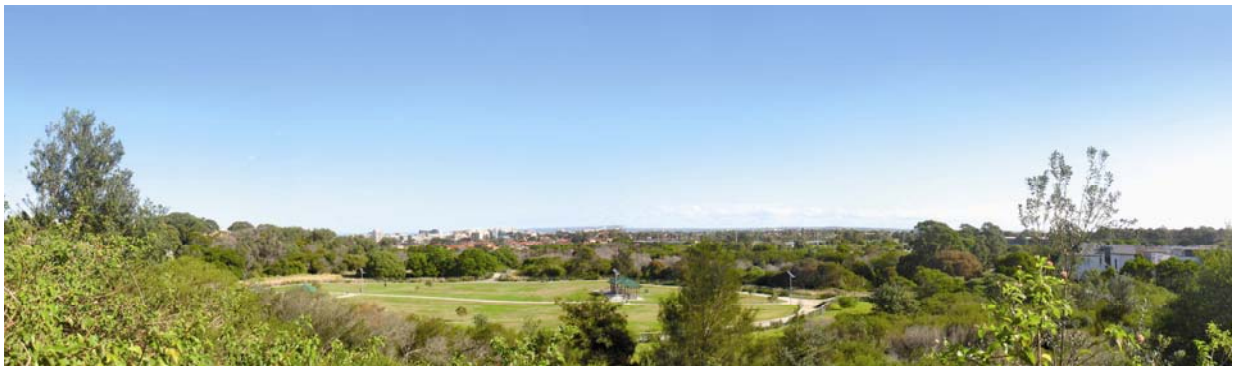
Randwick City Council
a sense of community

Randwick Environment Park Plan of Management



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Revision No:	Date:	Prepared by:	Reviewed by:
V6	29/05/13 –Draft	Sarah Horlyck	Glenn Berrill
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EXECUTIVE SUMMARY

Randwick Environment Park (REP) is a 13.1 hectare park in Randwick. Handed over from the Department of Defence to Randwick City Council (RCC) in 2010 as community land, RCC is responsible for the management of REP and the conservation of the significant ESBS vegetation community.

REP Plan of Management provides a framework to guide the management and future use of the Park. The PoM has been prepared following detailed assessment of the relative legislative documentation, comprehensive analysis of the site conditions and user patterns, and through stakeholder and community consultation.

REP predominantly comprises bushland, including vegetation of National conservation significance, an ephemeral wetland and open space area. The natural significance of the site was a major factor that led to the creation of REP and its classification under the Local Environment Plan (LEP) as Zone E2 Environmental Conservation. A core objective of this zone is to protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values.

This PoM complies with the LEP requirements and the requirements for preparation of plans of management for community land pursuant to the *Local Government Act 1993.* The PoM includes objectives, describes current issues and conditions and details proposed actions for the site.

It replaces a draft 2003 PoM prepared by the then land owner, the Department of Defence as part of its requirement for redeveloping adjacent land for residential purposes.

Complimentary studies have been undertaken in (conjunction with) or recommended by this PoM. The PoM should be read in conjunction with the Fire Management Plan (FMP) in Appendix C and the REP Concept Plan, in Appendix A. The FMP outlines the adopted fire management strategy for REP, and the Concept Plan. This Concept Plan illustrates future uses, connections, recreational opportunities, and PoM recommendations.

This Plan of Management proposes a series of key changes to the Park to improve user access, site facilities, aid in site interpretation and ultimately user enjoyment of this special natural area.

The implementation of this Plan of Management will ensure the protection, conservation and enhancement of this significant natural heritage site while providing for the community's low key recreation, social and educational enjoyment of the park.

This PoM, as part of its management approach identifies three key management areas for the park, being Bushland, ephemeral wetland and passive recreation/environmental interaction.

This plan was adopted by council on 24 March 2015.

GLOSSARY

Term	Definition in this POM
Community Land	Means land that is classified as community land under Division 1 of Part 2 of Chapter 6 of the Local Government Act 1993
CP	Concept Plan
Detailed Documentation	A detailed drawing set resolving a concept design suitable for construction purposes
EEC	Endangered Ecological Community
ESBS	Eastern Suburbs Banksia Scrub
LEP	Randwick Local Environmental Plan (2012)
Management Area	Defined area of Randwick Environment Park used to describe and satisfy the criteria of the Local Government Act to complete the Plan of Managements' objectives
RCC	Randwick City Council
REP	Randwick Environment Park
PoM	Plan of Management
SW	Sydney Water
The Act	Local Government Act 1993

1. INTRODUCTION

1.1 WHAT IS A PLAN OF MANAGEMENT

A Plan of Management (PoM) is a document that identifies and describes issues affecting public open space administered by a federal or state agency. A PoM provides guidelines and recommendations of how a park or park will be used, improved, maintained and managed in the future, helping to determine where and which activities occur in the park.

1.2 BACKGROUND TO THE PLAN OF MANAGEMENT

This PoM has been developed to identify current uses and values present in REP, define management areas and identify actions.

This Plan builds upon and supersedes the 2003 Draft Plan of Management for the Park prepared by the Department of Defense and adopted by Randwick City Council. It provides Council with a framework and methodology to implement a prioritised list of recommendations for the improved use and management of the Park. This plan can also be referred to for any new proposals for the park's development, use and/or management to ensure the proposals are compatible with the values of the Park.

This Plan identifies a vision and describes aims and objectives in accordance with State and Local legislation and guidelines, before developing management actions and means of implementation. A Landscape Concept Plan has been undertaken concurrently with this Plan of Management to spatially resolve the issues and identify opportunities.

In combination, these two documents identify and outline a set of recommendations and actions to improve the future condition, character and use of the park, including the ongoing maintenance of high value Eastern Suburbs Banksia Scrub (ESBS) vegetation. The implementation of this Plan of Management will ensure the protection, conservation and enhancement of natural heritage over time.

The PoM has been prepared following detailed assessment of the relevant legislative documentation, comprehensive analysis of site conditions and user patterns, and thorough stakeholder and community consultation.

The preparation of a PoM for the adjacent Randwick Community Centre has been undertaken and opportunities to integrate the park and centre uses have been identified in both PoMs.

This plan was adopted by council on 24 March 2015.

1.3 VISION, PURPOSE AND AIMS OF THIS PLAN OF MANAGEMENT

1.3.1 Vision

A vision statement has been developed to assist in developing specific, site appropriate management objectives.

"Randwick Environment Park is an area of significant natural environments that will be maintained and enhanced, and offers unique environmental experiences, educational resources and informal recreational activities for the local and wider community."

1.3.2 Purpose

The purpose of this PoM is to provide a guiding document for future use and management of REP for the protection, conservation and enhancement of the native remnant bushland including ESBS and the wetland, while providing a range of sympathetic passive recreational opportunities.

1.3.3 Aims

The aims of this PoM are as follows:

- Define the purpose of the park for both natural heritage conservation and passive recreational uses;
- Identify measures for the protection and improvement of ESBS in accordance with best practice;
- Assess current fire management practices for asset protection and ESBS management purposes, providing recommendations for future fire management in the park;
- Identify and respond to community needs, values and expectations for future use and management;
- Address site issues with actions that are sustainable and cost effective;
- Prepare concise, considered and achievable management objectives and actions for the enhancement of the park;
- Prepare a Concept Plan to illustrate the broad design principles, actions and approaches for identified future improvements, in accordance with the PoM recommendations;
- Establish a PoM compatible with broader Council policy and planning frameworks; and
- Satisfy the legislative requirements under the Local Government Act for preparation of a PoM for land zoned as E2: Environmental Conservation.

1.4 RELEVANT LEGISLATION AND POLICY

1.4.1 Commonwealth

1.4.1a Environmental Protection and Biodiversity Conservation Act 1999

The Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) is the Australian Government's key piece of environmental legislation. The EPBC Act provides for the identification and listing of nationally threatened native species and ecological communities. The Eastern Suburbs Banksia Scrub ecological community and the *Acacia terminal ssp. terminalis* species which both occur within the Park's bushland have both been listed under this Act and the Australian Government Minister for Environment Protection, Heritage and the Arts has adopted recovery plans to protect and restore these important populations.

1.4.1b National Strategy for the Conservation of Australia's Biological Diversity

The 1996 National Strategy for the Conservation of Australia's Biological Diversity was developed to fulfil Australia's obligations under the 1993 United Nations Convention on Biological Diversity (CBD), which seeks to sustain the rich diversity of life on Earth. Australia's Biodiversity Conservation Strategy 2010–2030 replaces the 1996 Strategy. This Plan of Management implements the sub priorities of the plan by protecting diversity, Maintaining and re-establishing ecosystem functions and reducing threats to biodiversity.

1.4.2 State

1.4.2a Local Government Act

Randwick Environment Park is owned by Randwick City Council and is classified as 'community land' under the Local Government Act 1993. Chapter 6 part 2 requires that council must prepare a plan of management for the Park. It is to be further categorised as "Natural area" and sub categorised for Bushland (for the Bushland and Passive Recreation – Environmental Interaction management areas) and wetland (for the wetland management area).

The LG Act requires community land to be managed according to prescribed core objectives.

The core objectives for management of community land categorised as an **"Natural area**" are:

(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 and setting, and

(c) to provide for the restoration and regeneration of the land, and

(d) to provide for community use of and access to the land in such a manner as will minimise and mitigate any disturbance caused by human intrusion, 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.

The core objectives for management of community land further categorised as **"Natural area –bushland"** are:

(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

The core objectives for management of community land further categorised as **"Natural area – wetland"** are:

(a) to protect the biodiversity and ecological values of wetlands, with particular reference to their hydrological environment (including water quality and water flow), and to the flora, fauna and habitat values of the wetlands, and

(b) to restore and regenerate degraded wetlands, and

(c) to facilitate community education in relation to wetlands, and the community use of wetlands, without compromising the ecological values of wetlands.

This plan of management aims to satisfy these management objectives for community land.

1.4.2b Environmental Planning and Assessment Act 1979 (EP&A ACT)

The Environmental Planning and Assessment Act 1979 (EP&A Act 1979) establishes the statutory planning framework for environmental and land use planning in NSW. This is done through State Environmental Planning Policies (SEPPs) and Local Environmental Plans (LEPs). The EPA Act 1979 also sets out processes for approving development applications for structures and works as set out in Randwick LEP 2012.

1.4.2c Threatened Species Conservation Act (TSC ACT) 1995

The main objectives of the TSC Act are to:

- conserve biological diversity and promote sustainable development
- prevent the extinction of native plants and animals
- protect habitat that is critical to the survival of endangered species
- eliminate or manage threats to biodiversity
- properly assess the impact of development on threatened species
- encourage cooperative management in the conservation of threatened species

Two items within the REP have been listed under the TSC Act. These are the endangered ecological community Eastern suburbs Banksia Scrub and the sunshine wattle *Acacia terminalis ssp. terminalis*.

Recovery plans for both of these items have been developed to assist in Species recovery and threat abatement; Eastern Suburbs Banksia Scrub Endangered Ecological Community Recovery Plan February 2004 and the National Recovery Plan Acacia terminalis subspecies terminalis (Sunshine Wattle) April 2010. The PoM aims to implement the relevant actions contained within these recovery plans.

1.4.2d Noxious Weeds Act (NW ACT) 1993

This Act provides for the identification, classification and control of noxious weeds. Under this Act certain plant species are declared noxious in the Randwick City Council area.

The bush regeneration actions in this PoM aim to control noxious weed species present in the park in accordance with the NW Act.

1.4.2e The NSW Rural Fires Act (RF ACT) 1997

This Act provides for the prevention, mitigation and suppression of fires for the protection of persons and property and for the protection of the environment. Under Part 4 Division 1 of the RF Act:

"It is the duty of a public authority to take the notified steps (if any) and any other practicable steps to prevent the occurrence of bush fires on, and to minimise the danger of the spread of a bush fire on or from any land vested in or under its control or management".

This PoM aims to address fire management within the Park in a manner consistent with relevant legislation and accepted fire management practices, and in accordance with the Park's fire management plan prepared by Total Earth Care Pty Ltd October 2013. This plan addresses fire management regimes which will be used to stimulate regrowth and regeneration for the existing threatened species and ecological communities.

1.4.2f Wetlands Management Policy

The policy provides a set of guiding principles for government agencies when making decisions on wetlands management and conservation.

This PoM aims to implement these guiding principles where relevant in the wetland management area.

1.5 COUNCIL'S PLANS AND POLICIES

1.5.1 The Randwick City Plan

The Randwick City Plan is a 20 year strategic community plan, which reflects the community's vision and long term goals for Randwick City. The Plan comprises five broad interrelated themes and the Randwick City Plan (2012) is an update of The Randwick City Plan that was first adopted by Council in 2006 and reviewed in 2013.

A key outcome in the City Plan is: Excellence in recreation and lifestyle opportunities. The Randwick Environment Park Plan of Management has been prepared based on the vision and actions contained in this city wide strategic plan.

Key outcome 10 - A Healthy Environment is also addressed in this plan through the related action that *Bushland, open spaces and biodiversity are protected and enhanced for future generations*.

1.5.2 RCC Management Plan, Annual Report and Budgets

Council's Management Plan is a four year Delivery Program to implement the Randwick City Plan. Council's Annual Report provides the reporting mechanism and budget information to demonstrate how Council is achieving the vision and desired outcomes of the City Plan via the Management Plan.

1.5.3 Randwick Local Environment Plan (2012) and Development Control Plan (DCP) 2013

Randwick Local Environmental Plan (LEP) 2012 is the statutory planning instrument that currently applies to Randwick City. It was gazetted on 1 February 2013 and commenced on 15 February 2013. The LEP designates the zoning, the development objectives and the permissible uses for every parcel of land within the Randwick City Area.

The Randwick Environment Park is zoned as Environmental Conservation (E2). In the LEP the purpose of this zone is to protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values. The DCP provides detailed guidance for new development, supplementing the LEP.

1.5.4 Recreational Needs Study (2008)

Council's Recreation Needs Study considered classifications for all open space in Randwick City, recommending that the Randwick Environment Park be classified as a regional park. Regional parks are those open spaces that are large or unique areas that attract residents and visitors from the whole of the Randwick LGA and beyond. The Park is also identified as a remnant bushland area.

The principles identified in the Recreation Needs Study for remnant bushland areas are:

- Provide facilities that encourage participation in passive outdoor recreation, where appropriate, which may include walking trails, viewing areas, and picnic areas.
- Management must reflect the need to ensure environmental protection for sensitive bushland areas and rare and endangered flora and fauna as a high priority, and the recreation needs of the community as a secondary or lower priority.
- Support controlled (or managed) access to the bushland area(s), where appropriate.

The above principles have been addressed in this Plan of Management.

1.5.5 Randwick s.94A Development Contributions Plan

This plan provides the mechanism for requiring development contributions to be paid to Council to increase or enhance public amenities and services required as a result of development. The works identified in this PoM may be funded in part from Council's s.94A plan.

1.5.6 Draft Plan of Management 2003

In 2003 a draft PoM was prepared for the park as part of the development assessment process for upgrade of the bushland, wetland and parkland. In July 2003 Council resolved to endorse the draft plan and further resolved that upon dedication of the Randwick Environment Park (REP) to Council, when it's responsibilities under the Local Government Act were enabled, a Plan of Management would be prepared for Council's consideration, together with community consultation and public exhibition.

2. DESCRIPTION OF RANDWICK ENVIRONMENT PARK

2.1 LOCATION

Randwick Environment Park (REP) is a 13.1 hectare park located in the suburb of Randwick. Situated in a mostly residential area, the park is bounded by low and medium density housing to the north, east and south. Randwick Community Centre and adjoining open space is situated to the north west of the park. The majority of the site's western boundary is currently undeveloped fenced land owned by the Department of Defence.

2.2 REGIONAL CONTEXT

Open space provision in Randwick City is 1,352 ha of land designated/zoned for open space and environmental purposes. This is significant with 30% of the city area or approximately 11.13 ha per 1,000 people, which is well above the provision in the neighbouring and similar local government areas (LGA) and the recognised standard of 2.83ha per 1,000 people. Refer to Figure 1 below.

Open space and environment zoned land in Randwick City contributes almost 70% of the open space provision in the eastern suburbs (with a total of 1,674 ha of open space within the four eastern suburb council areas of Randwick, Woollahra, Waverley and Botany Bay).

The Randwick Community Centre site is directly adjacent to the park; the centre is used by a large number of groups for purposes such as dance groups, yoga classes, children's birthday parties, table tennis, karate classes, meeting groups. The community centre is also used for environmental sustainability education courses. The Council's annual Eco-Living Fair is held in the centre and the open space area immediately to the south of the centre. This facility is a valuable resource for people within Randwick.

2.3 LOCAL DEMOGRAPHIC PROFILE

Residents of Randwick City are the main users of the site and according to the 'Randwick City Recreational Needs Study 2008' have the following general demographic characteristics, compared to the rest of Sydney:

- "Older" population profile and a high young adult population;
- Slightly higher proportion of residents that were born overseas; and
- Higher proportion of single people, and fewer families with children.

By 2021 the population has been projected to increase and "age". The expected impact on recreation provision includes:

- An ongoing need to improve the provision of open space and recreational facilities in the future;
- A likely increase in demand for unstructured passive recreation and low intensity social pursuits, such as walking;
- Most likely a continued strong demand for traditional sports; and
- Pockets of low income earners and therefore importance to ensure that subsidised, low-cost and/or nil-cost recreation participation opportunities.

Trends in participation in recreation in the Randwick City area include:

- Increased awareness of the strong link between involvement in recreational activities and good health;
- Demand by people for greater diversity of recreational facilities;
- Increased expectation by people/groups for higher standards in facility provision;
- Greater reliance on locally accessed and lower cost recreational opportunities; and
- Increased participation and community value for non-competitive, unstructured recreational activities, such as walking, cycling and jogging.

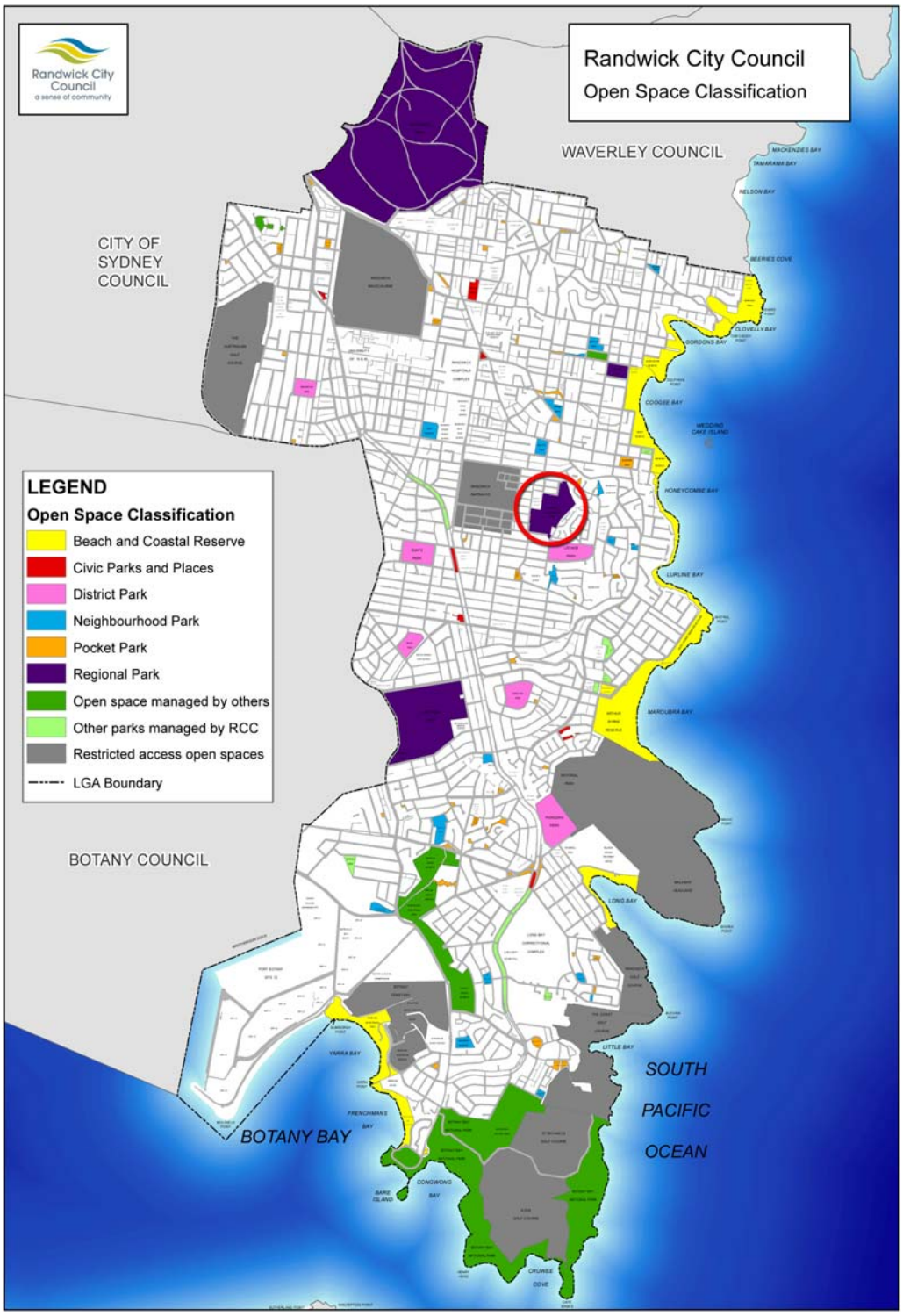

Figure 1- Regional context and open space distribution

2.4 LOCAL CONTEXT

REP has a larger physical area than many other parks in the immediate vicinity, providing a range of environmentally based and influenced recreational and educational resources. The map below depicts the public open space distribution and relative size within 1km of REP.

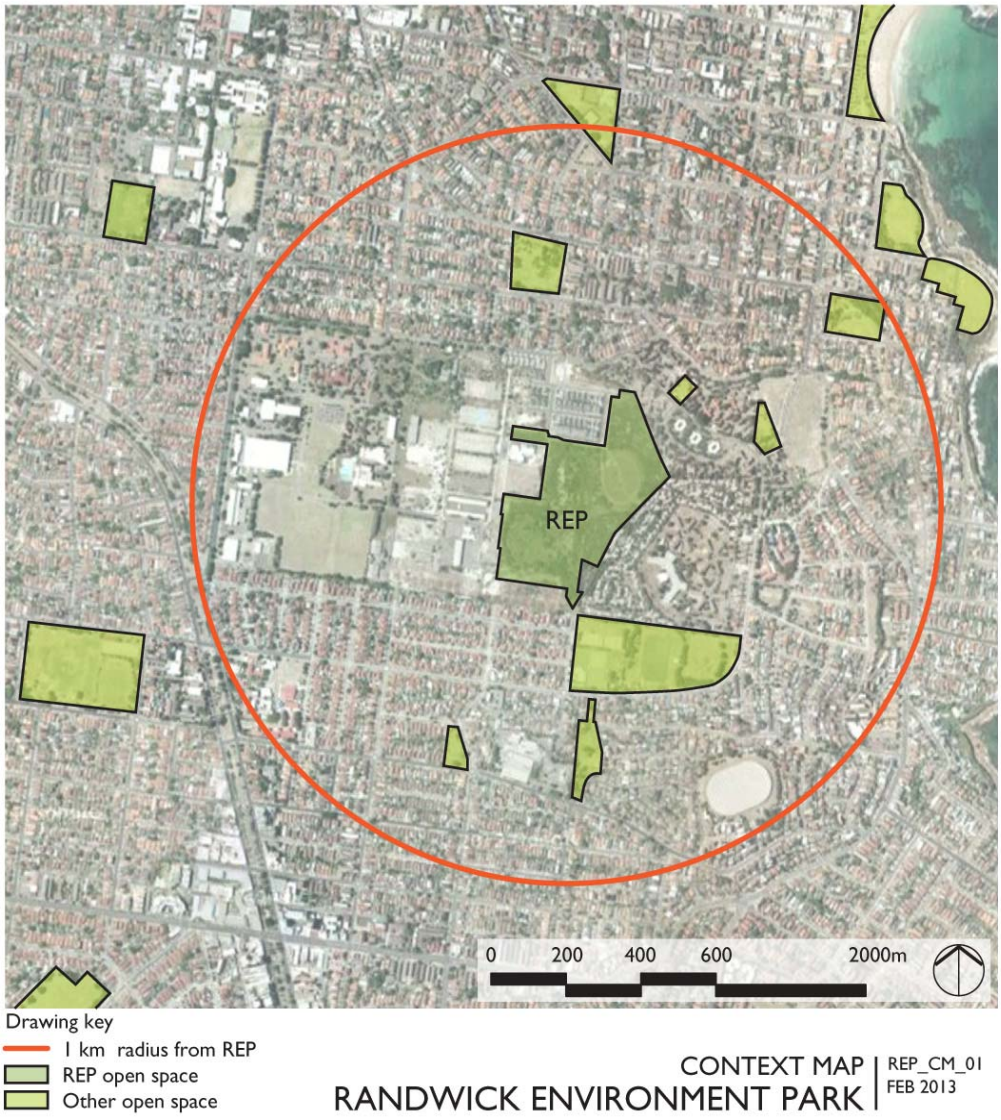

Figure 2- Local context and open space distribution

REP is a significantly larger open space than other public parks in the 1km area. It contains approximately 80% vegetation cover and 20% open space for informal recreational opportunities. As such, the REP open space is positively influenced by the significant environmental values, making the open space in REP a valuable resource. Due to its unique ecological values, REP provides a combination of environmental, natural and informal activities that don't exist elsewhere within the immediate area.

2.5 CULTURAL HERITAGE AND LAND USE

2.5.1 Cultural Heritage

An archaeological survey of the site was undertaken in 1997, in consultation with the La Perouse Aboriginal Land Council. This survey did not locate any Aboriginal sites in REP, and noted that there is little archaeological potential in the site due to the significant physical disturbance that has occurred to the land.

The Australian Heritage Commission identified the former Naval Stores previously on, and directly adjacent to, the site as having European cultural heritage significance. A part of the sheds have been represented as interpretive structures of the former Naval Stores, located within the Community Centre site adjacent to the REP.

2.5.2 Land Use History

The following is a brief chronological history of the site:

- 1875: Plan of the Botany & Lachlan Watersheds was prepared (surveyed and compiled by L. B. Blackwell, Assistant City Engineer, and 21 May). A “Deep Swamp” was identified in roughly the location of the current wetland.
- 1898: Formalisation of a rifle range across most of the REP site.
- Early 1940s: Cessation of rifle range.
- Late 1940s to late 1960s: Sand mining activities over much of the wetland and north-eastern parts of REP. These sand mining activities largely influenced the current topography of the site.
- 1944 to 1970s: Establishment and construction of Naval Stores.
- Late 1960s: Sports oval for Defence personnel use was constructed in eastern part of REP.
- 1970s: Construction of Department of Housing blocks north-east of REP – soil disturbance extends within eastern boundary.
- 1970s: Demolition of some of the Naval stores buildings with possible impacts on the Park.
- 1980s to1998: Use of REP for grazing of retired Police horses.
- Late 1980s: Development of Moverly Green residential area east of REP - possible deposition of large area of fill within REP adjacent to Argyle Crescent, influencing the topography of the site.
- 2001: Master plan for the Department of Defence Site.
- 2003: LEP Amendment 23 for rezoning surplus Defence Land and associated DCP.
- 2003: Development Assessment approval for the Randwick Environment.
- 2006: Randwick Community Centre was officially opened to the public.
- 2007-2008: Remediation and development of REP by Department of Defence.
- 2010: Park handover to Randwick City Council and official opening of REP.

2.5.3 Historical Site Photos

A series of historical photographs (supplied by RCC) of the site have been assembled below to illustrate the chronology described in section 2.5.2 above.

The photos graphically illustrate the significant changes in site conditions and the dramatic regrowth of vegetation across the site following comprehensive earthworks and clearing over many decades (the current subdivision pattern is superimposed on these, for ease of understanding the location).

Figure 3 - REP 1930 Aerial

Figure 4 - REP 1942 Aerial

Figure 5 - REP 1955 Aerial

Figure 6 - REP 1961 Aerial

Figure 7- REP 1975 Aerial

Figure 8 - REP 1984 Aerial

Figure 9 - REP 1999 Aerial

Figure 10 - REP 2002 Aerial

Figure 11 - REP 2006 Aerial

Figure 12 - REP 2009 Aerial

Figure 13 - REP 2011 Aerial

2.6 SITE CHARACTERISTICS

2.6.1 Landform, Soils & Drainage

Randwick Environment Park is relatively flat with an average height of 34m above sea level. The highest point of the park is the eastern edge of the park, where north-west-facing slopes rise to 52m above sea level. The lowest point of the park is the wetland, residing at 28m above sea level.

The park consists of Aeolian (wind-derived) sands. Although highly disturbed due to past land uses and sand mining operations, these soils are still present at the ground surface across the park. There are a small number of Hawkesbury Sandstone outcrops in the park on the eastern edge of the park and the eastern edge of the wetland.

During construction of Department of Housing and Moverly Green landfill has been deposited in the following locations:

- along the path connecting the two proposed passive recreation areas;
- within the wetland, possibly via stormwater from the Moverly Green development;
- adjacent to Argyle Crescent;
- throughout the passive recreation – Environmental Interaction picnic area; and
- in places south and south-west of the wetland.

The entire site has been remediated to the remediation standard for open space; National Environmental Health Forum's health based soil investigation level (NEHF E).

A site auditor accredited under the NSW Contaminated Land Management Act 1997 has confirmed that the site is suitable for use as parks, recreational open space by issuing a site audit statement (Site Audit Report, CH2MHILL, 2008).

The Randwick Environment Park Environmental Management Plan (GHD 2008) has been developed to provide guidance and procedures for the ongoing management of the park in relation to any potential contaminants and related health risks that may arise during bush restoration works or other intrusive ground works undertaken by council and/or Contractors.

As such, this PoM references the 2008 Management Plan for current and future actions.

2.6.2 Wetland

Due to the high permeability of the sands at the site and the site's location within the Botany Sands Aquifer there is a direct connection between the wetland and the groundwater system which explains the highly variable (ephemeral) nature of the water levels within the wetland. These water levels rise and fall in correspondence with local groundwater levels following periods of rainfall.

The wetland is also situated within the Botany Basin which has a catchment of approximately 89 hectares where it receives stormwater input from the surrounding residential and Defence lands. The wetlands perform an important stormwater detention function; with three stormwater outlets, each containing gross pollutant traps (GPTs), from adjacent residential catchments comprising the main inflows. When the wetland capacity is reached, flows are diverted via an overflow weir (at 31.0 AHD) to the Lurline Bay Outfall Tunnel. At capacity the water levels of the wetland have some impact on tree species growing on the edges of the wetland.

Photographic evidence undertaken since 2005 suggests that the wetland is dry a large amount of the time. The water levels of the wetland are influenced by rainfall, stormwater

runoff and groundwater infiltration. Water levels fluctuate naturally and are influenced by long periods of drought and rain, resulting in vast differences in wetland levels over long periods.

Little is known about the hydrological (and ecological) characteristics of the wetland as the wetland is man-made built over 60 years ago, arising from the sand mining period from the 1940's until the 1960's.This 20 year sand mining works saw a significant increase in size of the wetland. A preliminary investigations report was undertaken by Woodlots and Wetlands in 2002, but was inconclusive and outlined the need for further investigations.

Extended periods of higher water levels may lead to increased ecological diversity. Further investigations and study to determine the hydrological and ecological characteristics and values of the wetland would be of benefit to the overall ecological health and diversity of REP. Refer to Appendix I extract from Department of Defence, *Defence Land, Bundock Street, Randwick – Notice of Intention* (3 pgs. 2000).

2.6.3 Flora

2.6.3.1 Remnant Vegetation Communities

Native vegetation occupies approximately 4.5 hectares of the Bushland Management Areas within REP. Native vegetation, much of which is ephemeral, occupies up to 3.4 hectares within Wetland Management Area.

Since 1995, 92 indigenous (naturally-occurring) plant species have been recorded within REP (see Appendix F). This is relatively high, compared with other areas of remnant vegetation in the northern, more-developed, part of the City of Randwick. The high number of species is partly attributable to the variety of habitats.

One of the species present, a subspecies of the Sunshine Wattle *Acacia terminalis* subsp. *terminalis,* has been listed as endangered under the NSW Threatened species conservation Act 1995 (TSC Act) and EPBC Act. This rare wattle species occurs only within the Sydney Basin Bioregion, in eastern Sydney, near coastal areas from the northern shores of Sydney Harbour south to Botany Bay.

Fourteen other species recorded on the site are considered to be rare in the local area. Refer to Appendix F for list of indigenous and native plant species found in REP.

The native vegetation within REP can be divided into four different plant communities (RCC 2002), refer to Appendix H. These communities are:

- Eastern Suburbs Banksia Scrub;
- Moist Scrub on Sandstone;
- Dry Heath on Sandstone; and
- Wetland Vegetation.

Eastern Suburbs Banksia Scrub (ESBS)

REP contains vegetation of National conservation significance, namely the Endangered Ecological Community (EEC), of the Eastern Suburbs Banksia Scrub (ESBS). This vegetation community encompass approximately 3.6 hectares of the park.

With a height of usually 2-4m high, the ESBS in REP is a result of natural regeneration following the conclusion of sand mining in the 1960's. Located primarily on the park's fringes in the north-east and adjacent to the wetland, these vegetation areas are present in the least disturbed areas of the site, on remnant Aeolian soils.

The ESBS in REP is the largest population of ESBS in a Council owned and managed area in the wider Sydney region. As such, it is a significant ecological, natural and educational resource.

Habit: Open to closed heath and scrub, usually 2-4m high.

Habitat: Aeolian (wind-derived), dune sands.

Ecology: Natural regeneration appears to be greatly enhanced by certain combinations of: sunlight; fire; minor disturbance of the soil surface, the presence of a soil seed bank and the presence of at least certain, undetermined aspects of original soils, possibly of a mycorrhizal nature. Species richness is likely to decrease over time since last disturbance event, e.g. fire. ESBS may be affected by all the threatening processes identified in section 4.5.4.

Condition: Vegetation structure, species richness and natural regeneration of seedlings varies greatly within REP. Numerous sites contain combinations of complete cover, good species diversity and abundant seedling germination. Given time, it is likely that this community will expand, via natural regeneration, to occupy all available habitats.

While a large number of threatening processes are operating, most can be adequately addressed through appropriate park management. Weed invasion may be significantly addressed within the next ten years, while other processes, relating to fire and pollinators, will rely on further research, not necessarily at REP. Threatening processes will require ongoing monitoring.

Moist Scrub on Sandstone

Habit: Closed scrub to 4m high.

Habitat: The usually moist sandstone outcrop on the eastern side of REP.

Ecology: Natural regeneration is likely to be greatly enhanced by: sunlight; fire; minor disturbance of the soil surface; the presence of a soil seed bank and the presence of at least certain, undetermined aspects of original soils, possibly of a mycorrhizal nature. Species richness is likely to decrease over time since last disturbance event, e.g. fire. This community may be affected by all the threatening processes identified in section 4.5.4.

Condition: Vegetation cover is generally closed, with dense groundcover present for much of this community's extent. While species richness is relatively low, this is unlikely to affect the viability of this community. Given its relatively intact nature, apart from some weed invasion, the capacity for natural regeneration is likely to be high.

While a large number of threatening processes may operate, most are currently very limited and can be adequately addressed through appropriate park management. Weed invasion may be significantly addressed within the next three years. Threatening processes will require ongoing monitoring.

Dry Heath on Sandstone

Habit: Open heath to 2m high.

Habitat: Usually dry sandstone outcrop on the eastern side of the wetland.

Ecology: Natural regeneration is likely to be enhanced by: sunlight; fire; the presence of a soil seed bank and retention of some water (not flooding, which may wash away the seed bank) for periods on the rock platform. This community may be affected by all the threatening processes identified in section 4.5.4.

Condition: While vegetation cover is generally open, this may be considered natural, as is the case for sandstone heath in many places in the Sydney region. Soil is likely to accumulate slowly over time, with a gradual increase in vegetation cover. While species

richness is generally low, there is abundant natural regeneration of seedlings and colonisation of other species from adjacent heath on sand is likely to occur.

While a large number of threatening processes may operate on this community, most are limited and can be adequately addressed through appropriate park management guidelines and design and the first year's works. Weed invasion may be significantly addressed within three years. Threatening processes will require ongoing monitoring.

Wetland Vegetation

Habit: Sparse to closed sedgeland and herbland, usually <1m high.

Habitat: The wetland, generally below 31.0 (AHD), varying greatly spatially and temporally.

Ecology: Natural regeneration is likely to be greatly enhanced by: sunlight; minor disturbance of the soil surface; the presence of a soil seed bank; the presence of water and sufficiently long lower water levels to allow natural regeneration. This community may be affected by all the threatening processes identified in section 4.5.4. excepting: isolation; altered fire regimes and increased soil nutrients.

Condition: Vegetation cover is overall sparse to open, reflecting both past disturbance and extended periods of dryness over recent years. This may change rapidly if a pattern of higher and fluctuating water levels develop, as has been evidenced by Council over the past ten years. Species richness is generally low, for a wetland this size. However, during periods of inundation, more species are likely to colonise the wetland from other wetlands in the region, via water birds. During dry periods, adjacent heath and scrub vegetation on sand and sandstone expands into the wetland area. The fluctuating nature of the wetland / dryland community boundary around 31m (AHD) between is likely to persist.

While a large number of threatening processes may operate on this community, most can be adequately addressed through appropriate park management. Weed invasion will require ongoing management. Threatening processes will require ongoing monitoring.

2.6.3.2 Exotic Vegetation

A number of non-native species are present in REP, with weed invasion apparent throughout most of the park which is not unusual given the park's history and its urban context. Of the 144 non-indigenous plant species which have been recorded in REP (see Appendix F), nearly all of these species are likely to have naturalised and may be considered weeds.

2.6.3.3 Plantings

Little planting has occurred within REP due to the large areas of remnant bushland. All planting completed to date have consisted of native species. Planting areas include:

- Moverly Green boundary (trees and shrubs within 4 metres of boundary);
- Old sports field (shrubs around the western edge);
- Near Dooligah St (trees north of the wetland);
- Near Henning Ave (shrubs at the south-eastern corner of the wetland).

Only one species indigenous to the site is also believed to have been planted, i.e. *Leptospermum laevigatum.*

In general, future plantings are to be restricted to the Passive Recreation – Environmental Interaction Management Zones and on steep, erodible banks. Apart from turf, plantings are to be restricted to native species, while generally avoiding use of species indigenous to the site, in order to maintain the local genetic diversity.

2.6.4 Fauna

2.6.4.1 Native Fauna

A large number of fauna has been identified within REP, a significant portion of which are native to the region. A number of these fauna species have not been sighted elsewhere is Randwick, Illustrating how REP serves the purpose of a wildlife refuge for native animals.

Frogs

Six different varieties of frogs have been identified in REP, one, the Eastern Banjo Frog, represents the only known record of this species in the City of Randwick municipality. The numbers of frogs found in the park varies with fluctuation in wetland water levels. A reptile and frog survey is currently underway.

Reptiles

Nine reptile species have been identified in REP (refer Appendix F). Four of these, the Oak Skink, Fence Skink, Red-throated Skink and Robust Ctenotus, represent the most recent or only known recordings of these species in the City of Randwick. A reptile and frog survey is currently underway.

Birds

Sixty-six native bird species have been identified in REP (refer Appendix F). Three of these, the Grey Goshawk, Brown Thornbill and Intermediate Egret, represent the only known records of these species in the City of Randwick. A wide range of habitat types including: heath and scrub; taller trees; the wetland when water is present; taller grassy areas and open mown areas contribute to the overall varied composition of sighted bird species.

Invertebrates

No formal surveys of the invertebrate fauna have been undertaken, while observations have been undertaken. Council is currently conducting a survey, which will most likely identify a wide range of invertebrates present, though a generally limited number of species within each class.

2.6.4.2 Exotic Fauna

A number of non-native animal species have been identified in REP. This includes eight birds, three mammals and at least one fish. Many of these species are considered pests and compete with native fauna for food and shelter.

2.6.5 View Corridors

REP is more-or-less amphitheatre-shaped, rising on the north-eastern to south-eastern boundaries, allowing for significant views across the park and to the surrounding area from the elevated parts of the park.

A number of views are present in REP, as identified below.

Key view corridors **into** the Park include:

- Views from neighbouring residential properties;
- Views from Community Centre; and
- Views from surrounding streets.

Key view corridors **out** of the Park include:

- Views towards Maroubra Junction.

Key view corridors **within** the Park include:

- Views into and across Wetland from a number of view points and viewing decks;

- Views from North Eastern Ridge across entirety of park; and
- Views from pathways into ESBS vegetation.

Figure 14 – View from north eastern ridge across park

2.6.6 Infrastructure

REP has extensive existing infrastructure supporting the site's use and environmental protection, this infrastructure includes:

- Two BBQ shelters within the picnic area with BBQ's, picnic tables, bins and lighting.
- Park benches situated adjacent to extensive pathways throughout the park.
- Bins with dog waste bag dispensers throughout the park, to support on leash dog usage consistent with controlled access for dogs to minimise their entry to sensitive ESBS bushland areas; "off leash" is not considered suitable .
- Signage shelters with informative posters at the two main entrances to the park.
- Recycled timber and viewing platform for pedestrian access over ESBS.
- Council standard regulation and information sign posts at entries to the park.
- Five Solar lights located in the picnic area and on the southern side of the wetland.
- Three wetland lookouts.
- Fencing around bushland and wetland areas.
- Paths and Gross Pollutant traps on all stormwater outlets.

For use and condition of park infrastructure refer to section 2.8 below.

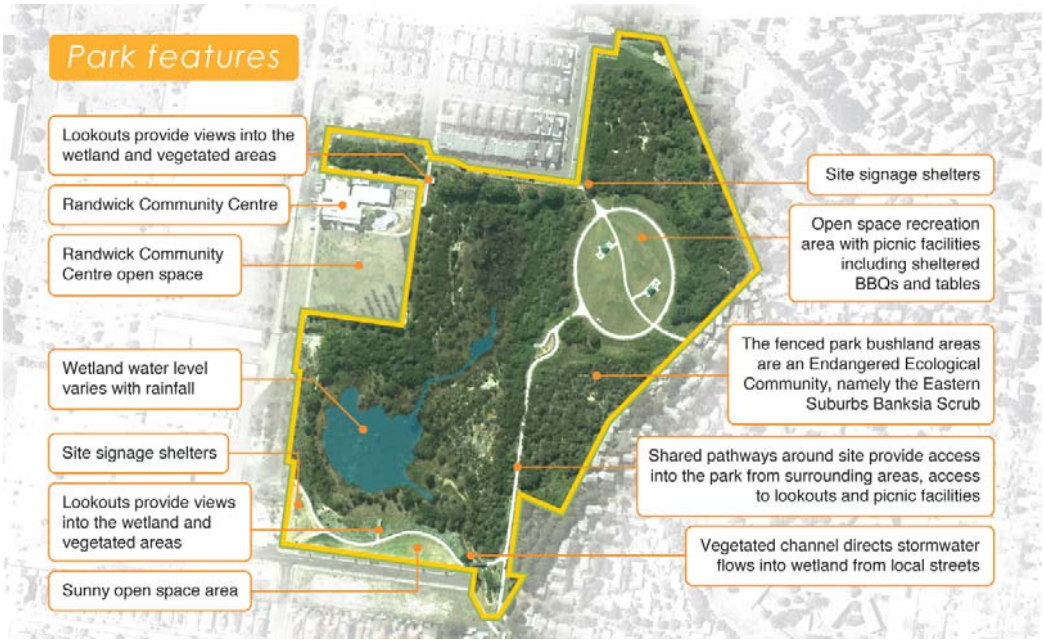

Figure 15 – Site Features

2.6.7 Access and Circulation

There are number of pedestrian access points into REP. These access points are predominantly formal, in the form of concrete pathways into the park from the surrounding streets.

The two main access points are from the on street parking bays on Dooligah Ave to the North and Joongah St to the south. More minor access points are present from Lomandra Pl (north east) and Argyle Cr (south east). An informal access point is evident from Wauchope Cres, where adjacent residents walk down the grassed slope to enter REP.

An extensive formal pathway network exists throughout the park. These are based primarily on pre-existing paths and a circuit around a former army ovals rather than desire lines within the park (i.e. routes that may be more direct and/or likely to be taken as a short cut).

2.7 COMMUNITY USE OF SITE

REP is well utilised by the Randwick community, with over 85% of surveyed visitors living within 5km of the park. Whilst there are no formal recreational activities undertaken in REP, it is used by a range of groups in an informal matter. This is enabled by the provision of extensive infrastructure for passive recreation and opportunities to experience natural bushland and wetland areas in an otherwise urban setting. A community survey has been undertaken to ascertain the community use of REP. The outcomes of the community consultation reinforce the importance to the community of informal recreation and demonstrate their appreciation of the natural values of REP. Refer to 3.2 for details of the community consultation (and Appendix E for outcomes).

In summary, the results of the survey confirm the informal activities that are undertaken (in order of popularity) include:

- Walking;
- Relaxation;
- Dog Walking;
- Cycling;
- Picnics; and
- Nature appreciation.

This range of activities reflects the current management practices for the park, in keeping with bushland conservation principles and predominantly passive recreational purposes. The community appreciates the nature of the park with respondents valuing the bushland over all other park features.

The survey identified a number of improvements suggested by the community. These (in order of popularity) include:

- Install toilets;
- Complete loop pathway;
- Protect bushland/wetland;
- More signage;
- More promotions/ tours of the park;
- Keep natural nature of park;
- Provide more shade;
- More dog waste bag dispensers; and
- More feral animal control.

These suggestions have been considered in the preparation of this PoM and Concept Plan. Refer to sections 4.3 & Appendix A.

2.8 MANAGEMENT AREA USES

This plan of management identifies three management area types within REP: bushland, ephemeral wetland and passive recreation/environmental interaction. These three management areas are illustrated in Figure 16 below.

Figure 16 – REP Management Areas

The use and condition of each management area is outlined in tables 2.8.1, 2.8.2 and 2.8.3 as the basis for undertaking the management needs and potential future improvements to these management areas, as set out in section 4 of this PoM.

2.8.1 Bushland Management Area Use and Condition Table

No.	Topic	Item	Use	Condition
Bushland Management Area				
1.1	Access & Circulation	North east site edge along fire break	• Route along fire break has been, until recently, somewhat over grown and rough underfoot, making it difficult to navigate, resulting in little use by the public. • Exceptional unimpeded panoramic views are available from a point at the north east edge of the site, along the fire break.	• Fire break access has been improved. • Whilst the view is spectacular, there is currently no suitable access to view point.
		ESBS areas	• Fencing to protect the ESBS and also to limit access into any ESBS area, yet also limits community appreciation and understanding of this significant vegetation community.	• Views from three lookouts at the wetland and northern entry have been impeded by bushland growth over time.
1.2	Landscape Infrastructure	Rock rap stormwater overflow into north eastern corner of park	• Stormwater overflow is dissipated by uneven rock rap down the grassed hill.	• Rock rap in moderate condition, however a significant amount of litter has accumulated in rocks requiring removal/maintenance.
		Raised Timber walkway bridge near community centre	• Constructed to allow for ESBS regeneration and fauna movement underneath.	• Walkway is in good condition.
		Timber lookout near visitor centre, designed to provide pedestrian access over ESBS areas and allow connection between ESBS patches	• Location and growth of vegetation has reduced views to ESBS and has no views to wetland resulting in little use by both visitors to REP and the Community Centre.	• Lookout in good condition, however the location provides limited views and results in it being underutilised.
		Perimeter fencing	• In some locations (Eastern and western edge) the site has a 1.8m high security fence to deter people from accessing the ESBS and wetland areas.	• Perimeter fencing in moderate condition.
		Site fencing	• All ESBS areas are fenced by 1.2m ESBS protection fencing. Present along pathways, this timber fence with mesh infill effectively deters people and domestic animals from entering the high value ESBS areas.	• Site fencing in good condition.

No.	Topic	Item	Use	Condition
		WIRES facilities	• Used by WIRES volunteers for wildlife rehabilitation. • Require access through the open space area to the south of the Community Centre. • Facilities are within and adjacent to high value ESBS areas.	• WIRES facilities in average condition and located too close to the sensitive ESBS areas.
1.3	Environment	Evidence of recent deliberately lit small fire in north eastern corner of the park	• If uncontrolled fire were to catch in REP there could be a risk to vegetation, park infrastructure and surrounding residences.	• Vegetation has recovered significantly since fire.
		Fire break	• Fire break serves the purpose of bushfire management and risk mitigation. • Fire break is not intended to be used by the public, previously over grown and inaccessible.	• Fire Break has been maintained, resulting in a cleared corridor along the eastern edge of REP. • Adjacent residences have some overhanging vegetation which could potentially increase the fire hazard to their property.
		ESBS	• Not intended for direct use by the public. • As a high valued EEC the ESBS forms a valuable environmental asset for the community as a whole.	• Condition of EEC varies across the site.

2.8.2 Wetland Management Area Use and Condition Table

No.	Topic	Item	Use	Condition
Wetland Management Area				
2.1	Environment	Wetland	• Little information on ephemeral nature of wetland, results in some community misconception that wetland has been drained when water levels are low. • Wetland is intended for viewing and wildlife appreciation and is not physically accessible to the public for safety reasons.	• Wetland is ephemeral, resulting in naturally fluctuating water levels. • High water levels have resulted in death of tree species within wetland. • Water quality of wetland is unknown. • The wetlands ecological function, structure and co-dependent species distribution (birds, fish, frogs, insects, plants, etc.) has not been surveyed or studied and is therefore largely unknown, precluding development of appropriate management actions. • Hydrological characteristics of wetland are ephemeral and seasonal by nature, influenced by catchment input, evaporation, infiltration to ground water and outlet control.
		Stormwater outlet into REP	• Conveys stormwater flows from the surrounding areas and filtered by existing Gross Pollutant Traps (GPTs). • Not intended to be used directly by the public.	• Channel in moderate condition, banks have recently been planted for stabilisation purposes. • Some undesirable in stream vegetation present.

2.8.3 Passive Recreation – Environmental Interaction Management Area Use and Condition Table

No.	Topic	Item	Use	Condition
Passive Recreation – Environmental Interaction Management Area				
3.1	Access & Circulation	An informal turfed, steep access route at Burragulung Street	• Connects the northern residential area and department of housing residences to the north east of REP, to Burragulung St. • Lack of formal access into the north eastern corner of the REP forces pedestrians to walk down the steep grassed slope to access REP.	• Turfed slope shows evidence of desire lines indicating frequent use.
		Pathway connection around the site boundary along Dooligah Ave and Burragulung St	• No formal pathway along this route limits access into the park from surrounding residences and between the residential area north of the park and the community centre.	• Turfed route shows evidence of desire lines indicating frequent use. • Walking option for park users.
		Pathway connection along western edge of wetland	• Informal path through vegetation formed by site users to complete the loop path given the proposed road (and associated pathway) on Department of Defence land is not yet built. • No formal pathway along the route limits the access to and from the community centre along the western edge of the wetland.	• Vegetated slope shows evidence of desire lines indicating frequent use.

No.	Topic	Item	Use	Condition
		2.3m and 3m wide sealed concrete pathways.	• Paths form a route from north to south and a circuit around the picnic. Pathway ends abruptly at the south western end of park and does not form a loop. • Pathways are utilised by park visitors for recreation purposes such as walking, cycling and dog walking. Where there is no formal access path along the western edge of the site; people climb fence and walk along the wetland bund. • Used by maintenance vehicles to access the site for GPT cleaning. • Forms main access route for Emergency vehicles, including fire trucks.	• Sealed plain concrete paths are in good condition. • Wide, formal nature of paths, lacking features and edge planting result in visual prominance and detracts from the 'natural' REP character and visitor experience of the wetland and ESBS.
		Narrower informal pathways don't exist	• Informal path type would complement the REP character and experience.	• n/a
3.2	Landscape Infrastructure	Site signage	• Marker signage installed at entries is the standard council signage, including a park map and regulatory information. • The two signage shelters located in the north and south entrances of the park are used for site specific information and are somewhat dated. They currently house a number of posters about REP.	• Standard council marker signs installed at entrances are in good condition but show evidence of minor vandalism. • Signage shelters are in moderate condition, with some evidence of vandalism to protective screens.
		Lookout at eastern edge of wetland	• Limited use as it does not provide views into the wetland due to large number of dead trees blocking views.	• Lookout is in good condition, yet provides limited views of the wetland and results in it being underutilised.

No.	Topic	Item	Use	Condition
		Long, pier style, timber lookout at the south of the wetland	• Linear nature of the lookout and small viewing area at the end with no seating or interpretation signage restricts the visitor experience and limits interaction with wetland detracting from the sensitive and natural nature of the site. • Lookout used by park visitors to view wetland and feed ducks by throwing food.	• Lookout in good condition yet its linear configuration, lack of seating, signage etc. results in it being underutilised.
		Lookout deck on western edge of wetland	• Few people use this deck as the pathway on the western side of the wetland has not been completed Lookout has limited views, and hence provides little interaction with the wetland.	• Lookout in moderate condition, but design limits views to the wetland by children.
		Park shelters, picnic tables and BBQ's	• Facilities for visitors to use for picnicking.	• Park shelters, picnic tables and BBQs in good condition.
		Park benches	• Used by the public. Benches are sited in open areas and on path edges, yet use could be enhanced by more inviting design/landscaping.	• Park benches are uniform and in good condition.
		Bins	• Bins are used by the public for disposing rubbish. Dog waste bags have recently been installed.	• Bins are uniform and in good condition although some are located in close vicinity to seating/picnic facilities.
		Lighting	• Solar lights exist at the picnic area and in the open space area on the south side of the wetland.	• In good condition and suitable for current use, as the Park is not designed for use of a night time.

No.	Topic	Item	Use	Condition
3.3	Environment	Large turfed open space recreation area with a few young trees	• Open space is utilised by the public for ball games, informal sports, and passive recreation. • Dog owners use park to exercise dogs off leash. NOTE: REP is a designated 'dog on leash' park.	• Turf is in good condition. • The few surviving trees are in moderate condition. • Open space has little shading with few trees which limits use • Suitable signage and management advice has been provided for dog users of the park.
		Open turfed space to the south of the wetland	• Unused by public due to dished profile, isolation, sparse nature and undeveloped adjacent land.	• Turf is in moderate condition.
		Area in the south west of the park are south of the wetland adjacent to Joongah Street	• Turfed and sparsely planted area for passive recreation.	• Turf is in poor condition. • Planting is sparse.

3. PREPARING THE PLAN OF MANAGEMENT

3.1 THE PLANNING PROCESS

The planning process for this Plan of Management followed the method below:

- Collation of background documents including the previous PoM and other supplementary reports;
- Review and analysis of background documents including preparation of Issues Log;
- Preparation of digital site base plans;
- Meetings and consultation with Council Officers, to oversee and advise the PoM and Concept Plan preparation;
- Numerous site visits for site analysis and planning purposes, including assessment of current fire conditions;
- Preparation of a Use and Conditions Table, detailing, current site conditions;
- Preparation of Functional Analysis Plan, illustrating detailed site analysis and presenting issues and opportunities for the site;
- Preparation of a draft Vision in collaboration with stakeholders;
- Review existing site conditions, fire management practices (including site visit) and the preparation of a site specific Fire Management Plan, including recommendations;
- Community Consultation, including, postcard drop, online survey, photo competition and stall at Eco-Living Fair;
- Review of consultation outcomes and preparation of summary;
- Stakeholder consultation;
- Preparation of Draft Plan of Management and Draft Concept Plan for Council review for Public Exhibition;
- Public Exhibition of Draft Plan of Management and Draft Concept Plan;
- Community consultation including notification and open days to gain community feedback on draft plan;
- Public Hearing as required for categorisation under the Local Government Act;
- Draft Plan of Management document is reviewed;
- Reporting on comments received during exhibition and any changes required for finalisation of the Plan of Management and Concept plan;
- Expert peer review of Draft Plan of Management; and
- Finalisation and adoption of Plan of Management and Concept Plan.

3.2 COMMUNITY CONSULTATION

Council undertook a range of communication and preliminary consultation activities with stakeholders and the community for input to the draft PoM. Key consultation activities included consultations with the community via a community booth at the Eco Living Fair, a user survey and a young persons' photograph competition are detailed below.

3.2.1 Eco Living Fair

In September 2012, REP hosted a stall at the Eco Living Fair, at Randwick Community Centre. The stall had a range of information about the park in its current condition and the proposed PoM process, including comprehensive Issues and Opportunities sheets (refer

3.3) that were displayed on the day. Both Council and consultant representatives were available on the day to answer questions, hand out and collect surveys.

3.2.2 Current User Survey

A user survey carried out in September/October 2012 generated 290 responses. Hard copy postage paid information postcards with survey, were distributed via the Eco Living fair, delivered to approximately 1500 residents living in close proximity to the site and made available via Council's administration centre, libraries and community centres . An equivalent online version of the survey was promoted via precinct committees, the Mayor's column in the southern courier and online via Council's website.

The results of this survey have provided useful input into the draft Plan of Management and copies of the postcard survey and the results are included in Appendix D and E of the attached plan.

Refer Appendix E for community consultation survey, results and summary.

3.2.3 Photo Competition

A young persons' photo competition was run concurrently by RCC with the Current User Survey. This competition aimed to engage local children in the REP and encourage them to enter photos they took of the park. A number of entries were received and the following photos gained prizes; and have been used in consultation and web material on the park and throughout this plan.

Figure 17 – Winners Young Person's Photo Competition

3.2.4 Stakeholder Consultation

Stakeholder consultation has been undertaken by RCC for this project. Council liaised with the relevant stakeholders to inform them of the process and gain feedback on issues pertaining to their areas of interest. Stakeholders consulted by RCC include:

- Department of Housing;
- Department of Defence;
- NSW Office of Environment and Heritage;
- Randwick Community Centre users;
- WIRES; and
- Community (as above).

3.2.5 Plan of Management Exhibition

The draft Plan of Management, along with a Concept Plan was reported to Council on 25 June 2013 where it was endorsed for public consultation. The plan was publicly exhibited for approximately 6 weeks from 9 July 2013 to 26 August 2013 with an extensive community consultation process including two open days and a public hearing. A total of 54 submissions were received and eight residents attended the public hearing.

The key issues raised in the submissions included need for toilets to be accessible on the weekend and located within the picnic area, completion of a loop walk around the wetland and maintenance issues with the current operation of the park including removal of weeds, litter and dog waste. A separate report on the public hearing was prepared and included in the Council report.

3.2.6 Peer Review

The Draft PoM was reviewed by Mr Douglas Benson form the Royal Botanic Gardens from August 2014 until February 2015. The recommendations in this peer review report have been taken into consideration during the finalisation of this plan.

3.2.7 Plan Adoption

The final version of the plan was reported to council and adopted on 24 March 2015.

3.3 SITE ASSESSMENT OF ISSUES AND OPPORTUNITIES

A number of site visits were undertaken to assess the site and identify current issues and opportunities. These Issues and Opportunities were compiled into sheets used at the Eco Living fair and provide a basis for PoM and Concept Plan development.

The main opportunities identified include the following:

- Enhance access into REP;
- Increase connections into the park;
- Improve circulation within the park;
- Maintain Fire Break;
- Provide improved viewing opportunities;
- Improve and extend signage;
- Continue to implement vegetation management;
- Enhance passive recreation experiences;
- Improve environmental education and nature appreciation opportunities;
- Expand opportunities for integration with adjacent community centre;
- Enhance the northern Park entry; and
- Provide demonstration areas highlighting the nature and beauty of ESBS plant species.

4. MANAGEMENT OF RANDWICK ENVIRONMENT PARK

4.1 MANAGEMENT AND MAINTENANCE OBJECTIVES

The PoM aims to appropriately manage REP for the protection, conservation and enhancement of the bushland and wetland, while providing a range of passive recreational opportunities which are sympathetic to the bushland and wetland. The following objectives apply to each Management Area:

- Bushland Management Area

To protect and enhance the significant ecological and biodiversity values of the endangered ESBS ecological community present in REP.

- Wetland Management Area

To achieve an ecologically diverse and healthy wetland ecosystem, that contributes to the overall ecological values of REP.

- Passive Recreation – Environmental Interaction Management Area

To provide high value passive recreational opportunities, quality informal recreational facilities, and foster an appreciation of the significant environmental values of REP.

A number of strategies have been developed for each of the management of REP and achieve the above objectives. These design strategies along with the Concept Plan focus on sustainability and sympathetic management responses to the environmental values of REP. Refer to Action Plans below for management strategies.

4.2 ACTION PLAN

The Action Plan below and Concept Plan summarise the purposes for which land, vegetation, and any infrastructure improvements will be used and developed.

The Action Plan provides the basis for the implementation of the Plan of Management (including the Concept Plan). The priorities have been assigned according to the specific action's relative importance or need for upgrading or improvement.

The design and upgrade proposals are indicative only and will be subject to relevant planning and approval requirements, including detailed design for the proposals. This detailed design may require minor variations in the location of facilities and works such as buildings, cycleways and paths.

The costings are based on preliminary 2014 figures for budgeting future works. Further detailed costing will need to be undertaken at detailed design and documentation stages and are subject to future capital works budget approval.

The Maintenance Program refers to a separate fund for maintenance of the REP which was provided by the Department of Defence upon the dedication of the Park (in accordance with the conditions of consent and the Deed of Agreement).

The identified actions, staging and estimated costings will be implemented via Council's annual Management Plan and Budget.

A comprehensive issue and action management plan has been prepared for each of the Management Areas (refer to the following tables):

- Bushland Management Area;
- Wetland Management area; and
- Passive Recreation – Environmental Interaction Management Area.

The actions in the action management plan have been categorised into High, Moderate and Low priority actions. The timeframes associated with these priority action categories are:

- High Priority - Short Term 1-2 years.
- Moderate Priority - Medium Term 3-5 years.
- Low Priority - Long Term 6-10 years.

4.3 LANDSCAPE CONCEPT PLAN

A Concept Plan (CP) has been developed to support the vision and outcomes of the Plan of Management. The plan conforms with the management objectives for each of the three areas of the park, set out in Appendix A.

The aim of this plan is to illustrate the recommendations included in the Action Tables to assist in clarifying the works and their location within the park. The CP recommendations predominantly cover landscape infrastructure and broad vegetation management recommendations. For specific fire management recommendations refer to Appendix C.

These actions can primarily be implemented through existing staff resources, with some capital works proposed, to be funded in annual Council budget and through grant funding.

This plan has been developed in collaboration with council and relevant stakeholders. The concept plan is a guiding document, and is to be read in conjunction with the PoM.

Action Plan

4.3.1 Bushland Management Area

Objective:
To protect and enhance the significant ecological and biodiversity values of the endangered ESBS ecological community present in REP.

Strategies:

- Improve ecological health of ESBS and *Acacia terminalis ssp. terminalis*
- Improve ecological health other bushland vegetation
- Protect ESBS and *Acacia terminalis ssp. terminalis* from environmental threats
- Raise community understanding and appreciate of ESBS

No.	Strategy	Issue	Action	Means of Implementation	Priority	Cost
Bushland Management Area						
1.1	Improve ecological health of ESBS	• Balancing ESBS management resources with provision for visual amenity to the boundary residents	1.1.1 Adopt REP Bushland Management Priorities with clear maintenance objectives and priorities for each area of the bushland.	Bushland Management Priorities	High	Staff resources + Maintenance Program
		• No ecological burning has been undertaken in the past in REP, to improve biodiversity and ESBS regeneration potential	1.1.2 Develop and implement an ESBS ecological burning strategy in collaboration with NSW Fire Brigade.	Bushfire Management Plan (refer Appendix C)	Moderate	Staff resources in conjunction with relevant authorities + Maintenance Program
		• Scope for greater management collaboration with agencies and interest groups with ESBS interests and responsibilities	1.1.3 Identify appropriate parties and develop mechanisms to facilitate collaborative working relationships.	Liaise with interagency groups	Moderate	Staff resources
		• Provision of fauna, avifauna and amphibian survey and condition assessments and with ongoing monitoring	1.1.4 Develop proposals and investigate collaborative projects involving the local community to regularly monitor the site.	Collaborative opportunities	High + Ongoing	Staff resources + Maintenance Program

No.	Strategy	Issue	Action	Means of Implementation	Priority	Cost
		• Scope for greater local community involvement to assist with improvement to ESBS ecology	1.1.5 Develop strategies for effective community involvement in the weed control of the site, e.g. Bradley Method.	Community Training	Moderate	Staff resources + Maintenance Program
1.2	Improve health of *Acacia terminal ssp. terminalis*	• Monitoring of population extent and numbers	1.2.1 Continue GIS mapping of *Acacia terminal ssp. terminalis* patches within the REP.	Bushland Management Priorities	High	Staff resources
1.3	Protect *Acacia terminal ssp. terminalis* from environmental threats	• Prevent hybridisation and to maintain the genetic integrity of the site's population	1.3.1 Exclude planting of *A. terminalis* species within the REP/RCC area to prevent hybridisation.	Planting schedule	High	Staff resources
		• Weed control invasion	1.3.2 Ongoing weed control management including targeted removal of major environmental weeds identified in the April 2010 Recovery Plan.	Bushland Management Priorities	Ongoing	Staff resources + Maintenance Program
		• Inappropriate fire regime	1.3.3 Adopt appropriate fire management practices for the park including appropriate maintenance of APZ, as per Fire Management Plan.	Bushfire Management Plan (refer Appendix C)	High	Maintenance Program
		• Altered hydrological flows	1.3.4 Following WIRES relocation maintain buffer zone north of site clear of structures to minimise upstream stormwater flows and nutrients.	Concept Plan	Ongoing	Staff resources + Maintenance Program

No.	Strategy	Issue	Action	Means of Implementation	Priority	Cost
		• Risk of Dieback from *Phytophthora cinnamomi*	1.3.5a Ensure hygiene protocols for contractors are followed. 1.3.5b Follow best practice guidelines for the design and construction of walking tracks. 1.3.5c Minimise importation of soil, gravel or sand into bushland. If this material must be introduced, ensure that it is free of *Phytophthora.*	Bushland Management Contracts + Concept Plan	Ongoing	Staff resources + Maintenance Program
1.4	Improve ecological health of native bushland areas (non-ESBS vegetation)	• Balancing bushland management resources with provision for visual amenity to visitors	1.4.1 Adopt REP Bushland Management Priorities with clear maintenance objectives and priorities for each area of the bushland.	Bushland Management Priorities	High	Maintenance Program
1.5	Protect ESBS from environmental threats	• Threat to ESBS through uncontrolled fire	1.5.1 Adopt appropriate fire management practices for REP, including appropriate maintenance of APZ, as per Fire Management Plan.	Bushfire Management Plan (refer Appendix C)	High	Maintenance Program
			1.5.2 Deter illegal lighting of fires in REP through informing community of fire threat to ESBS.	Community leaflet	Moderate	Maintenance Program
			1.5.3 Improve community amenity and understanding to encourage passive surveillance.	Concept Plan Signage strategy	Moderate	Maintenance Program
		• Weed control	1.5.4 Ongoing weed control management including removal of weed tree species subject to communication notification.	Bushland Management Priorities	Ongoing	Staff resources + Maintenance Program
		• Presence of feral animals in REP	1.5.5 Develop a feral animal control strategy for REP.	Feral Animal Control Strategy	High	Staff resource

No.	Strategy	Issue	Action	Means of Implementation	Priority	Cost
			1.5.6 Implement a feral animal control strategy for REP.	Feral Animal Control Strategy	High	Maintenance Program
		• Presence of domestic animals in REP	1.5.7 Inform community of threat of domestic animals to the fauna in REP.	Community leaflet Signage strategy	High	Staff resources + Refer to Action 1.5.6
		• Impact of dog faeces (nutrients and litter) on bushland	1.5.8 Inform community of threat of dog faeces to ESBS by clearly signpost dogs-on-lead nature of the park and encourage responsible dog ownership. Refer to 3.1.10 re bins.	Signage strategy Community leaflet	High	Staff resources + Refer to Action 1.5.7
		• WIRES facilities are located within valuable ESBS area, potentially impacting on ESBS natural regeneration	1.5.9a Propose alternative location for WIRES facilities. 1.5.9b Liaise with WIRES regarding relocation and improvement of facilities within REP. 1.5.9c Provision of appropriate screening and security measures for the new facility.	Consultation with WIRES East branch + Facility Plan development	High	Staff resources + Maintenance Program
1.6	Raise community understanding and appreciation of ESBS	• Restricted access into any ESBS areas because of its high environmental value limits community viewing and may impact on appreciation and understanding of this significant vegetation community	1.6.1 Investigate opportunities for interaction with ESBS that do not impact on the ESBS.	Develop strategy for ESBS interpretation and appreciation including (but not limited to) open days, planting activities, bush walks/tours.	High	Staff resources + Maintenance Program
		• Opportunity for improved signage to assist visitors to understand the ecological values of the park and providing information on activities/maintenance works underway or proposed	1.6.2 Develop a comprehensive signage strategy to inform community of value of ESBS and ongoing park improvements, including community input to the strategy.	Signage Strategy	High	Staff resources + Maintenance Program
			1.6.3 Implement the signage strategy.	Signage Strategy	High	Staff resources + Maintenance Program

4.3.2 Wetland Management Area

Objective:
To achieve an ecologically diverse and healthy wetland ecosystem, that contributes to the overall ecological values of REP.

Strategies:
- Improve environmental health of wetland
- Improve quality of stormwater flows entering wetland
- Improve visual amenity of wetland
- Foster community understanding of wetland system

No.	Strategy	Issue	Action	Means of Implementation	Priority	Cost
Wetland Management Area						
2.1	Improve environmental health of wetland	• Need for greater understanding of wetlands ecological function, structure and co-dependent species distribution	2.1.1 Investigate wetland to understand ecological function, structure and co-dependent species distribution (birds, fish, frogs, insects, plants, etc.) to develop appropriate management actions.	Wetland Strategy	High	Staff resources + Refer to Action 2.1.1
		• Hydrological characteristics of wetland	2.1.2 Undertake wetland investigation to understand hydrological characteristics and function of the wetland.	Wetland Strategy University student research project	High	Staff resources
		• Water quality of wetland is not documented	2.1.3 Investigate program of water quality monitoring involving local high schools and community groups.	Australian Museum Streamwatch Water testing program	Moderate	Maintenance Program + Staff resources
2.2	Improve quality of stormwater flows entering wetland	• Undesirable invasive in-stream species present in stormwater channel	2.2.1 Adopt REP Bushland Management Priorities and determine best method for removal and ongoing management.	Bushland Management Priorities (refer Appendix B)	Ongoing	Staff resources + Maintenance Program

No.	Strategy	Issue	Action	Means of Implementation	Priority	Cost
		• Variable quality of urban storm water entering wetland	2.2.2 Develop comprehensive water testing as part of Wetland Strategy, to determine and monitor quality of water entering wetland.	Wetland Strategy	Moderate	Refer to Action 2.1.1
			2.2.3 Develop appropriate GPT maintenance schedule involving monthly inspections and 3 monthly emptying.	Wetland Strategy	High	Staff resources + Maintenance Program
2.3	Improve visual amenity of wetland	• High and fluctuating water levels have resulted in significant death of trees within wetland	2.3.1 Develop tree removal method for selective removal of trees in wetland.	Tree removal	Moderate	Staff resources + Maintenance Program
		• Large wetland lookouts located and established over GPT and stormwater infrastructure detract from nature based aesthetic values of wetland	2.3.2 Investigate opportunities to upgrade wetland lookouts to improve viewing opportunities and aesthetics including possible construction of a bird hide on western lookout. (see also 3.5.1).	PoM Concept Plan	High	$45K Future Capital Works
2.4	Foster community understanding of wetland system	• Need for enhanced information for the community on the variable wetland, water levels resulting in misconception that wetland is being drained when water levels are low	2.4.1 Develop a comprehensive and illustrative signage strategy describing the ephemeral nature of the wetland. Consider community awareness measures including open day and talks/tours with consideration of ongoing events as part of the annual Eco Living Fair and/or other community centre events.	Signage Strategy	Ongoing	Refer to Action 1.6.2
		• Variable water quality and protection of the wetland requires no access to water	2.4.2 Utilise signage to inform public of conditions pertaining to wetland.	Signage Strategy	Moderate	Refer to Action 1.6.2
			2.4.3 Maintain fencing around wetland to deter access.	Maintenance	Ongoing	Maintenance Program

No.	Strategy	Issue	Action	Means of Implementation	Priority	Cost
		• Death of trees associated with ephemeral nature of the wetland	2.4.4 Develop signage strategy describing the ephemeral nature of the wetland and also tree death associated with changes in water levels of wetland as per 2.4.1.	Signage Strategy	Ongoing	Refer to Action 1.6.2

4.3.3 Passive Recreation – Environmental Interaction Management Area

Objective:
To provide high value passive recreational opportunities, quality informal recreational facilities, and foster an appreciation of the significant environmental values of REP.

Strategies:

- Improve passive recreational opportunities while ensuring that these are based on the environmental values of REP
- Provide ecologically based information, interaction and educational opportunities
- Improve pedestrian movement and circulation within REP
- Improve access into REP
- Improve passive recreational facilities
- Use environmentally sensitive materials in new and upgraded facilities

No.	Strategy	Issue	Action	Means of Implementation	Priority	Cost
Passive Recreation – Environmental Interaction Management Area						
3.1	Improve passive recreational opportunities that are sympathetic to the environmental values of REP	• Restricted viewing opportunities into ESBS and wetland limits appreciation and understanding of environmental values	3.1.1 Consider modification of ESBS lookout structure (see also 2.3.2 and 3.5.1).	PoM Concept Plan	High	Refer to Actions 2.3.2 and 3.5.1
			3.1.2 Identify possible additional viewing points within REP subject to relevant planning requirements and consultation with state agencies and the community.	PoM Concept Plan	Low	Maintenance Program
			3.1.3 Strategically locate signage at viewing points to explain site features and values.	Signage strategy	Moderate	Refer to Action 1.6.2
		• Concrete paths required for servicing of park and GPTs could be improved for visitor experience	3.1.4 Implement additional planting of interesting native species directly adjacent to wide pathways, while maintaining required vehicle maintenance access.	Management strategies	High	Maintenance Program

No.	Strategy	Issue	Action	Means of Implementation	Priority	Cost
			3.1.5 Investigate interesting graphic alterations / features to pathways and adjacent areas to provide sustainability/cultural connections to the ESBS, fauna and wetland.	Arts Strategy	Low	$30K Future Capital Works
		• Limited habitat connectivity to ESBS areas from Passive Recreation- Environmental Interaction Management Area	3.1.6 Incorporate ESBS plantings into the designated revegetated areas in Passive Recreation – Environmental Interaction management area as shown on Concept Plan.	PoM Concept Plan	High	Maintenance Program
		• Limited natural shade present in passive recreational areas of the park, in contrast with recreational and bushland areas of the site	3.1.7 Investigate the opportunity for plantings in the "picnic area" to be taken from Eastern Suburbs Banksia Scrub ecological community and *Acacia terminalis ssp. terminalis.*	PoM Concept Plan	Moderate	Staff resources + Maintenance Program
			3.1.8 Undertake soil improvement activities to ensure feasibility of installation of trees in the picnic area.	PoM Concept Plan	High	Staff resources
		• Use of the site for off-leash dog exercise, being sign posted as on-leash usage only, is not within keeping with the environmental values of REP	3.1.9 Clearly signpost dogs-on-lead nature of the park and encourage community to clean up after their dogs.	Signage Strategy	Ongoing	Refer to Action 1.6.2
			3.1.10 Maintain on a weekly basis dog waste bag dispensers and bins at entrances and exits of park.	Dog waste bags	Ongoing	Maintenance Program
		• Open turfed space in the south of the park is underutilised by the public due lowered profile, limited views of the wetland	3.1.11 Investigate opportunities for enhancing this area for improved amenity (e.g. landscaping) and use including views to the wetland with a sculptural landscape feature consistent with the natural values of the site	PoM Concept Plan	High	$30K Future Capital Works + Maintenance Program

No.	Strategy	Issue	Action	Means of Implementation	Priority	Cost
		• Picnic/BBQ area provides for informal use and does not contain a children's play ground	3.1.12a A children's playground is located adjacent to the community centres and is not proposed within the picnic area in line with community feedback. 3.1.12b A sculptural/educational element is to be provided on the southern side of the wetland (as per 3.1.11).	NA	NA	NA
3.2	Provide ecologically based educational opportunities	• Current signage is unevenly distributed and could be more strategically placed located, for better understanding of REP	3.2.1 Develop a comprehensive signage strategy for the park, with a collection of engaging signs to be implemented across the park.	Signage Strategy	High	Refer to Action 1.6.2
		• Site could be more frequently used by school and community groups	3.2.2 Develop an education program to encourage the visitation by school/community groups in conjunction with excursions/activities at Randwick Community Centre.	Promotion	High	Staff resources + $40K Future Environmental Levy
			3.2.3 Explore opportunity for ESBS education through the development of an ESBS demonstration walkway located to north of Community Centre.	PoM Concept Plan + ESBS interpretation and appreciation Strategy	Moderate	Staff resources. + Maintenance Program
			3.2.4 Expand ESBS demonstration area to also include areas other than the existing area adjacent to RCC.			
		• Connection between REP and adjacent Randwick Community Centre is underutilised	3.2.5 Enhance visual connection through ESBS demonstration area and signage. Expand community centre educational program to develop a stronger connection and biodiversity focus and encourage park visitation and environmental awareness.	Consultation and Promotion	Ongoing	Staff resources

No.	Strategy	Issue	Action	Means of Implementation	Priority	Cost
3.3	Improve pedestrian movement and circulation within REP	• Absence of formal continuous 'loop' pathway connection along western edge of wetland between the community centre and southern section of REP limits passive recreational potential of REP	3.3.1 Complete loop path by installation of a 2m wide low impact pathway outside the existing fence along western edge of wetland, joining the community centre path and southern REP path.	PoM Concept Plan	High	$75K Future Capital Works
			3.3.2 Investigate a low impact pathway along northern edge of community centre to provide connection to the Community Centre, while providing design and landscape measures to maintain the privacy and amenity of centre users.	PoM Concept Plan	High	$30K Future Capital Works
3.4	Improve access into REP	• Formal pathway opportunity to connect from residential areas to the north of the park which significantly restricts community access and ease of use by adjacent residents	3.4.1 Investigate the opportunity for implementing a formal access route from Department of Housing Estate to Dooligah Ave.	PoM Concept Plan	High	$30K Future Capital Works
			3.4.2 Undertake discussions with Department of Housing, regarding the implementation of a formal DDA compliant pathway with stairs in this location.	Investigation	Medium	Maintenance Program
		• Formal pathway connection opportunity along Dooligah Ave and Burragulung St, to address access to the park from surrounding residences and the community centre	3.4.3 Investigate the implementation of a low impact pathway in this location.	PoM Concept Plan	High	$100K Future Capital Works
3.5	Improve passive recreational facilities	• Existing wetland lookouts do not currently optimise views and the environmental values of REP	3.5.1 Investigate opportunities to modify existing wetland lookouts to allow for improved viewing opportunities and more sympathetic design, while recognising drainage/stormwater function.	PoM Concept Plan	High	$50K Future Capital Works

No.	Strategy	Issue	Action	Means of Implementation	Priority	Cost
			3.5.2 Identify preferred locations for one new lookout subject to planning requirements and detailed design while minimising environmental impacts and enhancing educational opportunities related to ESBS appreciation.	PoM Concept Plan	Low	Staff resources + $100-200K Future capital Works
		• Lack of toilet facilities in picnic area near picnic shelter and informal recreational area result in limited use of this area	3.5.3 Identify preferred location for toilet facilities in picnic area of REP subject to relevant planning requirements and detailed design ensuring toilet structure does not impact on, or overshadow ESBS areas.	PoM Concept Plan + Development Application	Moderate	$600K Future Capital Works
3.6	Materials	• Provision of environmentally sustainable facilities consistent with park values	3.6.1 Utilise best practice sustainable materials for all new infrastructure/facilities sympathetic to the site's natural heritage values.	New facilities/signage	High	Refer to specific items

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7. APPENDICES