

SEVERN RIVER NATURE RESERVE

PLAN OF MANAGEMENT

NSW National Parks and Wildlife Service

March 2004

This plan of management was adopted by the Minister for the Environment on 15 March 2004.

Acknowledgments

The principal author of this plan of management is Warren Herbert, with assistance from National Parks and Wildlife Service Glen Innes West Area staff and the Northern Directorate Planning Group.

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NSW National Parks and Wildlife Service

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FOREWORD

Severn River Nature Reserve is located on the western slopes of the New England Tableland, approximately 30 km east of Ashford and 70 km north of Inverell on the Severn River in northern NSW.

The reserve covers an area of 4,290 hectares. The recent acquisition of an adjoining property, "Clayton Chase", will bring the total area of the reserve to 5,743 hectares.

The reserve is dissected by the deeply incised valley of the Severn River (which also becomes the reserve boundary for approximately 12 km). Pindari Dam, with its recreation facilities, adjoins the western section of the reserve.

A total of 460 species of vascular plants have been recorded in the reserve, including 7 that are listed under the *Threatened Species Conservation Act 1995*. In addition, the reserve is important for providing habitat for at least 10 threatened animal species.

The *National Parks and Wildlife Act 1974* requires that a plan of management be prepared for each nature reserve. A plan of management is a legal document that outlines how the area will be managed in the years ahead.

A draft plan of management for Severn River Nature Reserve was placed on public exhibition from 13 December 2002 until 18 March 2003. The exhibition of the plan of management attracted 2 submissions that raised 7 issues. All submissions received were carefully considered before adopting this plan of management.

The primary emphasis of this plan is to manage Severn River Nature Reserve as an ecologically viable remnant of the North West Slopes, and to facilitate and protect the re-establishment of native vegetation on areas previously cleared for agriculture.

This plan of management establishes the scheme of operations for Severn River Nature Reserve. In accordance with section 76 of the *National Parks and Wildlife Act 1974*, this plan of management is hereby adopted.

BOB DEBUS

MINISTER FOR THE ENVIRONMENT

1. NATURE RESERVES IN NEW SOUTH WALES

1.1 LEGISLATIVE AND POLICY FRAMEWORK

The management of nature reserves in NSW is in the context of the legislative and policy framework, primarily the *National Parks and Wildlife Act 1974* (NPW Act), the *Threatened Species Conservation Act 1995* (TSC Act), and the policies of the NSW National Parks and Wildlife Service (NPWS). The policies arise from the legislative background, the NPWS corporate goals and internationally accepted principles of park management. They relate to nature conservation, Aboriginal and historic heritage conservation, recreation, commercial use, research and communication.

Other legislation, international agreements and charters may also apply to management of the area. In particular, the *Environmental Planning and Assessment Act 1979* (EPA Act) requires the assessment and mitigation of environmental impacts of any works proposed in this plan.

A plan of management is a statutory document under the NPW Act. Once the Minister has adopted a plan, no operations may be undertaken within Severn River Nature Reserve except in accordance with the plan. This plan will also apply to the “Clayton Chase” additions and to any other future additions to Severn River Nature Reserve. Where management strategies or works are proposed for the reserve or any additions that are not consistent with the plan, an amendment to the plan will be required.

1.2 MANAGEMENT OBJECTIVES

General objectives for nature reserves

Nature reserves are reserved under the NPW Act to protect and conserve areas containing outstanding, unique or representative ecosystems, species, communities or natural phenomena.

Under the Act, nature reserves are managed to:

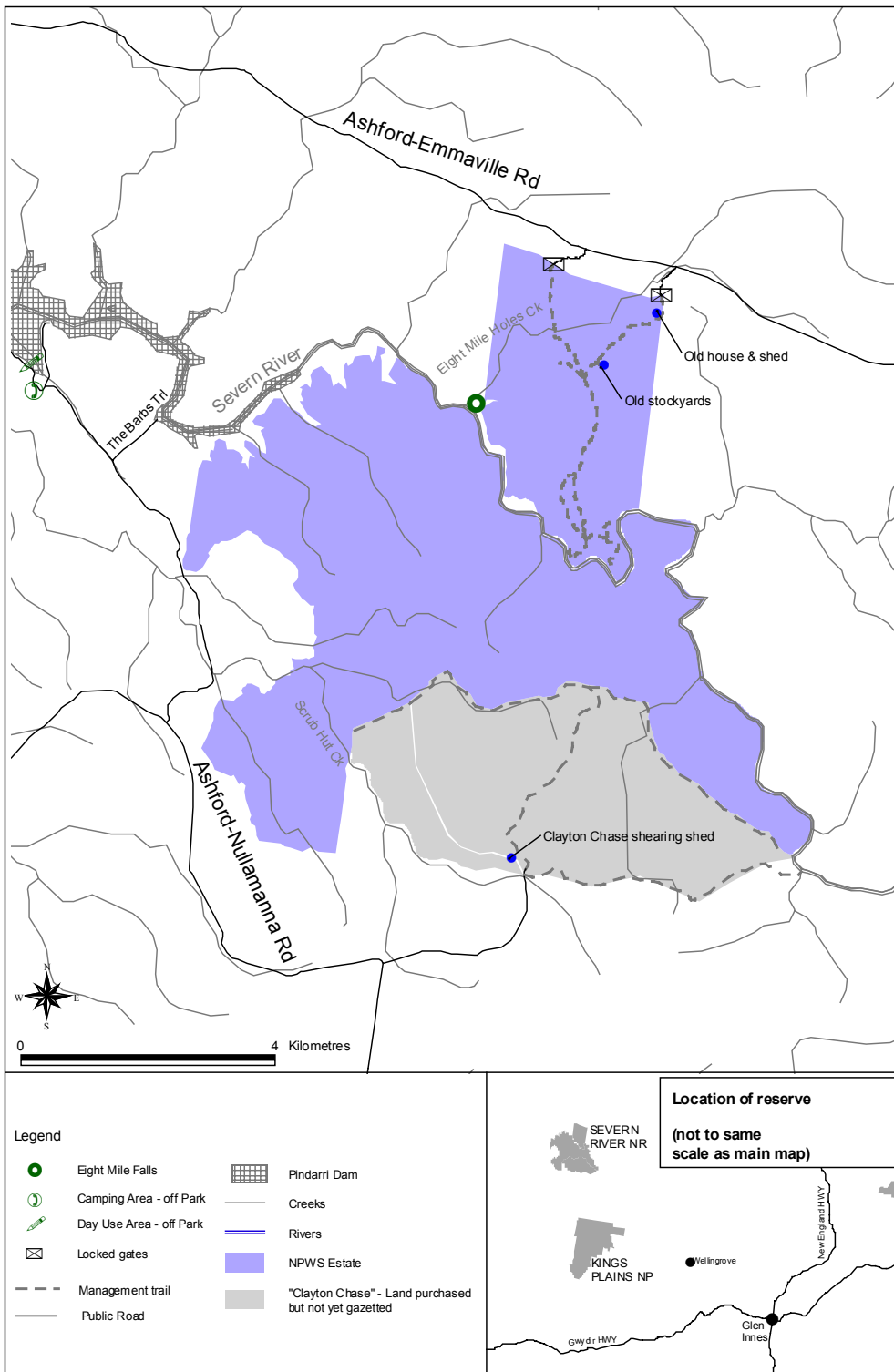
- conserve biodiversity, maintain ecosystem functions, and protect geological and geomorphological features and natural phenomena;
- conserve places, objects, features and landscapes of cultural value;
- promote public appreciation, enjoyment and understanding of the reserve’s natural and cultural values; and
- provide for appropriate research and monitoring (Section 30J).

Nature reserves differ from national parks in that they do not have as a management principle to provide for visitor use.

Specific objectives for Severn River Nature Reserve

In addition to the above, the specific management objectives for Severn River Nature Reserve are:

- To manage the reserve as an ecologically viable remnant of the North-west Slopes.
- To facilitate and protect the re-establishment of native vegetation on areas previously cleared for agriculture.
- To develop a cooperative working relationship with reserve neighbours to:
 - encourage conservation of adjoining natural areas, thus enhancing the ecological viability of the reserve,
 - encourage a coordinated fire management strategy for the reserve and adjoining properties, and
 - control the feral animal population in the area by establishing cooperative trapping, fencing and poisoning programs.
- To eliminate weed species where possible and prevent the spread of weeds elsewhere in the reserve.
- To assess significance of cultural objects, sites or landscapes and, if relevant, develop an appropriate cultural site management strategy in cooperative with the local Aboriginal community.



SEVERN RIVER NATURE RESERVE AND LOCALITY MAP

2. SEVERN RIVER NATURE RESERVE

2.1 LOCATION, GAZETTAL AND REGIONAL SETTING

Severn River Nature Reserve (referred to as “the reserve” in this plan) is located on the western slopes of the New England Tableland, approximately 30 km east of Ashford and 70 km north of Inverell on the Severn River in northern NSW. The reserve is dissected by the deeply incised valley of the Severn River (which also becomes the reserve boundary for approximately 12 km). Pindari Dam adjoins the western section of the reserve. An area of 1,924 hectares was formally reserved on 21 February 1968, with subsequent additions to the reserve occurring up to 28/8/03 with the acquisition of “Clayton Chase” which adjoins the southern section of the reserve (refer to “land purchased but not yet gazetted” on the map). These acquisitions will bring the total area of the reserve to 5,743 hectares. Collectively the reserve and “Clayton Chase” are referred to as “the reserve” in this plan. “Clayton Chase” will be managed as though as though it were nature reserve.

In 1992 Pindari Dam, downstream from the reserve, was enlarged to impound additional irrigation water in the Severn River. This impoundment resulted in a small portion of the reserve being inundated. Additional lands were identified for annexation to the reserve by the then Department of Water Resources.

Extensive agricultural development and land clearing on the North-west Slopes has resulted in much of the adjoining land being highly modified. The reserve is bounded by eight separate private holdings. In addition, the reserve adjoins a crown land recreation reserve located on the foreshores of Pindari Dam and managed by the Inverell Shire Council.

The reserve is part of a system of protected areas in the NPWS Northern Tablelands Region, including Kings Plains National Park, Torrington State Recreation Area (SRA), Kwiambal National Park and Arakoola Nature Reserve and forms part of an interlinking network of regional corridors between Kings Plains National Park and Torrington SRA for forest fauna as identified under the Key Habitats and Corridors Project (Scotts and Drielsma 2002).

The reserve is within traditional Kwiambal Aboriginal country and is within the Ashford Local Aboriginal Land Council area. The reserve is entirely located within the Inverell Shire local government area.

This plan applies both to the land currently reserved and to any future additions. Where management strategies or works are proposed for future additions that are not consistent with the plan, an amendment to the plan will be required.

2.2 LANDSCAPE CONTEXT

Natural and cultural heritage and on-going use are strongly inter-related and together form the landscape of an area. Much of the Australian environment has been influenced by past Aboriginal and non-Aboriginal land use practices, and the activities of modern day Australians continue to influence bushland through

recreational use, cultural practices, the presence of introduced plants and animals and in some cases air and water pollution.

Both Aboriginal and non-Aboriginal people place cultural values on natural areas, including aesthetic, social, spiritual, recreational and other values. Cultural values may be attached to the landscape as a whole or to individual components, for example to plant and animal species used by Aboriginal people. This plan of management aims to conserve both natural and cultural values. For reasons of clarity and document usefulness natural and cultural heritage, non-human threats and on-going use are dealt with individually, but their inter-relationships are recognised

2.3 NATURAL AND CULTURAL HERITAGE VALUES

Geology, topography, soils and climate

The reserve lies within the New England Fold Belt of Eastern Australia. Most of the reserve consists of Late Permian (about 250 million years old) volcanic rocks – part of the Wandsworth Volcanic Group that is developed over much of the northern part of the NSW portion of the New England Fold Belt. Immediately to the south of the reserve are Tertiary (about 35 million years old) basalts and volcanoclastics. Underlying the rocks (but not outcropping in the reserve) are Early Carboniferous metasediments and metabasalts of the Texas beds and Early Permian volcanics sandstones and conglomerates. The reserve mainly consists of extensive outcrops of Late Permian volcanics. Minor Quaternary alluvial sediments occur along some watercourses and residual laterite occurs on some ridges. The reserve and areas to the south are significant for the development of sapphire within placer deposits in Quaternary sediments. The sapphire deposits were originally sourced from volcaniclastic rocks that were part of the Tertiary volcanic sequence.

The majority of the reserve is undulating to hilly, with many internal drainage lines generally flowing north into the Severn River. Scrub Hut Creek, however, drains west from the centre of the reserve before finally discharging into the Severn River. Areas directly associated with the Severn River are heavily dissected with many steep ridges and valleys. Elevation is lowest along the western margin on the banks of the Severn River, where it is 500 metres above sea level. The majority of the reserve has an elevation ranging between 600 and 700 metres above sea level.

The Severn River is a visually spectacular feature of the reserve with its associated deep rocky gorge, rapids and large pools in the river.

The soils throughout much of the reserve are thin to skeletal with parent rock exposed in numerous places, particularly along the eastern third of the reserve. Soil depth generally increases away from these areas.

Native plants and animals

The reserve contains eight vegetation communities *viz*:

- Rough-barked Apple River Banks;

- Disturbed Riverbanks;
- Tea-tree Shrublands and Grasslands;
- Tumbledown Gum / Caley's Ironbark Woodlands;
- Tumbledown Gum / Narrow-leaved Ironbark Woodlands;
- Yellow Box / Rough-barked Apple Woodlands;
- Narrow-leaved Ironbark / Orange Gum Shrubby Woodlands; and
- Severn Shrublands.

A total of 460 species of vascular plants have been recorded in the reserve. Fourteen Rare or Threatened Australian Plant (ROTAP) species have been identified, of which seven are listed under the *Threatened Species Conservation Act 1995* (TSC Act). Many plant species recorded to date in the reserve are significant at a regional level. These plant species are listed in the table below:

Common name	Scientific name	Significance
	<i>Acacia williamsiana</i>	2RCa
	<i>Allocasuarina brachystachya</i>	2RCa
	<i>Astrotricha roddii</i> *	3VCa / TSC 1
Granite Boronia	<i>Boronia granitica</i> **	3VC / TSC 1
	<i>Callistemon pungens</i>	3RCa
	<i>Dodonaea hirsuta</i>	3RC
McKie's Stringybark	<i>Eucalyptus mckieana</i>	2V / TSC 2
	<i>Hibbertia</i> sp.B	2KC
	<i>Homoranthus biflorus</i>	2VC / TSC 2
	<i>Leionema rotundifolium</i>	3RCa
	<i>Micromyrtus grandis</i>	2ECi / TSC 1
	<i>Olearia gravis</i>	3KC
	<i>Persoonia terminalis</i> subsp. <i>recurva</i>	3RC
	<i>Pomaderris queenslandica</i>	TSC 1

Legend to the table above:

ROTAP codes (Briggs & Leigh 1995)

- 2 Geographic range in Australia less than 100 km
- 3 Geographic range in Australia greater than 100 km
- E Endangered, at risk of disappearing in wild within 10-20 years
- V Vulnerable, not presently endangered but at risk over longer period (20-50 years)
- R Rare, species considered rare in Australia but does not currently have any identifiable threat
- K Poorly known, species suspected but not definitely known to belong to one of the above categories
- C Reserved, at least one population known to occur within a conservation reserve
- K Species considered poorly known in Australia, but suspected of being rare, vulnerable or endangered
- a 1000 plants or more are known to occur within a conservation reserve
- i less than 1000 plants are known to occur within a conservation reserve
- * A recovery plan for this species is currently in preparation
- ** An approved recovery plan for this species will be available in the near future

TSC 1 TSC Act Schedule 1—Endangered

TSC 2 TSC Act Schedule 2—Vulnerable

The following Endangered Ecological Communities have the potential to occur within the reserve:

- McKies stringybark (*Eucalyptus mckieana*) / blackbutt (*Eucalyptus andrewsii*) open forest in the Nandewar and New England Tablelands Bioregions, and
- White box (*Eucalyptus albens*) / yellow box (*Eucalyptus melliodora*) / Blakely's red gum (*Eucalyptus blakelyi*) woodland.

The reserve is important for providing habitat for threatened animal species including the koala (*Phascolarctos cinereus*), squirrel glider (*Petaurus norfolcensis*), glossy-black cockatoo (*Calyptorhynchus lathami*), turquoise parrot (*Neophema pulchella*), square-tailed kite (*Lophoictinia isura*), large-footed Myotis (*Myotis adversus*), eastern cave bat (*Vespadelus troughtoni*), diamond firetail (*Emblema guttata*), speckled warbler (*Sericornis sagittatus*) and *Underwoodisaurus sphyrurus*, all listed as Vulnerable under the TSC Act. The regent honeyeater (*Xanthomyza phrygia*) may also occur in the reserve.

Extensive agricultural development and land clearing on the North-west Slopes has resulted in a highly modified environment, but fortunately, some properties adjoining the reserve still retain significant native vegetation remnants that enhance the ecological viability of the reserve.

Cultural Heritage

There is an Aboriginal art site recorded in the reserve, however no formal cultural heritage study has been undertaken and Aboriginal heritage includes cultural meaning on a landscape scale.

Following European settlement of the Northern Tablelands in the 1830s, sheep and cattle grazing occurred in the area. Much of the reserve north of the Severn River was cleared for grazing although significant areas are now regenerating following the removal of stock.

There is a set of stockyards in the northern part of the reserve that may be of historic significance as they appear to relate to an early period of occupation and agricultural use of the area. The yards have been constructed using an old style of wiring the posts and rails together. An assessment of the historic significance of these relics has not yet been undertaken. The yards need to be recorded and, as far as practical, protected from fire.

2.4 VISITOR USE AND ACCESS

Recreational activities, other than the study of nature and natural environments, are generally considered inappropriate uses of a nature reserve. Visitor use of the reserve is minimal, despite its close proximity to Glen Innes and Ashford. There are no visitor facilities in the reserve although good facilities are provided in the area at Pindari Dam, and Kings Plains and Kwiambal National Parks.

A reserve identification sign is located at the Strathbogie to Ashford road entrance although the locked gate prevents public vehicular access. Public vehicles, other

than boats, do not currently access the reserve and it is considered appropriate to maintain this situation.

The reserve may be attractive to small numbers of self-reliant walkers and campers and these activities will be permitted. Although levels of use are expected to be very low, these activities will be monitored to ensure they do not adversely impact on reserve values. Fishing is a popular pastime in the Severn River, which is mostly accessed by small boats from the adjacent Pindari Dam. In accordance with NPWS policy cycling is permitted on the management trails while horse riding is prohibited in nature reserves, however, neither of these activities are known to occur in the reserve. Under the NPW Act commercial recreation activities cannot occur in nature reserves.

No visitor facilities will be provided in the reserve. There are no commercial tour operations licensed for the reserve.

2.5 THREATS TO THE RESERVE'S VALUES

Fire

NPWS recognises that fire is a natural phenomenon, however the frequency of fire, its intensity, and the season in which it occurs are some of the major factors influencing the distribution of vegetation communities and animal species. Inappropriate fire management practices have the potential to cause localised extinction of some plants and animals. Management of fire is an important and complex issue. It must aim to achieve both long-term conservation of natural communities and ongoing protection of life and property within and adjacent to the reserve.

The reserve has not been subject to frequent wildfires and there has not been a wildfire in the reserve since its gazettal. Vegetation assessments suggest that an infrequent fire regime may be necessary to maintain floristic diversity of some vegetation communities but can be damaging to other communities and those regenerating from past grazing activities. If fire was to occur in the regenerating areas it could cause a significant setback to the revegetation of this area because the young trees are highly susceptible to fire (especially the cypress pines) and have not yet had sufficient time to produce seed.

So as to protect life and property in the reserve, wildfire will be suppressed as quickly as possible.

Prescribed fire may be used to achieve a variety of fire regimes in appropriate vegetation types, maintain habitat suitable for species with specific requirements and protect significant natural and cultural features.

Boundary fire trails exist along the southern boundary and in the south-western area of the reserve. In other areas cleared grazing land adjacent to the reserve provides access to the reserve boundaries for fire protection purposes. There are also several fire trails in the northern portion of the reserve that allow access to the river for water supplies.

A recent review of fire management by the NPWS has resulted in a modified approach to fire planning based on the level of complexity involved. In regard to Severn River Nature Reserve, the NPWS considers that the reserve requires that separate fire management strategies be prepared for the park covering the complex issues. The NPWS actively participates in district Bush Fire Management Committees and submits hazard reduction programs to the Committees annually. Close contact, coordination and cooperation is maintained with the Rural Fire Service brigades, fire control officers and neighbours with regard to fuel management and fire suppression.

Introduced plants and animals

Introduced plants generally occur as a result of disturbance to natural ecosystems from past land uses and have the potential to adversely affect the viability and diversity of native vegetation communities.

No detailed assessment has been undertaken of the introduced species present in the reserve, although the reserve appears to be generally free of significant weed infestations. Initial assessment shows the presence of honey locust (*Gleditsia triacanthos*) and tree of heaven (*Ailanthus altissima*) along the river banks. Isolated occurrences of African love grass (*Eragrostis curvula*) have also been observed.

Feral pigs (*Sus scrofa*) and goats (*Capra hircus*) are the most prevalent of all vertebrate pests recorded in the reserve. Pigs cause extensive damage to the native vegetation by rooting up the soil, destroying habitat and competing with native wildlife. The NPWS, neighbours and the Northern Tablelands Rural Lands Protection Board are cooperatively undertaking a pig eradication program.

The European red fox (*Vulpes vulpes*) and rabbit (*Oryctolagus cuniculus*) have been recorded in and around the reserve. Predation by the red fox is listed as a key threatening process under the TSC Act. Fox control will be carried out in conjunction with neighbours as required.

Further research into the population and distribution of vertebrate pest species is required.

The section of the reserve to the north of the Severn River has a long history of sheep grazing as a freehold farm. Grazing ceased in 1994 and the native plants are currently regenerating over much of this area. No domestic stock now occur in the reserve although feral goats continue to cause grazing pressure.

Redundant Buildings

The section of the reserve that was formerly grazed contains a house in an advanced state of disrepair and a small shearing shed. The house presents a potential safety hazard to anyone who enters it. Neither the house nor the shearing shed are considered to be of historic significance although they will be assessed before being removed.

The recently acquired “Clayton Chase” property contains an old shearing shed. This building is not required for future management purposes for the reserve and is in a poor state of repair. The shearing shed will be assessed for its historic value and demolished if not of historic significance. Other buildings and structures on “Clayton Chase” will to be removed.

3. MANAGEMENT STRATEGIES

Current Situation	Desired Outcomes	Actions and Guidelines	Priority
<p>Native plants and animals</p> <p>A comprehensive vegetation survey has been undertaken for the reserve. Little research has been undertaken into the animals of the reserve.</p> <p>Wildfire and inappropriate fire frequencies may have adversely effected some plant communities in the reserve.</p> <p>The ecological viability of the reserve can be enhanced if the native vegetation remaining on adjoining properties is managed to provide further habitat and corridors for the retention of native plants and movement of animals.</p>	<ul style="list-style-type: none"> • There is no loss of, or reduction in, native plant and animal species or populations found in the reserve. • Threatened species are protected. • There is improved knowledge of the reserve's native plants and animals and their ecological requirements. • Ecological viability of the reserve is enhanced through cooperation with adjoining landholders. 	<ul style="list-style-type: none"> • Encourage research into the ecological requirements of the reserve's native plants and animals, in particular survey work to ascertain the presence and abundance of threatened species such as the glossy-black cockatoo, regent honeyeater and koala. • Monitor regrowth of vegetation following fires and hazard reduction burns to determine appropriate burning regimes. • Liaise with neighbours, Landcare, vegetation management committees and other land use authorities to encourage adjoining properties to protect native vegetation on their land where properties have high natural values or add to the ecological integrity to the reserve. • Provide information to neighbours on the importance of remnant vegetation to enhance community understanding, awareness and appreciation. • Facilitate the natural regeneration of the former grazing property in the northern section of the reserve. Fire will be actively precluded from this area. • Encourage community groups (such as Landcare, Conservation Volunteers and Green Corps) to assist with revegetation and weed control especially in regenerating areas. • Implement recovery plans in the reserve as they become available. 	<p>High</p> <p>Medium</p> <p>Medium</p> <p>Medium</p> <p>Medium</p> <p>Medium</p> <p>High</p>

Current Situation	Desired Outcomes	Actions and Guidelines	Priority
<p>Cultural heritage</p> <p>An Aboriginal art site has been recorded in the reserve, however, no formal cultural heritage studies have yet been undertaken.</p> <p>The old stockyards are likely to be of historic significance or interest.</p>	<ul style="list-style-type: none"> • Significant cultural heritage sites and places in the reserve are documented and managed in accordance with their heritage value. • Aboriginal cultural heritage is adequately protected with involvement from the local Aboriginal community. • Consultation occurs with relevant Aboriginal people over the management of any Aboriginal artefacts and places. • European cultural heritage objects of significance are adequately protected and recorded. 	<ul style="list-style-type: none"> • Encourage research into the Aboriginal cultural heritage values of the reserve in cooperation with relevant local Aboriginal people. Provide copies of any research findings on Aboriginal cultural heritage to the Local Aboriginal Land Council. • Encourage relevant Aboriginal people to be involved in matters relating to the identification and management of Aboriginal objects, sites and places. • The Aboriginal art site will be fenced to protect it from damage by feral goats. • Undertake an archaeological survey prior to any new works with the potential to impact on Aboriginal sites and values. • Assess and record the conservation significance of the stockyards and other historic sites to determine management requirements if deemed to be of historic significance. The stockyards will be recorded and, as far as practical, protected from fire. 	<p>High</p> <p>High</p> <p>High</p> <p>High</p> <p>High</p>

Current Situation	Desired Outcomes	Actions and Guidelines	Priority
<p>Redundant Buildings</p> <p>The farmhouse to the north of the Severn River is dilapidated and not practical to repair, while the shearing shed is a relatively contemporary building. Neither building is considered to be of historic significance, nor are they needed for reserve management purposes. There is also a dilapidated shearing shed on “Clayton Chase”.</p>	<ul style="list-style-type: none"> Buildings that are of no further use and not of historic value are removed. 	<ul style="list-style-type: none"> Following an assessment of the historic values of the farmhouse and the shearing sheds, they will be recorded and then removed. 	<p>Medium</p>
<p>Introduced Flora and Fauna</p> <p>Feral pigs and goats occur in the reserve. Feral pig control programs are carried out annually in cooperation with neighbours.</p> <p>Feral goat numbers have been kept low through on-going control programs.</p> <p>Honey locust and tree of heaven are the most prevalent weed species. Some of the boundary fencing is old and in need of replacement in order to prevent stock entering the reserve.</p>	<ul style="list-style-type: none"> Weeds are identified, controlled, and where possible eradicated. Feral animal populations are controlled, and where possible eradicated. Honey locust and tree of heaven is eradicated from the reserve. Domestic stock do not enter the reserve. 	<ul style="list-style-type: none"> Prepare and implement a pest species strategy that includes identification, control and monitoring. Undertake an eradication program for honey locust and tree of heaven in the reserve. Undertake feral animal control in cooperation with neighbours, the Rural Lands Protection Board, Inverell Shire Council and other stakeholders Ensure that pest control programs have minimal impact on the native vegetation and fauna. Negotiate fencing agreements with neighbour’s to ensure boundary fencing excludes stock from the reserve. Any such agreement will be in accordance with the NPWS fencing policy. 	<p>High</p> <p>High</p> <p>High</p> <p>High</p> <p>High</p>

Current Situation	Desired Outcomes	Actions and Guidelines	Priority
<p>Fire Management</p> <p>The reserve has not been subject to frequent wild fire. Burning prescriptions and other management strategies must take into account the effects of proposed actions on native plant and animal species.</p> <p>Fire could also damage fences or cultural features, as well as threaten neighbouring land.</p> <p>Fire management strategies have not yet been prepared for the reserve.</p>	<ul style="list-style-type: none"> • Persons and property are protected from fire. • Information regarding appropriate fire regimes and vegetation response to fire is obtained. • Regenerating areas remain free of fire. • Fire regimes are appropriate for conservation of native plant and animal species and communities. • Cultural heritage features are protected from fire. 	<ul style="list-style-type: none"> • Prepare and implement fire management strategies for the reserve, which identifies appropriate fire regimes and infrastructure. Exclude fire from the reserve pending the outcome of the proposed fire management strategies and exclude fire from any fire sensitive communities identified in the strategies. Particular attention will be paid to excluding fire from the regenerating communities on the former grazed area. • Continue to actively participate in the Inverell Bush Fire Management Committee. Maintain close contact and cooperation with neighbours, Council fire officers and bush fire brigades concerning fire management on and adjacent to the reserve. • Suppress all wildfires on the reserve as quickly as possible. • Promote research into appropriate burning regimes for the reserve. • Maintain the system of fire trails and firebreaks to adequately protect the reserve as shown on the map. Fire trails will not be available for public vehicular access. 	<p>High</p> <p>High</p> <p>High</p> <p>Medium</p> <p>Medium</p>

Current Situation	Desired Outcomes	Actions and Guidelines	Priority
<p>Visitor Use</p> <p>Promotion of community understanding and appreciation of the conservation values of the reserve will be important for minimising damaging activities.</p> <p>No recreational facilities are provided in the reserve.</p> <p>Access is only available by foot or bicycle from the Strathbogie to Ashford Road along a management trail. Small boats can access the reserve from the Pindari Dam waterway.</p> <p>Feral pigs are a potential hazard to visitors but the risk is minimised by not encouraging recreational use of the reserve.</p>	<ul style="list-style-type: none"> • Reserve signs identify tenure and prohibited activities. • There is community understanding and appreciation of the reserve's natural and cultural values as well as management programs. • Visitor use is ecologically sustainable and consistent with the purposes of a nature reserve. 	<ul style="list-style-type: none"> • Liaise with neighbours and community organisations to promote community understanding of the reserves values and management strategies. • Visitor facilities will not be provided in the reserve. • Permit low impact self-reliant recreation on management trails, including bushwalking, cycling, bird watching and nature observation. • Recreational use by self-reliant visitors will be monitored and areas may be closed to any recreational activity that adversely impact on the values of the reserve. • Signs will be erected at appropriate location(s) advising the public of tenure, prohibited activities and any hazards in the reserve. • Recreational campfires are not permitted in the reserve due to the vulnerability of much of the reserve to unplanned fire. 	<p>Medium</p> <p>Medium</p> <p>Medium</p> <p>Medium</p> <p>Medium</p> <p>High</p>

Current Situation	Desired Outcomes	Actions and Guidelines	Priority
<p>Research and education</p> <p>Scientific study by local tertiary institutions is occasionally conducted in the reserve.</p> <p>Scientific study is needed to improve understanding of the reserves natural and cultural heritage, the processes that affect them and the requirements for management of particular species, populations or vegetation communities.</p> <p>Appropriate research may be of benefit to the management of the reserve.</p> <p>The recovery plan for <i>Boronia granitica</i> identifies a monitoring and research strategy for the species.</p>	<ul style="list-style-type: none"> • Relevant research is undertaken that enhances the information base and assists management of the reserve. • Research causes minimal environmental damage. • There is greater community awareness and appreciation of the natural and cultural values of the reserve and management programs 	<ul style="list-style-type: none"> • Encourage appropriate research by organisations and individuals to improve knowledge and management of the reserve’s natural and cultural values. • Encourage research into matters that are directly useful for management purposes. • Seek to incorporate into the reserve the unconstructed road reserve that traverses the Clayton Chase acquisition. • Permit researchers and educational institutions to use the reserve for relevant educational and research purposes, subject to public safety considerations relating to access and potential contact with feral pigs. • Inform and invite input from the local community, and particularly reserve neighbours, regarding reserve values, management strategies and future operations through the neighbour’s newsletter “Over The Fence” and other forms of communication. • Undertake the research and monitoring component required in any approved recovery plan for species known to occur in the reserve. 	<p>Medium</p> <p>Medium</p> <p>Low</p>

Current Situation	Desired Outcomes	Actions and Guidelines	Priority
<p>Management operations</p> <p>The existing trails and fire breaks are currently in good condition Although some boundary fences are in need of repair (refer Introduced Flora and Fauna section above).</p> <p>No management buildings (eg for storage) are required in the reserve as such facilities are available nearby Kwiambal National Park or Glen Innes.</p> <p>Within the “Clayton Chase” addition to the reserve there is an unconstructed road reserve that serves no future management or public access purpose and should be incorporated into the reserve (see white corridor on the map)</p>	<ul style="list-style-type: none"> • Management facilities adequately serve management needs and do not create an unacceptable environmental impact. 	<ul style="list-style-type: none"> • Maintain the management trail network shown on the map to the appropriate standard for 4WD vehicles. The Management trails in the reserve are not available for public vehicular use, but are available for use by walkers and cyclists (horse riding is not permitted in nature reserves under NPWS policy). • The entrance gate to the reserve will remain locked. • Seek to incorporate into the reserve the unconstructed road reserve that traverses the Clayton Chase acquisition. 	<p>Medium</p> <p>Medium</p> <p>Low</p>

Legend for priorities

High priority actions are those that are imperative to the achievement of management objectives identified in this Plan and need to be implemented in the near future to prevent degradation of the natural and cultural values or physical resources of the reserve, significant costs associated with rehabilitation at a later date, and/ or unacceptable risk to the public.

Medium priority actions are those that are necessary to achieve management objectives but will be implemented as resources become available because the time frame for their implementation is not urgent.

Low priority actions are desirable to achieve management objectives but can wait until resources become available.

4. KEY REFERENCES:

Department of Water Resources 1991, *Pindari Dam Enlargement Supplementary EIS* April 1991.

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FURTHER INQUIRIES:

Inquiries about this draft plan of management or Severn River Nature Reserve should be directed to the Glen Innes West Area Office, P.O. Box 281, Glen Innes, on (02) 6732 5133.