



COOPER PARK

*PLAN OF
MANAGEMENT
- February 2001.*

FINAL DOCUMENT AS APPROVED BY COUNCIL
AT ITS MEETING 9 MARCH 2001



EXECUTIVE SUMMARY

Cooper Park was gazetted as a park in 1917. Occupying an area of 17.7 hectares, it straddles the suburbs of Bellevue Hill and Woollahra within the southern part of the Woollahra Municipality. It extends for 1100 metres in an east-west direction and contains the largest area of urban bushland (\cong 12 hectares) within the Municipality under Council control. It contains a tennis centre, junior sportsfield, large grassed areas, walking tracks and a variety of landscape structures (such as gazebos, bridges and staircases) dating from the 1930s, the initial period of infrastructure development. The park presents a broad range of recreation opportunity settings and possesses a rich cultural history. In 1993 the park was listed on the Register of the National Estate by the Australian Heritage Commission. Key features highlighted in the significance assessment include the park's 'early 20th century bushland pleasure ground style', the 'significant stands of Port Jackson/ Eastern Suburbs vegetation' and a range of 'cultural features laid out in a manner that demonstrates design excellence'.

This plan of management has been prepared in accordance with the *Local Government Act 1993* (LGA 1993) and takes account of amendments made through the *Local Government Amendment (Community Land Management) Act 1998* and its *Regulation*. The area to which this plan applies is highlighted in the Site Plan (map 2).

The park is classified as 'community land' under the LGA 1993. Accordingly, respective areas within the park are categorised as being either **park, sportsground, natural area** or for **general community use** with the total park being categorised as **an area of cultural significance** (Map 3). 'Natural area' components are further categorised under the Act as being either **bushland** or **watercourse**. The Act provides, in association with each land category, sets of 'core objectives', which form the primary rationale for the management of Cooper Park.

The 'natural area' categorisation results, in part, from the presence of an endangered plant species, *Acacia terminalis ssp. terminalis*, the Sunshine Wattle. Under the Act, the existence of an endangered species within a given area requires that an individual Plan of Management be prepared for that area, in this case, Cooper Park.

This plan of management is based on the perspective that particular park qualities impart value and that overall management should be value-based. These values can be variously described as being educational, scientific, recreational, cultural, aesthetic, historical, social and natural and are reflected in legislative land categorisations, Council land management goals, community preference and the park's heritage listing. Within this context the plan considers relevant issues, sets objectives linked to a schedule of prioritised action and proposes an implementation process linked to performance targets and a process of review.



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About this plan of management

The Cooper Park Plan of Management has been prepared by Woollahra Council's Parks and Streetscape Department in accordance with the *Local Government Act 1993* (LGA 1993) and takes account of amendments made through the *Local Government Amendment (Community Land Management) Act 1998* and its *Regulation*. The plan is based, in part, on a draft document prepared by Manidis Roberts Consultants in association with Arterra Design.

This plan is a document that regulates the appropriate use and guides the effective long and short-term management of Cooper Park. It acts simultaneously as a management tool and a public document, setting guidelines for those directly involved in its management whilst informing the community generally of the rationale behind this process. The inclusion of a broad consultation process during plan preparation ensures that community and stakeholder concerns are addressed within the context of council land management strategies and legislative obligations. Consultation has consisted of requests for input through an advertisement in the local media, letters to residents in surrounding streets, a community meeting attended by about 40 residents and discussions with stakeholders and on-site staff.

Once adopted, Council may not undertake any activities, uses or developments that are not provided for in the plan of management. Any changes in the plan must be exhibited publicly. Importantly, this plan does not replace existing legislation/ systems relating to the approval of activities or development. This plan will have a five-year 'lifespan' from the date of adoption and therefore be reviewed in 2005. Additionally, Council will conduct annual reviews of all plans of management for Parks and Reserves in order to gauge the ongoing relevance of plan 'action' and to determine the ongoing success of plan implementation.

This plan consists of **six** Sections: -

Section 1 - (Introduction) – describes the primary legislative context of the plan and makes reference to related plans, policies and other legislation. Provides a summarised description of the site.

Section 2 – (Park Description) – describes the park's location, physical features, history and recreational use. As required by the LGA 1993 (as amended 1998), land is categorised and the present condition and permitted use of land and buildings tabulated.

Section 3 – (Planning Issues) – discusses relevant issues and therefore provides the practical basis for the formulation of a plan of action.



Section 4 – (Basis for Management) – briefly explains the value judgement, which underscores this plan of management and, presents the plan’s overriding goal. Desired outcomes appear generally as ‘core objectives’ provided by the LGA 1993 (as amended 1998) and, specifically as ‘specific objectives’ relating to current and ongoing site-based issues.

Section 5 – (Action Plan) - presents a strategy to achieve the plan’s goal and objectives. The strategy comprises a series of prioritised actions. Objectives, Issues, Actions, Performance Indicators, Review Methods, Cost Estimates and Responsibilities are presented in tabular format.

Section 6 – (Review) discusses performance indicators and review methods as a means of measuring the success of plan implementation.

Supporting documentation consists of maps (including a Masterplan summarising proposed site-specific actions), tables and appendices as listed in the Table of Contents.

NOTE : Words underlined in text have a **Glossary** entry



1.0 INTRODUCTION

1.1 Primary Legislative Context

The *Local Government Act 1993* as amended 1998 requires:-

- the categorisation of ‘community land’ based on its use and/or other ecological and heritage significance criteria (**Section 2.6**)
- a description of the ‘condition of the land’ and any buildings or improvements thereon (**Section 2.7**)
- a description of the use of the land and any such buildings or improvements, at the date of the adoption of the plan of management (**Section 1.3, Table 2**)
- the specification of the purposes for which the land, and any such buildings and improvements will be, permitted to be used together with a description of the scale and intensity of such permitted use or development (**Section 2.8**)
- the inclusion of ‘core’ objectives within the management plan for each land category (**Appendix 5**)
- that the terms of any leases or licences issued be consistent with the core objectives for the particular land category in which they occur (**Section 3.9**)
- the inclusion of performance targets (**Section 5**)
- the inclusion of actions to achieve objectives and satisfy performance targets (**Section 5**)
- a means of assessing the success or otherwise of plan implementation (**Section 5**)

1.2 Related Legislation, Plans, Policies and Strategies

Apart from the LGA 1993, this Plan of Management takes account of and ensures consistency with the goals and objectives of related legislation, plans, policies and strategies (**Appendix 1**) adopted variously by Woollahra Council, associated local government organisations and the State government. Such documentation includes the Woollahra Local Environment Plan (LEP) 1995, the Woollahra Management Plan 1998/1999 to 2000/2001, the Woollahra Outdoor Recreation and Open Space Strategy 1992, *Environmental Planning and Assessment Act 1979*, *Noxious Weeds Act 1993*, *NSW Companion Animals Act 1998*, *Bush Fires Act 1949*, *Threatened Species Conservation Act 1995*, *Environment Administration Act 1991*, *Catchment Management Act 1989*, and State Environmental Planning Policy (SEPP) No. 19 – Bushland in Urban Areas, and Green Web (a local government environmental initiative relating to wildlife corridors). These documents set goals and objectives relating variously to the conservation of environmental heritage, the protection of local amenity, the provision of diversity in open space areas and recreational opportunity, planning for the needs of children, the protection of native flora, native fauna and existing vegetation patterns, the protection of biodiversity, long term ecological viability and natural features, the maintenance of wildlife corridors, the promotion of principles that underpin ecologically sustainable development, the regular survey of open space users and the encouragement of community participation in the management of open space.



1.3 The Site at a Glance

Table 1 presents an overview of Cooper Park, and contains a description of tenure, administrative responsibilities, staffing, physical features and use:

TABLE 1: The Site at a Glance

| Item | Description |
|-------------------------------|--|
| Ownership and Management | Council owns and manages the entire park with the exception of Cooper Park Tennis Courts which is owned by Council but managed by the licensee |
| Classification and categories | Community land categorised as park, sportsground, natural area, general community use and area of cultural significance |
| Zoning | 6a Open Space in Woollahra Local Environmental Plan 1995 |
| Land designation | Lot 101 in DP 827011, Lot 9 in DP 215076, Lot 1 in DP190598, Lot 1 in DP 186299, Part Lot 1 in DP 175726, Lots 1 and 7-9 in DP16997, Lot 1 in DP 355186, Part 3 and 4 in DP 81467, Lots 6-1 ₂ & 21 in DP 81467, Lot 1 in DP865574, Lot 1 in DP 538060, Lot 5 in DP 23857, Lot 1 in DP 324740, Lot1 in DP 1952 |
| Area | 17.7 hectares, comprising 11.95 ha bushland, 3.15 ha grass/ playing field, 0.47 ha synthetic grass tennis courts, 0.3 ha paved carparking, access road and footpaths, and 1.83 ha of steep weed infested slopes |
| Tennis Courts | Eight tennis courts and kiosk under licence to GJ, KA and PJ Teagle |
| Sportsfield | Western end, contains two all weather cricket wickets and two practice nets |
| Caretaker's cottage | Residence above tennis kiosk houses the Cooper Park Team Leader |
| Community Hall | Leased during weekdays to Miroma; used by the general community at other times |
| Walking paths | 1.5 km paved, 2.5 km unpaved; plus major staircases (wood, stone and concrete) |
| Playground | Small playground |
| Other | Public toilets in tennis centre, Recycling Bay, three wood-fired BBQs, toolshed |
| Shelters | Seven grottoes (two converted as storage sheds, two gazebos) |
| Watercourses | Central creek fed by tributaries and piped stormwater |
| Car park | Accommodates 30 vehicles, another 30 can be accommodated on the access road |
| Visitation | About 130,00 visits per annum including approximately 90,000 to tennis courts |
| Staffing and Costs | Five full time staff assisted by occasional volunteer help |

2.0 PARK DESCRIPTION

2.1 Location, Size and Topography

The Woollahra Municipality contains 80 open space areas covering approximately 100 hectares. Additional open space within the Municipality is administered by other authorities such as Sydney Harbour National Park. Overall, there are 85 open space areas incorporating approximately 144 hectares of land within the Municipality. Of Council administered land, 72 per cent is Council-owned and the remainder is Crown Land. 46% of these areas are under 0.2 hectares in size²². By comparison, Cooper Park occupies 17.7 hectares (including 12 hectares of bushland area), extends 1100 metres along its east-west axis and is 450 metres across at its widest point. It is situated within a steep sided gully within the suburbs of Woollahra and Bellevue Hill (Map 1) and has a perimeter of just over 4 kilometres. Of that total, 2.3 kilometres abuts residential development and the remaining 1.7 kilometres is bounded by roadway. The slopes of the park are typified by rocky outcrops which in part form sustained clifflines and numerous overhangs. At the eastern end of the park a large earthen amphitheatre dates back to the 1930s; a turfed grassed area below is partly supported by a major sandstone retaining wall. Lower Cooper Park consists of a large open turf area at the western end. A mostly natural watercourse traverses the park along its east-west axis (Map 2).

2.2 Soil and Hydrology

2.2.1 Soil

The soil of Cooper Park derives from underlying Hawkesbury sandstone. Typically, soils produced by this type of parent material are infertile and slightly acidic and generally support the typically dry sclerophyll 'hard-leaved' vegetation of the Sydney district. The lower central gully area of the park consists of a particular soil landscape known as 'Deep Creek', comprising an alluvial mixture of deposited sands, silts and clay². These soils are relatively deep and support a predominance of wet sclerophyll species in contrast to the shallow sandy soils overlaying rocky outcrops on steeper slopes.

The original soils of the park are largely deficient in the elements Phosphorous (P) and Nitrogen (N). If present in higher concentrations than that which occurs naturally, these elements can be either phytotoxic to members of some plant families (eg. P in Proteaceae) or encourage excessive growth in many weed species. The latter in turn displaces native vegetation. Urban bushland soils can be loaded with unnaturally high levels of these nutrients through the introduction of dumped garden refuse, imported soil, sewerage overflows and leaks, detergents and dog faeces, all of which are either deposited on-site or arrive via uncontrolled stormwater flows.

2.2.2 Hydrology

The park has a stormwater catchment of approximately 85 hectares, inclusive of the park itself. This area extends through much of Bellevue Hill and Bondi Junction. The main drainage line consists of a creek that traverses the park along its east-west axis. A number of weirs have been constructed within this watercourse producing a series of ponds along its length. The creek flow leaves the park via a large diameter pipe at Lower Cooper Park discharging eventually into Double Bay and Sydney Harbour. The creek remains in predominantly natural form above the confluence at the brick bridge just east of the tennis courts, with stone-pitched embankments occurring below this point. It is fed by numerous tributaries and piped stormwater outlets (Map 2).

Urban development has resulted in a dramatic increase of impermeable surfaces (eg. roads, footpaths, buildings, kerb and gutter) within the catchment resulting in significantly greater stormwater volumes as compared to the period preceding residential and commercial development. This water flow is capable of causing erosion, siltation, nutrient loading (Section 2.2.1) and the deposition of gross pollutants within the park's drainage system. These problems are compounded through other forms of stormwater pollution including the uncontrolled pumping of silt-laden water from development sites and the illegal dumping and accidental spillage of chemicals within the catchment.

2.3 Bushland

2.3.1 Flora

The topography, aspect, soil type, historical records and remnant vegetation within Cooper Park suggest that three predominant plant communities would have existed, Shrubby Open Forest (ridges and upper slopes), Tall Open Forest (sheltered valley slopes and creek embankments) and a Swampland Association (lower flat area at western end of park)¹¹. The major tree species present within regenerated bushland areas include *Angophora costata* Smooth-barked apple, *Eucalyptus punctata* Grey Gum, *Eucalyptus botryoides* Coast Mahogany, *Eucalyptus piperita* Sydney Peppermint, and *Corymbia gummifera*, Sydney Bloodwood on the slopes and *Synoum glandulosum*, Scentless Rosewood, *Ficus ssp.* Figs and *Syzigium ssp.* Lilly Pillies in the gully area. Stands of *Eucalyptus pilularis* Blackbutt were mostly logged last century but two mature individuals survive on deeper soils in the lower catchment with others occurring in the southeastern section of the park. The understorey in the upper gully area is comprised mostly of ferns, wet sclerophyll and other related mesic species. The understorey on the upper slopes comprises elements of coastal heath, dry sclerophyll vegetation and native grasses.



Cooper Park has been the subject of previous planting programs that have seen the introduction of a number of non-endemic native plants into bushland areas including *Elaeocarpus grandis* Quandong, *Castanospermum australe* Blackbean, *Eucalyptus globulus* Tasmanian Blue Gum and *Eucalyptus citriodora* Lemon-scented Gum.

Weed infestation is the most visible indication of native plant community degradation. Weeds compete with native plants for light, moisture, nutrition and space. Today, more than 50% of the park's bushland area suffers from significant levels of weed infestation with some areas being totally devoid of native vegetation. Weed infestation in the park derives directly from the impacts of residential and commercial development and resource extraction. Impacts have derived from operations associated with logging, sandstone quarrying, waste disposal and incineration, the installation of sewerage infrastructure and market gardening. Altered drainage patterns and volumes, and changing soil chemistry have exacerbated the situation. Major weed species include Large leaved Privet (*Ligustrum lucidum*), Small-leaved Privet (*Lucidum sinense*), Lantana (*Lantana camara*), Balloon Vine (*Cardiospermum grandiflorum*), Morning Glory (*Ipomoea indica*), Madeira Vine (*Anredera cordifolia*), Palm Grass (*Setaria palmifolia*), Common Tradescantia (*Tradescantia albiflora*), Mist Flower (*Ageratina riparia*), Green Cestrum (*Cestrum parquii*), Veldt Grass (*Ehrarta erecta*), Potato Vine (*Rumex sagittatus*), Coral Tree (*Eyrthrina x syksei*) and Camphor Laurel (*Cinnamomum camphora*).

More than 160 weed species and more than 220 native plant species have been identified within Cooper Park. Records are kept and maintained on-site by park staff (Appendix 2). It is important to note that species number however, gives no indication as to the relative abundance and distribution of each plant species within Cooper Park. The ecology of individual species of plants is dealt with at the operational level by staff engaged in the park's program of bush regeneration.

2.3.2 Fauna

The sustainability of animal populations is dependent on a number of variables. One of the most important of these is habitat size. Fragmentation of habitat during the period of residential development has resulted in the local extinction of a number of animal species within the Cooper Park area. In this regard, Cooper Park will always be limited in its ability to sustain animal populations by the fact that it is a fragment of a once much larger area of continuous native vegetation.

Nonetheless, within a given area, the quality of animal habitat is supported primarily by plant species diversity, variability of vegetation structure and variability of plant species age classes¹³. The park's bush regeneration process is mindful of these parameters. Presently, the park provides refuge for a number of birds, reptiles (**Appendix 3**), amphibians and mammals together with various invertebrate species including insects and soil microfauna.

2.3.3 Bush Regeneration

The degradation of plant communities within Cooper Park began with the aforementioned commercial use of the park (Section 2.3.1) and was compounded by the effects of residential development. These effects included the increase in stormwater volume and the installation of sewerage and drainage lines. The recreational development of the park did not take explicit account of vegetation management. However during the mid 1970s the municipal engineer proposed basic regeneration work to be undertaken over a 20 month period, 1974-76. Weeds were removed (Privets, Tree of Heaven, Coral Tree, Balloon Vine and Morning Glory) and up to 500 native trees, shrubs and grasses were planted. The rationale for species selection and the genetic source of planted material is not recorded. By today's standards it was a crude approach. One decade later, the National Trust was contracted to undertake bush regeneration work within Cooper Park. This was the first time that a systematic scientific approach was adopted for the regeneration and restoration of remnant native plant communities within Cooper Park. This contract continues today. The appointment of a Park Manager in 1988 and a subsequent increase in staff skilled in natural area management has led to a substantial increase in the area of regenerating bushland exhibiting a high degree of sustainability; from 4% of total bushland area in 1988 to 44% in 1998 (**Maps 4 & 5**).

2.4 Recreation

Recreation here is broadly interpreted to include the many ways in which people choose to spend their leisure time, from active sporting activities undertaken by groups through to individuals engaged in solitary contemplative thought. Cooper Park comprises a number of community land categories which accordingly provide a spectrum of recreation opportunity settings ranging from 'developed' (eg. tennis courts) through to 'natural' (eg. bushland areas). It is generally accepted that the provision of diversity of recreation opportunity is a sign of quality in recreation provision. Importantly, Cooper Park constitutes an 'island of naturalness' within an urban landscape and its primary recreational importance lies in its ability to facilitate 'introspection, temporary escape and tension release, as well as' provide 'opportunity for personal development'¹².

In summary, recreational pursuits undertaken within Cooper Park include tennis, cricket, walking including organized walks, reading, jogging, fitness training, the playing of ball games, the practising of relaxation techniques, painting, playground use, picnicking, social interaction, bird watching, dog walking and the general appreciation of the park's natural elements.

The development of recreation infrastructure within Cooper Park was initiated in 1923 and involved the construction of tennis courts, a tennis pavilion and playgrounds. Development during the 1930s was based on an award winning design by E. Coleman and R.C. Coulter, the result of a competition run in 1928¹⁰. Themes of romance and pleasure were enhanced with the construction of meandering paths, bridges and grottos, all set within a natural landscape. At the eastern end of the park a natural amphitheatre was constructed and was host to a number of classical concerts during the 1950s.

2.4.1 Park User Profile and Survey Response

A 'Study of Recreational Needs in the Woollahra Municipality' completed in 1984^{cited in 22} provides some information as to the 'typical user profile' of park users within the Municipality. The study found the typical user to be single or a single parent, highly educated, well paid, in white-collar employment, in rental accommodation and in the 15-34 year age group. The average length of stay was two hours. Profiles such as this can be useful for matching recreation demand with the provision of recreation opportunity and in developing interpretive strategies for a target audience. Park exit surveys which have been in use in Woollahra since 1991 give some indication as to recreation demand and general satisfaction levels in relation to park use and can be useful in identifying issues and assessing the success or otherwise of some prescriptive actions associated with a plan of management. Park survey use is further discussed in Section 3.5 and Section 6.

A small park user survey conducted during 1999 by Manidis Roberts Consultants provides information on recreation activity and park user perception of park management issues. Prominent responses have been absorbed as planning issues in Section 3. This survey is not comprehensive but has provided another avenue for public consultation during the preparation of this plan. Issues identified are similar to results obtained from park exit surveys conducted in the early 1990s. The survey found that:

Park users are exclusively from the local area though former council park surveys suggest that the park also receives visitors from other parts of Sydney, from interstate and from overseas. 66% of visitors came to walk or walk their dog, 29% came to play tennis, 20% came for a picnic (Sunday only), and a small number of visitors came to play with children and jog. (Some respondents came to the park for more than one reason, for example to play tennis and then have a picnic, or picnic and walk).

The bushland and natural surrounds are the aspects most enjoyed by visitors (44% of respondents), followed by the tennis courts (24%), the park's feeling of seclusion and isolation (22%), its open space (17%), and the sense of the park being a community focal point and meeting place and close to home (small numbers of respondents).

Major dislikes of visitors were stated as 'nothing to dislike about Cooper Park' (32%), weeds (24%), litter on the ground and in streams (20%), dogs, dog faeces, dog behaviour (12%). Other dislikes: insufficient facilities such as toilets, picnic facilities, dog facilities (eg. Dog bins, plastic bag dispensers); occasional conflict between users of the cricket nets and other park users, graffiti, the grottoes, the tennis courts, and paths that become boggy after rain.

When asked what they would like to change about Cooper Park, 24% said no improvements are needed; 17% said less weeds; 17% said facilities for dogs (eg. dog bins, plastic bag dispensers); 15% said improved litter management; and 10% said more planting bush regeneration. A few suggested: more public toilets; improvements to the paths; further provision of picnic and children's facilities; upgrading of the kiosk; and greater enforcement of dog rules.



When asked to rate Council's management of Cooper Park on a scale of excellent, good, fair, poor, or don't know, 73% said Council is doing a 'good' job; 17% rated Council's performance as 'excellent', 10% rated Council's performance as fair; and 'poor' and 'don't know' were not stated by respondents. When asked if they would like to make any other comments about Cooper Park, 59% of respondents made positive comments reflecting general satisfaction with Cooper Park in its present condition, a level of community pride in the park, and acknowledgment of the park's contribution to engendering a sense of community. 7% of respondents made negative comments, mostly in regard to dogs and dog faeces, litter (particularly in the creek and stormwater drains), and weed infestation. 17% of respondents offered suggestions which included: more BBQ pits, more resources for bush regeneration, better controls over dogs and dog owners, and better design to ensure that passive recreation areas have sun in winter, and shade in summer.

Table 2 presents an overview of park use. Not surprisingly, this centres on recreational use and indicates the popularity of a large urban park that presents a diverse range of recreation opportunity. Visitation to Cooper Park peaks in summer, particularly on weekends though there is a constant level of local use that persists throughout the year.

Table 2: Park Use

| Area | Use |
|---------------------------------|--|
| Cooper Park Tennis Courts | The courts are used daily from 7am until 10pm (Monday to Thursday), 9pm (Friday), 7pm (Saturday) and 8pm (Sunday). Visitation peaks in the warmer months on weekends. The licensee does not keep records of visitation but it is estimated that total annual visits would be about 90,000. The café associated with the court attracts both tennis players and non-players |
| Sportsfield (Lower Cooper Park) | Used for junior cricket in summer by local schools, usually on Wednesday mornings and afternoons; and Saturday mornings. There is no licence. Very popular site for dog walking early morning and late afternoon |
| Picnic/ BBQ area | Very popular |
| Community Hall | Leased to Miroma for work for disabled persons and other programs. The Youth Advisory Council also has meetings there, and it is leased for yoga classes and minor activities but no large parties with amplification systems |
| Bushland | Path system popular for bushwalking and as preferred thoroughfare access between local streets |
| Playground | Very popular |

2.5 Human History

2.5.1 Aboriginal History

Aboriginal occupation of the Sydney area dates back at least 6,000 years ¹⁶. The original inhabitants of the Woollahra Municipal area comprised members (over time) of at least two Aboriginal clans, the Cadigal on the southern shore of Sydney Harbour and the Birrabirralah of South Head and nearby coastal areas ^{Kohen 1986 cited in 17}. During 1789 approximately fifty percent of the known local Aboriginal population was killed by disease, probably smallpox brought by European settlers¹⁶. Subsequent land appropriation by colonialists hastened the process that led to the eventual demise of the Aboriginal population within the Sydney area.



There are several confirmed indications of Aboriginal occupation in the Cooper Park area. There is a rock engraving of a fish within an overhang just north of Bellevue Road above the eastern end of the park¹. There is a record of another rock engraving on a large flat rock in the north-eastern section of the park featuring 'a fully rigged ship and some figures of men'⁹. There is reference to 'two charcoal figures' on the wall of a small shelter 'between tennis courts and home units in Cooper Park'⁹. Additionally, there are a number of sacred/ burial sites that exist within the eastern suburbs of Sydney, the exact location of which remains, for spiritual reasons, privileged information kept in trust by the La Perouse Land Council (pers. comm. Williamson 1995). There are a number of sites within the park with deposits of iron rich clay material which are thought to have been utilized by local aborigines as paint material for body adornment (pers. comm. Shannon 1999).

2.5.2 European History

Following European settlement in 1788, the area now occupied by Cooper Park became part of a series of land grants made to the emancipist Hayes between 1793-1812. By the early part of the nineteenth century this land had become part of the estate of Daniel Cooper, 'one of the Colony's early industrial barons'¹¹. His nephew William Cooper who gained title to the land in 1882 undertook in 1913 'to give the whole of the gully, from Victoria Road to Manning Road, to the Council as a park'¹⁰. The park was officially named in 1917. Land acquisitions made by Council over subsequent years has increased park size from an initial 8 hectares to 17.7 hectares today. The major period of recreation infrastructure development during the 1930s (Section 2.4), was achieved through the use of up to 60 unemployment relief workers. The Moon Bridge at the park's centre is a fine example of the stonemasonry undertaken by Ernest Miles and a team of 50 stoneworkers. Other major sandstone work undertaken can be evidenced in the long flight of steps at the park's Victoria Road entrance and the retaining wall below the large turfed area at the eastern end of the park. Construction of the park's distinctive synthetic stone grottoes was performed by Mr. H. Arnold during 1936, the creator of many similar constructions at Taronga Zoo.

Commercial use/ resource extraction within the area comprised Chinese market gardens over the period 1850s –1920s¹⁰ and dairy production in the western area of the park, timber extraction in the early part of the nineteenth century, sandstone quarrying in the northern and southeastern parts of the park and the operation of an incinerator site at the bottom of Cooper Park Road.

2.6 Land Categorisation

Reference to the *Local Government Act 1993* (as amended 1998) and its *Regulation* in respect of 'Community Land' categorisation, indicates that Cooper Park would be represented within 5 (five) categories, namely: **natural area**, **area of cultural significance**, **sportsground**, **park**, and **general community use** (Map 3). The Act further provides a set of core objectives for each category (Appendix 5) that give general guidance to the formulation of management action and provides a framework for the general protection of values associated with each category.

2.6.1 Natural Area

Land is categorised as a natural area under Section 36 (4) of the Act if the land, whether or not in an undisturbed state, possesses a representative system, natural feature or other attribute that would be sufficient to further categorise the land (in this case) as **bushland** or **watercourse**. The park contains a mainly natural watercourse and bushland areas representative of remnant Port Jackson/Eastern suburbs vegetation. The bushland area identified comprises, in part, habitat of the endangered species *Acacia terminalis ssp. terminalis*, the Sunshine Wattle. The presence of this plant species requires that objectives, performance targets and other matters in respect of this species are consistent with the objects of the *Threatened Species Conservation Act 1995*. Under provisions of the Act, the National Parks and Wildlife Service (NSW) is to prepare a Recovery Plan for this plant species.

2.6.2 Area of Cultural Significance

Land is categorised as an area of cultural significance under Section 36 (4) of the Act if the land is an area of historical significance, because of the importance of an association or position of the land in the evolving pattern of Australian cultural history, or is an area of technical or research significance, because of the area's contribution to an understanding of Australia's cultural history or environment or, is an area of social significance, because of the area's association with Aboriginal life after 1788 or the area's association with a contemporary community for social, spiritual or other reasons. Though other criteria are provided within the Act, the aforementioned are considered appropriate for the classification of Cooper Park in its entirety as an area of cultural significance.



During 1992, the Australian Heritage Commission listed Cooper Park on the Register of the National Estate (FileNo.1/12/041/0114/01). The following statement is taken from a significance assessment report completed by the Australian Heritage Commission in 1992. Definitions of the criteria used in the assessment are contained in Appendix 4.

‘Cooper Park is an uncommon example of an early twentieth century municipal park, which demonstrates a bushland pleasure ground style. The style is expressed by the predominance of bush vegetation, a creek and meandering network of paths which link a series of architectural features (Criterion B2)’.

‘The park is important for an array of cultural features which include synthetic stone features, a moon bridge, a brick and concrete bridge, sandstone paths, a tennis pavilion and tennis courts, and a grass amphitheatre with retaining wall and plaque (Criterion A3)’.

‘The park contains some significant stands of remnant Port Jackson/Eastern suburbs vegetation (Criterion A1 and D1)’.

‘These cultural features are laid out in a manner which demonstrates design excellence (Criterion F1)’.

Although the park is not listed as a heritage item under the Woollahra LEP 1995, its cultural significance is identified in Council’s Heritage Study (1984) which highlighted Cooper Park as a ‘creek valley with quite thick vegetation...with unique rainforest species’ and overall high recreational value. The Heritage Study nominated the north-facing valley and south-facing slope as areas of naturalistic character and pointed to the existence of Aboriginal engravings within Cooper Park and surrounding areas.

2.6.3 Sportsground

Land is categorised as sportsground under Section 36 (4) of the Act if the land is used primarily for active recreation involving organised sports or the playing of outdoor games. The tennis courts satisfy this criteria.

2.6.4 Park

Land is categorised as park under Section 36 (4) of the Act if the land is, or proposed to be, improved by landscaping, gardens or the provision of non-sporting equipment and facilities, for use mainly for passive or active recreational, social, educational and cultural pursuits that do not unduly intrude on the peaceful enjoyment of the land by others. This is the appropriate category for the park’s main open turfed areas covering the eastern, western and northern extremities and the central area of the park.



2.6.5 General Community Use

Land is categorised as being for general community use under Section 36 (4) of the Act if the land does not satisfy criteria for inclusion in other categories and therefore 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. It is considered appropriate that a small area of the park which contains Cooper Park Road Community Hall and an adjacent carpark be categorised as being for 'general community use'. It is also possible that a recent addition to the park at 9a Cooper Park Road (Section 3.7.1) may be classified within this category depending on a decision as to its appropriate use.

2.7 Condition of the Land, Buildings and Other Improvements

The *Local Government Act 1993* as amended 1998 requires that a plan of management that applies to just one area of community land (in this case Cooper Park) must include a description of the condition of that land and any associated buildings or improvements - Refer Tables 3 and 4.

Table 3 : Condition of Land

| LAND | CONDITION |
|--|--|
| Bushland | Subjected to high degree of weed infestation. Approximately 45% of potential 12 hectares regenerating and on maintenance. |
| Picnic and passive areas | Good condition – regularly maintained |
| Watercourses | Fair condition – Upgrade during the 1990s has resulted in improved bank stabilisation and reduced sedimentation. More treatment is required. Water testing has demonstrated variable water quality. Fluctuations in quality are typical of urban stormwater systems. |
| Lower Cooper Park – Playing field at western end | Reasonable condition. Problems with compaction and uneven surface |
| Bellevue Gardens – eastern end | Level turfed area in reasonable condition Terracing of earthen amphitheatre has lost its original definition. Its surface is covered in a climax community of introduced grasses. Some erosion is apparent through recreational use. |
| 9a Cooper Park Road | Totally weed infested |



Table 4: Condition of Buildings and Other Improvements

| Buildings/ Improvements | Condition |
|--|---|
| Tennis pavilion containing staff offices, amenities, tennis kiosk and park manager's residence | Very good condition. Substantially renovated/rebuilt in 1989 |
| Tennis courts | Excellent condition. Perimeter wire fencing and synthetic court surfacing renewed 1999 |
| 9a Cooper Park Road House and disused bowling club | Dilapidated and not fit for use |
| Cooper Park Road Community Hall | Structurally sound |
| Sandstone flight of steps at Victoria Road entrance | Structurally sound but some tread repair required. Handrailing requires upgrade |
| Footbridges 2 concrete, 1 brick, 1 sandstone, 1 metal | Structurally sound |
| Treated pine stairs (x2) | Excellent condition |
| Sandstone perimeter walls | Good condition. Some repair required |
| Grottoes and gazebos | Structurally sound yet often targeted for graffiti |
| Concrete and flagstone pathways, steps and handrailings | Majority are structurally sound. Some stormwater erosion in some small sections. Rosewood walk requires stone realignment and stabilisation. Tubular steel handrailings are structurally sound. Some wooden arris handrailing has been subject to termite attack. |
| Retaining walls, pond walls and weirs | Structurally sound. Leak in eastern pond and general problems with sedimentation in system |
| Cricket pitches/ Cricket practice nets | Good condition (recently resurfaced) |
| Carpark off Suttie Road | Structurally sound |
| Information shelter | Structurally sound |
| Routed wooden signage | Structurally sound |

2.8 Permitted Use of Land, Buildings and Other Improvements

The *Local Government Act 1993* as amended 1998 requires that a plan of management that applies to just one area of community land (in this case Cooper Park) must specify the purposes for which the land, and any such buildings and improvements will be permitted to be used, together with a description of the scale and intensity of such permitted use and must specify the purpose of any proposed development. Refer Table 3. Within this Table, land, buildings and other improvements are grouped within areas to facilitate a sensible link to permitted use.



Table 5: Permitted Use of Land, Buildings and Other Improvements

| Area | Purpose, Scale and Intensity of Permitted Use | Purpose of any further development |
|---|--|--|
| Bushland Areas | Remnant Eastern Suburbs bushland – provision of low intensity recreational use. Resource to be protected, conserved, rehabilitated and transmitted to future generations. | Activities associated with bush regeneration program |
| Watercourses (including bridges and other structures) | Small channels carrying water from within the catchment delivering the outflow to Sydney Harbour. Collection of weed plant material allowable for educational use. Not used for recreational purposes | Structures associated with the Stormwater Management Plan |
| Tennis Centre/ Council staff office and accommodation | Intensively used tennis courts catering for up to 90,000 visits per year, for social and competition tennis and coaching Small scale kiosk and outlet for goods and services supportive of tennis Small scale office/ lunchroom and accommodation for park supervisor. | Upgrading associated with tennis court (eg. resurfacing) |
| Picnic areas/ play area | Small scale venue for picnics, BBQs and children’s play | No further development proposed |
| Lower Cooper Park | Small scale area for junior cricket games, cricket practice; casual ball games; exercise, dog walking and social gatherings | No further development proposed |
| Upper Cooper Park (including the amphitheatre and other structures) | Park entry area for casual exercise, cultural and social events (eg. outdoor films and concerts for up to 3000 people) | Temporary or permanent structures (eg. paving and seating) associated with the establishment of areas for cultural and social events |
| Areas off Fletcher Street and Cooper Park Road | Low key areas for relaxation and exercise | No further development proposed |
| Cooper Park Road Community Hall | Small public building for meetings, children’s play groups, cultural, social and educational pastimes and activities | No further development proposed |
| 9a Cooper Park Road | To be determined | To be determined |



3 PLANNING ISSUES

This section presents issues relevant to the planning process. Any response in the form of recommended action is consistent with the core objectives associated with each land category.

3.1 Access

Cooper Park is generally accessible by motor vehicle, bicycle, on foot and by public transport.

3.1.1 Entry Points

Cooper Park has eleven general points of entry (Map 2) which are considered effective and appropriate. There are other informal access points which tend to exacerbate management problems in relation to soil erosion, soil compaction, drainage, weed encroachment and litter.

The preferred points of entry need to be formalised with appropriate signage and landscape treatment that aids visitor orientation. The latter would ideally include a simple map and/ or the opportunity to engage in an interpretive experience (Section 3.5.2). Informal access points should be discouraged. This would ideally be solved with some form of barrier treatment or signage.

A sizeable volume of pedestrian traffic passes between Lough Playing Fields and Lower Cooper Park at Suttie Road near the intersection with Manning Road. The placement of a pedestrian crossing at this point should be investigated by Council's Traffic Committee.

3.1.2 Pathways

Cooper Park contains 4 km of pathway, 1.5 km paved and 2.5 km unpaved. Paved pathways are constructed alternatively of concrete and/ or sandstone flagging. Some of the paths are close to seventy years old and have been subject to repair over time. At present the stabilization and realignment of some sections of flagstone pathway is required. These areas include the total length of Rosewood Walk; the eastern end of Cooper Creek Path adjacent the eastern pond area and the flight of steps at the Victoria Road entrance (Map 7). Occasional repair of stabilised decomposed granite pathways on the eastern pond access ramp and the lower section of Cooper Creek path will also be required. Some paths in the northeastern section of the park exhibit poor drainage after rain. Appropriate drainage treatment or the installation of duckboard may be required. Handrailing within the park is constructed alternatively of arris rail hardwood or tubular galvanised steel. Hardwood railing is subject to termite attack and within wet areas of the park has an approximate life of ten years. All future handrailing installation and replacement should ideally be with tubular galvanised steel. This material blends with some original installations (tennis courts and railing in eastern section of park) and has superior life expectancy.

3.1.3 Carparking

The tennis court carpark at the western end of the park is generally adequate for average levels of park visitation but lacks sufficient solar protection during summer months. The placement of an appropriate number of trees (possibly two) with a shading habit, minimal leaf fall, stable branch structure and compatibility with the surrounding vegetation is recommended.

The installation of kerb and gutter along the southern edge of the entrance road leading to the carpark from Suttie Road would facilitate better drainage and improve parking opportunity on busy days when the carpark overflows.

3.1.4 Lighting

There is limited artificial lighting associated with pedestrian access within the park. Streetlights occur on the path leading up to Adelaide Street (a popular access point) from the tennis kiosk but are inadequate to ensure safe access to tennis court patrons that enter and leave the park via this entrance during the evening. Adequate lighting should be installed to ensure safe access. It is however inappropriate and not cost effective to consider the installation of lighting throughout the park generally.

3.1.5 Disabled Access

Cooper Park's topography makes access to many areas, particularly bushland sites, difficult for disabled persons. Nonetheless, vehicular access into the central picnic area is possible, with Council permission, for disabled individuals or groups. This access point is located at the park's western entrance on the northern side of the tennis court carpark. From the central picnic area, easy wheelchair access is possible along Cooper Creek Path to a point 300 metres east of the central bridge. This path allows access to a pleasant bushland/ creek setting and passes by the park's architectural landscape focal point at the Moonbridge.

The park's information bay adjacent to the central picnic area has stepped access at two points. The shorter right hand section with the lesser gradient should be replaced with a ramp allowing wheelchair access. And any interpretive program developed for the park should be mindful of making the experiences it offers accessible to the disabled, including those with sight and hearing impairment.

3.2 Bush Regeneration

Bush Regeneration is the primary managerial theme of Cooper Park. It is a process that aims to restore through various methods of regeneration, rehabilitation and revegetation, the type of plant communities and some elements of the animal communities that existed



within this area prior to European settlement. Simple quantitative endpoints in this process are best couched in terms of the annual area of weed clearance (primary treatment) and the subsequent area maintained in a weed free state (maintenance treatment). Accordingly, a simplified quantitative overview of regeneration work within Cooper Park over the past decade (Maps 4 & 5) would show an increase of 40% to 44% (4.8 hectares) of bushland area on maintenance following initial primary weed removal. In 1998, this figure stood at just 4% (0.48 hectares). These percentages relate to an area of 12 hectares, the total area of potential bushland, within the park's total 17.7 hectares of open space. A qualitative endpoint is best couched in terms of the maintenance and enhancement of biodiversity (Section 3.2.2). Map 6 shows a 5-year projection of proposed primary work to 2005.

In practical terms, the degree of success within bush regeneration is dependent on the level and efficiency of ongoing labour input required for primary weed removal, associated landscape work, planting (where necessary) and the subsequent maintenance of restored areas into the future. Success will also be dependent on the degree to which threats to bushland have been removed or minimised. Such threats are represented most noticeably, through weed establishment and uncontrolled stormwater flows. These threats derive directly from disturbances associated with early resource extraction and residential development.

A key advantage of the bush regeneration process derives from the decreasing level of required per hectare labour input relative to increasing plant community stability over time. Despite this, continuing primary work will result in a net increase in required labour input in the long term. Park staff have over time managed to rationalise the efficiency and effectiveness of labour input into bush regeneration relative to duties associated with general park maintenance. Nonetheless, it is necessary to maintain an adequate skilled staffing level in the long term. A minimum permanent staffing level of 6 (six) persons supplemented by a continuing contract with the National Trust of Australia (NSW) is appropriate.

3.2.1 Weed Infestation

Weed infestation within the park stems directly from the impacts of residential development and resource extraction. Impacts have derived from operations associated with logging, sandstone quarrying, waste incineration, the creation of sewerage, drainage and recreation infrastructure, house construction, increased stormwater volumes, altered drainage patterns and associated changes in soil structure and chemistry. Many weed species introduced originally as horticultural plants on private property within the park's catchment have, through various dispersal mechanisms, become established within Cooper Park.

Weed infestation is the most visible indication of native plant community degradation. Weeds compete with native plants for light, moisture, nutrient and space. Weed removal therefore is the primary requirement for the regeneration process preceding the

germination of naturally occurring seed and related propagative material and/or revegetation through planting. Techniques utilized in weed removal and the pattern and timing within this process are consistent with current industry bush regeneration methods and based on sound ecological principles.

3.2.2 Biodiversity

Biodiversity has become a key word within nature conservation. It is often interpreted simply as species richness but is more accurately described as ‘the variety of life forms, the ecological roles they perform and the genetic diversity they contain’²⁰. This variety in the natural world and the pleasure it brings to human experience is an obvious reason for the importance afforded biodiversity. On a broader scale biodiversity provides the basic material for new foods and medicines and helps maintain natural ecosystems providing clean water and air¹³. The conservation of biodiversity locally contributes to its conservation regionally.

Biodiversity can be interpreted as a simple measure of environmental health in that a rapid (ie. over a number of decades relative to geological time) loss of species diversity within an area indicates the occurrence of threatening processes, usually in the form of human-induced impacts as described in Section 3.2.1. Habitat destruction and the fragmentation of bushland have been major contributors to the loss of species within the area now occupied by Cooper Park. The protection and enhancement of the park’s present level of native biodiversity is therefore a key outcome of the park’s program of bush regeneration within the park. The maintenance of species lists therefore acts as a qualitative assessment of the success of the bush regeneration process.

Importantly, the protection and enhancement of biodiversity within Cooper Park will be based on management options that minimise the effects of, or totally negate threatening processes and capitalise on opportunities to maintain the sustainability of whole populations of species. Such opportunities within the bush regeneration process include the use of fire (Section 3.2.5), weed removal (Section 3.2.1), stormwater management (Section 3.6), planting (Section 3.2.3) and habitat creation (Section 3.2.6).

3.2.3 Planting

Planting in bushland areas will only be undertaken in sites that exhibit negligible natural regeneration potential over a period of time (at least three years). Assessment of natural regeneration potential within a site includes consideration of the likely response to fire treatment. Natural regeneration produces superior outcomes in relation to the restoration of bushland based on original vegetation type and species diversity. However, in areas that are non-responsive, planting serves to reintroduce a level of native plant diversity within a site, initiates the production of a native seed bank and helps to suppress the occurrence of competing weed growth.

Species chosen for planting are selected taking account of the probable original plant community type that existed in Cooper Park prior to residential development. Cooper Park has an in-park nursery operated by park staff. Native plant seed is collected, stored and propagated when required. Plant material utilized in Cooper Park is almost exclusively derived from this on-site propagation of seed collected from remnant species within the park. Choosing locally sourced propagative material is important in terms of ensuring the genetic integrity (in the event of pollen transfer and seed dispersal) of remnant plant populations. An occasional alternative source of locally occurring plant material satisfying requirements of genetic integrity is Randwick Community Nursery.

3.2.4 Threatened Species

An endangered plant species on Schedule 1, Part 1 of the *Threatened Species Conservation Act 1995* has been identified within Cooper Park. It is the Sunshine Wattle, *Acacia terminalis ssp. terminalis* which is characteristically more hairy with relatively thick peduncles and wider seed pods than the other yet to be published subspecies; it was first collected in 1770 by Joseph Banks and Daniel Solander¹⁸.

‘Although *Acacia terminalis* is widely distributed on the coast and tablelands from northern New South Wales to Tasmania, the type subspecies has a restricted distribution in the Sydney region from the north shore area of Sydney Harbour south to Botany Bay. It occurs mainly near the coast with most records from Port Jackson and the eastern suburbs of Sydney. Much of its natural distribution range with suitable habitat has been cleared or disturbed for urban development¹⁸’.

Under s36A of the LGA 1993, the presence of an endangered species results in an automatic ‘natural area’ categorisation for the bushland area of Cooper Park. Eventually, the land area supporting this plant species will be subject to a Recovery Plan as prepared by the National Parks and Wildlife Service (NSW). The population of *Acacia terminalis* is restricted to the park’s northern slopes within regenerating areas of remnant bushland. The park’s bush regeneration program is mindful of the plant’s existence and all due care is provided to ensure it’s conservation on-site ahead of the preparation of a Recovery Plan.

The importance associated with the presence of *Acacia terminalis ssp. terminalis* will receive treatment as part of an interpretive strategy for the park’s natural elements focusing particularly on the importance of biodiversity conservation.

3.2.5 Fire

Fire has played a significant role in the evolution of Australian flora and fauna. Fire produces specific responses in respect of plant seed germination and establishment and vegetative reproduction. The resulting age, class and diversity of species produces a vegetation structure and food resource that holds habitat implications for the

sustainability of animal populations. In this way, fire regimes defined by fire type, intensity, frequency and season of occurrence have had a major influence on the relative distribution and abundance of species within native plant and animal communities. Urban development and the concomitant fragmentation of bushland have led to the alteration of these fire regimes resulting in an alteration of species composition within these communities. Within Cooper Park, the relative absence of fire has led to a reduction in plant species diversity which in turn has had a flow on effect to animal species diversity and abundance. This has led to change towards a simplified plant community dominated by mesic species such as *Syzgium ssp.* Lilly Pillies, *Clochidion ferdinandi* Cheese Tree, and *Pittosporum undulatum* Native Daphne away from a more diverse community of sclerophyllous species. This has specific implications for the maintenance of biodiversity within the park.

The management of fire within bushland on urban fringes must address the often mutually exclusive objectives of protecting life and property whilst promoting and sustaining biodiversity. Hazard reduction burns are mostly of insufficient intensity and are undertaken in restricted seasonal times to maximise the occurrence of plant species diversity. The *Bush Fires Act 1949* is special legislation, which ensures the former takes precedence over other forms of fire use that may be supported by other legislation. Council has determined that the Woollahra municipality is not a fire-prone area but that scope exists for the use of fuel reduction burns as a management tool within regeneration activities undertaken within Council's bushland parks²³. Any experimentation with conservation fires should be conducted in consultation with a plant ecologist to determine size, placement, intensity, and season of burn and likely outcome for plant species diversity. It is likely that high intensity pile burns may be the most appropriate treatment considering the park's urban context.

3.2.6 Habitat Creation

Inherent in the bush regeneration process is the need to be mindful of habitat requirements for fauna. In particular this requires some appreciation of the structural element of vegetation. Habitat types such as tree hollows are lacking in Cooper Park with most Eucalypts of an older age class having been logged last century. In response to this, possum and bird boxes have been and will be constructed and placed at strategic locations to help compensate for this habitat loss within the park.

3.2.7 Lower Cooper Park

The open grassed area bordering Suttie Road at the western end of the park and otherwise known as Lower Cooper Park is framed by steep embankments on its northern and southern perimeter. Both of these embankments are almost totally weed-infested with some remnant *Eucalyptus ssp.* occurring on the southern side. Current maintenance involves the occasional removal of vines from significant trees on the southern embankment. Given the aspect, occurrence of uncontrolled drainage, altered soil profile



and chemistry of this area it would be inappropriate to apply a bush regeneration approach. Previous attempts in this regard have proven unsustainable and not cost effective.

Nonetheless, recent community interest in the site by residents of Edward Street has indicated a preparedness by those residents to become involved in an appropriate restoration treatment of the southern embankment and its subsequent maintenance. This could be viewed as a component of volunteer involvement within the park's bush regeneration program (Section 3.8.1). An appropriate treatment would involve the establishment and maintenance of native tree species (the selection of which is to be determined by park staff) across the embankment whilst tolerating a climax weed community as a soil stabilizing groundcover and understorey.

The northern embankment will be the subject of a mixed native planting to compliment the remnant bushland vegetation on the northern side of the park's entrance road. The planting will include Figs *Ficus ssp.* to facilitate the provision of shade during summer months. Planting will be undertaken in accordance with the considerations outlined in Section 3.2.3. The Cottonwoods *Populus deltoides* in this area are in a state of decline and will eventually be the subject of a staged removal.

3.3 Recreation

The provision of recreation opportunity and the protection of recreational value are key outcomes contained in the core objectives for community land categories as set out in the LGA 1993. Issues identified in relation to Cooper Park are set below.

3.3.1 Children in the Landscape

The traditional response to children's recreational needs within open space management is through the provision of playground equipment within a designated location. Cooper Park has such equipment situated within its central picnic area. Whilst this generally serves a child's need for physically active play, it may not wholly satisfy this need or other needs relating to creative, social/ dramatic and cognitive play ⁶. In this context, Cooper Park's complexity of landscape represents a broader provision of recreational opportunity in terms of its variety of environmental spaces providing a setting for imaginative exploration and interpretation by children.

Allowing off-path access by children in the park's bushland areas is incompatible with objectives of the park's bush regeneration program due to plant disturbance, soil compaction and erosion associated with 'trampling'. Nonetheless, it is possible that this use can be regulated through a zone approach. Such an approach would tolerate disturbance in small 'preferred' play areas close to picnic areas where such a concession has no permanent adverse effect on the park's overall environmental integrity. Conversely, such use would be discouraged in 'preferred' play areas that are within environmentally sensitive sites through the use of physical barriers and/or signage. The latter is most effective where parental guidance is present.



3.3.2 A Second Playground

Community opinion currently points to a need for a second children's playground within the northern extension of Cooper Park between Streatfield Road and Cooper Park Road. The rationale determining whether a second playground is appropriate will be based on perceived child catchments and access both in terms of the overall distribution of playgrounds within the municipality, and the effect that major arterial roads and other geographical features have on pedestrian access. At present there is a relatively high density of playgrounds within this part of the municipality. Others in the area occur at Harbourview Park (off Edward Street), Cooper Park (off Northland Road), Plumb Reserve (off Fletcher Street) and Bradley Ave. Reserve (off Victoria Road). Installation of a second playground should proceed if considered appropriate.

3.3.3 Exercise Station

Community consultation has identified an increasing interest in physical fitness and an associated demand for the provision of fitness and exercise equipment within public open space areas. Accordingly, the installation of appropriate fitness and exercise equipment to complement existing recreational opportunity within Cooper Park would be appropriate. Placement would be suitable within areas with designated 'park' land categorisation (Map 3).

3.3.4 Cricket Practice Nets

The practice cricket nets at Lower Cooper Park have been a point of some conflict between cricketers and other park users in relation to wayward balls threatening injury. Appropriate signage will be placed on-site directing users to be mindful of other park users.

3.3.5 Companion Animals

There are strongly divided opinions on the appropriate level and type of control that companion animals, particularly dogs, should be afforded by their owners within public open space. Woollahra Council has adopted a zoning approach (3 categories) in an attempt to accommodate this diversity of community opinion. Within Cooper Park, dogs are permitted in all areas if leashed at all times (Category B). Cooper Park is extremely popular with dog walkers particularly on Lower Cooper adjacent Suttie Road during the late afternoon. On nearby Lough Playing Fields dogs are permitted on a leash at all times and **unleashed** between 4.30pm and 8.30am (Category C). This provides a convenient option for users of Cooper Park to allow their dogs unleashed exercise.

Problems associated with dog use in Cooper Park include:

- unleashed dogs interfering with the leisure experience of other park users
- uncollected dog droppings
- disturbance of the creek system (ie interference with creek fauna including ducks and increased turbidity affecting freshwater invertebrate and plant life ecology), disturbance of fauna generally, disturbance of plantings in garden beds.

Accordingly, there needs to be increased enforcement of the dog control categories by Council's Ordinance Officers coupled with the appropriate provision of signage in key areas. In the absence of enforceable sanction for the transgression of dog control ordinances then appropriate behaviour by many dog owners cannot be expected. Additionally, an interpretive treatment addressing the community values underlying dog control ordinances may result in an increase in freely chosen appropriate behaviour by dog owners utilizing Cooper Park.

Cats have proven to be an after hour problem in Cooper Park preying on native fauna at night. This issue will be dealt with within the park's interpretive plan encouraging responsible cat ownership.

The NSW *Companion Animals Act* 1998 requires that councils promote responsible animal ownership through environmental initiatives. The placement of simple interpretive signs within the park encouraging dog owners to retrieve and dispose of their dog's faeces in an appropriate manner has resulted in a reduction of deposited dog faeces within the park. These signs will be maintained and increased. It is not considered appropriate that bag dispensers for faeces collection be installed in Cooper Park due to their susceptibility to vandal attack. Rather the responsibility of bag procurement and bag carrying should rest with the dog owner.

3.3.6 The Amphitheatre

The natural earthen amphitheatre bordering Victoria Road at the eastern end of the park was constructed during the 1930s. It later became a venue for various cultural events, in particular, the staging of classical concerts during the 1950s which were broadcast throughout the State by the ABC (Australian Broadcasting Commission). The last use of the site for the staging of a significant cultural event was during the Bicentennial celebrations of 1988.

A community desire to restore the amphitheatre's former use was made evident during the consultation process that formed part of this plan's preparation. The present



condition of the site is not amenable to such a use and it will take substantial restoration to bring it to an appropriate standard. It is possible that the cost of such works if undertaken could be recouped through the rental of the site for community events. It is recommended that consideration be given to the restoration of the amphitheatre to accommodate the staging of cultural events and the feasibility of such action determined. This would be compatible with the core objective s.36H as provided by the LGA 1993 for the area's 'park' land categorisation which aims 'to encourage, promote and facilitate recreational, cultural, social and educational pastimes and activities'.

3.4 Heritage

The categorisation of Cooper Park as an **area of cultural significance** requires that its significance be retained and enhanced through the active use of conservation methods. These methods may include the protective care, maintenance, restoration, reconstruction, adaptive use and/ or preservation of the physical material of the land.

As a basis for this management objective, it is recommended that a Heritage Study of the park be undertaken in order to establish:-

- 1) How and to what degree each element of the park's 'fabric' contributes to the park's cultural significance
- 2) The present condition of these elements and,
- 3) Recommendations on the most appropriate conservation methods to apply to ensure their proper protection / restoration.

The 'fabric' in this instance refers specifically to the park's architectural features including bridges, paths, retaining walls, grottos, gazebos, tennis courts, tennis kiosk, name plaque, stairs and perimeter walls, its natural elements and any object or material indicating previous Aboriginal occupation of the area (Section 2.6.2). In respect of the latter, the discovery of any new material should be made known to both the La Perouse Land Council and the National Parks and Wildlife Service of New South Wales (NPWS).

The park's bush regeneration program forms the protective and restorative basis for the appropriate management of the setting or context of the area of cultural significance and in this regard would not have to receive detailed treatment in the proposed heritage study. Nonetheless, Council should consider encouraging staff involved in the park's bush regeneration program to discuss with NPWS representatives methods of identifying and avoiding accidental damage to actual or possible Aboriginal sites whilst undertaking regeneration activities. Additionally, it is appropriate that any interpretive strategy developed for the park include a detailed treatment of the park's cultural significance inclusive of its Aboriginal heritage.

3.4.1 Tree Management

Part of the visual amenity and cultural significance of Cooper Park derives from group plantings of large northern hemisphere deciduous tree species, such as Plane Tree *Platanus x acerifolia*, Cottonwood, *Populus deltoides* and Liquidamber *Liquidamber styraciflua*, and non-endemic native deciduous trees, Illawarra Flame Tree *Brachychiton acerifolia* and Kurrajong, *Brachychiton discolor*. Some of these plantings are associated with the park's initial 'pleasure garden' thematic development but in some areas appear disjunctive and haphazard considering their juxtaposition within a bushland context.

The Liquidambers in the central picnic area are in a state of decline suffering from included bark and fungal attack. Major branch failure has been a problem and resulted in the removal of several individuals over the past decade. It is proposed that the Liquidambers west of the central bridge be subject to a staged removal and replaced with grouped native plantings, some of which have already been established. The Liquidambers east of the bridge will also be subject to a staged removal but replaced with advanced Liquidambers (some of which are already in place) in order to perpetuate the original theme. The steepness of the gully at this point allows for structural harmony between the Liquidambers and the surrounding bushland.

Cottonwoods at Bellevue Gardens at the eastern end of the park adjacent to the slip rail entrance are in a state of decline and have suffered major branch failure. All of these Cottonwoods are currently the subject of a staged removal. Replacement Cottonwoods have been planted at a greater distance from the closest residence. Cottonwoods along the entrance road off Suttie Road at the western end of the park are also in a state of decline and will require removal. A mixed native planting that complements adjacent bushland would be an appropriate treatment for this embankment area. The inclusion of Figs *Ficus ssp.* in this planting will serve to replace, over time, the structural amenity and shade currently provided by the Cottonwoods (Section 3.2.7).

The Illawarra Flame Trees bordering the flight of stairs at the park's Victoria Road entrance are of inconsistent character as a formal planting and in poor health. Their retention and care or replacement with species of appropriate character and structure will be contingent upon the provision of a practical maintenance system, which would conceivably extend to the installation of an irrigation system. A similar treatment would be appropriate for the flat area that skirts the perimeter sandstone wall on both Victoria and Bellevue Roads to fill existing gaps. Such treatments however, should be mindful of the impact on associated maintenance such as grass mowing.

Similarly, a perimeter planting of large shade trees of consistent character will be established on the edge of the park's northern extension between Cooper Park Road and Streatfield Road to complement existing canopies.

3.5 Education, Interpretation and Signage

3.5.1 Education

A significant number of students, school groups and university staff utilise Cooper Park as a resource for environmental studies particularly within the bushland and watercourse areas. Use of the resource in this manner adds value to primary conservation objectives and should be permitted and, where possible encouraged. The development of an information package centred on the park's environmental qualities would be an appropriate response to the demand for the park as an educational resource. Such packages would conceivably extend to issues dealing with Aboriginal and European history within the Cooper Park area. Importantly, provision should be made to ensure that any activities associated with the park's educational use do not compromise the integrity of the park's natural and built elements.

3.5.2 Interpretation

Interpretation generally is undervalued as a management tool within open space management. An adequate system of interpretation has the potential to enhance visitor satisfaction and strengthen the park's role as an educational resource. Importantly, this would serve to encourage community awareness, understanding of and support for the conservation rationale that underlies the management of the park's natural areas. Similarly, an interpretive program would provide an opportunity to promote heritage values generally and encourage park users and local residents to adopt appropriate behaviour in relation to preserving the integrity of the park's natural and built elements. Importantly, an interpretive approach within a natural area context would also be amenable to an analysis of the Aboriginal history of the local area. Interpretive techniques may variously involve the use of display material in the park's information bay or at key points throughout the park, guided walks and maps for orientation at access points. A draft interpretive plan₅ was prepared by the park's Area Team Leader in 1995. This plan should be consulted in the development of an overall interpretive strategy for the park. Such a strategy should ensure interpretive elements are co-ordinated and that desired objectives be clearly defined. Additionally, the development of an interpretive strategy should be preceded by an up to date park user survey to ascertain the profile of a likely target audience.

3.5.3 Signage

Signage within public open space is required for purposes of visitor orientation, interpretation, regulating appropriate use and ensuring visitor safety. Signage within much of Sydney's public open space varies in terms of the graphic and literary style employed and in terms of its construction and placement. Woollahra Council needs to develop a unified municipal approach to signage ensuring consistency of style, construction and siting principles based on rules of user perception and effectiveness. The development of such an approach would be appropriate for signage within Cooper Park.

3.6 Stormwater management

There are specific problems associated with stormwater flows that enter and pass through Cooper Park (Section 2.2). Large volumes of stormwater cause erosion and siltation and deliver nutrient loads and other pollutants (both visible and dissolved) to the park. The physical disturbance of soil in conjunction with changes in soil chemistry compromise the ability of native vegetation to establish and remain established. Moreover, this type of disturbance supports weed establishment and infestation. A Stormwater Management Plan for Cooper Park was prepared in 1992 by Patterson Britton and Partners. The majority of plan prescriptions have been implemented. However, during the five-year implementation period some further stormwater problems have been identified and some budgetary estimations have been inaccurate. Major drainage problems remaining are listed below with action responses listed in Section 5 and summarised in the Masterplan (Map 7):

- Uncontrolled stormwater flow entering park at Small Street and Small Lane
- Dispersed drainage along northeastern perimeter
- Soakage area at Bellevue Gardens
- Soakage area along southern perimeter of Lower Cooper Park
- Piped stormwater discharging from driveway off Cooper Park Road at Northland Road hairpin
- Small diameter pipe discharging stormwater south of eastern pond below Bellevue Gardens
- Need for Gross Pollutant Trap (GPT) placement in drain inlets on park perimeter
- Need for regular dredge of eastern pond sediment trap, repair of leak and complete construction of the perimeter wall
- Uncontrolled single property stormwater discharges along park perimeter
- Destabilised creek embankment at pipe entry at Lower Cooper Park
- Destabilised creek embankments generally

Water quality tests undertaken at four sites within Cooper Park during 1999 show good results for nitrate, dissolved oxygen and pH and variable but generally poor results for concentrations of reactive phosphate, copper and turbidity. The first and last indicate a high nutrient and sediment load respectively at the sites tested and confirms what is generally known of the polluted status of urban stormwater. The only response possible at this stage is to keep all drainage within designated drainage lines to minimise the opportunity for nutrient loading of soils away from these areas and to maintain the use of the eastern pond below the Bellevue Gardens retaining wall as a regularly serviced sediment trap.

3.7 Miscellaneous Issues

3.7.1 9a Cooper Park Road

The most recent addition to the park's land area was in 1992 when Council gained ownership of 3096 m² of land at 9a Cooper Park Road (Map 2) as part of a developer's (Sunlord's) compliance with Section 94 of the *Environmental Planning and Assessment Act 1979*. It contains a disused grass tennis court (a former bowling green), former bowling clubhouse and store, and a derelict brick house. It was once the site of the Bellevue Hill Bowling Club, but today is not used for any purpose. The land has a three metre wide access to Cooper Park Road and a similar narrow access to the main body of Cooper Park along the northern perimeter of the site. The site affords extensive views to the south across the main valley of the park towards Bondi Junction. Due to its shape, steep and narrow access, proximity to residences, and poor visibility into the land from the street, it is not an easy site for which to find an appropriate use. Considering the park's importance as a bushland remnant, it is probably best managed as an extension of the park's vegetated area concentrating on the maintenance and enhancement of biodiversity. However, considering the total amelioration of the soil profile in part of the site it may be appropriate to utilize that part for 'general community use' in the form of a 'community garden' based on ecologically sustainable management practices. The periphery of the site could still contain a bushland element that could be maintained as part of the operation of the garden providing a diverse experience for probable participants.

Nonetheless, a call for expressions of interest to utilize the site under lease or licence for an appropriate recreational or community use should be pursued. In the interim it would be appropriate to seal off the site, ensure it is safe and undertake basic maintenance.

3.7.2 Vandalism

Vandalism here is broadly interpreted to include human behaviour that degrades any part of the park's fabric. This may include behaviour that is non-intentional in respect of the damage it causes. Vandalism within the park is usually represented by the placing of graffiti on built structures such as sheds, grottos and signage, the defacing and movement of park furniture, the indiscriminate breaking of glass bottles, collection of barbecue wood from bushland areas, uncontrolled access into sensitive bushland areas, the taking of flora, fauna and bushrock, the distribution of litter, occasional fire damage and damage to vegetation. Attempted and or successful break-ins at the tennis kiosk are also a noted form of vandalism.

The individual motivations of vandalism are complex with up to nineteen behavioural categories being identified³. It is beyond the scope of this plan to develop broad social solutions to vandal behaviour. However, within the context of this plan the most practical response is a 'situational'⁶ one that concentrates on site-based design and placement



solutions to reduce opportunity. If this extends to site hardening it should be done sympathetically in relation to the character of the park environment. A continuous improvement approach should be adopted in respect of a situational response to vandal behaviour whereby the efficacy of certain anti-vandal treatments is evaluated over time and if proven inappropriate then modified until a desirable outcome is achieved.

Additionally, there is scope for the use of interpretive techniques to combat the probably non-intentional vandalism of over the fence dumping of garden refuse on the park perimeter and the taking of barbecue wood within the park's bushland areas.

3.7.3 Woodchip Pile

Lower Cooper Park is the site for a storage pile of woodchip created by Council's municipal street tree pruning operations. The woodchip is used by Council staff involved in the maintenance of municipal garden beds. The positioning of the site and its associated use by heavy vehicles has resulted in soil compaction and loss of turf cover in the surrounding area. Additionally, there has been some resident concern with the size of the pile and the impact it has on visual amenity. Accordingly, it is recommended that as a storage pile, its size be reduced and repositioned to the rear of the present site and turf repair take place. Additionally, the access haulage line will be reduced and hardened in order to reduce erosion and the size of the compacted area, the dumping of woodchip by private contractors will be discouraged and the direct delivery of woodchip on site to work areas encouraged.

3.7.4 General Maintenance and Park Furniture

General maintenance consists of lawnmowing, rubbish removal, recycling, amenities cleaning; garden bed maintenance and minor landscaping work. This work will continue to be rationalised in order to improve general amenity whilst reducing maintenance times. Park Furniture consists of seating, tables, rubbish and recycle bins. The provision and distribution of these items throughout the park will be rationalised to maximise utility whilst minimising the time devoted to their maintenance.

3.8 Human Resource Management

3.8.1 Volunteer Management

Succinctly put, a volunteer is someone who chooses to 'act in recognition of a need, with an attitude of social responsibility and without concern for monetary profit, going beyond what is necessary for one's physical well-being'⁴. An individual's propensity to volunteer is determined by an interaction between personal or internal needs and a set of external conditions related to a perceived community need. The altruistic motive, the *desire to assist*, of social concern and responsibility was shown to be the most important reason for volunteers offering their services according to two South Australian surveys¹⁵. Other common reasons given for voluntary participation are, to gain experience and self-knowledge, to gain achievement, to meet expectations of others, to increase social



contact, to gain recognition, to fill leisure time, to express self and to express specific interest in the cause or activity⁴. In this regard, Cooper Park's bush regeneration program presents an opportunity for individuals within the local community to satisfy social and other personal needs whilst contributing to bushland conservation. Over the last decade Cooper Park's program of work has accommodated the casual involvement of volunteers from the local community.

The degree to which volunteer labour has been successfully utilized within the park's bush regeneration program has depended on the complexity of the site and the skill level of the participant relative to the supervisor/ volunteer ratio. This is especially relevant within Cooper Park where there is a significant level of remnant vegetation forming relatively complex plant communities. By comparison, the formal volunteer program undertaken in nearby Harbourview Park (and in which Cooper Park staff provide supervision each Thursday and Saturday) is based on relatively straightforward weed clearance and revegetation/ planting. Accordingly, volunteer involvement within Cooper Park's bush regeneration process should be encouraged but monitored to ensure quality outcomes. A preferred supervisor/ volunteer ratio at complex sites would be 1:2.

The involvement of the local community within the management of open space is consistent with objectives contained within, the 'Council's Charter' of the *Local Government Act 1993*, the Woollahra Management Plan 1998/1999 to 2000/2001 and the Woollahra Outdoor Recreation and Open Space Strategy 1992.

3.8.2 Park Staffing

Approximately, 45% of Cooper Park's 12 hectares of bushland has received primary treatment and is now on maintenance. As primary weed removal proceeds the requirement for maintenance labour input over a larger area increases despite improving plant community stability (a reduction in per hectare maintenance times) within those areas. Moreover, if a newly worked area has moderate regeneration potential or high weed establishment potential, then the time lapse between initial weed removal and an endpoint exhibiting sustainable plant community stability lengthens. Bush regeneration is a labour intensive process that brings results over a large area. Accordingly, the implementation success of Cooper Park's bush regeneration program hinges on the sustainability of an adequate staffing level over time. The history of bush regeneration work within Cooper Park to date has followed an ecologically sound process of working from good areas to bad. Consequently, remaining areas to receive primary treatment have at best moderate natural regeneration potential and will therefore require a slower pace of primary weed removal and a more intensive maintenance stage. Given a permanent staff of six and a continuing National Trust contract it is estimated that the area of bushland/potential bushland within the park will be on maintenance within 20 years.

Cooper Park is presently experiencing a staff shortage. An increase and/or redistribution of hours between National Trust contract areas within the Woollahra Municipality in order to favour Cooper Park is being considered. There is community support for the re-establishment of a permanent staffing level of 6 (six) within the park.



3.9 Leases and Licences

There are two licences current at Cooper Park. No other leases or licences are proposed under this plan of management except for a potential lease or licence of the area at 9a Cooper Park Road which will be subject to further investigation.

There is one licence issued to Cooper Park Tennis Courts and Kiosk. The term of the licence is for 10 (ten) years from 1 July 1996. The licence area comprises 8 tennis courts, a kiosk, public toilets and grass verges. Permissible uses involve the use of the tennis courts for social tennis, competitions and coaching; a kiosk for serving and selling light refreshments and pro shop for selling tennis-related equipment.

The other licence is issued to Miroma, a day care centre providing programs for adults with disabilities, for use of the Cooper Park Road Community Hall. Miroma uses the hall each week day between 9 am and 3.30 pm for activities for small groups of adults with disabilities. The term of the lease is for 5 (five) years from 1 July 1999. The hall is used by the general community at other times.

Any lease or licence granted must comply with the core objectives of the relevant community land categorisation though existing agreements remain unaffected by the provisions of the Act until their expiry date. The latter is the case for the present lease and licence. Nonetheless, the current lease is consistent with the core objectives for land categorised as being for **general community use** and the current licence is consistent with the core objectives for land categorised as **sportsground**.

3.10 Park Hire

Woollahra Council hires out parks and reserves for organized activities such as weddings, wedding photographs, film shoots, social gatherings and sporting events. It is important that the undertaking of any such activities does not compromise the core management objectives for any identified land category.

4.0 BASIS FOR MANAGEMENT

4.1 Cooper Park Valued

Legislative land categorisation, Council land management goals, community preference and a listing with the Australian Heritage Commission reflect the specific values attributed to Cooper Park. These values can be variously described as being educational, scientific, recreational, cultural, aesthetic, historical, social and natural. It is upon these values that the goal and objectives within this plan of management are based. The protection and enhancement of these values is consistent with objectives contained within legislation, related policies, plans and initiatives noted in Section 1.2 and detailed in Appendix 1. Cooper Park values comprise:

Educational value as a site for environmental and cultural studies by primary, secondary and tertiary students

Scientific value as a site for studying the ecology of flora, fauna and other life forms within an urban context and as a site containing a threatened plant species

Recreational value as a park providing a range of recreation opportunity settings

Cultural value for its ability to impart a sense of cultural relatedness stemming from the romantic garden theme and bushland context of its recreational development and, its earlier Aboriginal history

Aesthetic value stemming from the architectural layout and design of its recreation infrastructure and the naturalistic beauty of its bushland setting

Historical value as a reminder of, the area's Aboriginal presence, the early period of European colonisation, a mostly lost community of local flora and fauna and as a record of early 20th century landscape development

Social value as a setting for a variety of social interactions

Natural Value - as an island of bushland within an urban landscape, traversed by a natural watercourse and providing habitat for flora, fauna and other life forms

4.2 Goal

'A park primarily valued for its remnant bushland character exhibiting a high level of local endemic biodiversity, presenting a diverse range of recreation opportunity settings, and managed sustainably in relation to its overall heritage significance'.



4.3 Objectives Explained

The *Local Government Act 1993* as amended 1998 provides sets of core objectives in association with each land category (Appendix 5) which gives general guidance to the formulation of management action. Fully interpreted these **core** objectives accommodate the formulation of **specific** objectives that address all site-based and other planning issues and ensure the protection of identified values for Cooper Park.

The diversity of land categories identified within Cooper Park illustrates the management challenge that faces the often mutually exclusive objectives of natural area/ heritage conservation and recreational use. The objectives contained within this plan are mindful of the need to reconcile in part the cross-purposes associated with such juxtaposed values.

The Action Plan (Section 5) groups objectives according to each of the planning issues discussed in Section 3. Each specific objective will follow an abbreviated reference to one or more relevant core objectives. Each issue may generate a number of specific objectives and subsequently one or more actions.

5.0 ACTION PLAN

Action Plan Tables have been constructed for each of the legislative land categories identified for Cooper Park. This serves to make clear the link between core objectives and management action. Accordingly, seven Action Plan Tables are presented including one for, **Bushland, Watercourse, Sportsground, Park, Area of Cultural Significance and General Community Use**. An extra category '**Park as a Whole**' has been created to address whole park issues. It should be noted that recommended actions may simultaneously satisfy core objectives in a number of categories other than the one for which they occur. Recommended actions are assigned a time-based priority rating which in turn form this plan's strategy to be implemented over a five-year period. **Priority** ratings are assigned within the Action Plan Tables according to the following code:

S - Short Term (completed by Year 1- 2)

M – Mid Term (completed by Year 3 - 4)

L - Long Term (completed by Year 5)

O - Ongoing

Specific site-based actions are presented geographically in Map 7 – the **Masterplan**



Action **Responsibility** is nominated according to the following code:

MPS - Manager Parks and Streetscape

MHR - Manager Health and Regulatory

ATL - Area Team Leader

MPI - Manager Public Infrastructure

PS - Park Staff

HO - Heritage Officer

MWS - Manager Works and Services

TLT - Team Leader - Traffic

Performance Indicators and **Assessment Methods** (described Section 6) appear also in conjunction with each recommended action within the Action Plan Tables (Section 5) as a means of gauging the success of action implementation. Finally, **Cost Estimates** appear where applicable.





























6.0 REVIEW

Performance indicators and assessment methods appear in association with each recommended action within the Action Plan Tables. The methods of review consist of annual reports, observations by park staff, photographic records, park diary entries, the maintenance of species lists and nursery and planting records, park user surveys and the monitoring of resident complaints.

Park User Surveys can serve multiple purposes. They can help:

- gauge the success of plan implementation
- gauge the satisfaction levels of park users
- identify emerging issues and,
- identify components and levels of recreation demand

The success of park user surveys will depend on survey structure, which in turn will determine how amenable responses will be to interpretation. Regular park surveys will attempt to elicit information that will support an efficient and effective allocation of resources towards the management of Cooper Park.



REFERENCES

- 1) **Campbell, W.D.** (1899) *Aboriginal carvings of Port Jackson and Broken Bay – Ethnological Series No.1.* Department of Mines and Agriculture, Sydney.
- 2) **Chapman, G.A., Murphy, C.L.** (1989) *Soil Landscapes of the Sydney 1:1000,000 Sheet*, Soil Conservation Service of NSW, Sydney.
- 3) **Christiansen, M.L.** (1983) *Vandalism Control Management for Park and Recreation Areas.* Venture Publishing, Pennsylvania.
- 4) **Ellis and Noyes** cited in **Heidrich, K.W.** (1990) *Working with volunteers in employee services and recreation programs.* Australian Academic Press, Brisbane.
- 5) **Hill, J.** (1995) *Interpretive Plan and Strategy in Support of a Bush Regeneration Program – Cooper Park (Woollahra Council)*, unpublished.
- 6) **Hitchmough, J.D.** (1994) *Urban Landscape Management.* Inkata Press, Sydney.
- 7) **Hobbs, R.J.** (1992) *Biodiversity of Mediterranean ecosystems in Australia.* Surrey Beatty & Sons, Pty. Ltd., NSW.
- 8) **Huys, Johnston and Wickman – Australian Archaeological Survey Consultants Pty. Ltd.** (1995) *The Waverley Council Area, An Aboriginal Perspective: A report to the Waverley Council.*
- 9) **Jack, I.R.** (1984) *Municipality of Woollahra – Primary Report for Heritage study for the Municipality of Woollahra, Vol. 1*, unpublished.
- 10) **Jervis, J., Kelly, V.** (1961) *The History of Woollahra: A Record of Events from 1788 to 1960 and a Centenary of Local Government.* Sydney.
- 11) **Martin, K.** (1987) *Cooper Park: Woollahra Municipal Council.* Woollahra Municipal Council, Sydney (unpublished).
- 12) **McIntyre, G., Cuskelly, G. and Auld, C.** (1991) *The Benefits of Urban Parks: A market segmentation approach.* *Australian Parks and Recreation, Summer.*
- 13) **National Parks and Wildlife Service (NSW)** (1995) *Living with fire: bushfire management, the community and national parks in southern NSW.*



REFERENCES (cont.)

- 14) **New South Wales National Parks and Wildlife Service** (1994) *Biodiversity...nature's creativity, our responsibility*. NSWNPWS, Sydney.
- 15) **Noble, J.** (1991) *Volunteering: A current perspective*. The Volunteer Centre of South Australia, Adelaide.
- 16) **North Sydney Council** (1995) Bushland – Plan of Management.
- 17) **Perumal, Murphy Wu PL** (1993) Waverley Heritage Study, Volumes 1-6. Prepared for Waverley Municipal Council, Sydney (unpublished).
- 18) **Royal Botanic Gardens Sydney** (1997) Letter of plant identification for submitted specimen. Unpublished.
- 19) **Shannon, R.** (1999) Freelance Aboriginal Interpretive Officer. Bondi, Sydney.
- 20) **Wilcox** (1984) cited in Recher, H.F. (1993) The loss of biodiversity and landscape restoration: conservation, management and survival. An Australian perspective in Saunders, A., Hobbs, R.J. and Ehrlich, P.R. (eds.) *Nature conservation 3: reconstruction of fragmented ecosystems - global and regional perspectives*. Surrey Beatty and Sons Pty. Ltd., N.S.W.
- 21) **Williamson, D.** (1995) La Perouse Land Council.
- 22) **Woollahra Municipal Council** (1992) Woollahra Outdoor and Open Space Strategy. Prepared by Manidis Roberts Consultants. Unpublished.
- 23) **Woollahra Municipal Council** (1994) Prevention and Control of Bushfires. Recommendation to Council by the Community and Environmental Planning Committee – File No. 272.G, unpublished.



GLOSSARY

Community Land – The LGA 1993 requires that all Council land be classified as being either ‘operational’ or ‘community’ land. Community land is simply defined as land designated for use by the community.

Biodiversity - often interpreted simply as species richness but is more accurately described as ‘the variety of life forms, the ecological roles they perform and the genetic diversity they contain’⁶

Bush Regeneration – a process by which an ecosystem is restored and maintained primarily through a process of weed removal so that the natural regeneration of endemic plant species can occur

Fabric - refers to the physical material associated with heritage items

Fugitive Seed Stock – refers to the possible soil-borne occurrence of viable native plant seed

Genetic integrity – refers to the maintenance of genetic purity within the subpopulations of plant species by avoiding the introduction of plant material from geographically distant origins

Gross Pollutant Traps – Structures designed to intercept litter within drainage systems at a point from which the accumulated litter is easily retrievable. Acts to partially prevent the pollution of water bodies into which drainage channels discharge

Interpretation – refers to a process that utilizes various media to interpret the nature and significance of a particular resource for an audience that may not have a natural understanding of that resource. In this plan, the interpretation of Cooper Park involves the presentation of its overall heritage significance and related management issues to park users and the local community.

Mesic – usually referring to dark green soft-leaved plant species with a high content of mesophyll tissue. Such species typically inhabit moist, shady sites on more fertile soils

Non-endemic native plants – plants that are native to Australia but which do not have a natural distribution within the area into which they have been introduced.

Peduncle – the main stalk of an inflorescence or of a solitary flower

















APPENDIX 1 - RELEVANT OBJECTIVES FROM RELATED PLANS, STRATEGIES AND LEGISLATION

Woollahra Outdoor Recreation and Open Space Strategy 1992

Corporate Philosophy

In respect of the Woollahra Municipality:

- Facilitate the enhancement of the quality of life of its community
- Conserve the natural and built environment of the municipality
- Foster the individuality of local areas and the diverse range of lifestyles they offer yet maintain an overall harmony within this diversity

Open Space Goals

- To develop a regional co-ordinated approach to management of open space
- To satisfy the Woollahra community's needs for open space
- To encourage community participation in the management of open space

Woollahra Planning Program 1998/1999 to 2000/2001

Infrastructure

- Reduce pollution and urban run-off
- To provide, maintain and manage a high standard of infrastructure for the Council area

Community

- To provide appropriate public health services, controls and support
- To promote public safety within the built environment and public domain
- To satisfy needs of target groups in the municipality for leisure, arts and recreation
- To protect and enhance the natural environment including Woollahra's topography, foreshores and vegetation, its natural drainage system and the quality of harbour water
- To identify, protect and improve wildlife habitats and corridors
- To protect and enhance existing vegetation on public and private land; ensuring due consideration of views, safety, wildlife corridors, fauna and the promotion of appropriate planting programs in keeping with the character of areas
- To provide for and maintain open space which will meet community needs and which will be developed in sympathy with the existing natural environment



APPENDIX 1 (cont.) - Relevant Objectives from Related Plans, Strategies and Legislation

Local Government Act 1993 – Council Charter

- To properly manage, develop, protect, restore, enhance and conserve the environment of the area for which it is responsible, in a manner that is consistent with and promotes the principles of ecologically sustainable development

Woollahra Management Plan 1998-1999

Open Space/ Recreational Facilities

- To develop a planned program of maintenance and improvements consistent with the recreation needs of the community, contemporary landscaping techniques and research developments and manage the use of these areas, protecting the local amenity and the natural and built environments and in accordance with appropriate risk management principles

This principal objective includes the following strategic points

- Regular survey of open space users
- Ensure public participation in review and design of facilities
- Ensure protection of areas of remnant indigenous vegetation and encourage biodiversity
- To develop and maintain a community volunteer program within the Municipality

Local Environmental Plan 1995

- 2(2)e(iii) To provide for a diversity of open space types and recreation opportunities
- 2(2)e(iv) To allow for contributions towards the provision and embellishment of public open space and recreation facilities
- 2(2)(f) (I) To protect and enhance the natural landscapes throughout the area of Woollahra
- 2(2)f(ii) To promote the retention of trees and the planting of suitable new trees in appropriate locations
- 2(2)f(iv) To protect and enhance the environmental quality of the area of Woollahra through the appropriate management and conservation of the existing pattern of vegetation
- 2(2)(v) To protect the native flora and fauna
- 2(2)i(ii) To encourage the optimum use of existing infrastructure
- 2(2)g(I) To identify heritage items and heritage conservation areas and to provide measures for their conservation, protection and enhancement



- 2(2)g(vii) to protect sites of archaeological significance

APPENDIX 2 – FLORA OF COOPER PARK

COOPER PARK NATIVE PLANT LIST (June 2000)

Note: Not all listed plants are necessarily indigenous to Cooper Park or the region.

DIVISION PTERIDIOPHYTA

| FAMILY (Genus/Species) | COMMON NAME |
|--------------------------|--------------------|
| Adiantaceae | |
| Adiantum aethiopicum | Maidenhair Fern |
| Aspleniaceae | |
| Asplenium australasicum | Birds nest Fern |
| Asplenium flabellifolium | Necklace Fern |
| Blechnaceae | |
| Blechnum cartilagineum | Gristle Fern |
| Doodia caudata | Rasp Fern |
| Cyatheaceae | |
| Cyathea cooperi | Scaly Tree Fern |
| Cyathea australis | Rough Tree Fern |
| Calochlaena dubia | Rainbow Fern |
| Dicksonia antarctica | |
| Dennstaedtiaceae | |
| Hypolepis punctata | Downy Ground Fern |
| Hypolepis muelleri | Harsh Ground Fern |
| Pteridium esculentum | Bracken |
| Histiopteris incisa | Bats Wing Fern |
| Gleicheniaceae | |
| Gleichenia dicarpa | Pouched Coral Fern |
| Sticherus flabellatus | Fan Fern |
| Lycopodiaceae | |
| Lycopodium sp. ? | Club Moss |
| Osmundaceae | |
| Todea barbara | King Fern |
| Polypodiaceae | |
| Platyserium bifurcatum | Elkhorn |
| Pyrrosia rupestris | Rock Felt Fern |
| Pteridaceae | |
| Pteris tremula | Tender Brake |
| Pteris vittata | Chinese Brake |
| Selaginellaceae | |
| Selaginella sp. ? | Swamp Selaginella |
| Thelypteridaceae | |
| Christella dentata | |



DIVISION SPERMATOPHYTA

Subdivision Gymnospermae

| FAMILY (Genus/Species) | COMMON NAME |
|---------------------------|-----------------------|
| Cupressaceae | |
| Callitris sp. | |
| Podocarpaceae | |
| Podocarpus elatus | Plum Pine |
| Subdivision Angiospermae | |
| Acanthaceae | |
| Pseuderanthemum variabile | |
| Agavaceae | |
| Cordyline stricta | |
| Cordyline australis ? | Cabbage Tree |
| Doryanthes excelsa | Gynea Lily |
| Aizoaceae | |
| Tetragonia tetragonioides | Warrigal Cabbage |
| Apiaceae | |
| Centella asiatica | Indian Pennywort |
| Hydrocotyle sp. | |
| Xanthosia pilosa | |
| Araliaceae | |
| Polyscias sambucifolius | Elderberry |
| Polyscias elegans | Panax |
| Cotula australis | Asteraceae |
| Gnaphalium sphaericum | Carrot Weed |
| Gnaphalium sp. | |
| Helichrysum diosmifolium | |
| Bignoniaceae | |
| Pandorea pandorana | Wonga Vine |
| Campanulaceae | |
| Wahlenbergia sp. | Blue Bell |
| Cassythaceae | |
| Cassytha sp. | Dodder |
| Casuarinaceae | |
| Casuarina littoralis | Black She Oak |
| Casuarina glauca | Swamp Oak |
| Casuarina cunninghamiana | River Oak |
| Centrolepidaceae | |
| Centrolepis strigosa | |
| Ceratophyllaceae | |
| Ceratophyllum demersum | Foxtail |
| Commelinaceae | |
| Commelina cyanea | Native Wandering Jew |
| Convolvulaceae | |
| Dichondra repens | Kidney Weed |
| Cunoniaceae | |
| Callicoma serratifolia | Black Wattle |
| Ceratopetalum gummiferum | N.S.W. Christmas Bush |
| Ceratopetalum apetalum | Coachwood |
| Aphanopetalum resinum | Gum Vine |
| Cyperaceae | |
| Cyperus imbecillis | |
| Cyperus gracilis | Sedge |



| | |
|-------------------------------|----------------------------|
| Cyperus brevifolius | " |
| FAMILY (Genus/Species) | COMMON NAME |
| Cyperus polystachos | |
| Cyperus sesquiflorus | |
| Cyperus congestus | |
| Cyperus sanguinolentus | |
| Gahnia sieberana | |
| Gahnia clarkei | |
| Isolepis inundata | |
| Isolepis prolifera | |
| Dilleniaceae | |
| Hibbertia scandens | Climbing Guinea Flower |
| Droseraceae | |
| Drosera sp. | Sundew |
| Elaeocarpaceae | |
| Elaeocarpus reticulatus | Blueberry Ash |
| Elaeocarpus grandis | Quandong |
| Epacridaceae | |
| Monotoca elliptica | Tree Broom Heath |
| Leucopogon sp. | Beard Heath |
| Epacris longiflora | Fuschia Heath |
| Euphorbiaceae | |
| Poranthera microphylla | Small Poranthera |
| Phyllanthus gastroemii | Blunt Spurge |
| Glochidion ferdinandi | Cheese Tree |
| Breynia oblongifolia | Breynia |
| Omolanthus nutans | Bleeding Heart |
| Eupomatiaceae | |
| Eupomatia laurina | Bolwarra |
| Fabaceae | |
| Platylobium formosum | |
| ssp.formosum | Handsome Flat Pea |
| Kennedia rubicunda | Dusky Coral Pea |
| Pultanaea linophylla | |
| Pultanaea rosmarinifolia | |
| Haloragaceae | |
| Gonocarpus teucrioides | Raspwort |
| Juncaceae | |
| Juncus continuus | |
| Juncus usitatus | Common Rush |
| Juncus planifolius | |
| Juncus bufonius | Toad Rush |
| Lamiaceae | |
| Plectranthus parviflorus | |
| Westringia fruticosa | Coastal Rosemary |
| Lauraceae | |
| Neolitsia dealbata | White Bolly Gum |
| Endiandra sieberi | Corkwood |
| Cryptocarya microneura | Laurel below Kunzea forest |
| Liliaceae | |
| Dianella caerulea | Flax Lily |
| Schelhammera undulata | Lilac Lily |
| Lobeliaceae | |
| Lobelia alata | |



| FAMILY (Genus/Species) | COMMON NAME |
|-------------------------------------|----------------------|
| Loganiaceae | |
| Loganiaceae albiflora | |
| Loranthaceae | |
| Amyema sp. ? | Mistletoe |
| Malvaceae | |
| Pavonia hastata | Pavonia |
| Meliaceae | |
| Synoum glandulosum | Bastard Rosewood |
| Menispermaceae | |
| Stephania japonica var. discolor | Snake Vine |
| Mimosaceae | |
| Acacia binervia | Coast Myall |
| Acacia dealbata | Silver Wattle |
| Acacia decurrens | Black/Green Wattle |
| Acacia elata | Cedar Wattle |
| Acacia falcata | Sickle Wattle |
| Acacia floribunda | Sally Wattle |
| Acacia longifolia | Sydney Golden Wattle |
| Acacia parramattensis | Sydney Green Wattle |
| Acacia longifolia var. sophorae | Sydney Golden Wattle |
| Acacia stricta | Hop Wattle |
| Acacia suaveolens | Sweet Wattle |
| Acacia terminalis | Sunshine Wattle |
| Acacia ulicifolia | Prickly Moses |
| Moraceae | |
| Ficus rubiginosa | Port Jackson Fig |
| Ficus macrophylla | Moreton Bay Fig |
| Ficus superba | Sea Fig |
| Ficus obliqua | |
| Myrsinaceae | |
| Rapanea variabilis | Muttonwood |
| Myrtaceae | |
| Micromyrtus ciliata | Fringed Heath Myrtle |
| Syzygium australe | Brush Cherry |
| Syzygium oleosum | |
| Acmena smithii | Lillipilli |
| Syncarpia glomulifera | Turpentine |
| Lophostemon confertus | Brushbox |
| Tristanopsis laurina | Water Gum |
| Angophora costata | Smooth Barked Apple |
| Eucalyptus botryoides | Mahogany Gum |
| Eucalyptus capitellata ? | Brown Stringybark |
| Eucalyptus cinerea | Argyle Apple |
| Eucalyptus elata | Willow Peppermint |
| Eucalyptus globoidea | White Stringybark |
| Eucalyptus globulus | Tasmanian Blue Gum |
| Eucalyptus gummifera | Red Bloodwood |
| Eucalyptus maculata | Spotted Gum |
| Eucalyptus microcorys | Tallowood |
| Eucalyptus pilularis | Blackbutt |
| Eucalyptus piperita | Sydney Peppermint |
| Eucalyptus punctata | Grey Gum |



| FAMILY (Genus/Species) | COMMON NAME |
|----------------------------------|-----------------------|
| <i>Eucalyptus resinifera</i> | Red Mahogany |
| <i>Eucalyptus robusta</i> | Swamp Mahogany |
| <i>Eucalyptus saligna</i> | Sydney Blue Gum |
| <i>Eucalyptus tereticornis</i> | Forest Red Gum |
| <i>Leptospermum laevigatum</i> | Coast Tea Tree |
| <i>Leptospermum</i> sp. | |
| <i>Kunzea ambigua</i> | Tick Bush |
| <i>Callistemon salignus</i> | Willow Bottle Brush |
| <i>Callistemon rigidus</i> | Stiff Bottle Brush |
| <i>Callistemon citrinus</i> | Red Bottle Brush |
| <i>Melaleuca nodosa</i> | |
| <i>Melaleuca quinquenervia</i> | Broad Leaf Paper Bark |
| <i>Melaleuca stypheloides</i> | Prickly Paper Bark |
| <i>Melaleuca linariifolia</i> | Snow in Summer |
| <i>Baeckea</i> sp. | Heath Myrtle |
| Oleaceae | |
| <i>Notelaea longifolia</i> | Mock Olive |
| Orchidaceae | |
| <i>Pterostylis</i> sp. | Greenhood |
| <i>Acianthus fornicatus</i> | Pixie Orchid |
| <i>Cryptostylis erecta</i> | |
| Oxalidaceae | |
| <i>Oxalis corniculata</i> | Creeping Oxalis |
| Palmae | |
| <i>Livistona australis</i> | Cabbage Tree Palm |
| <i>Howea fosteriana</i> | Kentia Palm |
| Philesiaceae | |
| <i>Eustrephus latifolius</i> | Wombat Berry |
| Pittosporaceae | |
| <i>Pittosporum undulatum</i> | Sweet Pittosporum |
| <i>Pittosporum revolutum</i> | Yellow Pittosporum |
| <i>Billardiera scandens</i> | Apple Berry |
| <i>Hymenosporum flavum</i> | Native Frangipanni |
| Poaceae | |
| <i>Poa affinis</i> | |
| <i>Danthonia longifolia</i> | |
| <i>Danthonia linkii</i> | Wallaby Grass |
| <i>Danthonia tenuior</i> | |
| <i>Echinopogon caespitosus</i> | Tufted Hedgehog Grass |
| <i>Dichelachne crinita</i> | Plume Grass |
| <i>Aristida vagans</i> | Wire Grass |
| <i>Microlaena stipoides</i> | Weeping Grass |
| <i>Microlaena stipoides</i> var. | |
| <i>Digitaria parviflora</i> | |
| <i>Paspalidium distans</i> | |
| <i>Entolasia stricta</i> | Wirey Panic |
| <i>Entolasia marginata</i> | |
| <i>Entolasia whiteana</i> | |
| <i>Oplismenus aemulus</i> | |
| <i>Oplismenus imbecillis</i> | |
| <i>Imperata cylindrica</i> | Blady Grass |
| <i>Botriochloa macra</i> | Red Leg |
| <i>Themeda australis</i> | Kangaroo Grass |
| <i>Eragrostis brownii</i> | Brown's Love Grass |



| | |
|-----------------------------------|----------------------------|
| <i>Agrostis avenacea</i> | Blown Grass (at Livistona) |
| FAMILY (Genus/Species) | COMMON NAME |
| Polygonaceae | |
| <i>Persicaria hydropiper</i> | |
| <i>Persicaria decipiens</i> | |
| <i>Persicaria lapathifolium</i> | |
| Proteaceae | |
| <i>Persoonia lanceolata</i> | Lance-leaf Geebung |
| <i>Persoonia levis</i> | Broad-leaf Geebung |
| <i>Banksia ericifolia</i> | Heath Banksia |
| <i>Banksia integrifolia</i> | Coast Banksia |
| <i>Banksia serrata</i> | Old Man Banksia |
| <i>Hakea dactyloides</i> | Broad-leaf Hakea |
| <i>Grevillea robusta</i> | Silky Oak |
| <i>Grevillea sericea</i> | Pink Spider Flower |
| <i>Lomatia silaifolia</i> | Crinkle Bush |
| <i>Stenocarpus sinuatus</i> | Fire Wheel Tree |
| <i>Xylomelum pyriforme</i> | Woody Pear |
| <i>Lambertia formosa</i> | Mountain Devil |
| Ranunculaceae | |
| <i>Clematis aristata</i> | Old Mans Beard |
| Rhamnaceae | |
| <i>Alphitonia excelsa</i> | Red Ash |
| <i>Pomaderris discolor</i> ? | Pomax |
| Rubiaceae | |
| <i>Opercularia aspera</i> | Common Stinkweed |
| Rutaceae | |
| <i>Zieria smithii</i> | |
| <i>Zieria pilosa</i> | |
| <i>Phebalium dentatum</i> | |
| <i>Crowea saligna</i> | |
| Sapindaceae | |
| <i>Dodonea triquetra</i> | Hop Bush |
| <i>Guioa semiglauca</i> | |
| <i>Cupaniopsis anarcardioides</i> | Tuckeroo |
| <i>Alectryon tomentosus</i> | Soap Berry |
| Scrophulariaceae | |
| <i>Veronica plebeia</i> ? | Wall Speedwell |
| Smilacaceae | |
| <i>Smilax</i> sp. | Native Sarsaparilla |
| Sterculiaceae | |
| <i>Brachychiton acerifolium</i> | Illawarra Flame Tree |
| <i>Brachychiton populneus</i> ? | Kurrajong |
| <i>Brachychiton discolor</i> | White Kurrajong |
| <i>Lasiopetalum</i> sp. | Velvet Bush |
| Violaceae | |
| <i>Viola hederacea</i> | Violet |
| Vitaceae | |
| <i>Cissus hypoglauca</i> | Water Vine |
| Xanthorrhoeaceae | |
| <i>Xanthorrhoea arborea</i> | Grass Tree |
| <i>Lomandra longifolia</i> | Spiney Headed Mat Rush |
| <i>Lomandra multiflora</i> | Many Flowered Mat Rush |



COOPER PARK WEED/NON-NATIVE LIST

DIVISION PTERIDIOPHYTA

| FAMILY (Genus/Species) | COMMON NAME |
|------------------------|---------------|
| Salvinaceae | |
| Salvinia molesta | Salvinia |
| Davalliaceae | |
| Nephrolepis cordifolia | Fishbone fern |

DIVISION SPERMATOPHYTA

Subdivision Gymnospermae

| FAMILY (Genus/Species) | COMMON NAME |
|------------------------|-------------|
| Cupressaceae | |
| Cedrus sp. | |
| Cupressus sp. | |

Subdivision Angiospermae

| | |
|--------------------------|-----------------------------|
| Acanthaceae | |
| Eranthemum pulchellum | Blue Sage |
| Hypoestes phyllostachya | Polka-dot plant |
| Agavaceae | |
| Cordyline australis? | |
| Alstroemeriaceae | |
| Alstroemeria psittacina | New Zealand Christmas Bells |
| Amaranthaceae | |
| Amaranthus sp. | Amaranth |
| Amaryllidaceae | |
| Nothoscordum inodorum | Onion Weed |
| Crinum sp. | |
| Apiaceae | |
| Apium sp. ? | Sea Celery |
| Foeniculum vulgare | Fennel |
| Apocynaceae | |
| Mandevilla laxa | Chilean Jasmine |
| Acokanthera oblongifolia | |
| Araceae | |
| Zantedeschia aethiopica | |
| Colocasia sp. | Taro |
| Araliaceae | |
| Hedera helix | Ivy |
| Asclepiadaceae | |
| Araujia hortorum | Moth Plant |
| Asteraceae | |
| Eupatorium adenophorum | Crofton Weed |
| Eupatorium riparium | Mist Flower |
| Conyza canadensis | Canadian Fleabane |
| Conyza albida | Tall Fleabane |



| | |
|--|-----------------------|
| <i>Conyza bonariensis</i> | Flaxleaf Fleabane |
| FAMILY (Genus/Species) | COMMON NAME |
| <i>Erigeron karvinskianus</i> | Seaside Daisy |
| <i>Solidago canadensis</i> var. <i>scabra</i> | Canada Goldenrod |
| <i>Bidens pilosa</i> | Cobblers Peg |
| <i>Bidens subalternans</i> | |
| <i>Ambrosia</i> sp. | Rag Weed |
| <i>Senecio mikanioides</i> | Cape Ivy |
| <i>Senecio</i> spp. | Fireweed |
| <i>Crassocephalum crepidioides</i> | Thickhead |
| <i>Gnaphalium</i> sp. | Cudweed |
| <i>Facelis retusa</i> | |
| <i>Taraxacum officinale</i> | Dandelion |
| <i>Lactuca serriola</i> | Prickly Lettuce |
| <i>Hypochoeris</i> sp. | Cats Ear |
| <i>Sonchus</i> sp. | Milk Thistle |
| Basellaceae | |
| <i>Anredera cordifolia</i> | Madeira Vine |
| Cactaceae | |
| <i>Opuntia stricta</i> | Prickly Pear |
| Caesalpiniaceae | |
| <i>Cassia coluteoides</i> | |
| Cannaceae | |
| <i>Canna indica</i> | Indian Shot |
| Caprifoleaceae | |
| <i>Lonicera japonica</i> | Honey Suckle |
| Caryophyllaceae | |
| <i>Stellaria media</i> | Chickweed |
| <i>Cerastium glomeratum</i> ? | Mouse Eared Chickweed |
| <i>Petrorhagia velutina</i> | |
| <i>Silene</i> sp. | |
| <i>Sagina procumbens</i> | Procumbent Pearlwort |
| Chenopodiaceae | |
| <i>Chenopodium album</i> | Fat Hen |
| Commelinaceae | |
| <i>Tradescantia albiflora</i> | Wandering Jew |
| Convolvulaceae | |
| <i>Ipomoea cairica</i> | Coastal Morning Glory |
| <i>Ipomoea indica</i> | Blue Morning Glory |
| Crassulaceae | |
| <i>Kalanchoe tubiflora</i> | |
| Cruciferae | |
| <i>Sisymbrium</i> sp. | |
| <i>Rorippa nasturtium-aquaticum</i> | Watercress |
| <i>Capsella bursa-pastoris</i> | Shepherds Purse |
| Cyperaceae | |
| <i>Cyperus eragrostis</i> | |
| Euphorbiaceae | |
| <i>Euphorbia peplus</i> | Petty Spurge |
| <i>Ricinus communis</i> | Castor Oil Plant |



| FAMILY (Genus/Species) | COMMON NAME |
|-------------------------------|--------------------|
| Fabaceae | |
| Trifolium sp. | Clover |
| Trifolium angustifolium | Narrow leaf Clover |
| Vicia sativa | Vetch |
| Dipogon lignosus | |
| Erythrina x sykesii | Coral Tree |
| Lotus hispidus | |
| Fumariaceae | |
| Fumaria sp. | Fumitory |
| Hydrocharitaceae | |
| Egeria densa | |
| Elodea canadensis | Canadian Pondweed |
| Iridaceae | |
| Romulea rosea | |
| var. australis | Onion Grass |
| Sisyrinchium micranthemum | |
| Watsonia angusta | |
| Crocasmia x crocomiiflora | Crocasmia |
| Juncaceae | |
| Juncus cognatus | |
| Lamiaceae | |
| Leonotis leonurus | Lions Ear |
| Plectranthus ciliatus | |
| Salvia uliginosa | |
| Lauraceae | |
| Cinnamomum camphora | Camphorlaurel |
| Liliaceae | |
| Protoasparagus aethiopicus | Asparagus Fern |
| Protoasparagus plumosus | |
| Chlorophytum comosum | Spider Plant |
| Malvaceae | |
| Hibiscus syriacus | Syrian Hibiscus |
| Modiola caroliniana | Carolina Marrow |
| Malvaviscus sp. ? | |
| Sida rhombifolia | Paddys Lucerne |
| Nyctaginaceae | |
| Mirabilis jalapa | Marvel of Peru |
| Ochnaceae | |
| Ochna serrulata | Mickey Mouse Plant |
| Oleaceae | |
| Olea africana | African Olive |
| Ligustrum lucidum | Broadleaf Privet |
| Ligustrum sinense | Small-leaf Privet |
| Onagraceae | |
| Oenothera stricta | |
| Oxalidaceae | |
| Oxalis spp. | Oxalis |
| Palmae | |
| Butia capitata | Jelly Palm |
| Chinese Windmill Palm | |
| Queen Palm | |
| Phoenix canariensis | Canary Island Palm |



Phoenix robelina

| FAMILY (Genus/Species) | COMMON NAME |
|-------------------------------|----------------------|
| Passifloraceae | |
| Passiflora edulis | Passionfruit |
| Phytolaccaceae | |
| Phytolacca octandra | Inkweed |
| Plantaginaceae | |
| Plantago ssp. | Lambs Tongue |
| Plantanaceae | |
| Plantanus x hybrida | Plane Tree |
| Poaceae | |
| Lolium perenne | Perennial Rye Grass |
| Briza maxima | Blowfly Grass |
| Briza minor | Shivery Grass |
| Bromus diandrus | Great Brome |
| Bromus unioloides | |
| Poa annua | Winter Grass |
| Rhynchelytrum repens | Red Natal Grass |
| Hordeum vulgare | Pearl Barley |
| Cortaderia selloana | Pampas Grass |
| Arundo donax | Giant Reed |
| Eleusine tristachya | |
| Eleusine indica | Crowsfoot Grass |
| Sporobolus africanus | Parramatta Grass |
| Cynodon dactylon | Couch |
| Avena sativa | |
| Avena barbata | Bearded Oats |
| Anthoxanthum odoratum | Sweet Vernal Grass |
| Ehrharta erecta | Veldt Grass |
| Ehrharta sp. | |
| Digitaria didactyla | |
| Digitaria sanguinalis | Summer Grass |
| Digitaria ciliaris ? | Crab Grass |
| Axonopus affinis | Carpet Grass |
| Paspalum dilatatum | Paspalum |
| Paspalum urvillei | Vasey Grass |
| Echinochloa crus-galli | Barnyard Grass |
| Setaria palmifolia | Palm Grass |
| Setaria geniculata | |
| var. pauciseta | Slender Pigeon Grass |
| Vulpia myuros | Rat's Tail Fescue |
| Eragrostis curvula | African Lovegrass |
| Polygalaceae | |
| Polygala myrtifolia | |
| Polygonaceae | |
| Rumex brownii | Swamp Dock |
| Rumex saggitatus | Potato Vine |
| Persicaria capitata | Japanese Knotweed |
| Primulaceae | |
| Anagallis arvensis | Scarlet Pimpernel |
| Ranunculaceae | |
| Ranunculus repens | Creeping Buttercup |



| FAMILY (Genus/Species) | COMMON NAME |
|-------------------------------|-----------------------|
| Rosaceae | |
| Rubus sp. | Blackberry |
| Prunus sp. | |
| Cotoneaster glaucophyllus | |
| Raphiolepis indica | Indian Hawthorn |
| Eriobotrya japonica | Loquat |
| Rubiaceae | |
| Coprosma sp. | Mirror Plant |
| Saliaceae | |
| Salix babylonica | Weeping Willow |
| Scrophulariaceae | |
| Cymbalaria muralis | |
| ssp.muralis | Ivy leaf Toad Flax |
| Veronica ? | |
| Simaroubaceae | |
| Ailanthus altissima | Tree of Heaven |
| Cardiospermum grandiflorum | Balloon Vine |
| Solanaceae | |
| Solanum seaforthianum | |
| Solanum mauritianum | Wild Tobacco Tree |
| Solanum pseudocapsicum | Madeira Winter Cherry |
| Cestrum parquii | Green Cestrum |
| Petunia sp. | Wild Petunia |
| TOMATO | |
| Tropaeolaceae | |
| Tropaeolum majus | Nasturtium |
| Ulmaceae | |
| Celtis occidentalis | Hackberry |
| Urticaceae | |
| Parietaria judaica | Dead Nettle |
| Verbenaceae | |
| Verbena bonariensis | Purple Top |
| Verbena officinalis | Common Verbena |
| Lantana camara | Lantana |
| Lantana montevidensis | Creeping Lantana |
| Violaceae | |
| Viola sp. | Pansy |
| Zingiberaceae | |
| Hedychium gardnerianum | Kahili Ginger |



APPENDIX 3 – FAUNA OF COOPER PARK

REPTILES

| | Common Name | Scientific Name |
|-----------------|-----------------------------|------------------------------------|
| Snakes | Swamp Snake | Hemiapsis signata |
| Lizards | Southern Leaf-tailed Gecko | Phyllurus platurus |
| | Fence Skink | Cryptoblepharus virgatus |
| | Eastern Water Skink | Eulamprus guichenoti |
| | Garden Skink | Lampropholis guichenoti |
| | Three-toed skink | Saiphos equalis |
| | Weasel Skink | Saproscincus mustelina |
| | Gully Skink | Saproscincus gallii |
| | Eastern Blue-tongued Lizard | Tiliqua scincoides ssp. scincoides |
| Tortoise | Long-necked Tortoise | Chelodina longicollis |

BIRDS (1988-99)

| Common Name | Scientific Name |
|--------------------------|--------------------------------------|
| Superb blue wren | Malurus cyaneus |
| White-necked heron | Ardea pacifica |
| White-faced heron | Ardea novaehollandiae |
| White ibis | Threskiornis molucca |
| Black duck | Anas superciliosa |
| Peregrine falcon | Falco peregrinus |
| Domestic pigeon * | Colua livia |
| Galah | Cacatua roseicapilla |
| Sulphur-crested cockatoo | Cacatua galerita |
| Rainbow lorikeet | Trichoglossus haematodus |
| Scaly-breasted lorikeet | Trichoglossus chlorolepidotus |
| King parrot | Alisterus scapularis |
| Crimson rosella | Platycerus elegans |
| Eastern rosella | Platycerus eximius |
| Port Lincoln parrot | Barnardius zonarius (aviary escapee) |
| Red-rumped parrot | Psephotus haematonotus |
| Indian koel | Eudynamys scolopacea |
| Tawny frogmouth | Podargus strigoides |



Laughing kookaburra Dacelo gigas

APPENDIX 3 (cont.) – FAUNA OF COOPER PARK

BIRDS (1988-99)

| Common Name | Scientific Name |
|--------------------------|---|
| Dollar bird | Eurystomus orientalis |
| Welcome swallow | Hirundo neoxena |
| Black-faced cuckoo | Coracina novaehollandiae |
| Red-whiskered bulbul * | Pycnonotus jocosus |
| Grey shrike-thrush | Colluricincla harmonica |
| Grey fantail | Rhipidura fuliginosa |
| Willie wagtail | Rhipidura leucophrys |
| Red wattlebird | Anthochaera carunculata |
| Noisy miner | Manorina melanocephala |
| White-plumed honeyeater | Lichenostomus penicillatus |
| Eastern Spinebill | Acanthorhynchus tenuirostris |
| Spotted pardalote | Pardalotus punctatus |
| Silveryeye | Zosterops lateralis |
| Red-browed firetail | Emblema temporalis |
| Spangled drongo | Dicrurus hottentottus |
| Australian magpie lark | rallina cyanoleuca |
| Australian magpie | Gymnorhina tibicen |
| Pied currawong | Strepera graculina |
| Australian raven | Corvus coronoides |
| Crested pigeon | Ocyphaps lophotes |
| White-browed | |
| Woodswallow | Artamus superciliosus |
| Grey Butcherbird | Craticus torquatus |
| White-breasted sea eagle | Haliaeetus leucogaster |
| Barking Owl | Ninox connivens (not 100% ID. - possibly Boobook) |

* indicates introduced species



APPENDIX 4 - SIGNIFICANCE CRITERIA USED BY THE AUSTRALIAN HERITAGE COMMISSION IN ITS ASSESSMENT OF COOPER PARK:-

Criterion A: Its importance in the course, or pattern, of Australia's natural or cultural history

A.1 Importance in the evolution of Australian flora, fauna, landscapes or climate

A.3 Importance in exhibiting unusual richness or diversity of flora, fauna, landscapes or cultural features.

Criterion B: Its possession of uncommon, rare or endangered aspects of Australia's natural or cultural history

B.2 Importance in demonstrating a distinctive way of life, custom, process, land use, function or design no longer practised, in danger of being lost, or of exceptional interest.

Criterion D: Its importance in demonstrating the principle characteristic of:

(I) A class of Australia's natural or cultural places; or

(II) A class of Australia's natural or cultural environments.

D.1 Importance in demonstrating the principle characteristics of the range of landscapes, environments, ecosystems, the attributes of which identify them as being characteristic of their class.

Criterion F: Its importance demonstrating a high degree of creative or technical achievement at a particular period

F.1 Importance for their technical, creative, design or artistic excellence, innovation or achievement.



APPENDIX 5 - CORE OBJECTIVES FOR COMMUNITY LAND CATEGORISATIONS

s.36E CORE OBJECTIVES FOR COMMUNITY LAND CATEGORISED AS A NATURAL AREA

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

s.36F CORE OBJECTIVES FOR MANAGEMENT OF COMMUNITY LAND CATEGORISED AS A SPORTSGROUND

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

s.36G CORE OBJECTIVES FOR MANAGEMENT OF COMMUNITY LAND CATEGORISED AS A PARK

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



APPENDIX 5 (cont.) – CORE OBJECTIVES FOR COMMUNITY LAND CATEGORISATIONS

s.36H CORE OBJECTIVES FOR MANAGEMENT OF COMMUNITY LAND CATEGORISED AS AN AREA OF CULTURAL SIGNIFICANCE

- 1) To retain and enhance the cultural significance of the area (namely its Aboriginal, aesthetic, archaeological, historical, technical or research or social significance) for past, present or future generations by the active use of conservation methods
- 2) Those conservation methods may include any or all of the following methods and relate to the land and any buildings erected thereon:-
 - A) The continuous protective care and maintenance of the physical material of the land or of the context and setting of the area of cultural significance,
 - B) The restoration of the land, that is, the returning of the existing physical material of the land to a known earlier state by removing accretions or by reassembling existing components without the introduction of new material,
 - C) The reconstruction of the land, that is, the returning of the land as nearly possible to a known earlier state,
 - D) The adaptive reuse of the land, that is, the enhancement or reinforcement of the cultural significance of the land by the introduction of sympathetic alterations or additions to allow compatible uses (that is, uses that involve no changes to the cultural significance of the physical material of the area, or uses that involve changes that are substantially reversible or changes that require a minimum impact),
 - E) The preservation of the land, that is, the maintenance of the physical material of the land in its existing state and the retardation of deterioration of the land

s.36I CORE OBJECTIVES FOR MANAGEMENT OF COMMUNITY LAND CATEGORISED GENERAL COMMUNITY USE

To promote, encourage and provide for the use of land, and to provide facilities on the land, to meet the current and future needs of the local community and of the wider public:

- A) in relation to public recreation and the physical, cultural, social and intellectual welfare or development of individual members of the public, and
- B) in relation to purposes for which a lease, licence or other estate may be granted in respect of the land (other than the provision of public utilities and work associated with or ancillary to public utilities).



APPENDIX 5 (cont.) – CORE OBJECTIVES FOR COMMUNITY LAND CATEGORISATIONS

s.36J CORE OBJECTIVES FOR COMMUNITY LAND CATEGORISED AS BUSHLAND

- A) To ensure the ongoing 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, and
- B) To protect the aesthetic, heritage, recreational, educational and scientific values of the land, and
- C) 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, and
- D) To restore degraded bushland, and
- E) To protect existing landforms such as natural drainage lines, watercourses and foreshores, and
- F) 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, and
- G) To protect bushland as a natural stabiliser of the soil surface

s.36M CORE OBJECTIVES FOR MANAGEMENT OF COMMUNITY LAND CATEGORISED AS WATERCOURSE

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

