

Draft Forestville Park

Plan of Management

January 2012

EXECUTIVE SUMMARY

Warringah Council has management responsibility for numerous Council and Crown reserves which support bushland throughout Warringah. It is a statutory requirement that Council prepares Plans of Management for community land, and for improved management Council elects to do so for Crown reserves. The draft Forestville Park Plan of Management (hereafter referred to as “the Plan”) covers bushland and park areas on the land parcels making up an area identified as Forestville Park.

The main value of the bushland reserve is conservation of remnant bushland. Low impact recreation is another value of the reserve and also presents aesthetic, scientific, educational and heritage value.

Forestville Park contains large areas of intact bushland which provides habitat for locally significant flora and fauna species and may also provide habitat for species listed as threatened under state and federal legislation. The reserve shares a boundary with a National Park and also forms part of a regional core habitat. A known Aboriginal heritage site is present adjacent to the National Park.

The Plan’s actions and directions focus on protecting these values, with the ecological value of the bushland being the primary value. Council’s primary management intention for the reserve is to conserve and restore the bushland through weed control, fencing, closure of selected tracks, and bush regeneration.

This Plan contains management actions for Council to protect and conserve the bushland remnants of the reserve, it also contains actions to remedy deeply eroded tracks and reduce impacts of informal trails via remediation works and/or track closures.

The implementation of this plan requires Council to undertake a review of each action as part of Council business planning processes. All actions within a plan of management are assessed for priority and final commitment to implementing an action is given once they appear in the Strategic Community Plan and other relevant documents.

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BACKGROUND

1 What is a Plan of Management?

A Plan of Management provides a framework for managing public land. The *Local Government Act 1993* (LG Act) requires that Council prepare Plans of Management for all land classified as 'Community Land'. Community Land must be categorised in accordance with the LG Act. Categories are assigned based on the values of the land and future management intent - each category has a set of core objectives defined in the act. All current and intended uses of the land must comply with the core objectives. Appendix 2 lists the core objectives applying to the categories of community land. Forestville Park is partly owned by Council and contains 'Community Land' - see Map 1 and Table 1 for land and cadastral details.

Forestville Park includes three Crown Reserves for which Warringah Council has the responsibility to manage under the *Crown Lands Act 1989* (CL Act). It is not a statutory requirement for these reserves to have a Plan of Management, however Council has chosen to include these reserves to ensure all bushland reserves in Warringah are strategically planned and managed. This draft Plan will ensure that Crown land is used and managed in accordance with the purpose for which it has been reserved.

Council has designated this Plan as a specific area Plan of Management in recognition of the high biodiversity and heritage values, and the importance of this reserve to the Warringah community in general.

This Plan aims to provide a clear, concise and practical outline for the management of this reserve. It also aims to assist Council in meeting its broader strategic goals and vision as set out in Council's *Strategic Community Plan* (2011). This draft Plan uses a values-based approach to land planning and management and aims to provide strategies that will protect and enhance community values for this land by addressing any issues threatening these values.

The Plan meets the requirements of the *Local Government Act 1993* and the *Crown Lands Act 1989*.

2 What land does this Plan of Management apply to?

This Plan applies to Forestville Park as identified on Map 1.

Table 1 lists specific information relating to each parcel of land within this Plan of Management. Most land is categorised Natural Area - Bushland (NA/B) or Natural Area – Watercourse (NA/W). Actions for these categories are provided in Table 11. Actions for areas in this Plan covered as Park are provided in Table 12.

The remaining land is categorised as General Community Use (GCU) and Sportsground, and are managed under either Council's Sportsgrounds Plan of Management (2007) or general Community Use Plan of Management (2005). Areas covered by this plan and areas covered by other plans are depicted in Map 2.

A description of each of these categories and their core objectives are listed in Appendix 2.

Map 1 – Plan of Management Boundary and Parcel Reference Numbers



Map 2 – Land Covered by this Plan of Management



Map 3 - Bushland Condition, Vegetation Communities and Creeklines

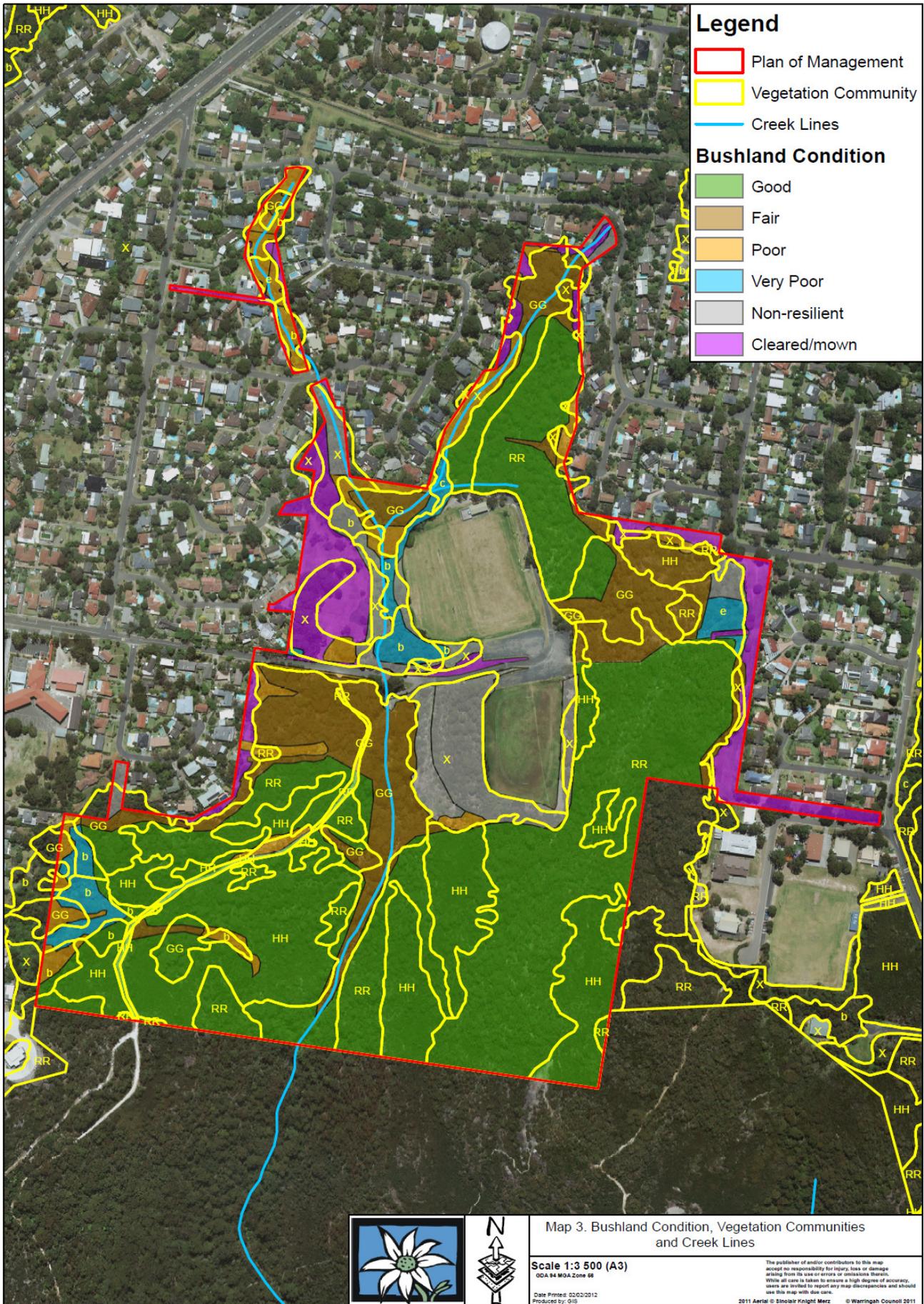


Table 1 - Land ownership and category details

Parcel Ref. No	Reserve Name	Address	Lot	DP	Reg No	Owner	Category
1	FORESTVILLE PARK	CURRIE ROAD FORESTVILLE	1615	752038	59/7 (Crown Reserve 48669)	CROWN *	NA/B (Crown - Public Recreation)
2	FORESTVILLE PARK	CURRIE ROAD FORESTVILLE	7306	1146155	59/7 (Crown Reserve 48669)	CROWN *	NA/B, NA/W, Park, GCU & Sportsground (Crown - Public Recreation)
3	FORESTVILLE PARK	TYALLA AVENUE FRENCHS FOREST	35	28546	85/20	WARRINGAH COUNCIL	NA/B, NA/W
4	FORESTVILLE PARK	TYALLA AVENUE FRENCHS FOREST	91	29463	85/21	WARRINGAH COUNCIL	NA/B, NA/W
5	FORESTVILLE PARK	CAREEBONG ROAD FRENCHS FOREST	90	29463	85/23	WARRINGAH COUNCIL	NA/B
6	FORESTVILLE PARK	38 PARNI PLACE FRENCHS FOREST	35	238711	85/24	WARRINGAH COUNCIL	NA/B
7	FORESTVILLE PARK	28A PARNI PLACE FRENCHS FOREST	40	238711	85/25	WARRINGAH COUNCIL	NA/B
8	CLAIRE DEAN BUSH SANCTUARY	COOLABAH CRESCENT, FORESTVILLE	26	28055	84/2	WARRINGAH COUNCIL	NA/B
9	PARNI PLACE RESERVE	PARNI PLACE FRENCHS FOREST	Y	29273	85/12	WARRINGAH COUNCIL	NA/W
10	PARNI PLACE RESERVE	MAXWELL PARADE FRENCHS FOREST	6	28251	85/13A	WARRINGAH COUNCIL	NA/W
11	PARNI PLACE RESERVE	MAXWELL PARADE FRENCHS FOREST	92	29463	85/13B	WARRINGAH COUNCIL	NA/W
12	PARNI PLACE RESERVE	TYALLA AVENUE FRENCHS FOREST	34	28546	85/14	WARRINGAH COUNCIL	NA/W
13	FORESTVILLE PARK	22A MILTON PLACE FRENCHS FOREST	24	29604	85/15	WARRINGAH COUNCIL	Park
14	FORESTVILLE PARK	RHONDA AVENUE FRENCHS FOREST	20	29893	85/16	WARRINGAH COUNCIL	Park
15	GRATTAN CRESCENT RESERVE	GRATTAN CRESCENT, FRENCHS FOREST	1 sec 149	238985	59/8 (Crown Reserve 88741)	CROWN *	NA/B (Crown – Plantation)

* Council is the trustee for identified Crown Reserves

PREPARING THIS PLAN OF MANAGEMENT

3 What legislation is relevant to the development of this draft plan?

3.1 Crown Lands Act 1989

Most of the area covered by this plan is Crown land reserved for public recreation under the *Crown Lands Act 1989*. Council as the Reserve Trust Manager is responsible for the management of the Forestville Park Reserve Trust.

The principles of Crown land management as per the *Crown Lands Act 1989* stress the conservation of natural resources in an ecologically sustainable manner while providing for appropriate opportunities for public use.

Lands to which the *Crown Lands Act 1989* applies are not subject to the same categorisation requirements as the *Local Government Act 1993* and appropriate uses are determined by the public purpose nominated for the land. This means that the land must provide a public benefit and all use and development must be consistent with the public purpose. All of the Crown land within this Plan of Management has been reserved for the purpose of 'Public Recreation' and 'Plantation'. A Crown reserve can have an additional purpose declared where there are competing interests, such as bushland (environment protection) and recreation (usually the primary purpose).

To provide consistent direction within this Plan of Management, Council has adopted the view that lands owned by the Crown will be "categorised" in the same fashion as community land subject to the provisions of the *Local Government Act 1993*. These lands will be managed in accordance with the core objectives of the identified category. However the 'Public Purpose' of the reserve is the basis for planning and management of all Crown Reserves and all land use must either support or be ancillary to the public purpose. Although categorised, the actions and categories assigned are consistent with the public purpose.

Further information relating to the management of Crown land is included in **Appendix 2**.

3.2 Local Government Act 1993

Excluding the Crown Reserve parcels, the remainder of the land in Forestville Park is classified as community land under the *Local Government Act 1993*. Under this Act Councils must prepare and adopt Plans of Management for all community land.

Such a plan must identify:

- The category of the land
- The objectives and performance targets of the plan with respect to the land (strategies)
- The means by which these strategies will be achieved (actions)
- The methods which will be used to assess whether the strategies are being achieved

Plans pertaining to a specific area must also include a description of the condition and use of the land and of any buildings or other improvements on the land, at the date of the adoption of the plan. The purpose for permitted uses and further development of the land or improvement to buildings should be also specified by the plan.

Further information relating to the management of community land is included in **Appendix 2**.

3.2.1 Categorisation of Land

The *Local Government Act 1993* requires that all community land be categorised. A category reflects the nature and management intent of the land and has a set of core objectives. All uses specified in the plan must comply with the core objectives for the category.

The categories covered by this Plan of Management are: Natural Area - Bushland, Natural Area - Watercourse and Park. The categories of Sportsground and General Community Use have been

assigned in other Plans. A description of each of these categories and their core objectives are listed in Appendix 2.

A combination of categories may be used for one parcel of land. Map 4 shows the categories assigned to the reserve.

3.4 Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (EP&A Act) typically requires development to be undertaken in accordance with Part 4 of the Act (permitted with consent) and activities to be undertaken/assessed in accordance with Part 5 (generally those permitted without consent) in regards to Council works. Several provisions however have been made to allow for a more streamlined approval process for activities generally undertaken by public authorities.

Key Instruments made under the EP&A Act.

State Environmental Planning Policy (Infrastructure) 2007

State Environmental Planning Policy (Infrastructure) 2007 (the SEPP) generally applies to land in New South Wales and aims to facilitate the effective delivery of infrastructure across the State.

This policy facilitates the delivery of public infrastructure and would apply to this reserve in certain circumstances. In particular, it specifies a range of developments and/or activities that can be carried out by or on behalf of a public authority on parks and other public reserves which are exempt or are permitted without consent. The range of development includes outdoor recreational facilities, landscaping, amenity facilities, and environmental management works, among others.

Warringah Local Environmental Plan 2011 (WLEP 2011)

The entirety of the area covered by this plan is zoned RE1 Public Recreation under WLEP 2011.

Key objectives of this zone include;

- To enable land to be used for public open space or recreational purposes.
- To provide a range of recreational settings and activities and compatible land uses.
- To protect and enhance the natural environment for recreational purposes.
- To protect, manage and restore public land that is of ecological, scientific, cultural or aesthetic value.
- To prevent development that could destroy, damage or otherwise have an adverse effect on those values.

The actions and strategies prescribed in this plan are consistent with these objectives.

3.5 NSW Threatened Species Conservation Act 1995

The NSW *Threatened Species Conservation Act 1995* sets out the guiding principles for the management, protection and recovery of threatened biodiversity in the state of NSW. The act allows for the listing of species and ecological communities, and key threatening processes, and the development of Priorities Action Statements and Recovery Plans. The NSW *Local Government Act 1993* specifies that Plans of Management prepared for community land that is habitat for threatened species, must contain actions and objectives that are consistent with relevant recovery plans and the objectives of the *Threatened Species Conservation Act 1995*.

Map 4 - Land Categorisation



4 Values

4.1 Community Views

A number of consultation exercises and surveys have been drawn upon to identify the values attached to bushland reserves. In particular, the results of Warringah's State of the Environment (2005) survey indicate that a high proportion of the community (89%) are concerned 'a great deal' or 'a fair amount' about environment problems. The Warringah Community Survey (2011) showed 'environmental issues' as being an equal 4th issue of major concern identified for Warringah over the next 5-10 years with 'caring for bushland' being the 11th most important service undertaken by Council.

In addition, a finding of the Environmental Perceptions Survey (2010) was that bushland and biodiversity was considered to be one of the top four environmental issues in Warringah.

As well as drawing on these surveys, consultation with relevant community members and groups was carried out to identify values and any issues associated with these areas. In addition to the consultation surveys above, Council also:

- Researched previous community correspondence and relevant information;
- Consulted relevant agencies and government bodies;
- Commissioned a detailed bushland and infrastructure survey of the reserve;
- Researched relevant Council studies and documentation (see Appendix 3 for details); and
- Carried out preliminary consultation with neighbouring residents (see Appendix 1 for details).

4.2 Community Values

This plan takes a values-based approach to land use planning and management. This approach allows the key values, role and purpose to be identified so that they may be protected and enhanced. Values can simply be described as "what is important about a place" (Department of Land and Water Conservation & Manidis Roberts, 1996).

The consultation process has confirmed that this reserve is considered to be a valuable resource. The primary value of this reserve is the conservation of bushland in an urban environment. The habitat value of Forestville Park was highlighted as an important value by the public. Other values include: recreational value, in particular for walkers and bike riders, and educational value. They also have incidental aesthetic and educational value as a result of their natural bushland value.

5 Council's management goals

5.1 Strategic Framework

Strategic Community Plan

The Strategic Community Plan is updated annually and sets direction and vision for Warringah. The Strategic Community Plan 2011 sets out this vision:

Community Vision for Warringah: *'A vibrant community, improving our quality of life by living and working in balance with our special bush and beach environment'.*

To be able to achieve such a vision a series of goals and strategies were developed in four main areas. The following goals and strategies are relevant to Forestville Park:

Living Environment

Goal 1.1: Protecting the natural environment so it is healthy and diverse.

Strategy: To maintain the diversity of natural environments at their current levels or better.

Living Spaces

Goal 3.1 Safe and well maintained public spaces that reflect community needs

Strategy: To provide recreational access to natural areas while ensuring the sustainability of the natural environment.

Draft Environmental Sustainability Strategy

The Draft Environmental Sustainability Strategy (ESS) is a long-term guiding document for Council. The purpose of the ESS is to set overarching strategic directions for how Council approaches environmental sustainability: providing a 'compass direction' in contrast to plotting a specific route on a map. This adaptive approach allows flexibility and room for new knowledge to be continuously considered over the expected 10 year lifespan of the strategy. The ESS serves the dual function of forming the basis for Council's annual environmental planning as well as being the basis for ongoing conversations with our community members and other stakeholders. We need to work collaboratively to make a positive difference and ensure the wellbeing of current and future residents and visitors to Warringah, as well as the health of our environment.

The ESS takes its starting point in the vision outlined in the 'Strategic Community Plan 2000' and sets a long-term direction for how best to balance growth with the environmental, economic and social values of the Warringah community. The ESS is founded on a guiding principle that community partnerships and participation will form the cornerstone of long-term environmental programs in Warringah. Genuine partnerships will foster and sustain positive change in the long run as it will build the capacity of both parties to work together creatively.

Relevant aspirations as part of the strategic directions of the ESS include to:

- Maintain and enhance locally indigenous biodiversity in Warringah
- Protect the natural and cultural values of Council-managed lands while ensuring that visitor access and use is sustainable

Bushland Policy 2008

Bushland in Warringah is managed according to Council's *Bushland Policy*. The Policy sets out Council's goals for bushland management and Council's approach to managing bushland areas:

Council's goals for Bushland Management Programs are to:

- Re-establish fully functioning, self sustaining native ecosystems by providing the optimal ecological conditions for this to occur;
- Protect, conserve and restore fauna habitat and wildlife corridors;
- Prioritise restoration of bushland based on conservation significance of vegetation communities and populations of plants and animals as identified in the latest version of the Natural Area Survey (Smith and Smith 2005);
- Protect residential properties on the bushland reserve boundaries by developing and maintaining access for fire fighting agencies;
- Maximise the effectiveness of pest animal and noxious weed control programs on public and private land by coordinating with other land management agencies, adjacent local government areas and residents;
- Provide sustainable recreational access to bushland reserves with a focus on environmental interpretation of features with special ecological and cultural significance where appropriate;
- Integrate bushland restoration goals with natural area management projects undertaken by other sections of Council;
- Foster community knowledge of Warringah's special natural environment, the threats to its survival, and the actions and behaviour patterns needed for a sustainable environment by integrating environment education with every aspect of Council's bushland management program.

Local Habitat Strategy

Council's Local Habitat Strategy (2007) also provides guidance on the management of bushland in Warringah. In relation to bushland reserves, it contains actions Council can take, in partnership with the community, to preserve, protect, enhance and restore our habitat areas. Chief among these is to identify and protect remnant vegetation in public open space, with priority given to rare and threatened habitat and crucial linkages.

Draft Warringah Biodiversity Conservation Strategy

The draft Warringah Biodiversity Conservation Strategy (WBCS) was developed as a tool that prioritises management activities in bushland areas. It ranks all parcels of bushland in the LGA according to select criterion (including threatened species habitat) and allocated a score to each parcel. Essentially the WBCS provides a mechanism to support the restoration and conservation of Warringah's biodiversity. The WBCS provides the ability to:

- Facilitate strategic biodiversity management;
- Identify 'priority' sites for management and restoration;
- Provide a guide for the allocation of expenditure and staff resources; and
- Provide a consistent method to compare the conservation value of remnant vegetation throughout the Warringah local government area (LGA).

The WBCS ranks the majority of Forestville Park as an area of 'high' conservation significance.

5.2 Management of Urban Bushland in Warringah

Threats to biodiversity which require ongoing management typically include pest species, vegetation clearing, habitat loss, bush fire hazard management and urban run off. Key threatening processes are identified in the TSC Act. These processes threaten all urban bushland in Warringah, regardless of whether threatened species are present or not. These processes include:

- Infection of native plants by *Phytophthora cinnamomi*
- Removal of dead wood and dead trees
- Predation by the Feral Cat *Felis catus* (Linnaeus, 1758)
- Predation by the European Red Fox *Vulpes vulpes* (Linnaeus, 1758)
- Loss of hollow-bearing trees
- Loss and degradation of native plant and animal habitat by invasion of escaped garden plants, including aquatic plants
- Invasion of native plant communities by exotic perennial grasses
- Competition and grazing by the feral European Rabbit, *Oryctolagus cuniculus* (L.)
- Clearing of native vegetation (as defined and described in the final determination of the Scientific Committee to list the key threatening process)
- Bushrock removal (as described in the final determination of the Scientific Committee to list the threatening process)
- Alteration to the natural flow regimes of rivers and streams and their floodplains and wetlands (as described in the final determination of the Scientific Committee to list the threatening process)
- High frequency fire resulting in the disruption of life cycle processes in plants and animals and loss of vegetation structure and composition
- Invasion, establishment and spread of Lantana (*Lantana camara* L. sens. lat)
- Invasion and establishment of exotic vines and scramblers
- Introduction and establishment of Exotic Rust Fungi of the order Pucciniales pathogenic on plants of the family Myrtaceae

Other threatening processes (i.e. not listed under TSC Act) which also threaten biodiversity include:

- Recreational use – bicycles, motorbikes, excessive pedestrian use and horse-riding.
- Over-collection of the native seed resource
- Physical damage from illegal access, dumping, tree removal, encroachments.

Although not listed as KTP's, these three processes contribute indirectly to the KTP's listed previously.

In order to address these processes, the management of each reserve needs to incorporate the following points:

- Ongoing monitoring of the condition of the bushland and any assets in the reserve.
- Integrating the conservation planning of the reserve with other programs within Council and with other land management agencies. This includes the management of weeds, pest animals, stormwater, fire regimes, illegal activities and sustainable recreational access.

CURRENT CONDITION AND USE OF THE RESERVE

6 Forestville Park

6.1 Background and Use of Land and Structures

Forestville Park is located at the eastern end of Currie Road, Forestville. It is bordered by residential development to the north, east and west, with Garigal National Park forming the southern boundary. The reserve occupies ridge-tops, slopes and a sandstone gully within the Middle Harbour Creek catchment. The primary watercourse, Main Creek, flows from urbanised areas to the north, through steep headwaters into Garigal National Park and then into Bantry Bay. The reserve also supports a site of cultural significance with Aboriginal rock engravings located in the southern portion of the site.

The reserve contains large areas of intact vegetation. The vegetation communities at Forestville Park include Peppermint-Angophora Forest, Bloodwood-Scribbly Gum Woodland and Sandstone Heath. These three communities are common in Warringah but are notable for their species richness and floristic diversity. Areas of revegetation are also present, namely in the northwest of the reserve. The site supports at least four rare plant species, seven species threatened in northern Sydney, six biogeographically significant species (i.e. at the limit of their natural range) and an unconfirmed record of a flora species threatened in NSW and Australia (*Tetratheca glandulosa*). The vegetation types, combined with the site's outstanding natural features, such as creeks, waterfalls, caves, rock outcrops and hollow bearing trees, also provide potential habitat for a number of threatened fauna species.

Environmental management works have been undertaken in the reserve for over ten years and has involved ongoing bush regeneration and weed control, maintenance of fire access zones behind residences, sandstone capping and planting of a degraded area below the southern sports field, and drainage rehabilitation works at Yarraman Avenue. Areas of revegetation are also present to the north of the site between Tyalla Avenue and Parni Place.

Two volunteer groups also undertake bush regeneration activities in Forestville Park. Council Friends of the Bush volunteer groups currently undertake bush regeneration activities around 42 Parni Place and within the Claire Deane Bush Sanctuary off Coolabah Crescent. The Claire Deane Bush Sanctuary was created in memory of Claire Deane, a young National Parks and Wildlife Service officer who was tragically killed during a hazard reduction fire at Ku-ring-gai Chase National Park in June 2000. This volunteer site is worked several times a year by a group of friends, colleagues and local community members.

Steep, west-facing slopes, and connectivity to Garigal National Park, leave the reserve vulnerable to wildfires. Major fires have occurred regularly at intervals of approximately ten to twelve years, with the site extensively burned by wildfires in 1990 and 2000. Smaller hazard reduction burns were conducted along residential boundaries throughout the 1990s.

The site has been heavily impacted by the introduction of landfill around the sports fields, sewer leaks, poor stormwater management and high levels of weed invasion along urban boundaries and drainage lines. Dumping of waste, garden encroachments, poisoning of canopy trees, clearing of dead wood and native vegetation to reduce perceived fire risk, collection of firewood, planting of non-endemic native species on bushland edges, creation of tracks into bushland, and mowing or spraying of native understorey behind properties are also ongoing impacts on the reserve's bushland by neighbouring residents. Feral and domestic animals are an ongoing threat to native fauna in the reserve, with foxes, rabbits, domestic cats and unleashed dogs recorded regularly.

The reserve has a number of tracks that are very popular with walkers and bike riders. These tracks are used for access to the playing fields as well as for bushwalking enjoyment. These tracks vary in condition with some presenting significant erosion issues.

6.2 Condition of Reserve at Forestville Park

Table 2 - Reserve condition

Condition Indicator	Brief Description of Condition of Land Requiring Management Response
Vegetation health	<ul style="list-style-type: none"> • Away from drainage lines, core areas of bushland have low levels of weed infestation, healthy canopy, structural integrity and good diversity of native species. These areas have regenerated well after widespread, high intensity fires in 1990 and 2000; however, an insufficient fire-free interval will compromise biodiversity, reduce fauna habitat and prevent an adequate native seed bank from accumulating. • Areas of 'fair condition' bushland generally have good resilience but are compromised by continual weed infiltration, drainage disturbances or absence of fire. • Senescent vegetation below Coolabah Crescent properties. This area has localised, moderate-to-high levels of weed infestation and lower native species diversity but is functioning as a favoured nesting site for Ringtail Possums and small birds. A plume of die-back and fallen shrubs below 34-38 Coolabah Crescent warrants further investigation. • Partial loss of a stand of rare <i>Eucalyptus luehmanniana</i> some years ago due to a prolonged sewer leak. At least six healthy, fruiting plants remain in the adjacent, unaffected area. Damaged area is regenerating after weed control but no recruitment of <i>E. luehmanniana</i> has occurred, despite burning in 2000. • Poor native cover and low to no resilience in disturbed areas of landfill around the sports fields. • Upstream of the Currie Rd entrance, exotic vines threaten the remnant native canopy. • In planted, sandstone-capped area: maturing trees are falling over, possibly due to exposed position and lack of anchorage in the sandstone capping. Many Acacias have matured and died, although seedling recruitment is evident. • Absence of riparian vegetation and riparian buffer zone in upper sections of creek. • Long term health of native vegetation is compromised by management practices along power line easements, including regular, broad area clearing and removal of cleared, seed bearing native vegetation from site.
Weed infestation	<ul style="list-style-type: none"> • Over 100 introduced species have been recorded for the site, encompassing 'garden escapees', noxious and other environmental weeds. • At least 19 noxious weed species, including a localised population of <i>Equisetum arvense</i> (Horsetail) - a Class 1 State Prohibited Weed, detected in April 2009. • Large, core areas of bushland are generally weed-free. Wildfires have helped to contain weed plumes to unburned drainage lines. • Track areas are generally good, but are subject to ongoing seasonal flushes of annual weeds and grasses. • Long residential and open space interface provides a large frontage for weed infiltration. Herbaceous weeds are particularly problematic along edges and boundaries. • High level of weed infestation in land-fill areas around sports fields and north of Currie Road. These areas have very poor resilience and require constant weed suppression. • Major woody weed and vine plumes occur along drainage lines below stormwater outlets and around sewer pop tops. An extensive weed plume occurs at the base of cliffs below houses in Landscape Avenue, where drainage and sewer lines converge. Other problem areas include drains below properties in Coolabah Crescent, Grattan Crescent, Parni Place, Pildra Place and Tyalla Avenue. • High threat to riparian vegetation downstream in resilient areas and Garigal National Park from transport of weed propagules from degraded areas higher in

Condition Indicator	Brief Description of Condition of Land Requiring Management Response
	<p>catchment. Noxious aquatic weed <i>Ludwigia peruviana</i> recurs persistently in the riparian zone and is likely to have spread downstream to Garigal National Park. Monitoring and eradication are impeded by difficulty of access through a steep gorge with waterfalls.</p>
<p>Potential threats to this reserve</p>	<p>Altered fire regime - large areas of the site have been subject to high frequency and high intensity fires, with some overlap from hazard reduction burns conducted in the interim. An insufficient fire-free interval, or extensive wildfire within the next five years, will compromise biodiversity, reduce fauna habitat and prevent an adequate native seed bank from accumulating.</p> <p>Introduced fauna species - including feral and domestic cats, rabbits, unleashed dogs and foxes, which have all been detected in the reserve. Impacts include: disturbance to foraging and nesting areas; predation of native fauna; competition for resources, and damage to vegetation (particularly by rabbits) and pollutants/nutrients in uncollected dog faeces.</p> <p>Dumping of waste - including garden vegetation, lawn clippings, timber, soil and building materials.</p> <p>Altered soil chemistry - from leachate in land fill. Previous soil testing of some land fill areas has registered high pH levels (alkaline) compared to the naturally low pH (acidic) level of the natural sandstone soil profile. Alkaline soil favours weed growth and is often fatal to local native species.</p> <p>Weed invasion - particularly along drainage lines, edges, urban boundaries and land fill. Persistent recurrence of noxious aquatic weed <i>Ludwigia peruviana</i> along Main Creek and tributaries from Parni Place.</p> <p>Sewer leaks and overflows - the site has a history of sewer problems with past overflows causing soil contamination, weed invasion, loss or decline in health of native species, and disturbance to bushland from soil excavation during repair of sewer structures.</p> <p>Clearing of power line easements – undertaken on behalf of Energy Australia, involving tree lopping/felling, removal of shrub and groundcovers and off-site removal of vegetation. Loss of habitat/nesting and damage to vegetation along tracks.</p> <p>Introduction of soil and water-borne disease pathogens - particularly due to the type and frequency of access to the reserve. Potential sources of contamination include: maintenance vehicles that access the main fire trail, sewer line and drainage structures, equipment used for clearing under power line easements and mowing; stormwater and run off from gardens and sports fields; dumping of diseased vegetation and soil; bush regenerators; walkers and large community groups that regularly use the reserve.</p> <p>Recreational use by bike riders (including motor bikes) and creation of exploratory tracks and bike jumps.</p> <p>Removal or clearance of dead wood from bushland. Previous instances of residents collecting firewood in reserve. Evidence of dead wood clearance behind some Coolabah Crescent and Parni Place properties.</p> <p>Tree poisoning - a large eucalypt was poisoned at Tyalla Place in Feb 2009.</p>
<p>Encroachments</p>	<p>Illegal clearing and mowing around the boundary of the reserve, generally by neighbouring residents. Construction of fences and other infrastructure, dumping of garden and building refuse. Random exploratory tracks and illegal development of bike jumps/cubby area north of the Rugby Club house (now not in use).</p>
<p>Erosion</p>	<ul style="list-style-type: none"> • Siltation and erosion below Gross Pollutant Trap at Currie Road. • Erosion evident along creek banks in highly disturbed areas particularly around

Condition Indicator	Brief Description of Condition of Land Requiring Management Response
	<p>stormwater outlets along the two northern tributaries.</p> <ul style="list-style-type: none"> • Severe erosion and siltation along length of creek channel behind properties in Careebong Road and Pildra Place. • Section of power line easement between the cleared area west of Penrose Place and sports fields is being used as a walking track and is becoming heavily eroded. • Some erosion through reconstructed area of sandstone capping. Sediment fences have collapsed due to slumping of sandstone fill and are no longer fulfilling function. Some stability is now provided by maturing plants and compaction/consolidation of the sandstone fill but there is poor vegetation cover at ground level. • Erosion evident on land fill embankment below sandstone capped area. Slope is very steep, laden with loose bricks and unconsolidated waste, has poor vegetation cover (other than seasonal flushes of herbaceous weeds) and no canopy. • Erosion along steeper sections of walking track from southern sports field to Grattan Crescent.
Drainage	<ul style="list-style-type: none"> • Condition of Main Creek channel improves downstream from Currie Road. Moderate pockets of sedimentation below waterfalls with accompanying weed plumes of minor to moderately severe intensity, but generally confined by gully sides and bedrock. Priority to prevent degradation of National Park downstream. • Upper catchment is urbanised with impervious surfaces and channelling of stormwater. No amelioration devices on stormwater outlets: flow is undirected with high volume and velocity during peak events. • Despite the disturbed nature of the sub-catchment, water quality samples near Forestville Park have recorded low levels of pollutants, although concentrations of total and dissolved nitrogen exceed recommended guidelines. • Drainage patterns and natural contours have been altered by construction of the sports fields and introduction of landfill. • Drainage line at the corner of Rangers Retreat and Yarraman Ave has been reconstructed with boulders to dissipate stormwater flow - is functioning well, although surrounds need further revegetation to prevent erosion and provide habitat. • Currie Road GPT (Gross Pollutant Trap) catches large debris and litter but overflows during peak rain events, causing erosion of creek bank on western side. Water also bypasses the GPT via a channel parallel to the vehicle ramp on the southern side. A large plume of weed and sediment has formed here and partially blocks the creek channel below the GPT. • Absence of riparian vegetation and riparian buffer zone in upper catchment area with large stretches of creek channel in poor condition. • Poor drainage/boggy area within mown area east of 22A Milton Place. Area is not used for recreation and may be better utilised by establishing riparian buffer zone and wetland area with revegetation. • Flooding behind houses near access way in Careebong Avenue and Pildra Place. The degraded condition of the creek channel, poor vegetation cover and large stormwater outlet have combined to form a boggy floodplain that encroaches into healthy bushland.

6.3 Vegetation Condition and Significant Features of Forestville Park

The tables below support Map 3. The information in the tables is taken from Council's *Natural Area Survey* (2010) and an assessment of bushland condition developed and trialled specifically on bushland sites in Warringah, see Appendix 3.

Table 3 - Vegetation communities

Map Symbol	Sydney Vegetation Map Unit (Benson and Howell 1994)	Warringah Vegetation Community	Conservation Significance
GG	Sydney Sandstone Gully Forest (part)	Peppermint-Angophora Forest	Local habitat; some areas contain rare, threatened or biogeographically significant species.
RR	Sydney Sandstone Ridgetop Woodland	Bloodwood-Scribbly Gum Woodland	Local habitat; some areas contain rare, threatened or biogeographically significant species
HH	Coastal Sandstone Heath (part)	Sandstone Heath	Local habitat; some areas contain rare, threatened or biogeographically significant species
b	N/A	Highly Disturbed Native Vegetation	Local habitat; potential habitat for species with higher conservation status.
c	N/A	Exotic Vegetation	Local habitat
e	N/A	Revegetation	Local habitat
X	N/A	Cleared areas (or canopy with mown understorey)	Local habitat

Table 4 - Bushland condition interpretation

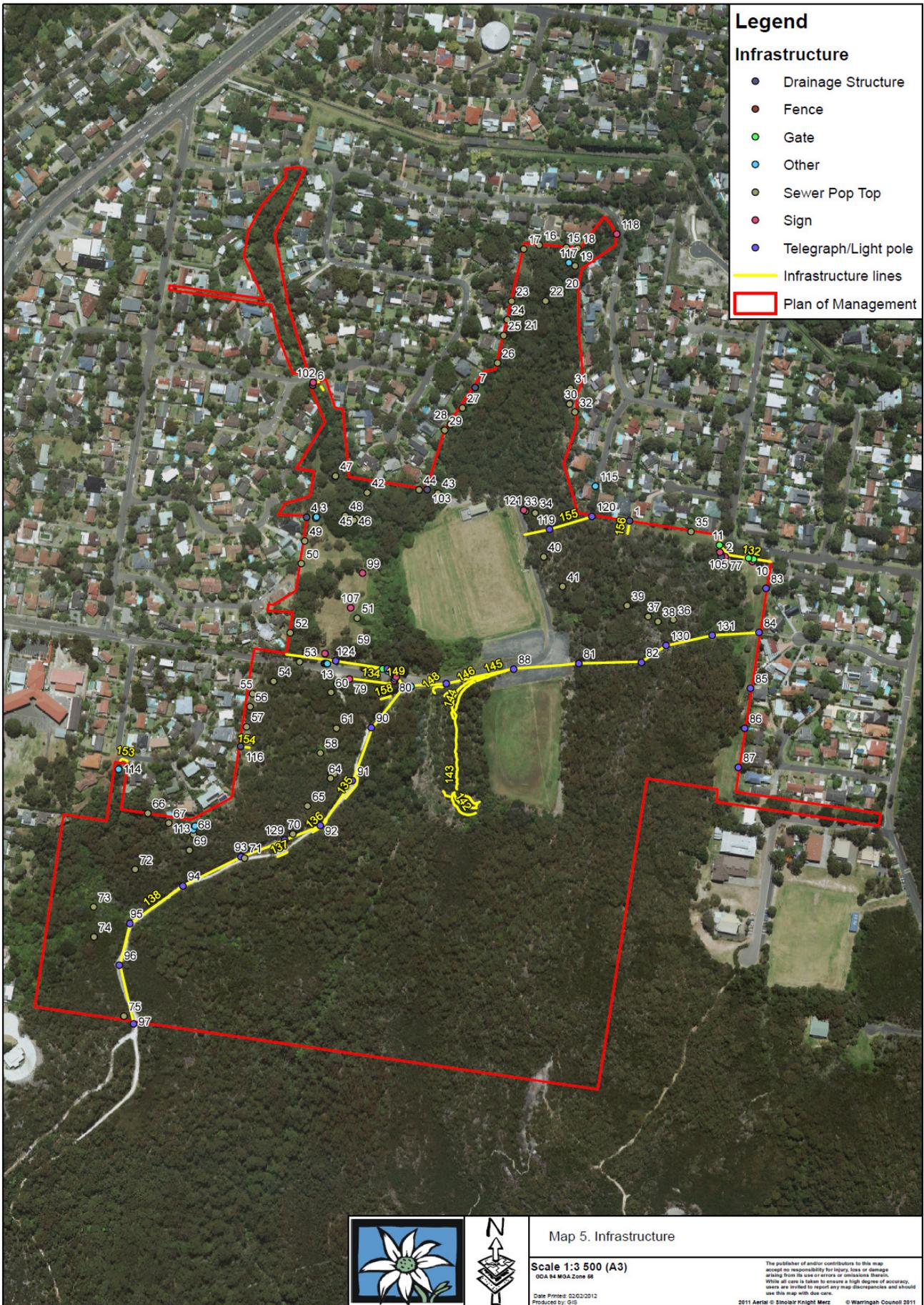
Resilience rating	Bushland condition	Intervention required
Good	Native community healthy. Virtually weed free.	None, passive or minimal – <i>Prevention of future impacts</i>
Fair	Minor infestation with weeds.	Low – <i>Removal of impacts. Removal of low to medium levels of weeds</i>
Poor	Severe infestation with weeds and regeneration of native species being suppressed. Ground layer of natives species still present.	Medium – <i>Removal of impacts. Removal of weeds. Additional “kick start to promote regeneration”</i>
Very Poor	Bushland virtually replaced with weed species and/or only mature specimens of highest stratum remain and no seedlings or saplings present due to infestation of understorey by weed species.	Medium to high – <i>Ability of system to recover is lost or seriously limited. Definitely needs a “kick start” or may require reconstruction of approximate original system</i>
Non-resilient	Bushland replaced totally by weed species.	High initial input with regular maintenance
Cleared/mown	Typically exotic ground cover periodically mown.	N/A

Table 5 - Known significant features

Feature Type	
Heritage	Notes
Natural	Majority of site identified in the Warringah Local Environmental Plan 2011 as a Heritage Conservation Area.
Cultural	Classed as Very High Sensitivity; an Aboriginal rock engraving occurs in close proximity to the site's southern boundary.
Flora	Notes
<i>Alisma plantago-aquatica</i> (plant)	Present on site - threatened in northern Sydney
<i>Alternanthera denticulata</i> Lesser Joyweed (plant)	Present on site - threatened in Warringah
<i>Angophora crassifolia</i> (plant)	Present on site - rare in Australia
<i>Angophora hispida</i> (plant)	Present on site - biogeographically significant
<i>Austromyrtus tenuifolia</i> (plant)	Present on site - biogeographically significant
<i>Crowea saligna</i> (plant)	Present on site - biogeographically significant
<i>Deyeuxia decipiens</i> (plant)	Present on site - threatened in northern Sydney
<i>Deyeuxia quadriseta</i> Reed Bent Grass (plant)	Present on site - threatened in northern Sydney
<i>Eucalyptus capitellata</i> Brown Stringybark (plant)	Present on site - threatened in northern Sydney
<i>Eucalyptus luehmanniana</i> Yellow-top Mallee Ash (plant)	Present on site - rare in Australia
<i>Gahnia erythrocarpa</i> Saw Sedge (plant)	Present on site - biogeographically significant
<i>Gonocarpus salsoloides</i> (plant)	Present on site - rare in Australia
<i>Grevillea speciosa</i> (plant)	Present on site - biogeographically significant
<i>Hibbertia nitida</i> Shiny Guinea Flower (plant)	Present on site - rare in Australia
<i>Lythrum hyssopifolia</i> Hyssop Loosestrife (plant)	Present on site - threatened in northern Sydney
<i>Paspalum distichum</i> Fresh Water Couch (plant)	Present on site - threatened in northern Sydney
<i>Persoonia pinifolia</i> (plant)	Present on site - biogeographically significant
<i>Sacciolepis indica</i> (plant)	Present on site - threatened in northern Sydney
<i>Symphionema paludosum</i> (Plant)	Present on site - threatened in northern Sydney
<i>Tetradlea glandulosa</i> (plant).	Previous record (McDougall 1994) could not be validated on site. Also recorded in adjacent National Park - threatened in NSW; threatened in Australia. High potential to be present on site.

Fauna	Notes
Eastern Pygmy Possum (<i>Cercartetus nanus</i>)	Potential habitat on site
Giant Burrowing Frog (<i>Heleioporus australiacus</i>)	Potential habitat on site
Glossy Black Cockatoo (<i>Calyptorhynchus lathami</i>)	Potential habitat on site
Powerful Owl (<i>Ninox strenua</i>)	Potential habitat on site
Red-crowned Toadlet (<i>Pseudophryne australis</i>)	Potential habitat on site
Rosenberg's Goanna (<i>Varanus rosenbergi</i>)	Potential habitat on site
Southern Brown Bandicoot (<i>Isodon obesulus</i>)	Potential habitat on site
Environmental	Notes
Habitat	The majority of Forestville Park is classified as Core Habitat as per the Warringah Natural Area Survey: Vegetation History and Wildlife Corridors 2009 Update.
Creek	The majority of the site forms part of the catchment for Main Creek and its tributaries which flow to Bantry Bay

Map 5 – Infrastructure



6.4 Infrastructure, Encroachments and Tracks

The following tables support Maps 5 and 6. The information in the tables summarises the results of an infrastructure, encroachments and track survey undertaken by Council staff following an earlier study carried out by consultants and verified by Council staff and current surveys.

Table 6 - Infrastructure

Map ID	TYPE	CONDITION	NOTES
1	Drainage Structure	Good working order	Stormwater outlet
2	Drainage Structure	Good working order	Stormwater outlet
3	Drainage Structure	Good working order	Stormwater outlet
4	Drainage Structure	Good working order	Stormwater outlet
5	Drainage Structure	Good working order	Large stormwater outlet and sediment trap basin (GPT)
6	Drainage Structure	Good working order	Stormwater outlet
7	Drainage Structure		Stormwater outlet
10	Gate	Good working order	Provides access through log fence
11	Gate	Good working order	Provides access through log fence
12	Gate	Poor	Timber slip rail
13	Gate	Good working order	Steel gate and short section of fence - access to fire trail
14	Other	Good working order	Bin holder and bin
15	Sewer Pop Top	Good working order	-
16	Sewer Pop Top	Good working order	-
17	Sewer Pop Top	Good working order	-
18	Sewer Pop Top	Good working order	-
19	Sewer Pop Top	Good working order	-
20	Sewer Pop Top	Good working order	-
21	Sewer Pop Top	Good working order	-
22	Sewer Pop Top	Good working order	-
23	Sewer Pop Top	Good working order	-
24	Sewer Pop Top	Good working order	-
25	Sewer Pop Top	Good working order	-
26	Sewer Pop Top	Good working order	-
27	Sewer Pop Top	Good working order	-
28	Sewer Pop Top	Good working order	-
29	Sewer Pop Top	Good working order	-
30	Sewer Pop Top	Good working order	-
31	Sewer Pop Top	Good working order	-
32	Sewer Pop Top	Good working order	-
33	Sewer Pop Top	Good working order	-
34	Sewer Pop Top	Good working order	-
35	Sewer Pop Top	Good working order	-
36	Sewer Pop Top	Good working order	-
37	Sewer Pop Top	Good working order	-
38	Sewer Pop Top	Good working order	-
39	Sewer Pop Top	Good working order	-
40	Sewer Pop Top	Good working order	-
41	Sewer Pop Top	Good working order	-
42	Sewer Pop Top	Good working order	-
43	Sewer Pop Top	Good working order	-
44	Sewer Pop Top	Good working order	-

Map ID	TYPE	CONDITION	NOTES
45	Sewer Pop Top	Good working order	-
46	Sewer Pop Top	Good working order	-
47	Sewer Pop Top	Good working order	-
48	Sewer Pop Top	Good working order	-
49	Sewer Pop Top	Good working order	-
50	Sewer Pop Top	Good working order	-
51	Sewer Pop Top	Good working order	-
52	Sewer Pop Top	Good working order	-
53	Sewer Pop Top	Good working order	-
54	Sewer Pop Top	Good working order	-
55	Sewer Pop Top	Good working order	-
56	Sewer Pop Top	Good working order	-
57	Sewer Pop Top	Good working order	-
58	Sewer Pop Top	Good working order	-
59	Sewer Pop Top	Good working order	-
60	Sewer Pop Top	Good working order	-
61	Sewer Pop Top	Good working order	-
62	Sewer Pop Top	Good working order	-
63	Sewer Pop Top	Good working order	-
64	Sewer Pop Top	Good working order	-
65	Sewer Pop Top	Good working order	-
66	Sewer Pop Top	Good working order	-
67	Sewer Pop Top	Good working order	-
68	Sewer Pop Top	Good working order	-
69	Sewer Pop Top	Good working order	-
70	Sewer Pop Top	Good working order	-
71	Sewer Pop Top	Good working order	-
72	Sewer Pop Top	Good working order	-
73	Sewer Pop Top	Good working order	-
74	Sewer Pop Top	Good working order	-
75	Sewer Pop Top	Good working order	-
76	Sign	Not fulfilling function	Unleashed dogs prohibition sign on steel post
77	Sign	Not fulfilling function	Bush regeneration sign on timber post
78	Sign	Poor	Dumping of rubbish prohibition sign on steel post
79	Sign	Poor	Conserving Warringah's bushland sign
80	Sign	Damaged and defaced	Unleashed dogs prohibited and wildlife protection area signs on steel post
81	Telegraph/Light pole	Good working order	Telegraph pole
82	Telegraph/Light pole	Good working order	Telegraph pole
83	Telegraph/Light pole	Good working order	Telegraph pole
84	Telegraph/Light pole	Good working order	Telegraph pole
85	Telegraph/Light pole	Good working order	Telegraph pole
86	Telegraph/Light pole	Good working order	Telegraph pole
87	Telegraph/Light pole	Good working order	Telegraph pole
88	Telegraph/Light pole	Good working order	Telegraph pole
89	Telegraph/Light	Good working order	Telegraph pole

Map ID	TYPE	CONDITION	NOTES
	pole		
90	Telegraph/Light pole	Good working order	Telegraph pole
91	Telegraph/Light pole	Good working order	Telegraph pole
92	Telegraph/Light pole	Good working order	Telegraph pole
93	Telegraph/Light pole	Good working order	Telegraph pole
94	Telegraph/Light pole	Good working order	Telegraph pole
95	Telegraph/Light pole	Good working order	Telegraph pole
96	Telegraph/Light pole	Good working order	Telegraph pole
97	Telegraph/Light pole	Good working order	Telegraph pole
98	Telegraph/Light pole	Good working order	Telegraph pole
99	Sign	Good working order	Dog prohibition sign on steel pole
100	Other	Not fulfilling function	Timber reflector pole
101	Other	Not fulfilling function	Timber reflector pole
102	Sign	Damaged and defaced	Unleashed dogs prohibition sign
103	Drainage Structure	Good working order	Stormwater outlet with headwall
104	Gate	Not fulfilling function	Slip rail in fence line
105	Sign	Good working order	Rubbish dumping prohibition sign on steel pole
106	Sign	Good working order	Dog unleashed exercise permitted sign
107	Sign	Good working order	Dog unleashed exercise permitted sign
108	Other	Good working order	Timber bollard
109	Other	Good working order	Timber bollard
110	Other	Good working order	Timber bollard
111	Other	Good working order	Timber bollard
112	Other	N/A	Concrete wall between rocks - unknown function
113	Other	N/A	Concrete wall between rocks with ag-pipe - unknown function
114	Other	Good working order	Timber bench - memorial
115	Other	Good working order	Rural Fire Service FHP fire hazard protection cabinet
116	Drainage Structure	Good working order	Stormwater outlet
117	Other	Good working order	Timber retaining stairs on track
118	Sign	Poor	Wildlife protection area sign on steel post
119	Telegraph/Light pole	Not fulfilling function	Steel telegraph pole - telephone cable detached
120	Telegraph/Light pole	Good working order	Timber telegraph pole
121	Sign	Not fulfilling function	Steel sign post - no sign attached
122	Gate	Good working order	Steel gate - main entrance to Forestville Park
123	Telegraph/Light pole	Good working order	Timber telegraph pole with light
124	Telegraph/Light pole	Good working order	Timber telegraph pole with light
125	Other	Not fulfilling function	Timber post with slip rail bracket attached
126	Other	Good working order	Large timber post for main entrance gate and sign
127	Other	Good working order	Large timber post for main entrance gate and

Map ID	TYPE	CONDITION	NOTES
			sign
128	Sign	Good working order	Large timber sign for Forestville Park main entrance
129	Telegraph/Light pole	Good working order	Telegraph pole
130	Telegraph/Light pole	Good working order	Telegraph pole
131	Telegraph/Light pole	Good working order	Telegraph pole
132	Fence	Good working order	Log fence - some sections require minor repair
133	Fence	Not fulfilling function	Timber fence - some sections missing
134	Fence	Not fulfilling function	Timber fence - some sections missing
135	Fence	Good working order	Sediment fence. Deteriorating.
136	Fence	Good working order	Sediment fence. Deteriorating.
137	Fence	Moderate deterioration	Sediment fence on fire trail - starting to deteriorate.
138	Other	Good working order	Powerlines
139	Sediment fence	Non functional	Star picket and filter fabric fence, partially buried - no longer fulfilling function
140	Sediment fence	Non functional	Star picket and filter fabric fence, partially buried - no longer fulfilling function
141	Sediment fence	Non functional	Star picket and filter fabric fence, partially buried - no longer fulfilling function
142	Sediment fence	Non functional	Star picket and filter fabric fence, partially buried - no longer fulfilling function
143	Sediment fence	Non functional	Star picket and filter fabric fence, partially buried - no longer fulfilling function
144	Sediment fence	Non functional	Star picket and filter fabric fence, partially buried - no longer fulfilling function
145	Sediment fence	Non functional	Star picket and filter fabric fence, partially buried - no longer fulfilling function
146	Sediment fence	Non functional	Star picket and filter fabric fence, partially buried - no longer fulfilling function
147	Sediment fence	Non functional	Star picket and filter fabric fence, partially buried - no longer fulfilling function
148	Sediment fence	Non functional	Star picket and filter fabric fence, partially buried - no longer fulfilling function
149	Rock retaining wall	Good working order	Rock retaining wall at main entrance gate - south side
150	Rock retaining wall	Good working order	Rock retaining wall at main entrance gate - north side
151	Fence	Good working order	Steel piping fence
152	Rock gabion	Good working order	Rock gabion stabilising creek bank
153	Fence	Good working order	Timber landscape border for sanctuary frontage
154	Drainage	Good working order	Earthen drainage channel down slope of stormwater outlet
155	Other	Good working order	Power lines - telephone cable detached
156	Drainage	Good working order	Drainage channel below stormwater outlet
157	Drainage	Moderate deterioration	Drainage channel below stormwater outlet - requires cleaning
158	Drainage	Good working order	Steel grill associated with sediment basin (GPT)
159	Other	Good working order	Powerlines

Table 7 - Encroachments

Map ID	TYPE	IMPACT
1	Dumping	Illegal dumping point for vegetation waste
2	Dumping	Illegal dumping point for vegetation and building waste
3	Construction	Mowing encroachment and fence
4	Storage	Timber stockpile
5	Planting	Unauthorised planting of tubestock
6	Planting	Unauthorised planting of non-endemic native species
7	Dumping	Dumped garden vegetation
8	Dumping	Sections of half concrete pipe within creek line
9	Dumping	Timber and soil dumping adjacent to creek
10	Storage	Firewood stockpile and other waste storage
11	Storage	Timber and other building material storage
12	Construction	Ropes extending from property fence and tied to tree in reserve and short section of old star picket and wire fence
13	Construction	Illegal camp site/rubbish within bushland area adjacent to large rock outcrop
14	Dumping	Mound of soil, rocks and bottles
15	Dumping	Old rusty vintage car
16	Dumping	Dumped garden vegetation
17	Dumping	Pile of rocks
18	Dumping	Pile of bricks and retaining wall
19	Dumping	Concrete blocks
20	Dumping	Building rubble
21	Construction	Timber steps
22	Construction	Wooden bridge adjacent to creek
23	Construction	Awning structure
24	Construction	Pool infrastructure
25	Dumping	Old dump pile of building waste and landfill
26	Clearing	Mowing encroachment and garden
27	Cleared area	Mowing encroachment
28	Construction/Dumping	Old bike jump area with dumped slabs of timber
29	Construction	Pool infrastructure
30	Clearing	Mowing encroachment
31	Clearing	Mowing encroachment
32	Clearing	Mowing encroachment
33	Clearing	Mowing encroachment
34	Clearing	Mowing encroachment
35	Clearing/Construction	Mowing encroachment and fence
36	Clearing	Mowing encroachment
37	Clearing	Mowing encroachment/slashing of herbaceous weed cover
38	Clearing	Mowing encroachment
39	Clearing	Mowing encroachment and constructed garden beds
40	Clearing/Dumping/ Construction	Mowing encroachment, laying of turf, soil/garden vegetation dumping, fence
41	Clearing/Construction	Mowing encroachment and fence
42	Clearing	Mowing encroachment
43	Clearing/Construction	Mowing encroachment and fence
44	Clearing/Construction	Mowing encroachment and pool
45	Clearing/Construction	Mowing encroachment and fence
46	Clearing/Construction	Mowing encroachment, fence and rock retaining wall
47	Clearing	Mowing encroachment

Map ID	TYPE	IMPACT
48	Clearing/Construction	Mowing encroachment and paved area
49	Clearing/Construction	Mowing encroachment

Table 8 - Tracks

Map ID	Notes
1	Major unsealed vehicle access track and fire trail that continues into Garigal National Park. Locked gate at entrance.
2	Major bush walking track continuing into Garigal National Park. Used by dog walkers; evidence of use by bike riders. Some erosion and drainage
3	Walking track from cleared area west of Moira Place linking with track 14
4	Vehicle access for upper section of power line easement also used as a walking track, from cleared area west of Penrose Place to top of large rock outcrop
5	Steep bush track, switching back between rock ledges on slope, between grassed area behind Kylie/Parni Place properties down to sports fields.
6	Established walking track from rear of Parni Place properties to Rugby Clubhouse.
7	Established walking track linking Careebong Ave to Rugby Clubhouse. Crosses drainage line through boggy floodplain area.
8	Connects NW corner of northern sports field to rear of properties in Nulgarra Place/Tyalla Avenue. Crosses two creek tributaries.
9	Trample track through dense weed below Coral Trees, access to sewer pop top.
10	Walking track to Rugby Clubhouse access road from rock outcrop south of Parni Place - adjacent to small power line easement
11	Bypass track around Currie Road entrance gate
12	Secondary track from behind Pildra Place linking with track 7
13	Short section of track linking bottom of large rock outcrop/campsite with track 14
14	Eroded track directly under power line from sports fields to junction with tracks 3 and 13

Map 6 - Encroachment and Tracks



THE MANAGEMENT OF THE RESERVES

7 What are Council's Intentions for the Future Use of the Land?

Council's primary management intention for the reserve in this Plan of Management is to conserve the bushland while providing for recreation opportunities which do not compromise the ecological integrity of the reserve.

Management options for the tracks and bike infrastructure will be investigated. Tracks/infrastructure will be relocated, re-routed and/or closed where appropriate to prevent and/or minimise impacts to significant biodiversity and areas of cultural heritage.

Authorised Development

In accordance with the *Local Government Act 1993*, Council must expressly authorise any proposed buildings and improvements on the land. This authorisation within a Plan of Management gives 'in principle' support for an activity to proceed, if required, to the development assessment stage. This plan **does not grant development consent under the *Environmental Planning and Assessment Act 1979***. Under the *Local Government Act 1993*, this plan authorises the following developments:

- Bush regeneration and revegetation works, including soil seedbank translocations;
- Erection of signage in reserves as outlined in action tables – this includes entry signs and interpretive signs;
- Installation of park benches, bubblers, etc as appropriate in reserves to enhance recreational use without compromising biodiversity values;
- Vertebrate pest control;
- Creek bank rehabilitation and stabilisation including rock gabions, rock armouring and revegetation;
- Rationalisation of tracks and access as appropriate within reserve – this includes track closure, track re-routing/realignment and track remediation.

8 Management Actions

Council's management intent is detailed in the actions tables which follow.

8.1 Implementation

Actions in this draft Plan of Management will be assessed on an annual basis for inclusion in Council's *Strategic Community Plan*.

It should be recognised that the commencement and completion of these management actions depends on available Council resources and prioritisation based on the WBCS. As such, projects and actions identified in this draft Plan must be assessed against the other priorities of Council. Implementation of actions will be undertaken in accordance with Council's *Strategic Community Plan* and related annual planning documents (such as the Capital Expenditure Program). As priorities change, actions may need to be rationalised.

What do the priorities mean?

The actions have been assigned priorities as the draft Plan of Management contains a very large list of actions and Council does not have the resources to undertake all of them immediately.

High (H) - Actions with high priority are to be considered in Council's funding processes annually until they can be resourced, then included in the Management Plan and relevant Council Unit's 'Business Plan' each year until completed.

Medium (M) - These actions are to be reviewed by the responsible Council Unit each year as to their current importance. This will be based on completion of previous actions and any new directions. When relevant, these actions will be considered for capital expenditure and/or placement in the relevant plans.

Low (L) – These actions are important and are necessary for the overall management and improvement of these Reserves. However they may not be allocated appropriate resources until they are formally reviewed or until resources are available for such actions. Relevant Council Units are to consider including these actions in their Business Plans each year.

On-going – These actions are ongoing and are likely to be required on a constant basis

As required – These are reactive actions that are to be undertaken as a situation arises.

8.2 Action Tables

The Local Government Act 1993 describes a set of "core objectives" for each category and it is a requirement under the Act that the Plan of Management describes how each of the core objectives will be achieved. The previous maps and following Management Actions tables have been developed to address the objectives of the Natural Area/Bushland category, Natural Areas/Watercourse and Park. The tables also indicate how Council will be able to assess whether the objectives have been met.

Table 9 - Action table abbreviations

Action Tables Abbreviations	
<i>Agencies</i>	
OEH	Office of Environment and Heritage
RFS	NSW Rural Fire Service
NPWS	National Parks and Wildlife Service
<i>Other Abbreviations</i>	
TSC Act	<i>Threatened Species Conservation Act 1995</i>

Management Actions for Forestville Park

Table 10 - Management action tables - Natural Area/Bushland and Natural Area/Watercourse

Value: Biodiversity

Objective: Manage the Reserve's scenic, environmental and recreational values to promote ecologically sustainable management practises

Means of Assessment: Regular assessment of bushland condition against baseline

Performance Targets	Permissible Management Actions	Priority
Recover original ecological processes	N1. Strategic rationalisation of mown areas to allow protection, expansion and consolidation of bushland and bushland fragments.	High
	N2. Prepare, implement and continue bush regeneration contracts for natural areas	High
	N3. Delineate boundaries between landscaped or mown areas and adjoining properties.	Medium
	N4. Undertake regulative action in regards to encroachments, where appropriate and as resources permit	Med
Management consistent with the values of the reserve	N5. Approach the NSW Crown Lands Division to authorise dual reservation for the purposes of Public Recreation and Environmental Protection.	Low
Reliable monitoring of management actions and reserve condition	N6. Establish and document baseline bushland conditions and monitoring points to measure management effectiveness.	High
	N7. Investigate and/or implement monitoring protocols to measure management effectiveness.	High
	N8. Link monitoring to any contracts and management actions by way of appropriate briefs, specifications and project plans.	High
	N9. Include Forestville Park in Warringah wide updates to strategic biodiversity inventories and surveys, including the Warringah Natural Area Survey	Med
	N10. Ensure all threatened and rare flora and fauna species are regularly recorded on the Warringah Council GIS and reported to OEH for inclusion on the Atlas of NSW Wildlife.	High
	N11. Conduct sampling for pathogens including <i>Phytophthora cinnamomi</i> and <i>Puccinia psidii</i> s.l.(Myrtle Rust) in accordance with best practise guidelines.	Low
Integrated planning to ensure no conflict of goals and outcomes	N12. Integrate conservation planning with other management planning and maintenance programs undertaken by Council and where possible other land management agencies and utilities.	High

Value: Biodiversity
Objective: Maintain the biodiversity of the land
Means of Assessment: Regular fauna survey/observations;
Regular audit of feral animal activity;
Pre and post fire monitoring; and
Regular assessment of bushland condition against baseline

Performance Targets	Permissible Management Actions	Priority
Condition of bushland areas maintained or improved	N13. Continue bush regeneration contract work throughout the reserve, as appropriate and in the context of bushland management priorities throughout the LGA. .	High
	N14. Consider consolidation of smaller weed and fire management contracts into the larger Forestville Park bush regeneration contract.	Low
	N15. Monitor vegetation condition pre and post burn and manage as appropriate and where resources permit.	Low
	N16. Revegetate poor resilience and degraded areas to provide habitat, erosion control and weed suppression in accordance with bush regeneration priorities.	Low
	N17. Incorporate regular monitoring and updating of native flora/fauna species lists into bush regeneration programs.	High
Sustainable management of native fauna	N18. Incorporate responsible companion animal education into Council's existing education programs.	Med
	N19. Maintain signage relating to companion animal regulation as required.	High
	N20. Consider further declaration or upgrade of Wildlife Protected Areas as per the NSW Companion Animals Act 1998.	Low
	N21. Include Forestville Park in Warringah wide updates to strategic biodiversity inventories and surveys, including the Warringah Natural Area Survey	Med
Management of pest species	N22. Monitor feral animal activity where resources permit as appropriate and in the context of bushland management priorities throughout the LGA.	Med
	N23. Continue and/or undertake integrated pest management control programs where monitoring indicates presence of feral animals.	Med
	N24. Continue integrated pest management programs in conjunction with adjacent land managers.	Med
	N25. Incorporate noxious and environmental weed education into Council's existing education programs.	Low
	N26. Continue to implement Council's Noxious Weed Inspectorial Program on private land adjacent to priority bushland areas as required.	Low
	N27. Continuation of pest management in accordance with current best practice guidelines and government policies and programs.	High
Sustainable management of	N28. Maintain integrity of existing stormwater infrastructure, and install new infrastructure when appropriate and where resources permit.	Ongoing

Performance Targets	Permissible Management Actions	Priority
stormwater	N29. Prioritise and cost any required remediation works in or immediately adjacent to the reserve based on Councils current risk assessment prioritisation process (with consideration of Warringah-wide priorities for water quality and sediment control works).	Ongoing
	N30. Consider and/or install new sediment, pollution or water quality control devices at appropriate sites.	Low
	N31. Continue with current scheduled maintenance activities for water quality devices.	Ongoing
	N32. Respond to illegal stormwater outlets or connections to stormwater system where appropriate.	Ongoing
Close informal trails	N33. Close informal trails where appropriate and as resources permit.	Ongoing
Sustainable management of appropriate fire regimes	N34. Give due consideration to maintenance of ecological processes which enhance biodiversity when planning and implementing fire programs. This may include ecological burning.	On-going
Sustainable management of endemic species	N35. Where required, collect seed under licence from remnant native species in open space areas, particularly canopy trees and grasses. This material provides a valuable resource for revegetation. Store and catalogue the seed appropriately.	Low
Maintain and/or improve biodiversity	N36. All planting/ landscaping throughout the reserves to use species endemic to the site.	On-going
	N37. All planting/ landscaping of park areas to use species endemic to the site.	On-going
	N38. Remove exotic or non-endemic flora species where appropriate and as resources permit	High
	N39. Continue to undertake regular weed inspections around high risk pathways, significant assets and hotspots as required.	Med

Value: Biological corridors and linkages

Objective: Bushland in parcels of a size and configuration (individually and collectively) that will enable the existing plant and animal communities to survive in the long term

Means of Assessment: Regular update of Council's Natural Area Survey;
Regular assessment of bushland condition against baseline; and
Regular fauna survey/observations

Performance Targets	Permissible Management Actions	Priority
Promote opportunities to acquire, or sympathetic management of, adjoining lands	N40. Identify opportunities to work with adjacent landholders (such as the development of partnerships or incentives, provision of education on appropriate landscaping plants, etc) to conserve buffer zones and significant habitat on adjacent land.	Low
Planning/management for biological corridors and linkages	N41. Provide due consideration of corridor and core habitat when undertaking reserve restoration works and in assessment of development proposals within identified areas adjacent to reserve. This may include the application of appropriate development consent conditions and planning provisions.	As required
	N42. Investigate, and where appropriate, reduce the extent of mown areas, particularly along regenerating bushland edges, watercourses and cliff lines. This is to allow protection, expansion and consolidation of bushland fragments.	Low
	N43. Protect disturbed and/or unmapped remnants of bushland with a view to gradual improvement of the bushland condition of these areas.	Low
	N44. Investigate and/or undertake soil seedbank translocations for highly degraded areas where there is little or no chance for natural colonisation.	As required

Value: Environmental Protection
Objective: Protect existing landforms such as natural drainage lines, watercourse and foreshores
Means of Assessment: Regular assessment of existing landforms against baseline

Performance Targets	Permissible Management Actions	Priority
Procedures and development control processes that protect the reserve	N45. Ensure correct legislative procedures are followed and appropriate licences are obtained when conducting works or research in the reserve.	High
	N46. Apply appropriate development conditions, planning controls and guidelines as required for developments and activities.	High
Protection and Rehabilitation of Water Courses and Riparian Systems	N47. Undertake water quality monitoring where appropriate and resources permit	Low
	N48. Undertake weed control specifically targeting weeds along creek channel and below Gross Pollutant Trap (GPT).	Med
	N49. Consider and/or re-establish riparian vegetation, particularly along degraded open space area north of Currie Road.	Med
	N50. Inspection of illegally constructed stormwater infrastructure and action taken as appropriate.	Low
	N51. Incorporate Water Sensitive Urban Design (WSUD) principles into future stormwater drain designs	High
	N52. Undertake erosion/siltation control, bank stabilisation as appropriate when required.	Low
N53. Undertake all works in accordance with the Protection of Waterways and Riparian Lands Policy and consider recommendations of the Creek Management Study (2004)	High	

Value: Environmental Protection
Objective: Measures directed to minimising or mitigating any disturbance caused by human intrusion
Means of Assessment: Regular audit of implementation of Council's Environmental Management Plan; and
 Regular assessment of bushland condition against baseline

Performance Targets	Permissible Management Actions	Priority
Ensure activities do not damage reserve	N54. Implement appropriate site management controls for reserve improvement activities and ensure temporary structures are removed at completion of works.	High
	N55. Monitor all activities in reserve and respond as required to protect the area.	On-going
	N56. Follow Council's consultation procedures when planning and implementing works.	On-going
	N57. Maintain Council signs and assets as required.	Medium

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Value: Educational Research and Community Awareness
Objective: Management that identifies, promotes and protects the educational and scientific values of the land
Means of Assessment: Update of Council's General Community Perception of the Environment Survey; and
 Level of use of reserve for recreational and educational activities

Performance Targets	Permissible Management Actions	Priority
Promote best management practise and community awareness of the conservation of bushland reserves	N58. Incorporate education of neighbouring residents and land managers into Council's environmental education program. This may include the distribution of information regarding impacts to the natural environment and ways to reduce these impacts.	Med
	N59. Consider and/or erect signs defining the National Park boundaries, and relevant restricted activities within the reserve.	Med
	N60. Update compliance signage at appropriate reserve entrances (e.g. Currie Rd entrance, fire trail entrance and walking tracks) - signage may address companion animal restrictions, illegal dumping and recreational access.	High
	N61. Allow and assist agencies and educational institutions to carry out research related to natural resource management in reserves.	As required
	N62. Incorporate the involvement of adjacent residents, bushfire brigades, recreational user groups and the local community into current environmental education campaigns regarding the protection of the reserve.	Low
	N63. Provide interpretive signs in the reserve as appropriate, and where resources permit.	Low

Value: Integrity and sustainability of the reserves
Objective: Ensure reserves are managed in a way that does not conflict with identified values and the interests of generations are protected
Means of Assessment: Regular assessment of bushland and track condition against baseline

Performance Targets	Permissible Management Actions	Priority
Reserve protected from activities that will degrade or reduce the viability of the site and genetic integrity of flora protected	N64. Monitor and address bushland management issues through education and enforcement.	Med
	N65. Address significant illegal encroachments as resources permit.	Med
	N66. Identify undefined boundaries with adjacent private lands and mark clearly on the ground where required and resources permit.	Low
	N67. Develop and implement a strategy for dealing with tree vandalism, incorporating public education, enforcement and effective deterrents.	Low
	N68. Monitor impacts from other reserve uses on the bushland areas and address when and if they become an issue.	On-going
	N69. Delineate and/or map boundaries between bushland, fire management areas and open space areas to facilitate effective and appropriate management.	Med
	N70. Ensure all bush regeneration and revegetation activities including the collection of seed and propagules are undertaken in accordance with appropriate licences and/or guidelines.	High
Manage the boundary between park and bushland within the reserve	N71. Liaise with utility providers regarding service and maintenance of utility infrastructure located within bushland reserves.	High
	N72. Delineate and/or map boundaries between bushland and mown areas. Ensure that mowing does not 'creep' into bushland areas by clearly marking boundaries on the ground.	High
Manage the boundary between bushland and other uses within the reserve	N73. Reduce mowing areas along suitable boundaries to increase natural areas	Med
	N74. Establish mowing boundaries in open space areas in relation to bush fire hazard management and native vegetation.	Med
	N75. Liaise with utility providers regarding service and maintenance of utility infrastructure located within bushland reserves.	Med
	N76. Liaise with licensees operating within the reserve to manage impacts on bushland areas.	Med
	N77. Liaise with NPWS regarding closures and redirection of tracks to protect cultural and significant environmental features.	Med
	N78. Liaise with OEH to for improved management of bike riding along tracks in adjoining National Parks Estate.	Low

Value: Recreation and access
Objective: Facilities and opportunities that promote public enjoyment and appreciation of the values and quality of the land, and that protect and enhance those values
Means of Assessment: Regular assessment of track and facility condition against baseline

Performance Targets	Permissible Management Actions	Priority
Sustainable recreation facilities	N79. Protect and manage sympathetically native canopy trees and their understorey in open space / recreation areas.	On-going
	N80. Provide and/or maintain seating in areas that do not compromise bushland values where resources permit.	Low
	N81. Address track erosion where appropriate via remediation works and/or track closures	Med
	N82. Allow for the provision of actions outlined in the Mountain Biking in Warringah: Research and Directions Paper	Med
	N83. Maintain, close, re-route and/or relocate tracks and recreational infrastructure where appropriate to protect significant biodiversity and heritage items.	On-going
	N84. Undertake management actions as required for Track 2 to protect significant biodiversity and heritage items. This may include re-routing, redirecting and exclusion devices.	High
	N85. Close bypass tracks adjacent to reserve entrances to prevent access by unauthorised vehicles where resources permit.	High
	N86. Monitor use and condition of existing trails in the reserves and rationalise or maintain as appropriate to protect significant environmental features, biodiversity and heritage items.	High

Value: Scenic / aesthetic
Objective: Land, and its features and habitats, retained in its natural state and setting
Means of Assessment: Regular assessment of bushland condition against baseline

Performance Targets	Permissible Management Actions	Priority
Protect psychological and social values of the reserve	N87. Consult with the Aboriginal Heritage Office regarding the cultural significance of Aboriginal heritage items and sites and manage in accordance with best practice guidelines and relevant legislation.	Med
	N88. Recognise and consider visual amenity and aesthetics when planning and designing facilities and opportunities in reserves.	On-going

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Value: Hazard management
Objective: To protect life and property from bush fire and other hazards
Means of Assessment: Regular audit of reserve bush fire hazard against Warringah-Pittwater Bush Fire Risk Management Plan and bush fire prone land map

Performance Targets	Permissible Management Actions	Priority
Manage bushfire hazards while protecting environmental values	N89. Manage bush fire risk within the reserve in a manner consistent with the Warringah-Pittwater Bush Fire Risk Management Plan 2010, and other relevant policy guidelines.	High
	N90. Have due consideration for the maintenance of ecological processes when planning and implementing bushfire hazard activities.	High
	N91. Monitor, undertake weed control and manage access through burnt areas where resources permit	Med

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Table 11 - Management actions tables – Park

Value: Recreational Experiences
Objective: To manage and develop parks and reserves in a manner which provides for a diverse range of recreational experiences
Means of Assessment: Playground inspection reports;
 User surveys; and
 Community survey

Performance Targets	Permissible Management Actions	Priority
Increase opportunities for a mix of passive and active recreational activities in parks and reserves	P1. Provide facilities that protect, enhance or are consistent with community values identified in this Plan, in accordance with, Council's Asset Management Policy (2003), Physical Access Policy (2006), and Recreation Strategy (2009).	Med
	P2. Consider any Council Park Design Guidelines when upgrading facilities and built structures.	High
	P3. Implement the recommendations of the, Playground Strategy (2007) as they relate to playground access in Forestville Park.	Low
	P4. Investigate opportunities to improve walking and cycle linkages between Park areas in Forestville Park and existing open space, schools, residential areas and shopping precincts.	Low
	P5. Provide facilities along relevant bicycle and pedestrian networks identified in the Warringah Bicycle Plan (1998), Warringah Regional Multiple-use Trails Strategy (2007), and the Mountain Biking in Warringah: Research and Directions Paper.	Low
	P6. Maintain unleashed dog exercise area within Park area adjacent to Currie Road, including installation of appropriate fencing as required.	On-going
	P7. Signage is to identify prohibited activities and relevant restrictions on dog exercise areas.	High

Value: Social and Cultural Interaction
Objective: To manage parks and reserves in a manner which protects and enhances their social and cultural qualities
Means of Assessment: Regular assessment of community opinion, behaviour and complaints;
 Reserve booking reports; and
 User surveys

Performance Targets	Permissible Management Actions	Priority
Ensure facility provision, maintenance and management of the reserve creates inviting spaces	P8. Provide information on permissible uses of the reserve on Council's website	High
	P9. Signage within the reserve is to be renewed in accordance with Council's Corporate Communications and Visual Standards Manual. Signage is to identify prohibited activities and relevant restrictions.	High
	P10. Investigate and/or provide picnic facilities in appropriate locations in accordance with Park Design Guidelines	Med
	P11. Develop additional programs aimed at attracting and inviting local residents and volunteers to be involved in the ongoing care and embellishment of the reserve	Low

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Value: Accessibility and Safety
Objective: To ensure parks and reserves are maintained as safe, useable spaces that are accessible to the whole community
Means of Assessment: Asset management condition reporting;
 Playground inspection reports;
 Management control of identified land parcels; and
 User surveys

Performance Targets	Permissible Management Actions	Priority
Increase awareness of reserve location and permitted uses, and improve accessibility to open spaces; and	P12. Install lighting where appropriate, and as resources permit in accordance with the principles of Crime Prevention Through Environmental Design (CPTED).	Med
	P13. Update park inventory to include new facilities in reserve.	High
	P14. Apply “Safer By Design” principles to any design, facilities or infrastructure for the reserve.	High
Ensure the provision of safe and inviting places		

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Value: Environmental and Aesthetic Quality

Objective: To protect and enhance the natural environment and appearance of parks and reserves through appropriate maintenance and management

Means of Assessment: Asset management condition reporting and natural area condition surveys;
Regular assessment or reserves – maintenance reports; and
Community satisfaction and user surveys

Performance Targets	Permissible Management Actions	Priority
Rehabilitate creeks, control weeds, reduce flooding impacts and protect and improve natural bush and habitat areas; and Create attractive and inviting open spaces	P15. Identify mown areas that are not used for passive or active recreation which can be planted out with habitat species that are appropriate to the area and its intended use (Local Habitat Strategy 2007)	Med
	P16. When designing and upgrading park areas, give consideration to relevant Council landscape design codes or strategies and ongoing cost of maintenance.	High
	P17. Identify areas of encroachments and undertake compliance action to ensure areas of public open space are preserved.	Med
	P18. Before undertaking any works to a creekline, consider recommendations of the Creek Management Study (2004) and any relevant policy or procedure if creek erosion impacts parks. When placing assets in parks that include creeks consider potential damage or impacts of flooding to the particular asset.	High
	P19. Undertake works within or adjacent to the creek line in accordance with the Protection of Waterways and Riparian Lands Policy.	High
	P20. Undertake an annual assessment of the maintenance requirements of the reserve taking community expectations and Council resources into consideration. Develop and amend service standards as appropriate.	Med
	P21. Maintain system for reporting, monitoring and recording the condition of park infrastructure.	High
	P22. As park assets deteriorate, assess opportunities to rationalise assets which are no longer required by the community (e.g. excessive taps, bollards, furniture engulfed by bushland).	High

9 Leases, Licences and Other Estates

9.1 Community Land

The *Local Government Act 1993* requires Council to consider what activities may require granting of a lease, licence or other estate during the life span of a plan of management. These activities may be short or long term and the authorisation is intended to allow occasional events and to promote the multiple uses of community facilities and resources. The authorisation allows for the consideration, and granting if appropriate, of the prescribed activity. Development must also be in accordance with the *Local Government Act 1993* and the Warringah Local Environmental Plan 2011. The following section provides information regarding existing leases and licences, restrictions to activities and authorisations of licences and other estates considered appropriate for the land covered by this Plan.

9.2 Crown Lands

Section 102 and 102A of the *Crown Lands Act 1989* authorises a reserve trust to enter into leases and licences for reserves under their management, subject to Ministerial. Such leases and licences must be in accordance with any dedication or purpose that applies to the land.

9.3 Existing leases and licences or other estates

Council has no record of valid current licences for the parts of these reserves that are covered by this Plan of Management. The sports fields and some areas of adjacent bushland had been previously leased by Forestville Junior Rugby League Club since 1982. The boundary of any new lease or licence for the sports fields are to be limited to areas categorised as 'Sportsground' under the Generic Sportsgrounds Plan of Management. An additional currently cleared area to the north for storage purposes may also be included as per Table 12 below.

Table 12 - Leases and other estate

Purpose of Licence or other Estate	Additional Conditions of Licences or other Estates
<p>This Plan of Management expressly authorises the granting of a licence or other estate for the purpose of recreational, community, educational or scientific activities within areas covered by this Plan. This authorisation may include activities such as:</p> <ul style="list-style-type: none">• Recreational activities• Private gatherings, including weddings, family functions, etc.• Scientific research/data collection• Educational activities• Seed collection (licences issued under the National Parks and Wildlife Act 1974 or the Threatened Species Conservation Act 1995 may also be required).	<p>The undertaking of the activity authorised by the licence or other estate must not compromise the purpose of the reserve (if Crown Reserve) or the core objectives of the category of the land (if Community Land).</p> <p>Agreements must take into consideration any other relevant Council policies and strategies relevant to community land categorised as Natural Area, including the Bushland Policy and Local Habitat Strategy (2007).</p> <p>Issuing of licences are only be undertaken in accordance with Council leasing and licensing procedures.</p>

Appendix 1 - Results of Preliminary Public Consultation

The comments and issues raised by residents during the preliminary consultation are shown below. The left hand column shows how many times an issue was raised. The table of general comments reflect the public's view of bushland reserves in Warringah in general with the following table specific to Forestville Park.

GENERAL COMMENTS

No of responses	Issue	Comment
5	Values of the bush include education, diversity of species, habitat (including dead trees), heritage, protection of natural features (rock features, drainage lines)	This Plan of Management confirms Council's intention to manage these reserves for these values.
3	Encroachments into reserves should be addressed, including but not limited to, mowing creep (by Council or adjoining residents)	Actions N1, N3, N4, N42, N65, N66, N73, N72, P17 address this issue.
2	Drainage – need to consider the impacts of drainage from upstream of the reserve when deciding on management actions.	Actions N28, N29, N30, N31, N32, N47, N48, N49, N50, N51, N52, N53 address this issue.
2	Volunteer bush regenerators should be encouraged not discouraged – recognise they need OH&S training and can't work alone for safety reasons, but Council should be sensitive when communicating this.	Actions N58, N62 address the issue of members of the public being involved in the protection of the reserve.
1	Council should aim to minimise the impacts of infrastructure providers . For example, an energy provider has cleared vegetation in both reserves.	Actions N71, N 75 reflect this issue.
1	Any new creeks that are discovered in reserves should be added to the Creek Study for completeness, as the Creek Study missed a number of small creeks.	Noted, Council's GIS is continually being updated.
1	The protection of soil is of utmost importance – seed source, erosion protection.	Noted, this Plan is consistent with this issue.
1	Maps should have coordinates (so locations can be verified with GPS) as well as care taken to ensure accurate scale and legend.	Noted, care has been taken to ensure accurate mapping, including scale and mapping. Coordinates (for subsequent GPA verification) are not included, however interested members of the public can contact Council for more detailed information on locations, coordinates, etc.

SPECIFIC COMMENTS

No of responses	Issue	Comment
12	<p>Intrinsic Value of the Reserve</p> <ul style="list-style-type: none"> All respondents strongly valued the bush in the reserve. Reserve is important habitat for wildlife (including kookaburras, echidnas, bandicoots, reptiles, etc). Bushland is important in keeping mangroves healthy downstream. There are aboriginal engravings nearby and could be some within the reserve as well. There should be no further development, all bushland should be retained. 	<p>This PoM confirms Council’s intention to continue to manage the reserve for biodiversity and heritage values.</p>
7	<p>Creek/Stormwater Management</p> <ul style="list-style-type: none"> Need to consider the impacts of drainage from upstream of the reserve (fertiliser, weeds, litter and sediment entering the creeks) when deciding on management actions. Need to improve stormwater management to protect waters of Middle Harbour (mangroves, etc). Works needed in creeks to maintain free flow and assist with pollution management. 	<p>Actions N28, N29, N30, N31, N32, N47, N48, N49, N50, N51, N52, N53 reflect this issue.</p>
5	<p>Encroachments / Dumping</p> <ul style="list-style-type: none"> Neighbouring residents dump grass clippings – need for public awareness of spread of weeds. Neighbouring residents mow the reserve along their boundaries, in an attempt to reduce fire hazard. Dumping occurs at bottom of Currie Rd and behind club house, need for closer monitoring and action. Encroachments including neighbours mowing the reserve near their property, trampolines, etc should be dealt with. Hard to tell if there are encroachments as boundaries between reserve and private property frequently aren’t marked. 	<p>Actions N1, N3, N4, N42, N65, N66, N73, N72, P17 reflect this issue.</p>
5	<p>Weeds</p> <ul style="list-style-type: none"> Weeds along drainage lines and trails, near car parking areas and playing fields, and around boundary of reserve adjoining residents. 	<p>Actions N25, N26, N36, N37, N38, N39 reflect this issue.</p>

No of responses	Issue	Comment
	<ul style="list-style-type: none"> Need for follow-up weeding, contractors are used but more work needed, particularly in cliff areas which are difficult for volunteers to access. 	
5	<p>Use of Reserve</p> <ul style="list-style-type: none"> Reserve is a good resource for users including Guides, Brownies, walking, jogging, mountain biking, educational. Inadequate parking areas for people accessing the reserve Signs indicating boundary between Forestville Park and Garigal National Park would be good, so dog walkers know where to turn back. Need for interpretive signs explaining cultural, flora and fauna significance, relationship with Garigal NP and water quality in Middle Harbour. No further extension of playing fields – public use of remainder of reserve should be passive walking only 	<p>Noted: the PoM confirms Council’s intention to continue to manage the reserve for its biodiversity values. Provision of parking is beyond the scope of this PoM. Actions P7, P9, N19, N57, N59, N60, N63 address the issues of signage.</p>
5	<p>Trail Management</p> <ul style="list-style-type: none"> Some trails are eroding badly, particularly access trails into the reserve which run downslope. Sediment and erosion control measures needed. Other trails are also in poor condition and introducing weeds. Fire trails are becoming inaccessible / overgrown (including trails behind Coolabah Crescent and Parni Place), causing concern to residents Track maintenance / grading can result in damage to vegetation, as can clearing under power lines. Additional trails being created by members of the public, particularly between playing fields and Bantry Bay. 	<p>Actions N33, N75, N81, N83, N85, N86 reflect this issue.</p>
4	<p>Domestic / Feral animals</p> <ul style="list-style-type: none"> Cats are killing wildlife – need for serious long-term education program for residents Urgent need to eradicate feral cats and foxes, which have increased since the fires of the 1980s. 	<p>Fox numbers have now decreased over the past 10 years. Actions N18, N22, N23, N27 reflect this issue.</p>
3	<p>Community Involvement</p> <ul style="list-style-type: none"> Need for public awareness of the value of the reserve, so people don’t inadvertently damage bushland values Consider regular local clean-up days or other ways to harness the 	<p>Actions P7, P8, P9, P11, N40, N58, N60, N62, N63, N64 reflect this issue.</p>

No of responses	Issue	Comment
	enthusiasm of neighbours	
3	<p>Fire Management</p> <ul style="list-style-type: none"> • Fire trails are becoming inaccessible / overgrown (including trails behind Coolabah Crescent and Parni Place), causing concern to residents • Fire hazard reduction needed, no fire for about 20 years, bush is getting thick. 	Actions N89, N90, N91, N34 reflect this issue.

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Appendix 2 - Legislation and Statutory Requirements

Local Government Act 1993 – Management of Community Land

What are the principles of community land management?

All land owned by Council must be managed in accordance with the *Local Government Act 1993*, including the *Community Land Management Amendment Act 1998*. The Act requires that councils must classify public land as “operational” or “community” and that plans of management must be prepared for Community Land. The ways in which Community Land can be used and managed are strictly governed in accordance with the adopted plan of management and any law permitting the use of the land for a specified purpose or otherwise regulating the use of the land.

Under legislative requirements of the *Local Government Act 1993, Section 36(a) – (n)*, councils must prepare and adopt plans of management for all Community Land. A Plan may apply to one or more areas of Community Land, providing all the Act’s requirements are fulfilled.

The Act states that the Plan must identify the following:

- The category of the land
- The objectives and performances targets of the plan with respect to the land
- The means by which Council proposes to achieve the plan’s objectives and performance targets
- The manner in which Council proposes to assess its performance with respect to the plan’s objectives and performance targets

Categorisation of community land

The Local Government Act requires that all Community Land be categorised. There are core objectives for each category. All current and intended uses of the land must comply with the core objectives.

A combination of categories may be used for one parcel of land. Accordingly, this Plan of Management has identified the following categories for these bushland reserves:

- Park
- Sportsground
- General Community Use
- Natural Area – Bushland

The definitions of each of the categories relevant to this Plan of Management are provided below as described in the Local Government (General) Regulation 1999:

(a) Park

Land that is, or is proposed to be, improved by landscaping, gardens or the provision of non-sporting equipment and facilities for use mainly for recreational, social, educational and cultural pursuits that do not unduly intrude on the peaceful enjoyment of the land by others.

(b) Sportsground

Land is used or proposed to be used primarily for active recreation involving organised sports or the playing of outdoor games.

(c) General Community Use

Land should be categorised as general community use if the land:

- May be made available for use for any purpose for which Community Land may be used, whether by the public at large or by specific sections of the public
- Is not required to be categorised as a natural area, or does not satisfy the guidelines for categorisation as a sportsground, a park or an area of cultural significance

(d) Natural Area

Land which, whether or not in an undisturbed state, possesses a significant geological feature, geomorphological feature, landform, representative system or other natural feature or attribute that would be sufficient to further categorise the land as bushland, wetland, escarpment, watercourse or foreshore. Community Land that has been declared critical habitat or which is directly affected by a recovery plan or threat abatement plan under the *Threatened Species Conservation Act 1995* or the *Fisheries Management Act 1994* must be categorised as a natural area.

Natural Area – Bushland

Land that contains primarily native vegetation and that vegetation is:

- The natural vegetation or a remainder of the natural vegetation of that land
- Is still representative of the structure and/or floristics of the natural vegetation in the locality

Natural Area – Watercourse

Land that contains:

- (a) any stream of water, whether perennial or intermittent, flowing in a natural channel, or in a natural channel that has been artificially improved, or in an artificial channel that has changed the course of the stream of water, and any other stream of water into or from which the stream of water flows, and
- (b) associated riparian land or vegetation

Core Objectives of Community Land

36E Core objectives for management of Community Land categorised as a natural area

- To conserve biodiversity and maintain ecosystem function in respect of the land, or the feature or habitat in respect of which the land is categorised as a natural area
- To maintain the land, or that feature or habitat, in its natural state and setting
- To provide for the restoration and regeneration of the land
- To provide for community use of and access to the land in such a manner as will minimise and mitigate any disturbance caused by human intrusion
- To assist in and facilitate the implementation of any provisions restricting the use and management of the land that are set out in recovery plan or threat abatement plan prepared under the *Threatened Species Conservation Act 1995* or the *Fisheries Management Act 1994*

36F Core objectives for management of Community Land categorised as a sportsground

- To encourage, promote and facilitate recreational pursuits in the community involving organised and informal sporting activities and games
- To ensure that such activities are managed having regard to any adverse impact on nearby residences

36G Core objectives for management of Community Land categorised as general community use

- To promote, encourage and provide for the use of the land, and to provide facilities on the land, to meet the current and future needs of the local community and of the wider public:
- in relation to public recreation and the physical, cultural, social and intellectual welfare or development of individual members of the public, and
- in relation to purposes for which a lease, licence or other estate may be granted in respect of the land (other than provision of public utilities and works associated with or ancillary to public utilities).

36I Core objectives for management of Community Land categorised as a park

- To encourage, promote and facilitate recreational, cultural, social and educational pastimes and activities
- To provide for passive recreational activities or pastimes and for the casual playing of games
- To improve the land in such a way as to promote and facilitate its use to achieve the other core objectives for its management

36J Core objectives for management of Community Land categorised as bushland

- To ensure that on-going ecological viability of the land by protecting the ecological biodiversity and habitat values of the land, the flora and fauna (including invertebrates, fungi and micro-organisms) of the land and other ecological values of the land
- To protect the aesthetic, heritage, recreational, educational and scientific values of the land
- To promote the management of the land in a manner that protects and enhances the values and quality of the land and facilitates public enjoyment of the land, and to implement measures directed to minimising or mitigating any disturbance caused by human intrusion
- To restore degraded bushland
- To protect existing landforms such as natural drainage lines, watercourses and foreshores
- To retain bushland in parcels of a size and configuration that will enable the existing plant and animal communities to survive in the long term
- To protect bushland as a natural stabiliser of the soil surface

36M Core objectives for management of community land categorised as a watercourse

- To manage watercourses so as to protect the biodiversity and ecological values of the instream environment, particularly in relation to water quality and water flows
- To manage watercourses so as to protect the riparian environment, particularly in relation to riparian vegetation and habitats and bank stability
- To restore degraded watercourses
- to promote community education, and community access to and use of the watercourse, without compromising the other core objectives of the category

What dealings can a Council have in Community Land?

Council has no power to sell, exchange or otherwise dispose of Community Land, except for the purpose of enabling that land to become, or to be added to, a Crown Reserve or land reserved or dedicated under the National Parks and Wildlife Act 1974.

Council may grant a lease or licence on Community Land, but only in accordance with the *Local Government Act 1993*. A Council may grant any other estate in Community Land to the extent permitted by the *Local Government Act 1993*.

Crown Lands Act 1989 – Management of Crown Land

Requirements of the Crown Lands Act 1989

The *Crown Lands Act 1989* is the principle Act in NSW controlling the management and use of Crown land. Plans of Management are instruments prepared under the Act to implement the objectives of the Act. The requirements of the Act in relation to the preparation of plans of management are set out in this section.

Objects of the Act

Section 10 of the Crown Lands Act, 1989 sets out the objects of the Act as follows:

The objects of this Act are to ensure that Crown land is managed for the benefit of the people of New South Wales and in particular to provide for:

1. a proper assessment of Crown land;
2. the management of Crown land having regard to the principles of Crown land management contained in this Act;
3. the proper development and conservation of Crown land having regard to those principles;
4. the regulation of the conditions under which Crown land is permitted to be occupied, used, sold, leased, licensed or otherwise dealt with;
5. the reservation or dedication of Crown land for public purposes and the management and use of the reserved or dedicate land, and
6. the collection, recording and dissemination of information in relation to Crown land.

What is “Public Purpose”?

It is an essential requirement in preparing a plan of management that the public purpose of the Reserve is identified and used as a basis for planning and management. It is a further requirement that all land uses must either support or be ancillary to the Reserve’s public purpose. The *Crown Lands Act 1989* provides for the reservation and dedication of Crown land for a range of public purposes including: Access, Community Purposes, Environmental Protection, Heritage Purposes and Public Recreation. The schedule of Public Purposes continues to be revised and amended and includes a number of other items. Each of the Crown Reserves in this Plan are reserved for Public Recreation.

Principles of Crown Reserve Management

Section 11 of the *Crown Lands Act 1989* provides a set of principles for Crown Land management as follows:

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

Furthermore, when preparing a plan of management for Crown land, the trust manager must comply with the following requirements of the *Crown Lands Act 1989*:

- Direction of the Minister or request by Trust for plan of management preparation;
- Drafts circulated for comment
- Exhibition of draft Plan
- Draft Plan exhibition notices provided

With the following outcomes:

- The Minister shall consider timely comment
- Ministerial adoption of the Plan
- Trust must follow the Plan and
- All operations must be in accordance with it

Leasing and licenses

Section 102 of the Act establishes requirements for the sale, lease or licensing of Crown land. Land cannot be sold, leased or a licence issued without the approval of the Minister. Section 102A provides that the Trustee may lease or issue a licence for reserved land where the Minister has approved the Trustee to do so. Section 108 also enables licenses to be issued for temporary purposes.

Section 106 of the Act requires that proceeds from the sale, lease or licensing of reserves must be used either as directed by the Minister, or for the management of the reserve by the Trustee.

Requirements for Plans of Management

Section 112 enables Plans of Management to be prepared for Crown reserves either by the Minister or by the reserve trust. Where a reserve trust manager, with the Minister's consent, prepares a plan of management, Section 112 of the Act requires the plan to specify or deal with the following matters:

1. the condition of the reserve (including the condition of any buildings or other improvements on the reserve);
2. the existing use of the reserve (including the existing use of any buildings or other improvements on the reserve);
3. the nature and scale of the proposed additional purpose;
4. the nature, scale and term of any lease, licence or other arrangement that is intended to be granted or entered into in relation to the additional purpose;
5. any submissions made in relation to the draft plan as a result of the consultation process and public exhibition requirements under section 113.

Section 113 establishes requirements for referrals, public display and submissions. Section 114 provides for the adoption of a Plan of Management by Council. Once a Plan of Management is adopted, no operations may be undertaken on or in relation to the reserve unless they are in accordance with the plan.

Reporting

Section 122 establishes requirements for reserve trusts to report to the Minister, as required by the Regulations.

Appendix 3 - Background Information

Draft Warringah Natural Area Survey: Vegetation Communities and Plant Species Update *Report prepared for Warringah Council – Eco Logical Australia (2010)*

The Warringah Natural Area Survey has surveyed and mapped the native vegetation of the Warringah Local Government Area outside Ku-ring-gai Chase and Garigal National Parks. Thirty-seven native vegetation communities were distinguished (of a total of 40 communities for the LGA as a whole), including 35 original communities and two derived communities (i.e. communities that were not part of the original vegetation of Warringah but have developed as a result of human activities). Thirteen of the original communities do not appear to be represented in either Ku-ring-gai Chase or Garigal National Parks (including sections outside the Warringah LGA).

Of the 35 original communities, one is considered threatened in Australia (as the dominant species is a threatened species listed in Commonwealth legislation), 15 are threatened in New South Wales (they form part of endangered ecological communities listed in NSW legislation), one is rare in Australia (as the dominant species is a rare species on the national list of Rare or Threatened Australian Plants), and 14 are threatened in Warringah (over 70% of their original extent in the LGA has been cleared, or their total area in the LGA is less than 100 ha). Of the 13 original communities not represented in the two local national parks, seven are threatened in New South Wales and six are threatened in Warringah.

Draft Warringah Natural Area Survey: Vegetation History and Wildlife Corridors Update *Report prepared for Warringah Council – Smith, Peter and Smith, Judy (2009)*

This report draws on the vegetation mapping to compare the distribution of native vegetation types in Warringah prior to European settlement with their present distribution. It identifies areas of 'core habitat' and "wildlife corridors" linking core habitats in the Warringah LGA. The report identifies "regional" and "local" core habitats and "regional" and "local" wildlife corridors.

Management Report – Forestville Park *Lyn McDougall (1994)*

This report was prepared as a major assignment for the Bush Regeneration Certificate Ryde TAFE. It is a comprehensive report on the condition of the bushland in the area identified as Crown land parcels.

Development of an Assessment of Bushland Condition/Site Resilience and Review of Bush Regeneration Record Keeping Format for Warringah Council *Michael Clark: Ecological Restoration Company (1999)*

This report reviewed bushland condition/site resilience assessments used by a range of organisations and developed an assessment that best suited the characteristics of Warringah's bushland. This assessment was trialled on a variety of bushland management project sites and subsequently refined. The report also standardised a bush regeneration record keeping format for use in regular reporting on the progress of bush-regeneration contracts.