that the park thereafter remains free from further feral horse impacts; and
- Provide for the humane capture, handling and removal of feral horses from the park and identify options for the appropriate disposal of the feral horses once removed from the park.

The NPWS recognises that there is a wide range of views within the community regarding the management of feral horses within conservation areas. The plan includes details of the consultation process that was undertaken to ensure that the public had an opportunity to provide input into the management of the feral horses in OWRNP. Consultation with neighbours and special interest groups will continue, as will the input from the OWRNP Feral Horse Reference Committee.

This plan examines the range of horse management methods available and recommends a combination of control methods that meet the key objectives for the removal of feral horses from the Park. The preferred capture method initially is trapping in paddocks and/or yards, using feed-based lures and, where applicable, “coacher horses”. Euthanasia using ground shooting, may be acceptable for some horses that cannot be captured or are not able to be safely removed from the park using other methods.

The feral horses will be handled using low stress stock handling techniques and will be transported from the park by 4WD truck. A range of options is provided for the humane disposal of captured horses.

Detailed protocols are included to ensure that the highest standards of animal welfare are maintained throughout the operation. This plan also sets out a method for evaluation and monitoring of the program.

1 Introduction

Oxley Wild Rivers National Park (OWRNP) is located on the eastern edge of the Northern Tablelands of NSW and is part of a broad contiguous belt of relatively undisturbed, forested land along the Great Escarpment. The park was established through the amalgamation of several existing reserves in 1986 and, with recent additions, has a gazetted area in excess of 140,000 hectares. A further 3,351 ha has been purchased by the NPWS but is yet to be gazetted.

Oxley Wild Rivers State Conservation Area (SCA) occupying an area of 1,496 hectares adjoins OWRNP on the Chandler River upstream of the junction with the Macleay River. Gazetted in January 2003, it is part of the Macleay Gorges identified wilderness area. For the purposes of this plan this SCA will be treated as part of OWRNP.

The park lies within the catchment of the Macleay River and consists largely of gorges and deep river valleys on the upper reaches of the river and its tributaries, with relatively small areas of peripheral and residual tableland. Spectacular gorges and waterfalls are prominent features of the park. Large parts have been declared wilderness and the majority of the park has been inscribed on the World Heritage List as part of the Central Eastern Rainforest Reserves of Australia (CERRA). See figure 1.

OWRNP supports a diverse assemblage of plant communities; their distribution strongly influenced by the marked climatic gradients, the varied terrain and to a lesser extent differences in geology. The relatively dry environment of much of the park has given rise to extensive development of woodland on steep slopes with north to westerly aspects and to grassy open forest on sheltered aspects, extending onto the plateau and along river

terraces. Dry rainforest is widely dispersed on slopes and gullies, while shrub lands occur along cliff edges where soil is too shallow and unstable for trees.

Areas of higher rainfall at the north-eastern and south-eastern extremities of the park support tall open forests and small areas of subtropical and warm temperate rainforest.

Some 31 plant species found in the area are classified as rare or threatened with seven of these species also listed as endangered and eight as vulnerable under the Threatened Species Conservation Act 1995 (TSC Act). Twenty-six fauna species, also listed as vulnerable or endangered under the TSC Act have been recorded in the park.

Feral horses (*Equus caballus*) occur in the gorges of OWRNP, primarily along the river flats but also on adjoining gullies and ridges. The plan of management for the park identifies feral horses as posing a threat to biodiversity, water quality and public safety. It recommends that effective strategies be developed to remove horses from the park.

This Feral Horse Management Plan includes:

- A description of the significance of OWRNP;
- A historical overview of the issue of feral horses in OWRNP;
- Objectives;
- An outline of the public consultation process that was followed to ensure adequate input from all sections of the community;
- A review of feral horse control methods;
- A description of the techniques that will be used to remove the horses from the park;
- An overview of the protocols that will be put in place to ensure the welfare of captured feral horses;
- An outline of the criteria to be used to evaluate and monitor the program.

1 Introduction (continued)

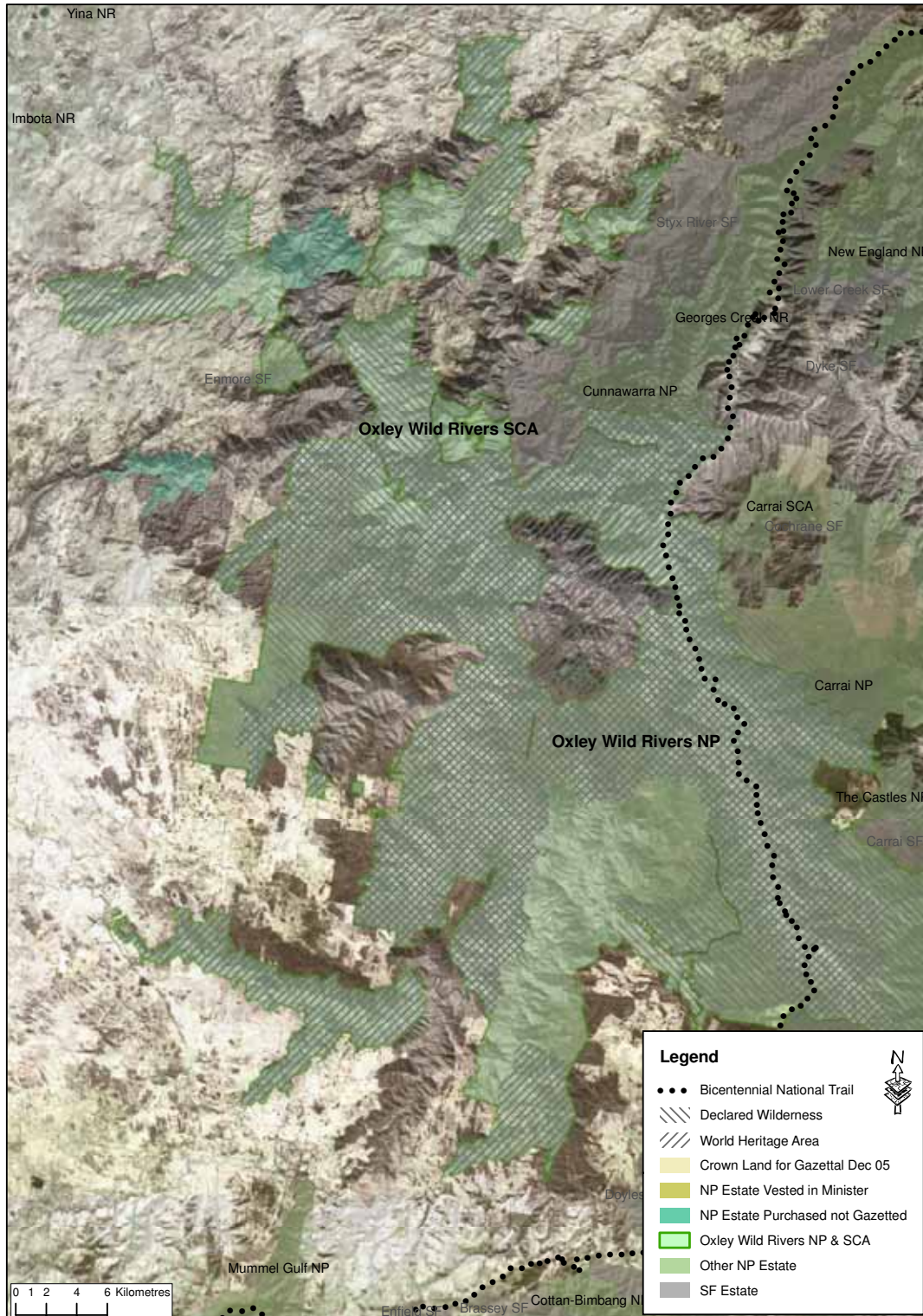


Figure 1. Map of Oxley Wild Rivers National Park

2 Background

Historical overview of horses in the New England

The first white settlers in the early to mid 1800s brought horses to the New England area. By the 1900s, through the release, abandonment or escape of domestic horses, feral horse herds had become established throughout many of the more remote and rugged areas of the New England.

Control techniques used by the early pastoralists in the area included sporadic mustering and trapping, usually targeting younger horses that had potential to be “broken” in to the saddle. “Brumby shoots” were organised when the horse population was felt to be excessive or the pasture was needed for other livestock. Various local groups also shot Brumbies just for the “sport” (Wright 1971).

While the local heritage value has been established for feral horses in some parts of the New England, no evidence was presented during the public consultation process to indicate that the horses in OWRNP have any significant heritage value.

Droughts are an important factor in limiting growth of the horse population throughout the New England. Mortality rates amongst older horses increase substantially and the survival rate of foals declines markedly during drought.

Overview of feral horse management in OWRNP

Mustering has been the only control method used by NPWS to control the feral horse population in OWRNP. In 1998 Armidale District of the NPWS

approved a trial mustering program to be undertaken by a group of local horseman. A portable yard, with very long wings, was set up on a well-used horse pad. The horses were mustered by members of the group either on horseback or on foot, with a helicopter used on several occasions. All horses captured were removed from the park by a 4WD truck and were retained by the musters as the only remuneration for their efforts.

The number of horses captured during the mustering programs was quite variable with some early efforts failing to capture a single horse. As the level of expertise and knowledge of horse movements increased so did the capture rate with 20 horses caught in a few days towards the end of the program. Seasonal conditions proved to be a major factor affecting the success rate of the program. Horses tended to congregate more along the river during dry conditions. In good seasons the horses were more widely dispersed and high river levels frequently limited access. Approximately 35 horses had been removed when the mustering trial was terminated due to access issues.

Ecology of the Feral Horse

Horses are generally seasonal breeders with oestrus determined by day length. They have a gestation period of 336 days with a single foal born. The horse population can increase by up to 20% per year under suitable seasonal conditions (Dobbie and Berman 1992).

2 Background (continued)

Although mares are capable of foaling every year, pregnancy stress usually results in their raising one foal every two years, the intervening year allowing them to recover sufficient body condition to support another pregnancy (Wagoner 1977).

Primarily a grazing animal, horses prefer green grasses but will also eat dried grasses, perennial herbaceous species as well as roots, bark, buds and fruit.

Horses can live more than 30 years. However in the wild few horses reach 20 years. The key mortality factors for feral horses are starvation (either due to drought or dentition), parasites and poisonous plants.

The home range of feral horses varies with the type of country and season. In central Australian range country, Dobbie and Berman (1990) reported home ranges of approximately 70 km². In higher rainfall areas the home range is much smaller. Radio tracking undertaken by NPWS staff in Guy Fawkes River National Park (GFRNP) found the home ranges varied from 1.2 km² to 9.76 km².

Bachelor males tend to occupy the largest living areas, whereas harem groups occupy smaller, more stable areas (Dobbie and Berman 1990).

Distribution and Population of Feral Horses in OWRNP

The preferred grazing areas for feral horses in OWRNP are the semi-open, grassy river flats, particularly along the Macleay, Chandler and Apsley Rivers as well as associated side creeks.

The utilisation of individual territories varies throughout the year, with horses frequenting the higher elevations when temperatures are higher and there is sufficient surface water in side creeks and gullies. The horses congregate along the rivers during the cooler periods or when pasture and water is limited. *See Figure 2.*

Boundary fences are difficult to maintain in stock proof condition within the riparian zone due to the frequent flooding. The rivers in some areas form the only boundary between the park and neighbouring properties and with fluctuating depth are easily forded by both livestock and feral horses. As a result, some horse mobs move freely between the park and neighbouring private or leasehold lands.

The exact number of horses living in OWRNP is not known. Approximately 207 were counted in March 2006 during a limited helicopter survey. A number of mobs of horses known to be present in the general area were not sighted during the survey, indicating that the population will be higher than the number counted.

More comprehensive surveys, utilising both aerial and ground techniques will be undertaken during the program. This will provide a more accurate estimate of the population and distribution of feral horses both within the park and on adjoining unfenced lands.

2 Background (continued)

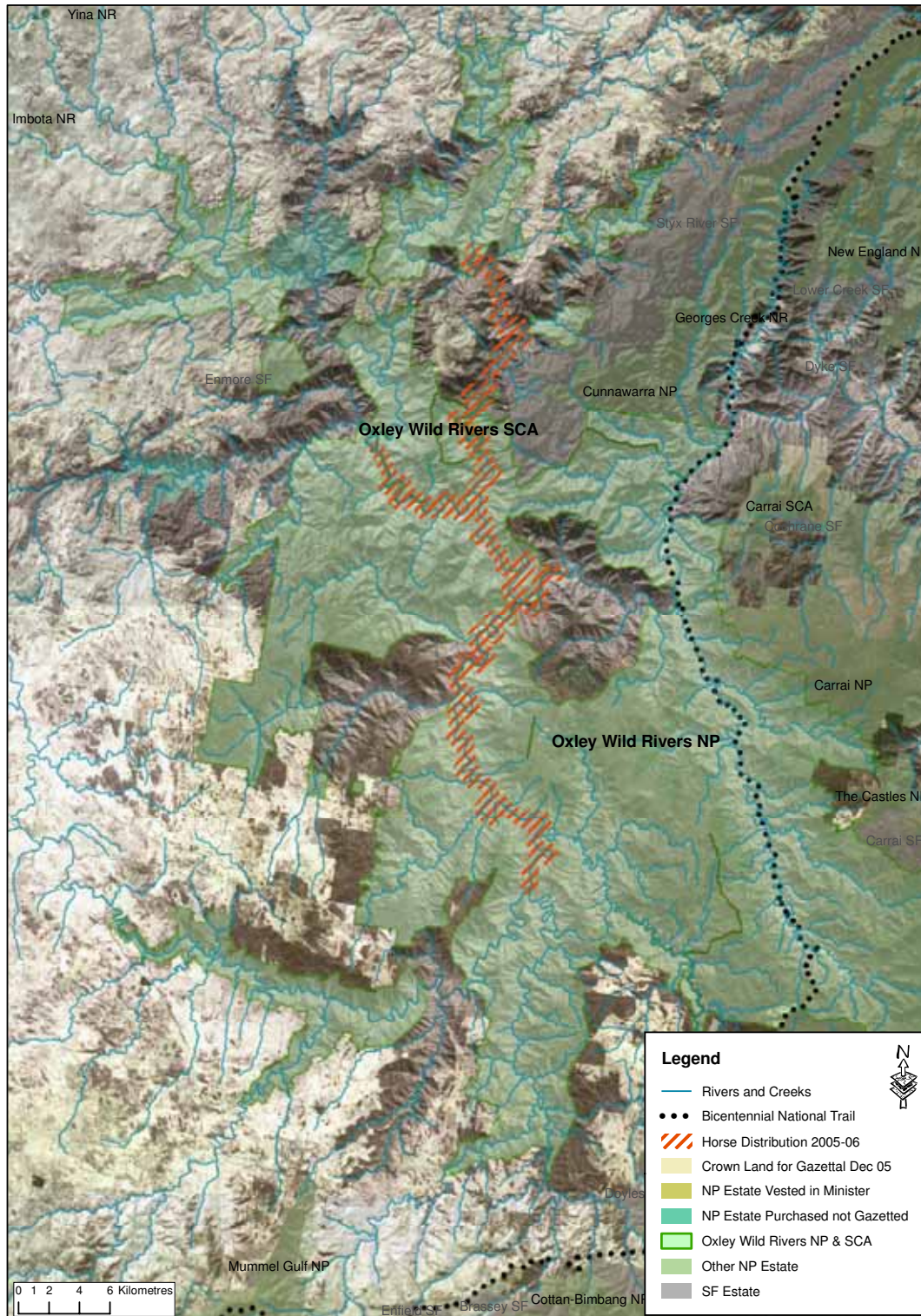


Figure 2. Current known feral horse distribution in Oxley Wild Rivers National Park

3 Significance of OWRNP

The park protects an area of international and national significance for its biological and landscape values and of regional significance for cultural heritage and recreation.

As previously stated in this plan, parts of OWRNP are included on the World Heritage List as part of the Central Eastern Rainforest Reserves of Australia (CERRA) World Heritage Area. CERRA was inscribed on the World Heritage List in 1986, and extended in 1994, because it satisfies three of the four criteria for natural values of outstanding universal significance.

It contains:

- outstanding examples of the major stages of the Earth's evolutionary history (criterion I), including rainforest ecosystems and relict plant and animal species dating from Gondwana;
- outstanding examples of significant ongoing geological processes and biological evolution (criterion II), including centres of endemism where ongoing evolution is taking place and taxa showing evidence of relatively recent evolution; and
- significant habitats where threatened species of plants and animals of outstanding universal value from the point of view of science and conservation still survive (criterion IV), including rainforest, wet sclerophyll forest and rocky outcrop habitats containing threatened and rare plant and animal species.

The natural values of the park, many of which form part of its World Heritage value, are discussed in detail in *Oxley Wild Rivers National Park, Oxley Wild Rivers State Conservation Area, Cunnawarra National Park and*

Georges Creek Nature Reserve Plan of Management. A brief summary is set out below.

Key natural values:

- diverse plant communities including rainforests, eucalypt forests, woodlands and heath, some of which are rare and/or restricted;
- examples of dry, sub tropical, warm temperate and cool climate rainforest types, including unparalleled samples of the transition of dry rainforest along gradients of moisture, exposure and soil depth;
- significant areas of old growth including moist forests that contain some of the tallest trees in NSW;
- areas of tall moist tableland forest;
- large number of threatened fauna species and rare and threatened plant species, the centre of distribution of several restricted and threatened species and limits of distribution of several species;
- endemic invertebrate species in the Kunderang Brook Karst System.

Significant landscape values:

- spectacular gorges, cliff lines and deep, steep sided valleys illustrating ongoing geomorphological processes associated with the Great Escarpment;
- numerous high waterfalls;
- panoramic views from locations along the escarpment edge;
- attractive tall moist forests and rainforests.

Key cultural heritage:

- a range of Aboriginal archaeological sites with traditional and contemporary values;
- an historic homestead of national

3 Significance of OWRNP continued

significance;

- nationally significant remains of Australia's first commercial hydro-electric scheme;
- a range of other historic features including huts, a woolshed, a quarry and forestry sites.

Recreation and tourism opportunities:

- easily accessible lookouts and associated facilities;
- a range of short to long day walks;
- self-reliant recreation in the extensive network of gorges and wilderness areas;
- swimming, canoeing, rafting and liloing along creeks and rivers;
- extended horse riding, bicycling and walking on the Bicentennial National Trail.

World heritage

The primary purpose of a declared world heritage property is, in accordance with Australia's obligations under the World Heritage Convention, to identify, protect, conserve, present and transmit to future generations, the World Heritage values of the property. Principles, set out in regulations to the Commonwealth Environment Protection and Biodiversity Conservation Act 1999, have been developed from these obligations.

With the majority of OWRNP inscribed on the World Heritage List, these principles place an obligation on NPWS for the long-term care and stewardship of the park. The NPWS must ensure that the park's values are identified, protected, conserved, presented and, if necessary, rehabilitated, and that individual or cumulative actions do not degrade the values over time. The continued presence of feral horses impacts on the ability to properly manage the World Heritage Area.

Wilderness

Two areas within OWRNP, totalling over 81,000 ha, have been declared wilderness under the Wilderness Act 1987. Wilderness areas are large natural areas of land that, together with their native plant and animal communities, are essentially unchanged by human activity. These areas contribute to the long-term protection of biological diversity and serve as scientific reference areas.

The Macleay Gorge Wilderness area of 59,338 ha was declared in 1996 and covers the majority of the core area of the park. This includes an extensive area of the remote middle and upper Macleay River catchment.

Declared in 1998, the Kunderang Wilderness comprises of 21,937 ha. It lies to the east of the Macleay Gorge Wilderness and covers the eastern and south-eastern section of the Kunderang Brook catchment.

Management of natural and cultural heritage and of introduced species is carried out in wilderness areas in the same manner as other parts of the park, with special attention to minimising impacts on wilderness values.

The following general principles apply to the management of wilderness areas in NSW:

- restoration (if applicable) and protection of the unmodified state of the area and its plant and animal communities, while managing cultural heritage in a manner appropriate to its significance;
- preservation of the capacity of the area to evolve in the absence of significant human interference; and
- provision of opportunities for solitude and appropriate self-reliant recreation.

4 Impact of Feral Horses in OWRNP

Introduced species, because of their potential for serious detrimental effects on ecological values, have been identified in the plan of management as a significant concern in OWRNP. Feral horses occur in the gorges of the park and on adjoining leasehold properties, primarily along river flats but also on adjacent gullies and ridges. These horses pose a threat to biodiversity, water quality and public safety.

Few, scientific studies have been undertaken to measure the actual impact of feral horses on the park. A significant factor affecting any attempt to measure

horse impact is the presence of cattle in many of the same areas grazed by the horses. However, as part of the OWRNP Stock Management Strategy, cattle have now been removed from some sections of the park and will be removed from the remainder of the park over the next two years.

Impact in the form of compacted horse pads, disturbance of soil, stream bank damage and heavy grazing of native flora is still evident. Soil erosion and increased weed growth has also been noted in areas of OWRNP frequented by feral horses.



Figure 3. Pads and erosion caused through regular movements of feral horses in Guy Fawkes River National Park (Freeman, 2005)

4 Impact of Feral Horses in OWRNP (continued)

Research in other areas has suggested that feral horses, through their grazing and trampling, can substantially alter the composition of plant communities and under dry seasonal conditions will compete with native fauna for available food and water. The chewing and stripping of bark by horses can reduce regeneration of seedlings and may result in the death of mature trees.

There have been three studies on the impact of free ranging horses in GFRNP, a reserve with similar topography and vegetation communities to OWRNP. A study by Andreoni (1998) found extensive erosion associated with horse movement, with the majority of erosion occurring on steeper slopes in woodland areas of GFRNP. Andreoni also reported a high density of manure pads in the park, with an average of 51 pads found along 100m x 10m transects on the valley floor and within grassland communities, an average of 184 square metres of pad per hectare.

Taylor (1995), in glasshouse germination trials, showed that viable seeds were present in manure collected from free-ranging horses. Sieving of samples found that one horse is capable of passing 19,412 seeds in one day and the viability of seeds was 6.7%. The chewing of the bark of various eucalypt species in numerous areas of GFRNP was recorded by Schott (2002).

Horses, stallions in particular, can pose a real or perceived threat to bushwalkers and other park users. A number of incidents have been reported of confrontations when bushwalkers and feral horses have met unexpectedly or of horses galloping through campsites during the night. Stallions are a particular threat to horse riders who may be travelling through the park for leisure (along the Bicentennial Trail) or for stock management purposes.

The movement of horses from the park onto adjoining agricultural land can impact on neighbours through competition with livestock for pasture, damage to fencing, dispersion of weeds and through attacks on stock horses depastured in the area.

5 Objectives

The key objectives of the *Feral Horse Management Plan for Oxley Wild Rivers National Park* are:

- Conserve and protect the natural values of OWRNP by removing all feral horses from the park and by ensuring the park thereafter remains free of further horse impacts; and
- Provide for the humane capture handling and removal of feral horses from the park and identify options for the appropriate disposal of these horses once removed from the park.
- To work cooperatively with neighbours to reduce the impact of feral horses on the whole of the Macleay gorges;
- To ensure that feral horses are not reintroduced into or are allowed to reinvade OWRNP after completion of the removal program;
- To ensure that there is community consultation in and support for the removal process;
- To ensure that all feral horses removed from the park are disposed of in a humane manner;
- To ensure that the removal process does not adversely impact on the natural values of OWRNP; and
- To ensure the safety of all NPWS staff, contractors and volunteers during the removal process.

Further Guiding Principles

- To ensure that all horses are treated humanely throughout the removal process and in accord with the *Model Code of Practice for the Humane Control of Feral Horses* (Sharp & Saunders, 2004);

6 Legislative Framework & Guidelines

There is a range of legislation and guidelines that provide the framework for the management of feral horses in OWRNP:

- *National Parks and Wildlife Act 1974*;
- *Threatened Species Conservation Act 1995*;
- *Wilderness Act 1987*;
- *Environmental Planning and Assessment Act 1979* (EP&A Act);
- *Prevention of Cruelty to Animals Act 1997* (POCTA);
- *Model Code of Practice for the Humane Control of Feral Horses, and associated Standard Operating Procedures* (Sharp and Saunders, 2004);
- *Model Code of Practice for the Welfare of Animals: Land Transport of Horses* (SCARM Report 1998);
- *Model Code of Practice for the Welfare of Animals: Feral Livestock Animals - Destruction or Capture, Handling and Marketing* (SCA 1991); and
- Oxley Wild Rivers National Park, Oxley Wild Rivers State Conservation Area, Cunnawarra National Park and Georges Creek Nature Reserve Plan of Management.

7 The Public Consultation Process

It is essential that the community in general and particular interest groups were given the opportunity to have input into any programs to remove horses from OWRNP.

Consultation with neighbouring landholders

Several neighbours of OWRNP have lands that either adjoin or are part of the area grazed by the feral horse population. These neighbours often have an intimate knowledge of horse movements and behaviour in the gorges. In addition some of the neighbours are experiencing the impact from the horses on their agricultural enterprises, including pasture degradation, damage to fences and watering points and attacks or interference with their saddle horses.

Consultation with Interest Groups

A number of groups have expressed keen interest in either the management of the feral horses in OWRNP or in feral horse management on NPWS lands in general. The interests range from preservation of the horses, concern regarding the impact of the horses on the conservation values or animal welfare issues in general.

Consultation process

A staged approach was adopted for the public consultation process. The stages included

1. Meetings with key neighbouring landholders – NPWS staff met on a one to one basis with these neighbours to draw on their local knowledge of horse movements within the gorges and to ascertain their level of interest / involvement in the project;
2. Discussions with identified local

interest groups – NPWS staff contacted representatives of a range of identified interest groups including conservation, animal welfare and horse interest groups to advise them of the proposed program and invited their participation in the process.

3. Formation of the Reference Committee – Representatives from the various interest groups, key neighbours and animal welfare experts were invited to join the Reference Committee. The role of the Committee is to advise NPWS in relation to community concerns, animal welfare, control methods and disposal of captured horses. It provides a direct link with the stakeholders and the rural community.
4. Public meetings were held in Armidale and Walcha to provide information to and receive input from the broader community. The meetings provided opportunities to identify the range of values held by people and gauge community support for the program.
5. Local Aboriginal Land Councils were consulted and provided with an opportunity to have input into the removal process.
6. Public exhibition of this Plan occurred during early 2006. Many submissions were received from the community. These submissions were considered by the Reference Committee and informed many of the amendments which were made to the Plan.

8 Horse Management Methods

The management of feral horses by conservation agencies has always been a contentious issue and has attracted the close scrutiny of a wide range of interest groups. The overriding consideration in selection of management techniques to be used in OWRNP is to ensure the humane treatment of the horses throughout the process. The technique or a combination of techniques must also be cost-effective to reduce the horse population to the extent required within the designated time frame, without having undue or irreversible impact on the natural values of the park.

Different horse management techniques are required depending on issues such as access, the geography of the area, seasonal conditions, band size, sex and age structure of the horse population. In OWRNP it is expected that a combination of techniques will be required to remove all feral horses from the park. The techniques selected will need to meet the criteria set out above and be suitable for use in rugged and often inaccessible areas.

The following is a discussion of the control methods that have been considered in the development of this plan.

Trapping

Trapping involves the setting up of temporary trap paddocks or yards at key locations and luring horses in with salt or fodder. A good local knowledge of horse behaviour and movement patterns is essential in selection of the trap site. The design and construction of the trap are also critical for success. Additionally, seasonal conditions will have a significant impact on the capture and survival rates.

Trapping is probably the least stressful method of capturing feral horses. However, the removal of the horses from the trap and out of the park could pose significant risks to both the horses and handlers. The alternative to live removal from the trap is the on-site euthanasia, under veterinary supervision, of some (particularly injured, sick or aged) or all of the trapped horses.

Without a major commitment of resources, trapping is generally a slower technique, as the horses need time to get used to the presence of the trap when first introduced into the area. There is also the interval between the removal of one mob of horses from the trap area and a new mob moving into the territory. The alternative is to use multiple traps over a much larger area.

Mustering

Mustering is the most common form of capturing feral horses and may involve people on horseback, foot or motorbikes and in some cases the use of helicopters to muster the horse into a yard. The addition, to the operation, of a small mob of quiet "coacher" horses to lead the feral horses into the yards may increase the success rate.

Critical points for the success of mustering include:

- local knowledge of horse movements, including escape routes;
- experienced horse people capable of handling mobs of horse in difficult terrain;
- well sited yards with adequate wings to guide the horses into the yards; and
- suitable terrain for mustering.

There can be considerable risk associated with ground based mustering

8 Horse Management Methods (continued)

due to the need to pursue horses at speed over often rugged and broken terrain.

Once yarded, there still remains the issue of handling and transporting the horses from the park without undue risk to the animals or handlers.

Roping

The technique involves chasing individual horses, usually foals, until they tire and then roping them from horseback. This method is ineffective as a primary control technique as only one horse at a time is removed and success rates are often low. There is considerable risk to both the horses being captured and the rider. It is not envisaged that roping would be used as a control method for the removal of horses from OWRNP.

Chemical immobilisation

The use of a “dart” gun to chemically immobilise horses would not be cost-effective as a primary control technique for large numbers of horses in rugged terrain. Two of the main limiting factors are the restricted range of this type of firearm (only accurate over 50m) and the cost of the chemicals used.

There are also welfare concerns for animals that are darted as they may succumb to the delayed effects of the chemical in steep rocky terrain and be injured when they fall. With darting, there is also the problem of retrieving the animal and transporting it to the holding yards without causing injury to either the horse or the handler. The technique may have some limited merit for capturing individual animals that are of particularly high value or cannot be caught using any other method.

Aerial Shooting

Aerial shooting is a widely used, cost-effective method of removing feral horses in Australia. The NSW Government announced it will not use aerial culling for horses in NSW national parks after an incident in Guy Fawkes River National Park. Aerial culling therefore will not be used as control technique.

Ground shooting

Ground shooting is generally effective only on fairly flat and readily accessible country. It is impractical when water is abundant and in rugged country. It is not suitable for large-scale control. Wounded animals are often difficult to pursue (Dobbie, Berman and Braysher, 1993).

Ground shooting is permitted in NSW national parks provided it is implemented by appropriately trained and skilled persons working to strict protocols.

Fertility control

Fertility control has potential for future use in the management of feral horse populations however at this time the technology is inadequate to regularly deliver the required dosage of contraceptive. In most cases the horses would need to be captured and restrained to permit administration of the immunocontraceptive vaccines.

Even if an effective method of delivery was to be developed, fertility control would not in the short-term address the key objective of the removal of all feral horses from the park.

9 Results of Guy Fawkes River National Park Trial Horse Capture and Removal Program

In 2004, North Coast Region of the NPWS undertook a trial of passive capture and removal techniques for horses in Guy Fawkes River National Park (GFRNP).

The trial demonstrated that horses could be trapped effectively in both steel yards and trap paddocks. The combination of the trap paddock linked to the yards with multiple holding pens proved most effective. During the 8-month trial, 114 horses in 19 separate mobs were captured.

Other key findings from this trial included:

- The location and size of yards and paddocks are important to the success of the trap and to the management of the horse's welfare when captured.
- Horses can be lured into traps using feed-based lures.
- Depending on circumstances, salt, lucerne hay and molasses were effective feed lures.
- Coacher horses that have been

educated to artificial feeds, fences and holding yards assisted in drawing horses into traps and educating wild horses to artificial feeds.

- Horses can be located gathered and moved using low stress stock-handling (LSS) techniques.
- Once captured, the horses required approximately 4 to 5 hours of humanisation to prepare them for transportation.
- Ground based LSS was less effective in forested plateau areas due in part to the size of the horse flight zone and reduced visibility in forested hilly terrain.

The Trial Horse Capture and Removal Program, Guy Fawkes River National Park, 2004/05 Evaluation Report prepared by North Coast Region provides a comprehensive evaluation of the techniques trialed in GFRNP and has been extensively used in refining the techniques to be used in OWRNP.



Figure 4. Feral horses in a trap yard in Guy Fawkes River National Park (Pines, 2005)

10 Selection of Horse Management Methods for use in OWRNP

While it is desirable to have a broad range of options available, the techniques selected for the management of horses in OWRNP must meet the key criteria of being humane, safe and cost-effective without having undue or irreversible impact on the natural values of the park.

Horse Capture Techniques

Based on the above criteria and the results from the trial in GFRNP, the following combination of techniques is considered most suitable for OWRNP.

- The primary technique will be trapping, utilising a combination of trap paddocks and steel trap yards.
- Temporary trap paddocks will be erected at a number of strategic locations within the park. Selection of sites will be based on knowledge of horse movements, potential for significant impact on the local environment and accessibility by vehicle for removal of trapped horses.
- Trap paddocks may vary in size and layout but should cover an area of approximately 15ha and contain areas of natural shelter.
- Trap yards will be constructed of portable steel cattle panels and will be divided into at least three separate yards as well as a loading race and associated forcing yards.
- Feed based lures including salt, lucerne hay and molasses will be used to draw horses into the trap paddocks and yards.
- Low stress stockhandling (LSS) techniques will be used for the movement and handling of all feral

horses undertaken during the program.

- Helicopter mustering using LSS techniques may be used later in the program to move mobs of horses from more remote inaccessible areas to established trap sites.
- Coacher horses may be used to facilitate feral horse acceptance of artificial feed and human presence; movement from paddock to yards or to bring in individual horses separated from their mob. Coacher horses will be mares selected from trapped mobs and will be educated to accept human contact, feed and handling.
- NPWS staff and/or contractors may undertake the erection of trap paddocks / yards; free feeding; operation of trap paddocks and/or other associated activities.
- The removal of the horses from the park by truck may be undertaken by contractors or by NPWS staff.
- Contractors will undertake the handling of horses in the trap yards including preparation for transport.
- Although not considered a primary method, ground shooting may be used as a control technique for selected groups or individual horses that cannot be cost-effectively and humanely captured and removed using other methods.

The ultimate goal for this program is to reduce the horse population in OWRNP to zero.

10 Selection of Horse Management Methods for use in OWRNP (continued)

Capture and removal of feral horses by contractors

Contractors will be employed to undertake the capture and handling of feral horses within the trap yards and may be utilised to carry out any other part of the program. Any contractor employed for this program will need to provide evidence of skills and experience in the humane capture, handling and / or transport of feral horses, with particular emphasis on low stress stock handling techniques. The provision of appropriate transportation will be the responsibility of the contractors.

Contractors and NPWS staff involved in the Program will be required to be familiar with the Codes of Practice and Standard Operating Procedures noted in this Plan.

NPWS staff will provide support and supervision for the contractor(s) as well as the materials used for trap paddock and yard construction.

Transport of captured horses from OWRNP

Captured feral horses will be transported from the trap yards by 4WD truck to outside the park. Holding yards may be use outside the park and will be accessible by a normal stock transporter and transport from the holding yards to the final destination will be the responsibility of whoever is granted possession of the horses.

The trucks used for transport of horses from the park will be fitted with crates modified to reduce unnecessary noise, stress and risk of injury to the horses. The crates will have adjustable partitions to separate groups of horses where required.

Captured horses will be prepared for transporting by limited handling and “humanisation” of four to five hours duration over a two to three day period by the contractor. Low stress stock handling techniques will be utilised for this education.

11 Disposal of captured horses from OWRNP

There are a number of options for the disposal of feral horses captured in OWRNP:

- Relocation to a suitable holding property under the supervision of a horse interest group. The subsequent disposal of the horses by the group will be in accord with agreement reached with NPWS.
- Sold by NPWS through open auction or tender directly from a holding property.
- Retention by the contractors as remuneration (or part remuneration) for their efforts.
- Donated to an interested community group or charity for subsequent disposal in accord with agreement reached with NPWS.
- Sent direct to an abattoir for slaughter.

The Reference Committee considered all the listed options. While the Committee recommended that all of the options should be available it felt that relocation to a suitable holding property under the supervision of a horse interest group would be most acceptable to the community provided that:

- it could be undertaken in a cost-effective and humane manner,
- a suitable community based horse interest group was prepared to take the horses,
- there was sufficient demand by the general public for the horses.

If this option is to be used, it is important

that the property is of a suitable size and has adequate facilities to take the horses as required. The holding property must also be located enough distance from OWRNP and other NPWS lands to prevent any chance of the horses returning to NPWS managed lands. It will be a requirement that all horses relocated to the property will be marked with a permanent identifier, eg. freeze branding or other readily identifiable marking.

It is essential that the final recipients of all horses relocated from OWRNP take all reasonable steps to ensure that no horses are released or escape back into OWRNP or into other NPWS managed lands. This condition will be a key part of any agreement for the disposal of horses captured during this program.

The Reference Committee also recommended that feral horses that cannot be disposed of by any of the listed options, or where it is not practical to utilise any of the listed options, will, along with injured, sick, aged or dangerous / intractable horses, be humanely euthanased on site.

The euthanasia of horses will be regulated by strict protocols and, apart from emergencies will require approval from the program manager or animal welfare supervisor.

The Reference Committee will continue to play a role in the disposal of horses captured in OWRNP. The animal welfare representatives will assist in ensuring that all horses are treated humanely during the disposal process.

12 Welfare of captured feral horses

The Prevention of Cruelty to Animals Act, 1997 prohibits cruelty to animals and imposes obligations for persons to provide among other things food, drink, shelter and veterinary care for the animals under their control. This is relevant to feral animals once movement is restricted, for example in a trap paddock or yard.

The welfare of all captured feral horses will be of the highest priority for NPWS staff and contractors involved in the program. All aspects of the operation will be in accord with the Model Code of Practice for the Humane Control of Feral Horses and its Standard Operating Procedures. The two animal welfare experts on the Reference Committee, a representative from the Royal Society for the Prevention of Cruelty to Animals (RSPCA) and a local veterinary surgeon, will have direct input into welfare issues throughout the program.

Trap paddocks and yards will be constructed to provide the horses with shade and shelter and will be large enough to prevent overcrowding. The horses will be provided with water at all times and appropriate feed will be available for any horses held more than 24 hours.

All handling and movement of captured horses will utilise low stress stock handling techniques to minimise stress and risk of injury to the horses. Capture and handling will be timed to avoid periods when females are foaling or have dependant foals at foot.

The humane euthanasia of injured, sick, aged or dangerous / intractable feral horses will be undertaken on site, where necessary, by a competent trained person. The euthanasia of horses will be regulated by strict protocols and, apart from emergencies, will require prior approval from the program manager and / or animal welfare supervisor.

13 Monitoring and Evaluation

Ongoing monitoring and evaluation of the program is needed in order to measure the success or failure of this plan in achieving its stated objectives. These key objectives are:

- Conserve and protect the natural values of OWRNP by removing all feral horses from the park, and by ensuring the park thereafter remains free of further feral horse impacts; and
- Provide for the humane capture, handling and removal of feral horses from the park and identify options for the appropriate disposal of these horses once removed from the park.

Evaluation of the effectiveness of the capture and removal program

The effectiveness of the horse removal program will be assessed by the reduction over time of the horse population in the park. The program will be reviewed annually and the Plan will be reviewed in five years time.

It is expected that the capture rate will be far higher in the first few years of the program, with the level of difficulty in locating and trapping horses increasing as the population decreases. Seasonal conditions are expected to cause significant variations in horse recruitment levels.

Regular aerial and / or ground surveys will be utilised to monitor the density and distribution of the horse population throughout the program. Information supplied by the contractor as well as

reports from NPWS staff, neighbouring landholders and park users will also be considered in the evaluation of the program.

Monitoring the humaneness of the capture and removal program

The welfare of the feral horses in OWRNP will be of the highest priority to all NPWS staff and contractors involved in this program. Clear animal welfare protocols will be established prior to commencement of the program and all operations will be in accord with the relevant codes of practice and standard operating practices. A review and monitoring program will be developed in collaboration with the Reference Committee's animal welfare experts to evaluate and enforce these animal welfare protocols.

Low stress stock-handling techniques will be utilised throughout the program.

A representative of the RSPCA and a local Veterinary Surgeon are on the community Reference Committee and will be consulted on all animal welfare issues. The NPWS will undertake ongoing monitoring of the welfare of the horses during the capture and removal process.

Provision will be made for the humane euthanasia, where necessary, of any horse injured during the program. All injuries to horses will be investigated and any remedial action required will be initiated to prevent further occurrences, where possible.

13 Monitoring and Evaluation (continued)

Monitoring the impact of the capture and removal program

The NPWS has undertaken an environmental assessment of activities related to the capture and removal of horses from the park. Impact on the environment at each trap site will be monitored throughout the program using fixed photo points at each site.

At the completion of the program all fencing and trap materials associated with the project will be removed from the park. Where required, trap sites will be restored to a natural condition.

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