



Environment,
Climate Change & Water
National Parks & Wildlife Service



Western Sydney Regional Park

Draft Plan of Management

Western Sydney Parklands Trust

For the

NSW National Parks and Wildlife Service

Part of the Department of Environment, Climate Change and Water

August 2010

Acknowledgements

The Western Sydney Parklands Trust (WSPT) acknowledges the traditional owners of the land occupied by Western Sydney Regional Park.

This plan of management was prepared by staff of the Western Sydney Parklands Trust on behalf of the Department of Environment, Climate Change and Water.

For additional information or any inquiries about this park or this plan of management, contact the Western Sydney Parklands Trust at Level 4 / 10 Valentine Ave Parramatta or by telephone on 02 9895 7500.

Disclaimer: This publication is for discussion and comment only. Publication indicates the proposals are under consideration and are open for public discussion. Any statements made in this draft publication are made in good faith and do not render the WSPT or NPWS liable for any loss or damage. Provisions in the final management plan may not be the same as those in this draft plan.

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INVITATION TO COMMENT

The *National Parks and Wildlife Act 1974* (NPW Act) requires that a plan of management be prepared that outlines how an area will be managed by the NSW National Parks and Wildlife Service (NPWS) or any Trust with care, control or management of gazetted lands. The Western Sydney Regional Park is in the care, control and management of the Western Sydney Parklands Trust (WSPT).

The procedures for the exhibition and adoption of plans of management are specified under Part 5 of the NPW Act and involve the following stages:

- The draft plan is placed on public exhibition for at least 90 days and any person may comment on it;
- The plan and submissions received on the plan are referred to the Regional Advisory Committee for consideration;
- The plan, submissions and any advice from the Regional Advisory Committee are referred to the National Parks and Wildlife Advisory Council for consideration;
- The plan, submissions and the recommendations of the Advisory Council are referred to the Minister administering the NPW Act, and a copy referred to the Regional Advisory Committee;
- After considering the submissions, the recommendations of the Advisory Council and any advice from the Regional Advisory Committee, the Minister may adopt the plan or may refer the plan back to the NPWS and Council for further consideration.

Members of the public, whether as individuals or as members of community interest groups, are invited to comment in writing on this plan of management.

Comments should be forwarded to:

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The closing date for comments on the plan is 10th November 2010

All submissions received by WSPT are a matter of public record and are available for public inspection upon request to WSPT. Your comments on this draft plan of management may contain information that is defined as “personal information” under the NSW *Privacy and Personal Information Protection Act 1998*. The submission of personal information with your comments is voluntary.

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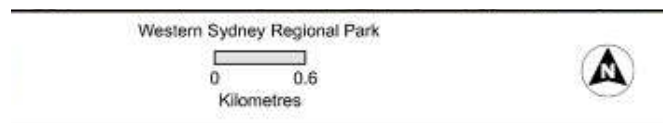
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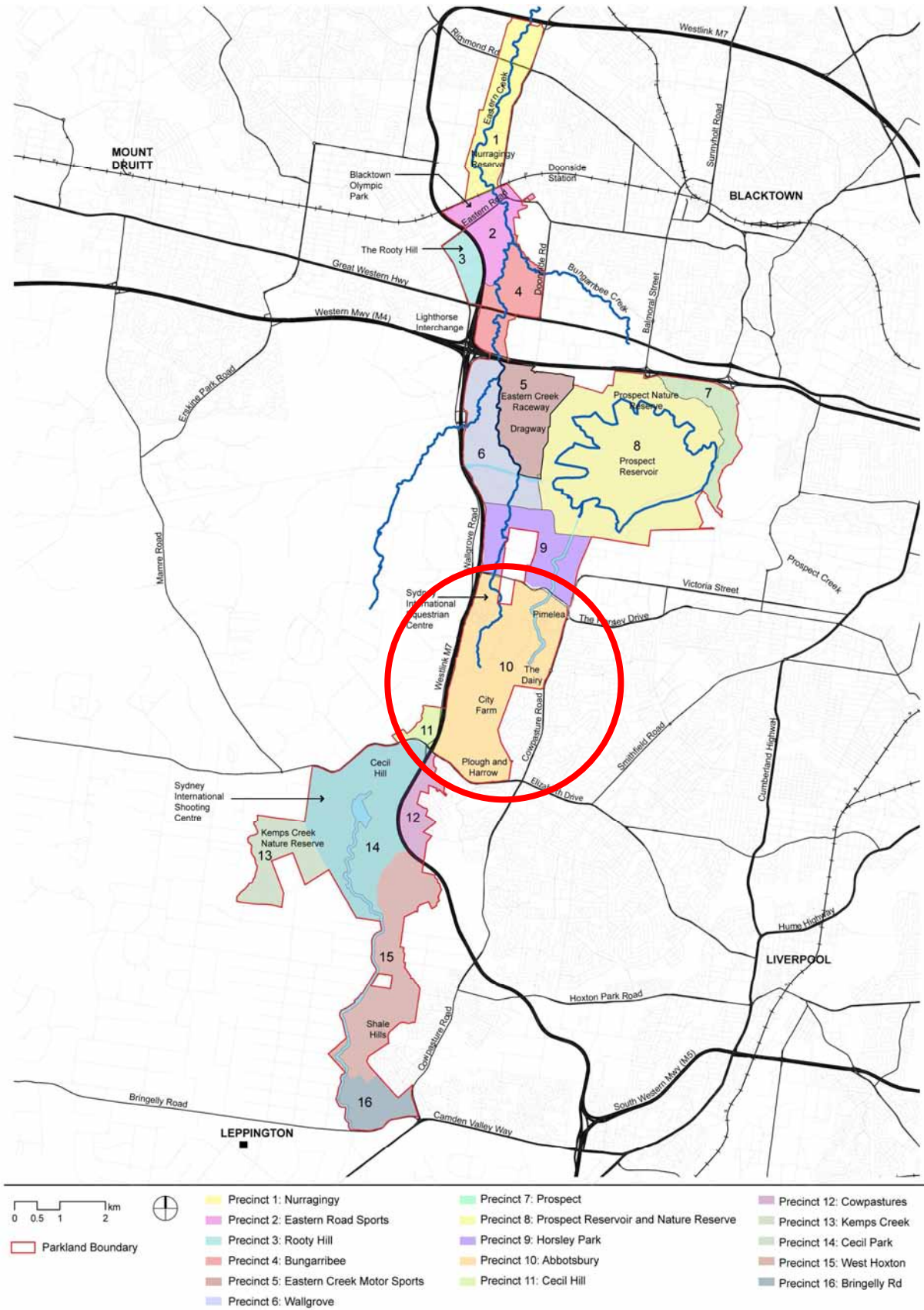
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Figure 1 MAP OF WESTERN SYDNEY REGIONAL PARK



Source: DECCW

Figure 2 WESTERN SYDNEY REGIONAL PARK WITHIN WESTERN SYDNEY PARKLANDS



Source: Western Sydney Parklands Draft Plan of Management

1. LOCATION, GAZETTAL AND REGIONAL CONTEXT

Western Sydney Regional Park (Figure 1), located within the Sydney Metropolitan area in the south western suburbs of Horsley Park, Wetherill Park, Bosley Park, Abbotsbury and Cecil Hills, is 583 hectares in size and was gazetted as a regional park under the *National Parks and Wildlife Act 1974* (NPW Act) in 1997. The regional park was initially managed by the NSW Government's former Metropolitan Parks Unit with management transferring to the NSW National Parks and Wildlife Service (NPWS).

Under the *Western Sydney Parklands Act 2006* (WSP Act), management of the regional park was transferred to the newly established Western Sydney Parklands Trust (WSPT) as an integral precinct of the 27 kilometre long Western Sydney Parklands. Western Sydney Parklands comprises a critical open space corridor stretching from Quakers Hill in the north to Bringelly Road, Leppington in the south (Figure 2). It is approximately 5,280 hectares in size and is the largest urban park in Australia. The WSP Act gives care, control and management of the Western Sydney Regional Park to WSPT with the objective of achieving the Government's overarching vision for the parklands corridor. The regional park remains subject to the NPW Act as it is still gazetted under this Act.

The vision of the Western Sydney Parklands (URS 2004) is:

"Western Sydney Parklands is a place for people of all backgrounds to meet, celebrate, learn and play. The Parklands will be the venue for communities to create and manage a new sustainable future on the Cumberland Plain"

Western Sydney Regional Park is a highly modified landscape, providing important open space and recreational opportunities in an urban setting. Historically the site of the regional park was used for agricultural purposes including intensive market gardening, dairy farming and grazing. In the late 1970s, the northern section of the regional park was subdivided for rural residential lots, however these lots were reclaimed by the Government to become the Western Sydney Regional Park in 1997.

Current land use surrounding the park includes small lot market gardens to the north, residential subdivision to the east and south, and rural residential and rural industrial holdings to the west.

The regional park is located within the Fairfield local government area, the Hawkesbury Nepean and Georges Rivers catchment areas and the Deerubbin Local Aboriginal Land Council's area. The regional park lies within the traditional lands of the Darug people and within the area of interest covered by the Darug Peoples MOU (DEC and Darug People 2007). The Gandangara people's traditional country lies immediately to the south of the regional park.

2. MANAGEMENT CONTEXT

2.1 LEGISLATIVE AND POLICY FRAMEWORK

The management of Western Sydney Regional Park is in the context of the legislative and policy framework, of both the *National Parks and Wildlife Act 1974* (NPW Act), and the *Western Sydney Parklands Act 2006* (WSP Act). It is also subject to the NPW Regulation and the *Threatened Species Conservation Act 1995* (TSC Act).

The WSP Act (Clause 31) gives care, control and management of Western Sydney Regional Park to the Western Sydney Parklands Trust (WSPT). This plan will form part of the overarching plan of management for the full 5,280 hectare Western Sydney Parklands corridor currently being prepared by WSPT as required under the WSP Act. All strategies and actions put forward for the corridor will be consistent with any strategies and actions included in this specific plan of management for the regional park.

To date, consultation has been undertaken with various community and stakeholder groups in the preparation of the Western Sydney Parklands Plan of Management (Hassell 2010 a & b). Key outcomes of the consultation have been around the need to provide more areas within the corridor for active and passive recreation including cycle and walking tracks, a desire for more activities and events and continuing the protection and enhancement of the parkland's bushland areas.

Under the WSP Act, WSPT is further required to prepare precinct plans for the 16 precincts of the Western Sydney Parklands corridor. Precinct planning for Western Sydney Regional Park, including the regional park precinct, will be undertaken in the future and be consistent with this plan of management.

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) may require the assessment and mitigation of the environmental impacts of works proposed in this plan. The *Western Sydney Parklands State Environmental Planning Policy* also provides the framework for planning approvals within the Park. The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) also applies in relation to actions that may impact on threatened species listed under that Act.

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 Western Sydney Regional Park except in accordance with this plan. This plan will also apply to any future additions to Western Sydney Regional Park.

Should management strategies or works be proposed for Western Sydney Regional Park or any additions that are not consistent with this plan, an amendment to this plan or a new plan will be prepared and exhibited for public comment.

2.2 MANAGEMENT PURPOSES AND PRINCIPLES

Regional parks are reserved under the NPW Act to protect and conserve areas in a natural or modified landscape that are suitable for public recreation and enjoyment.

Under the Act (section 30H), regional parks are managed to:

- provide opportunities for recreation and enjoyment in natural or modified landscapes;
- identify, interpret, manage and conserve the park so as to maintain and enhance significant landscape values;
- conserve natural and cultural values;
- promote public appreciation and understanding of the park's natural and cultural values;
- provide for sustainable visitor use and enjoyment that is compatible with conservation of natural and cultural values;
- provide for sustainable use (including adaptive reuse) of any buildings or structures or modified natural areas having regard to conservation of natural and cultural values.

2.3 STATEMENT OF SIGNIFICANCE

Western Sydney Regional Park was the first of a newly created category of land (regional parks) reserved under the NPW Act. As part of the Western Sydney Parklands, the regional park forms an integral role in the provision of recreation and community open space for the population of western Sydney.

Western Sydney Regional Park is considered to be of significance for its:

Recreation Values: The regional park provides passive recreation opportunities for a significant number of people in an environment that allows people to connect with nature. The majority of visitors to the regional park participate in family or community picnics and passive recreational activities;

Biological Values: The regional park contains a number of plant and animal species listed as endangered under the TSC Act and EPBC Act as well as plant communities that are part of the endangered Cumberland Plain Woodland;

Landscape/Catchment Values: The regional park lies within the upper sections of creeks draining into two of Sydney's main rivers. Its location in the Western Sydney Parklands corridor reinforces its importance as a resource for recreation, amenity and biodiversity in Western Sydney. The regional park has significant scenic values with visitors able to see the Sydney Basin and Blue Mountains from the ridgeline that runs through the centre of the regional park;

Aboriginal Heritage: The area is identified as highly significant by the Deerubbin Local Aboriginal Land Council as the hills forming the ridgeline within the regional park were a natural meeting place for Aboriginal people. The area has also been identified by the Darug people as having significance for Aboriginal people. The Gandangara people's traditional country lies to the south of the regional park.

2.4 SPECIFIC MANAGEMENT DIRECTIONS

In addition to the general principles for the management of regional parks (refer section 2.2), the following specific management directions apply to the management of Western Sydney Regional Park:

- Protection and enhancement of the natural heritage of the regional park, particularly the endangered ecological communities and the threatened flora and fauna species through the management of fire, disturbed areas, drainage, introduced species, access and visitor use.
- Recognition and protection of traditional and contemporary Aboriginal cultural heritage, landscape and spiritual values through providing opportunities for the involvement of the traditional owners and the local Aboriginal community in the protection, interpretation and management of this heritage and values.
- Protection of historic sites and relics through identifying, recording, conserving and interpreting historic resources.
- Protection of the catchment values of Eastern and South creeks through managing any disturbances, particularly those associated with fire, access and drainage.
- Provision of recreational facilities that are appropriate in a regional context and are designed, located and managed to protect the natural and cultural heritage and visual values of the regional park.
- Provision of interpretive and educational opportunities through signage, park brochures and activities to assist visitor understanding and enjoyment of the regional park.
- Improving knowledge of natural and cultural heritage, corresponding threats and the evaluation of management programs through research and monitoring.
- Working with local government, other agencies and authorities, the community and commercial interests to maximise community interest and involvement in the conservation of the regional park, and the implementation of sympathetic conservation measures in the neighbouring environment.

3. VALUES

The location, landforms and plant and animal communities of an area have determined how it has been used and valued. Both Aboriginal and non-Aboriginal people place values on natural areas, including aesthetic, social, spiritual and recreational values. These 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, various aspects of natural heritage, cultural heritage, threats and on-going use are dealt with individually, but their inter-relationships are recognised.

3.1 GEOLOGY, LANDSCAPE AND HYDROLOGY

The regional park is part of the Sydney Basin geological province. There are three types of soil present, the main one being Luddenham soil landscape, originating from Wianamatta Group Shales on undulation to rolling hills. There is also a small area of Picton Soil landscape (NSW NPWS 2001).

A ridgeline running north south divides Western Sydney Regional Park into distinct areas, with significant regional views from the high points. These areas contain the Moonrise picnic and recreation facilities.

The Sydney International Equestrian Centre, located in the north western area of the regional park, contains the headwaters of Eastern Creek, part of the South Creek subcatchment of the Hawkesbury-Nepean Catchment. The South Creek subcatchment encompasses most of the Cumberland Plain of Western Sydney, and is one of the most degraded catchments of the Hawkesbury-Nepean River system. Part of the regional park is within the upper reaches of the Georges River catchment.

3.2 NATIVE PLANTS AND ANIMALS

PLANTS

The regional park contains approximately 135 hectares of mature, natural woodland communities with the majority of the regional park comprising 427 hectares of planted revegetation and cleared grassland areas. This provides a diversity of habitat for wildlife and vegetation corridors providing linkages between vegetation communities.

Four vegetation communities are identified within Western Sydney Regional Park as endangered ecological communities. These communities are:

- Cumberland Plain Woodland, which includes the identified sub-types of Shale Plains and Shale Hills Woodland listed as a critically endangered ecological community under the NSW TSC Act and Commonwealth EPBC Act;
- River-Flat Eucalypt Forest on Coastal Floodplain with the sub-type Alluvial Woodland listed as an endangered ecological community under the TSC Act;
- Western Sydney Dry Rainforest listed as an endangered ecological community under the TSC Act;

- Moist Shale Woodland listed as an endangered ecological community under the TSC Act.

These Vegetation communities are identified in Cumberland Plain Vegetation Maps (NSW NPWS 2002). A general description of these vegetation communities is taken from the Threatened Species Profiles (DECCW 2010), which outline the following:

Cumberland Plain Woodland

The dominant canopy trees of Cumberland Plain Woodland are Grey Box *Eucalyptus moluccana* and Forest Red Gum *E. tereticornis*, with Narrow-leaved Ironbark *E. crebra*, Spotted Gum *Corymbia maculata* and Thin-leaved Stringybark *E. eugenioides* occurring less frequently. The shrub layer is dominated by Blackthorn *Bursaria spinosa*, and it is common to find abundant grasses such as Kangaroo Grass *Themeda australis* and Weeping Meadow Grass *Microlaena stipoides* var *stipoides*.

Cumberland Plain Woodland occurs on soils derived from Wianamatta Shale, and throughout the driest part of the Sydney Basin. Before European settlement, was extensive across the Cumberland Plain, western Sydney. Today, only 9 percent of the original extent remains intact, with the remnants scattered widely across the Cumberland Plain.

Cumberland Plain Woodland, which provides habitat for threatened species such as the Cumberland Land Snail (*Meridolum corneovirens*), typically occurs on heavy clay soils derived from Wianamatta Shale and is adapted to drought and fire. The understorey plants often rely on underground tubers or profuse annual seed production to survive adverse conditions.

River-Flat Eucalypt Forest on Coastal Floodplains

While the composition of the tree stratum varies considerably, the most widespread and abundant dominant trees include Forest Red Gum *Eucalyptus tereticornis*, Cabbage Gum *E. amplifolia*, Rough-barked Apple *Angophora floribunda* and Broad-leaved Apple *A. subvelutina*.

A layer of small trees may be present, including *Melaleuca decora*, Prickly-leaved Teatree *M. styphelioides*, Grey Myrtle *Backhousia myrtifolia*, White Cedar *Melia azaderach*, River Oak *Casuarina cunninghamiana* and Swamp Oak *C. glauca*.

Scattered shrubs include *Bursaria spinosa*, *Solanum prinophyllum*, *Rubus parvifolius*, *Breynia oblongifolia*, *Ozothamnus diosmifolius*, *Hymenanthera dentata*, *Acacia floribunda* and *Phyllanthus gunnii*.

The groundcover is composed of abundant forbs, scramblers and grasses including *Microlaena stipoides*, *Dichondra repens*, *Glycine clandestina*, *Oplismenus aemulus*, *Desmodium gunnii*, *Pratia purpurascens*, *Entolasia marginata*, *Oxalis perennans* and *Veronica plebeia*.

River-Flat Eucalypt Forest on Coastal Floodplains provides habitat for a broad range of animals, including many that are dependent on trees for food, nesting or roosting. These include cormorants and egrets, the Osprey *Pandion haliaetus*, Whistling Kite *Haliastur sphenurus*, White-bellied Sea-eagle *Haliaeetus leucogaster*, as well as the Brush-tailed Phascogale *Phascogale tapoatafa*, Yellow-bellied Glider *Petaurus australis*, Squirrel Glider *Petaurus norfolcensis*, Sugar Glider *Petaurus breviceps* and Grey-headed Flying Fox *Pteropus poliocephalus*.

Western Sydney Dry Rainforest in the Sydney Basin Bioregion

A dry vine scrub community of the Cumberland Plain, western Sydney. Canopy trees include Prickly Paperbark *Melaleuca styphelioides*, Hickory Wattle *Acacia implexa* and Native Quince *Alectryon subcinereus*. There are many rainforest species in the shrub layer, such as Mock Olive *Notolaea longifolia*, Hairy Clerodendrum *Clerodendrum tomentosum* and Yellow Pittosporum *Pittosporum revolutum*. The shrub layer combines with vines, such as Gum Vine *Aphanopetalum resinosum*, Wonga Vine *Pandorea pandorana* and Slender Grape *Cayratia clematidea* to form dense thickets in sheltered locations.

Moist Shale Woodland in the Sydney Basin Bioregion

Similar to Cumberland Plain Woodland it differs in having a shrub understorey that contains plants from moist habitats. Dominant canopy trees include Forest Red Gum *Eucalyptus tereticornis*, Grey Box *E. moluccana*, Narrow-leaved Ironbark *E. crebra* and Spotted Gum *Corymbia maculata*. Small trees, such as Hickory Wattle *Acacia implexa* and Sydney Green Wattle *A. parramattensis* ssp *parramattensis* are also common. The shrub layer includes *Breynia oblongifolia*, Hairy Clerodendrum *Clerodendrum tomentosum* and Indian Weed *Siegesbeckia orientalis* ssp *orientalis*.

Moist Shale Woodland provides excellent habitat for birds and insects and ideal nesting hollows for mammals and birds.

Threatened Species

A NSW Wildlife Atlas Search for Threatened Flora identified the following threatened flora within Western Sydney Regional Park:

- White-flowered Wax Plant *Cynanchum elegans*, listed as endangered species under the TSC Act and EPBC Act;
- Spiked Rice-flower *Pimelea spicata*, listed as endangered species under the TSC Act and EPBC Act;
- Downy Wattle *Acacia pubescens*, listed as a vulnerable species under the TSC Act.

ANIMALS

Results of systematic, vertebrate fauna surveys were published in November 2006 (NSW NPWS 2006) following surveys undertaken in 2003. A total of 80 native vertebrate species were detected during the survey, raising the total number of vertebrate fauna species known within the regional park from 116 to 150.

A general Wildlife Atlas search returned the identification of 167 vertebrate fauna species within the regional park, with records since 1980.

Threatened Species

Five threatened animal species have been confirmed as occurring within the regional park (DECC 2006):

- Cumberland Land Snail *Meridolum corneovirens* listed as endangered under the TSC Act;
- Grey-headed Flying-Fox *Pteropus poliocephalus* listed as vulnerable under the TSC Act and EPBC Act;
- Eastern False Pipistrelle *Falsistrellus tasmaniensis* listed as vulnerable under the TSC Act;
- Eastern Freetail Bat *Mormopterus norfolkensis* listed as vulnerable under the TSC Act;
- Turquoise Parrot *Neophema pulchella* listed as vulnerable under the TSC Act.

A further two threatened bat species, the Eastern Bent-wing Bat *Miniopterus schreibersii* and the Greater Broad-nosed Bat *Scoteanax rueppellii* which are both listed as vulnerable under the TSC Act, were tentatively identified in the regional park from Anabat echolocation call analysis.

A NSW Wildlife Atlas search identified the following, additional threatened fauna within the regional park:

- Varied Sittella *Daphoenositta chrysoptera* listed as a vulnerable species under the TSC Act and EPBC Act;
- Little Eagle *Hieraaetus morphnoides* listed as a vulnerable species under the TSC Act.

KEY THREATENING PROCESSES

Key threatening processes (TSC Act) that affect threatened species found in Western Sydney Regional Park are:

- Ecological consequences of high frequency fires;
- Invasion and establishment of exotic vines and scramblers;
- Invasion, establishment and spread of *Lantana camara*;
- Removal of dead wood and dead trees.

3.3 ABORIGINAL HERITAGE

Aboriginal communities have an association with and connection to the land. The land and water within a landscape are central to Aboriginal spirituality and contribute to Aboriginal identity. Aboriginal communities associate natural resources with the use and enjoyment of foods and medicines, caring for the land, passing on cultural knowledge, kinship systems and strengthening social bonds. Aboriginal heritage and connection to nature are inseparable from each other and need to be managed in an integrated manner across the landscape.

The regional park falls within the Deerubbin Local Aboriginal Land Council's area of interest. The area is identified as highly significant by the Deerubbin Local Aboriginal Land Council as the hills forming the ridgeline within the regional park were a natural meeting place for Aboriginal people (RTA 2008). A memorandum of understanding has also been prepared between the NSW Department of Environment and Conservation and the Darug People to outline the framework in which Darug people

are involved in the management of parks and reserves. The regional park is of interest to other Aboriginal people who live locally but are not from these groups, such as the Gandangara, and those from other parts of Australia.

A detailed study and survey of the regional park for its Aboriginal cultural heritage have not been carried out to date.

3.4 HISTORIC HERITAGE

The regional park has important associations with prominent early settlers, including Edward Abbott and George Johnson. Evidence of early patterns of rural development and settlement are considered important aspects of the site (NSW NPWS 2001). The site of the original homestead of Abbotsbury is located within the area leased by the Sydney International Equestrian Centre.

Western Sydney Regional Park contains Calmsley Hill Farm, protected under State Heritage listing (*Heritage Act 1977*). The farm has been managed under lease to Fairfield City Council for the past 20 years and is now under lease to City Farm Pty Ltd.

The regional park also contains part of the Sydney Water Canal, which was built in the late 1800s. This scheme was a series of gravity fed canals and tunnels that diverted water from Cataract, Cordeaux, Avon and Nepean Rivers to Prospect Reservoir.

3.5 RECREATION AND EDUCATION

Visitation to Western Sydney Regional Park is estimated at approximately 430,000 visits per annum (Source: WSPT Annual Visitor Monitoring 2009/2010). There is a substantial demand in the region for informal recreation opportunities in a natural setting, and the regional park provides these opportunities.

It is highly patronised for a variety of recreational activities. Visitors use the regional park for family picnics, walking, jogging, cycling, fitness and enjoying nature. It is popular with schools for cross-country and sporting events and for environmental education. Disabled groups, childcare and mothers groups are also frequent visitors.

The regional park has an extensive network of walking and cycling opportunities on mown, gravel, bitumen and concrete paths which connect the various key recreational areas. Western Sydney Regional Park is also home to The Sydney International Equestrian Centre that was built for the 2000 Sydney Olympic Games. This venue now offers major indoor and outdoor arenas, stables, 10 kilometres of trails and various event areas.

The regional park's passive recreation nodes include Pimelea picnic area, Sugarloaf Ridge picnic area, The Dairy and part of Plough and Harrow all of which have shelters and free BBQs. The most popular picnic areas are Pimelea, The Dairy and Plough and Harrow. There are times when the facilities and carparks struggle to meet demand. These areas are popular due to the facilities provided which include BBQs, picnic facilities, parking and playgrounds. The playground at Pimelea picnic area is a significant regional resource.

Calmsley Hill Farm is located within the regional park and is run as a children's education farm with a focus on school education. The farm showcases agriculture and environmental education and allows visitors to experience first hand farming practices within a rural setting. The lessee will continue to provide and develop these programs and activities.

Public access to Western Sydney Regional Park is via Cowpasture Rd, Elizabeth Drive and The Horsley Drive. There is limited public transport available with no bus services directly servicing the facilities of the regional park.

4. ISSUES

4.1 WEEDS AND PEST ANIMALS

A total of 111 introduced plant (weed) species and 19 introduced animal species have been recorded and identified within the regional park (NSW NPWS 2006).

A weed is defined in this plan as any plant species not native to the area. Weeds can be listed as noxious weeds, weeds of national significance and environmental weeds. The *Noxious Weeds Act 1993* places an obligation upon public authorities to control noxious weeds on land that they occupy to the extent necessary to prevent such weeds spreading to adjoining lands. These species occur in disturbed areas of the park, in particular along public access roads and neighbour boundaries and provide an invasive influence on vegetation communities.

Dominant or highly invasive and adaptive plant species identified in the regional park include:

- Moth Vine *Araujia sericifera*
- Balloon Vine *Cardiospermum grandiflorum*
- Bridal Creeper *Asparagus asparagoides*
- Blackberry *Rubus ulmifolius*
- Green Cestrum *Cestrum parqui*
- Lantana *Lantana camara*
- African Olive *Olea europaea* subsp. *cuspidata*
- Privet *Ligustrum lucidum* and *L. sinense*
- African Box Thorn *Lycium ferocissimum*

Lantana, African Olive and Privet species invasion creates an environmental threat to established vegetation communities within the regional park. Management activities will follow the Cumberland Plain Draft Recovery Plan (DECCW 2009).

Invasion and establishment of exotic vines and scramblers and Invasion, establishment and spread of Lantana camara have been listed as key threatening processes under the TSC Act.

The most dominant and highly visible pest animals found in the regional park include:

- European Rabbit *Oryctolagus cuniculus*
- European Red Fox *Vulpes vulpes*
- Brown Hare *Lepus capensis*
- Black Rat *Rattus rattus*

There is no current, integrated pest management strategy for the regional park.

4.2 FIRE

The primary fire management objectives are to protect life and property and community assets from the adverse impacts of fire, whilst managing fire regimes to maintain and protect biodiversity and cultural heritage.

Fire is a natural feature of many environments and is essential for the survival of some plant communities. However, inappropriate fire regimes can lead to loss of particular plant and animal species and communities, *Ecological consequences of high frequency fires* has been listed as a key threatening process under the TSC Act.

A fire management strategy has been prepared for the Western Sydney Parklands (WSPT 2009) and includes the regional park. Each of the parkland's management precincts (Figure 2) has a separate fire management and implementation strategy. This includes *Precinct 10 Abbotsbury*, which is the regional park.

The fire management strategy outlines the recent fire history of the regional park and key assets including built, natural and cultural heritage features. Assets at risk have also been identified and assigned zones including land management, asset protection and fire control advantages zones. Hazard reduction programs, ecological burning proposals and fire trail works are submitted annually to the Cumberland Zone Bush Fire Management Committee in line with the priorities set out in Cumberland Zone Bush Fire Risk Management Strategy.

The primary response fire authority identified in the fire management strategy and implementation program is the NSW Rural Fire Service who undertake fire suppression activities throughout the Western Sydney Parklands inclusive of the regional park.

4.3 ISOLATION AND FRAGMENTATION

The area surrounding Western Sydney Regional Park has been extensively cleared for farming and residential development, which has resulted in a high loss of biodiversity and fragmentation of habitat in the region. Long term conservation of biodiversity depends upon the protection, enhancement and connection of remaining habitat across the landscape, incorporating vegetation remnants on both public and private lands. Nearby vegetated areas within the Western Sydney Parklands contribute to the habitat values of the regional park and provide ecological corridors to other vegetated areas. Maintaining the integrity of the remaining habitat within the regional park and, where possible, linking this to adjacent vegetated areas to create wildlife corridors is important in ensuring long term viability of the Western Sydney Regional Park's biological values.

4.4 CLIMATE CHANGE

Climate change has been listed as a key threatening process under the TSC Act. Projections of future changes in climate for NSW include higher temperatures, increasing sea levels and water temperatures, elevated CO₂, more intense but possibly reduced annual average rainfall, increased temperature extremes and higher evaporative demand. These changes are likely to lead to greater intensity and

frequency of fires, more severe droughts, reduced river runoff and water availability, regional flooding, increased erosion and ocean acidification.

Climate change may significantly affect biodiversity by changing population size and distribution of species, modifying species composition, and altering the geographical extent of habitats and ecosystems. The potential impact of climate change is difficult to assess since it depends on the compounding effects of other pressures, particularly barriers to migration and pressure from feral animals. Species most at risk are those unable to migrate or adapt, particularly those with small population sizes or with slow growth rates.

Programs to reduce the pressures arising from other threats, such as habitat fragmentation, invasive species, bushfires, pollution and urban expansion, will help reduce the severity of the effects of climate change.

5. MANAGEMENT OPERATIONS AND OTHER USES

Western Sydney Regional Park has a range of leases and licences currently in place. It contains Calmsley Hill Farm (186 hectares) which has been under lease to Fairfield City Council for over 20 years and run as an educational children's farm, in particular for school groups. In February 2010, the farm lease was transferred to City Farm Pty Ltd and is continuing to be operated as an agricultural and environmental educational farm for primary and secondary schools. The current lease will expire in 2028.

The Sydney Olympic Equestrian Centre is managed by the NSW Department of Arts, Sport and Recreation. From time to time, events and activities at the Equestrian Centre utilise tracks and trails through the wider regional park. These activities require consent.

There are a small number of residential cottages within the regional park that are leased to private tenants for residential and semi-rural uses. Over time, the number of cottages within the regional park will be reduced as further environmental and recreational activities and programs are established.

Western Sydney Regional Park also contains a number of telecommunication towers with access arrangements through the regional park. There are a number of easements within the park for infrastructure provision for surrounding suburbs including Jemena (gas), Sydney Water, Transgrid (powerlines) and Integral Energy (powerlines).

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6. IMPLEMENTATION

Current Situation	Desired Outcomes	Management Response	Priority*
<p>6.1 On-Park Ecological Conservation</p> <p>Limited flora and fauna studies have been carried out within the regional park however known communities of Cumberland Plain Woodland exist. These need protection under the Cumberland Plain Recovery Plan.</p> <p>Climate change has been identified as a key threatening process under the TSC Act. Climate change may significantly affect biodiversity by changing the population size and distribution of species, modifying species composition, and altering the geological extent of habitats and ecosystems.</p>	<p>Native plant and animal species and communities are conserved.</p> <p>Structural diversity and habitat values are restored in areas subject to past disturbance.</p> <p>Landscape and catchment values are protected.</p> <p>The effects of climate change on natural systems are reduced.</p> <p>No new invasions or spread of existing weeds.</p>	<p>6.1.1 Work with neighbours, local Landcare groups and the local Catchment Management Authority to encourage conservation of remnant native vegetation in the vicinity of the regional park.</p> <p>6.1.2 Conduct a flora and fauna survey including targeting of threatened species identified as existing within the regional park. Implement relevant strategies in the Draft Cumberland Plain Recovery Plan (2009) for threatened species, as well as the Western Sydney Parklands Biorecovery Strategy.</p> <p>6.1.3 Continue existing fire, pest and weed management programs to increase the reserves ability to cope with future disturbances, including climate change, and encourage research into appropriate indicator to monitor the effects of climate change.</p> <p>6.1.4 Establish a weed monitoring program to measure the effectiveness of weed management actions and monitor the invasion and spread of new weeds. Refer 6.5</p> <p>6.1.5 Prepare and implement a feral animal management plan for the regional park.</p>	<p>Ongoing</p> <p>Medium</p> <p>Ongoing</p> <p>Medium</p> <p>Medium</p>

Current Situation	Desired Outcomes	Management Response	Priority*
<p>6.2 Cultural Heritage</p> <p>No specific Aboriginal or historic heritage surveys have been undertaken in the regional park, however known Aboriginal archaeological sites exist within the regional park.</p> <p>Ensure on-going Aboriginal involvement in park management.</p> <p>Limited cultural heritage assessment or conservation management planning has been carried out</p>	<p>Aboriginal places and values are identified and protected.</p> <p>Aboriginal people are involved in management of the Aboriginal cultural values of the regional park.</p> <p>Negative impacts on Aboriginal and historic heritage values are stable or diminishing.</p> <p>Understanding of the cultural values of the regional park is improved.</p>	<p>6.2.1 Consult and involve the Deerubbin and Gandangara Local Aboriginal Land Councils, the Darug People and other relevant Aboriginal community organisations in the management of Aboriginal sites, places and values, including interpretation.</p> <p>6.2.2 Undertake an archaeological investigation and cultural assessment prior to all works with the potential to impact on Aboriginal or historic sites and places.</p> <p>6.2.3 Encourage further research into the Aboriginal heritage values of the regional park with the (Deerubbin, Darug and Gandangara).</p> <p>6.2.4 Precede all ground disturbance works in the regional park by a check for cultural features.</p> <p>6.2.5 Prepare a Conservation Management Plan for Western Sydney Regional Park with reference to the <i>Western Sydney Parklands Heritage Conservation Plan</i>.</p>	<p>Ongoing</p> <p>Ongoing</p> <p>Medium</p> <p>Ongoing</p> <p>Medium</p>

Current Situation	Desired Outcomes	Management Response	Priority*
<p>6.3 Visitor Use and Services</p> <p>Current visitation is approximately 430,000 visits annually and this figure is growing.</p> <p>Visitor facilities will need to be upgraded as visitor use increases.</p> <p>The regional park is a significant part of the Western Sydney Parklands.</p> <p>Promotion / interpretation if relevant eg promotion of visitor understanding and appreciation of the values of the regional park is important for minimising damaging activities and maximising visitor enjoyment.</p> <p>The Western Sydney Regional Park contains the Sydney International Equestrian Centre and the Calmsley Hill Farm.</p> <p>Public transport to the regional park is not available.</p>	<p>Visitation is appropriate and ecologically sustainable.</p> <p>Negative impacts of visitors on the regional park's values are stable or diminishing.</p> <p>Visitation and visitor services encourage appreciation of the regional park's values.</p>	<p>6.3.1 Create a destination hub around Pimelea with links to other parts of the precinct with expanded facilities such as for bushwalking, biking, fitness, play activities and education.</p>	High,
		<p>6.3.2 Support the hub with increased facilities and increased use of Moonrise, The Dairy, Sugarloaf and ongoing management of Plough and Harrow.</p>	Medium
		<p>6.3.3 Develop the Pimelea precinct for entertainment and events programs including providing events spaces, café, agriculture and tourism facilities.</p>	High
		<p>6.3.4 Expand internal access within the regional park and between key points such as links to Plough and Harrow, The Dairy and Pimelea. Promote walking, cycling and drive links and make connections to external walking and cycling networks including the M7.</p>	Medium
		<p>6.3.5 Provide identification signage along boundaries such as Horsley Drive and the M7 and at entrances. Provide Interpretive and information signage within the regional park.</p>	Medium
		<p>6.3.6 Continue to develop partnerships with Sydney International Equestrian Centre and Calmsley Hill Farm to explore the opportunities for expanded recreation, education and business links including environmental and heritage actions.</p>	Medium
		<p>6.3.7 Encourage public transport providers to provide services to key visitor hubs in the regional park.</p>	High

Current Situation	Desired Outcomes	Management Response	Priority*
<p>6.4 Community Programs and Education</p> <p>The retention of habitat corridors and landscape connectivity would increase the biodiversity viability of the regional park.</p> <p>There are no community programs operating within the regional park, nor is there any interpretive information.</p> <p>There is a need for conservation of vegetation / habitat on neighbouring land.</p> <p>There is a need for / and value in community education programs.</p> <p>New interpretation or Discovery programs would be appropriate.</p>	<p>Neighbours support conservation of native vegetation near the regional park.</p> <p>The local community is aware of the significance of the regional park and of park management programs.</p>	<p>6.4.1 Liaise with neighbours to encourage the retention and appropriate management of key habitats and corridors adjacent to the regional park.</p> <p>6.4.2 Organise media releases, educational material and contact with neighbours and community organisations.</p> <p>6.4.3 Prepare an information brochure on the impacts of domestic animals and their potential impact on the regional park.</p> <p>6.4.4 Develop partnerships for education opportunities and programs with local schools that from part of the schools curriculum.</p>	<p>Medium</p> <p>Medium</p> <p>Medium</p> <p>Medium</p>

Current Situation	Desired Outcomes	Management Response	Priority*
<p>6.5 Weeds and Pest Animals</p> <p>Foxes and rabbits are known in the regional park in small numbers.</p> <p>Noxious weeds are known to exist within the regional park however a site-specific survey has not been carried out.</p> <p>Limited information exists regarding weed and feral animals. Further surveys and control programs are required.</p>	<p>Introduced plants and animals are controlled and where possible eliminated.</p> <p>Negative impacts of weeds on park values are stable or diminishing.</p> <p>Negative impacts of pest animals on park values are stable or diminishing.</p> <p>Pest control programs are undertaken where appropriate in consultation with neighbours.</p>	<p>6.5.1 Undertake surveys and prepare management plans to determine the presence and extent of introduced species in the regional park and manage introduced species in accordance with the Regional Pest Management Strategy.</p> <p>6.5.2 Survey the regional park to determine the presence and extent of introduced species.</p> <p>6.5.3 Prepare and implement, if needed, a pest management strategy for the regional park.</p> <p>6.5.4 Seek the cooperation of neighbours in implementing weed and pest control programs.</p> <p>6.5.5 Undertake on-going control programs for weeds and pest animals.</p> <p>6.5.6 Monitor noxious and significant environmental weeds. Treat any new outbreaks where possible.</p>	<p>Ongoing</p> <p>Medium</p> <p>Medium</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p>

Current Situation	Desired Outcomes	Management Response	Priority*
<p>6.6 Fire Management Fire is a natural feature of many environments but inappropriate fire regimes can lead to loss of particular plant and animal communities. High frequency fires have been listed as a key threatening process under the TSC Act.</p> <p>Consider fire threats, vegetation communities sensitive to fire, assets at risks, including cultural heritage, need for ecological burns</p> <p>A Fire Management Strategy has been prepared.</p> <p>Confirmation of recent fire activity is required.</p>	<p>Life, property and natural and cultural values are protected from fire.</p> <p>Fire regimes are appropriate for conservation of native plant and animal communities.</p> <p>Negative impacts of fire on natural and cultural heritage values are stable or diminishing.</p>	<p>6.6.1 Implement the Fire Management Strategy for the regional park.</p> <p>6.6.2 Suppress all unplanned fires in the regional park as quickly as possible.</p> <p>6.6.3 Manage the regional park to protect biodiversity in accordance with the identified fire regimes / thresholds in the fire management strategy.</p> <p>6.6.4 Review and revise the annual fire management works program on an annual basis.</p> <p>6.6.5 Develop and implement an Emergency and Incident Procedure Plan for the regional park.</p>	<p>Medium</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p> <p>Medium</p>

Current Situation	Desired Outcomes	Management Response	Priority*
<p>6.7 Management Operations and Other Uses</p> <p>The regional park contains a number of trails, bicycle and walking trails which are required for recreation and management purposes.</p> <p>The regional park includes the Sydney International Equestrian Centre and Calmsley Hill Farm.</p> <p>The regional park also includes a number of telecommunication leases, easements and access licences for infrastructure purposes.</p> <p>The regional park has the capacity to support the development of minor commercial opportunities as appropriate to the regional park and its environmental values.</p> <p>Boundary fences and external access infrastructure is included within the regional park.</p> <p>Residential cottages are currently leased to private tenants for residential and semi rural uses.</p>	<p>Management facilities and operations adequately serve management needs and have minimal impact.</p> <p>Current leases are managed to maximise community benefits and minimise environmental impacts.</p> <p>Infrastructure and assets are routinely maintained.</p> <p>Existing non-park infrastructure is managed to minimise impacts on natural and cultural values.</p>	<p>6.7.1 Maintain all roads, bicycle, walking and management trails as appropriate and with reference to the Western Sydney Parklands Access Management Plan.</p> <p>6.7.2 Continue to manage leases at the Equestrian Centre, Calmsley Hill Farm and telecommunications leases and licences along with infrastructure easements.</p> <p>6.7.3 Consider commercial opportunities as appropriate within the regional park, including for example mobile food vendor businesses and bike hire.</p> <p>6.7.4 Maintain and improve boundary fencing and access points to the regional park.</p> <p>6.7.5 Consider ongoing leases and sustainable use of the residential cottages.</p>	<p>Ongoing</p> <p>Ongoing</p> <p>Medium</p> <p>Ongoing</p> <p>Ongoing</p>

High priority activities are those imperative to achievement of the objectives and desired outcomes. They must be undertaken in the near future to avoid significant deterioration in natural, cultural or management resources.

Medium priority activities are those that are necessary to achieve the objectives and desired outcomes but are not urgent.

Low priority activities are desirable to achieve management objectives and desired outcomes but can wait until resources become available.

Ongoing is for activities that are undertaken on an annual basis or statements of management intent that will direct the management response if an issue that arises.