



Volume 1: Bobbin Head Masterplan 2006

Ku-ring-gai Chase National Park



**NSW National Parks
and Wildlife Service**

Department of **Environment and Conservation** NSW



Volume 1: Bobbin Head Masterplan 2006

Ku-ring-gai Chase National Park

Part 1: Masterplan

Part 2: Conservation Management Plan

Part 3: Landscape Management Plan

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Prepared for:

Department of Environment and Conservation

Conybeare Morrison International + Context Landscape Design
52 - 58 William Street
East Sydney, NSW 2011
T. +612 8244 8888 F. +612 8244 8877
E. mail@cmplus.com.au
05167

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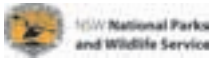
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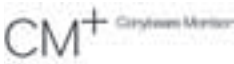
Department of Education and Conservation



National Parks and Wildlife Service

Project Consultants

Head Consultants:



Conybeare Morrison
Masterplanning
Conservation Management Plan



Context Landscape Design
Landscape Management Plan

Sub-Consultants:



Australian Museum Business Services
Flora Report and Fauna Information



Australian Museum Business Services
Aboriginal Research and Analysis



Arup
Traffic and Transport Planning



Bay Partnership
Quantity Surveying



Douglas Partners
Geotechnical Engineering



PPM Consultants
Community Consultation



Stratcorp
Recreational Planning



Sydney Soils and Laboratory Services (SELS)
Soil Conditions



Taylor Lauder Bersten
Marine and Structural Engineering

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Chris McIntosh	Regional Manager (Sydney North Region)	NPWS
Graeme Mitchell	Regional Operations Co-Ordinator	NPWS
Oriana Senese	Senior Projects Planning Officer, Central Branch	DEC
Mark Withford	Regional Works Coordinator, Sydney North Region	NPWS
Robin Aitken	Project Officer - Heritage, Central Branch	NPWS
Glen Crombie	Ranger, Ku-ring-gai Chase National Park	NPWS
Michele Cooper	Senior Ranger, Neighbour + Community Relations Officer	NPWS
Peter Milgate	Senior Field Supervisor (KCNP)	NPWS

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The Consultant Team Personnel were:

William Morrison	Company Director	Conybeare Morrison (CM+)
Colin Polwarth	Associate in Charge of Design	CM+
Lynette Gurr	Senior Heritage Specialist	CM+
Kate Denny	Heritage Specialist	CM+
Michelle Yik	Urban Designer	CM+
Rohini Mehta	Project Administrator	CM+
Oi Choong	Company Director	Context
Ben Dungey	Landscape Architect	Context
Astrid Brokamp	Landscape Architect	Context
Alan Duncan	Company Director	Bay Partnership (Quantity Surveying)
Leesi Lo	Quantity Surveyor	Bay Partnership
Mark Baker	Company Director	Taylor Lauder Bersten (Structural, Marine & Heritage Engineering)
Andrew Sutton	Engineer	Taylor Lauder Bersten
Andrew Hulse	Associate	ARUP Traffic and Transport Engineering
Brett Maynard	Traffic and Transport Engineer	ARUP
Carolyn Stone	Company Director	PPM Consultants (Facilitator)
Richard Simon	Company Director	Stratcorp Recreational Planners
Brendon Ryan	Senior Project Manager	AMBS (Flora and Fauna)
David Thomas	Sub-Contractor (Botanist)	AMBS (Flora)
Dr Melissa Carter	Project Manager	AMBS (Aboriginal Heritage)
Alison Nightingale	Senior Project Manager	AMBS
Simon Leake	Company Director	SESL (Soils Consultant)
Peter Oitmaa	Associate	Douglas Partners (Geotechnical Engineering)

The project was directed by Bill Morrison and Oi Choong; the Masterplans were authored by Colin Polwarth with the assistance of Michelle Yik. The Conservation Management Plans were authored by Lynette Gurr with assistance from Kate Denny, and the Landscape Management Plans were authored by Ben Dungey with assistance from Astrid Brokamp. CM+ wishes to extend its thanks to the entire consulting team for their efforts and good will.

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External Stakeholders

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NAME (no order)	Organisation
Pam Goldie	Chase Alive
Margarita Clayton	Coast Alive
Kurt Henkel	Landscape Coordinator, Hornsby Shire Council
Veronica Cook	Bobbin Inn Lessee
Miranda Heath	SNR Bobbin Head Information Centre
Stephen Smith	Empire Marina Bobbin Head
Stephen Black	Regional Manager, NSW Waterways
Alan Catford	National Parks Association
John Roberts	Hornsby Shire Historical Society
Gordon Limburg	Hornsby Conservation Society
David Martin	Hornsby Conservation Society
Cindy Budai	Kayak and Canoe Inc.
John Stefas	Kayak and Canoe Inc.
Rodney Brown	Whittley Motor Boat Club of NSW
John Blundell	Apple Tree Bay Boat Owners Association
Coral Blundell	Apple Tree Bay Boat Owners Association
Geoff Gauslar	Apple Tree Bay Boat Owners Association
Terrie Jenner	Boat Owners Association
Peter Stanford	Bobbin Head Cruising Lions Club Inc
Lavinia Schivella	Boating Industry Association
Bruce Foot	Gibberagong Environmental Education Centre
Steven Head	Director, Open Space, Ku-ring-gai Council
Jennifer Davis	District Officer, NSW Fisheries
Patricia Giles	SNR Advisory Committee
Lynn Parker	River Canoe Club

Abbreviations

AMBS Australian Museum Business Services	IDA Integrated Development Approvals
AHIMS Aboriginal Heritage Information and Management Systems	KCNP Ku-ring-gai Chase National Park
ATSIC Aboriginal and Torres Strait Islander Commission	KCT Ku-ring-gai Chase Trust
CMP Conservation Management Plan	KCLC Ku-ring-gai Chase Local Committee
COAG Council of Australian Governments	LEP Local Environmental Plan
DDA Disability Discrimination Act	LMP Landscape Management Plan
DEC Department of Environment and Conservation	MLALC Metropolitan Local Aboriginal Land Council
DMR Department of Main Roads	NPWS National Parks and Wildlife Service
EMP Environmental Management Plan	NSW New South Wales
EP&A Environmental Planning and Assessment	REF Review of Environmental Factors
EPBC Environment Protection and Biodiversity Conservation Act	SESL Sydney Environmental and Soils Laboratory
EPRD Environmental Protection and Regulation	TBA / TBC Incomplete works
ICOMOS Australian Charter for the Conservation of Places of Cultural Significance	TSC Threatened Species Conservation Act
	WWII World War II

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PART 1: MASTERPLAN

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Executive Summary

Volume 1, Bobbin Head Masterplan 2006 describes the Vision for the most comprehensive improvements to the parklands and amenities since the completion of the reclamation of the mudflats of Cockle Creek and Cowan Creek in the 1950s. A Conservation Management Plan is included as part of the Masterplan to guide future development. The historic and cultural landscape comprising Bobbin Head, along with Apple Tree Bay, will remain the premier recreation places in the Ku-ring-gai Chase National Park, and will be preserved for future generations.

The cultural landscape of Bobbin Head will be strengthened and preserved within the natural setting of the Ku-ring-gai Chase National Park. Contrasting colours, textures, forms, exotic trees and the natural environment, buildings and biodiversity, passive and active recreation, indigenous and non-indigenous cultures, noise and tranquility have to sustainably coexist and integrate. The contradictions make Bobbin Head a special place, a place: where visitors find tranquility and movement, a National Park within Sydney city, a recreation area within a conservation area.

Sustaining the parklands and amenities for future generations, making them safe and pleasing to be in, interesting and educational, while passive and active recreational pursuits are undertaken in a quiet picnicking atmosphere, are at the heart of the vision.

The accompanying Landscape Management Plan describes how the Vision for the upgrade and revitalisation is achieved in design, planning, management and action. Community and stakeholder consultation throughout the Masterplanning process informed the Recreational Planning, which guided the design and development of the amenities within the landscape. The Landscape Management Plan also identifies key opportunities for the future development of the parklands.

The Masterplan should be read in conjunction with the Conservation Management Plan, the Landscape Management Plan, and all the Appendices, which include specialist reports. The Masterplan is a summary form of all the reports, and guides the future design and development including management strategies to improve the sustainability of the parklands. The landscape design proposes car parking at the rear of the parklands, with a shady promenade, exotic and native trees and revitalised amenities throughout. The Masterplan includes a Vision for the Apple Tree Bay to Bobbin Head Track.

The entire Masterplanning process included extensive Community, External Stakeholder, Project Control Group, RTA (NSW) and National Parks and Wildlife Service Regional Advisory Committee consultation. The consultation culminated in the Public Exhibition of the Draft Masterplan with invited comment. Reference should be made to the Summary and Detailed Submissions Reports regarding the Draft Masterplans which contain information regarding the consultation process, exhibition, feedback, submission and agreed recommendations for improvements to the Draft Masterplan to achieve final status.

Concurrent with the finalisation of the Draft Masterplan, an estimated costing of the Masterplan was undertaken by the Masterplanning Team, so that funding for implementation of the Masterplan could be prioritised by Department of Environment and Conservation / National Parks and Wildlife Service over a 20-30 year period.

The Masterplan contains summary information regarding the project costings. The whole of the Masterplan was finalised in August 2006.

The Masterplan will be incorporated into the revised Ku-ring-gai Chase National Park Plan of Management. The two management documents will also be updated on a regular basis to ensure that the parklands maintain their status as the premier recreational area in the National Park. Future generations of tourists and visitors will continue to benefit from the cultural landscape experience of Bobbin Head.

Volume 2 is the Masterplan for Apple Tree Bay.

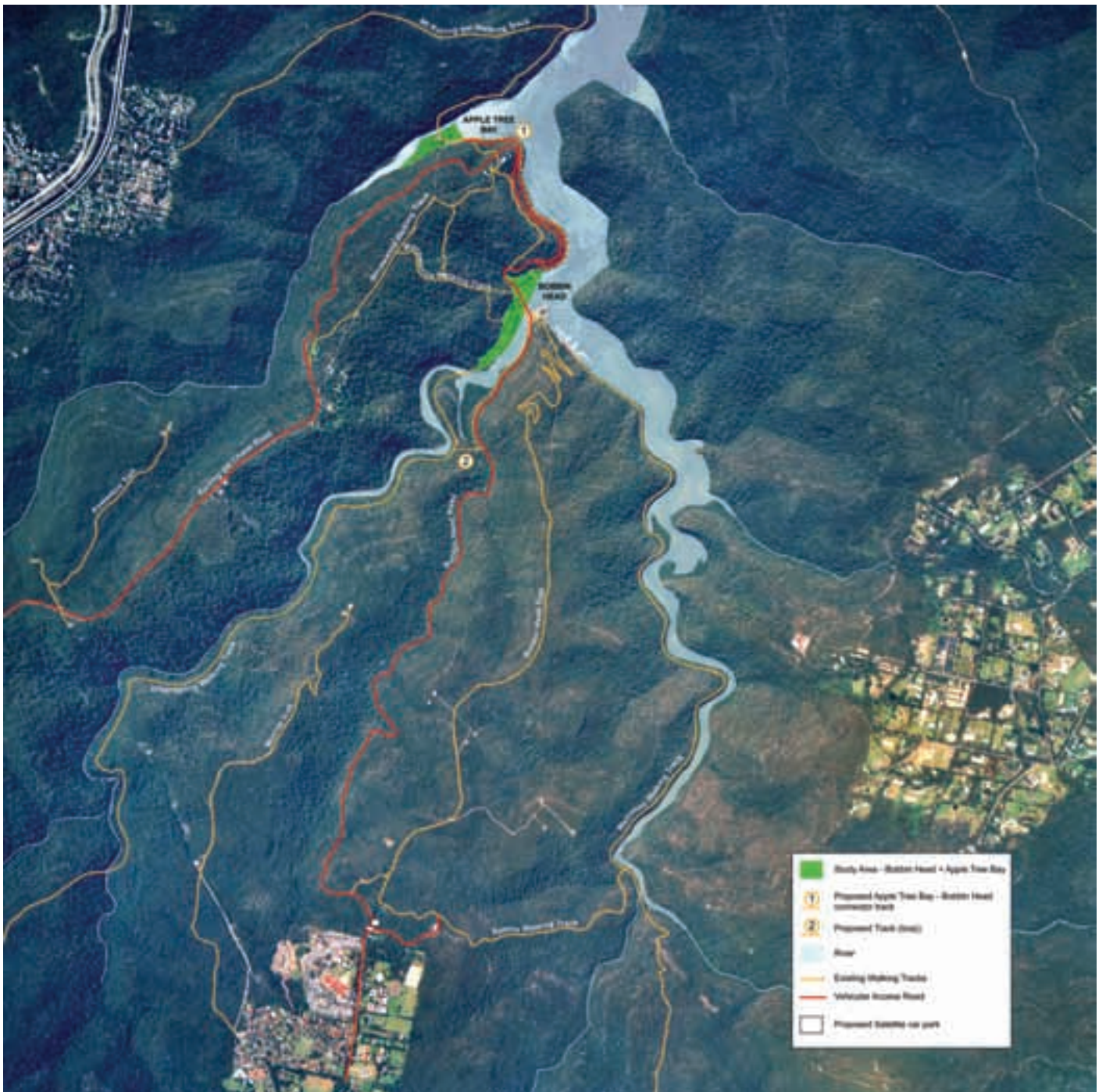


Figure 1.1 Aerial plan of tracks, Ku-ring-gai Chase National Park - NTS

1.0 Introduction

The Ku-ring-gai Chase National Park is situated within the Sydney Metropolitan Area, approximately 20 kilometres north of Sydney CBD. The park generally comprises the land east of the Sydney-Newcastle Expressway (F3), south of the Hawkesbury River, west of Pittwater and north of Mona Vale Road. It also includes Barrenjoey Head on the eastern side of Pittwater. The park falls within the Local Government Area boundaries of Hornsby to the southwest, Ku-ring-gai to the southeast, Warringah to the east of Cowan Creek, and Pittwater to the east.

Bobbin Head is located at the junction of Cockle and Cowan Creeks, approximately 7km from the entrance to the Ku-ring-gai Chase National Park. Bobbin Head is generally accessed by a steep and spectacular descent along Bobbin Head Road to the water's edge or by water craft along the winding waterways of the Hawkesbury River.

Bobbin Head is made up of a number of sub-precincts or parkland spaces comprising Orchard Park, Orchard Park South, Gibberagong Park, Gibberagong South and the Wharf Area.

Figure 1.1 shows the location of Bobbin Head in the Ku-ring-gai Chase National Park including roads and tracks.

Figure 1.2 shows the boundaries of the five sub-precincts of Bobbin Head and defines the study area of Bobbin Head. The relationship of the parklands to the natural bushlands and waterways is a significant visual and environmental catchment area.



P1. Aerial photograph of Bobbin Head + Apple Tree Bay, undated (source: Land + Property Information - NTS)

1.1 How to use the Masterplan Documents

The Masterplan for Bobbin Head is made up of the following components:

- The Vision for Bobbin Head (*and Apple Tree Bay*) - Masterplan Summary 2006
- Volume 1*- Part 1 Bobbin Head Masterplan
Part 2 Bobbin Head Conservation Management Plan
Part 3 Landscape Management Plan
- Volume 3 - Appendices

* Note: Volume 2 is the Apple Tree Bay Masterplan, Conservation Management Plan, and Landscape Management Plan.

The Masterplan has been separated into Volumes:

- To assist readers with special interests
- Due to the size and nature of each volume
- To facilitate limited reproduction of each part

The Vision for Bobbin Head and Apple Tree Bay - Masterplan Summary 2006

The Vision for Bobbin Head and Apple Tree Bay describes the overall vision for the parklands and recreational use in the wider context of Ku-ring-gai Chase National Park: The vision includes information on education, conservation, heritage, cultural importance, tourism, sustainability and management of scarce natural resources at a Local, Regional, State and National level.

Volume 1 – Part 1 Bobbin Head Masterplan

Part 1 - Bobbin Head Masterplan: The Masterplan describes the vision, its objectives, and defines actions and policy to achieve the vision. The Masterplan summarises the Conservation Management Plan (CMP), Landscape Management Plan (LMP), Recreational Planning, Submissions Reports and defines timeframes, costings and actions for the implementation of the Masterplan. The Masterplan provides objectives for the broad issues of conservation, environment, recreation, park and infrastructure uses, social history, Aboriginal and European history, landscape design and management of the parklands. The Masterplan is intended to be adopted by an updated Ku-ring-gai Chase National Park Plan of Management within the next four years. Volume 1, Part 1 also outlines the Masterplanning authorship, statutory and non-statutory requirements, consultation and methodology.

The Masterplan should be read in conjunction with the Vision for Bobbin Head and Apple Tree Bay, and Volume 3, Appendices.

Volume 1 – Part 2 Bobbin Head Conservation Management Plan (CMP)

Part 2 - Bobbin Head CMP is a stand-alone document and outlines the general historical background of the natural and cultural development of the parklands. The conservation significance of Bobbin Head is assessed in accordance with the principles of the *Burra Charter*. The principles of preservation, conservation, adaptive re-use, and extent of new works are established to guide and control the future development of the parklands and landscape. The CMP provides policy to ensure that Bobbin Head continues as a living cultural parkland within the conserved natural setting. The policy provides a framework for the guidelines in the Masterplan. Improvements to Bobbin Head parklands and associated infrastructure are also defined. The CMP sets the policy for the interpretation of the heritage and education policy. The CMP is cross referenced to the Appendices and LMP. The conclusion provides a summary for the Masterplan.

Volume 1 – Part 3 Landscape Management Plan (LMP)

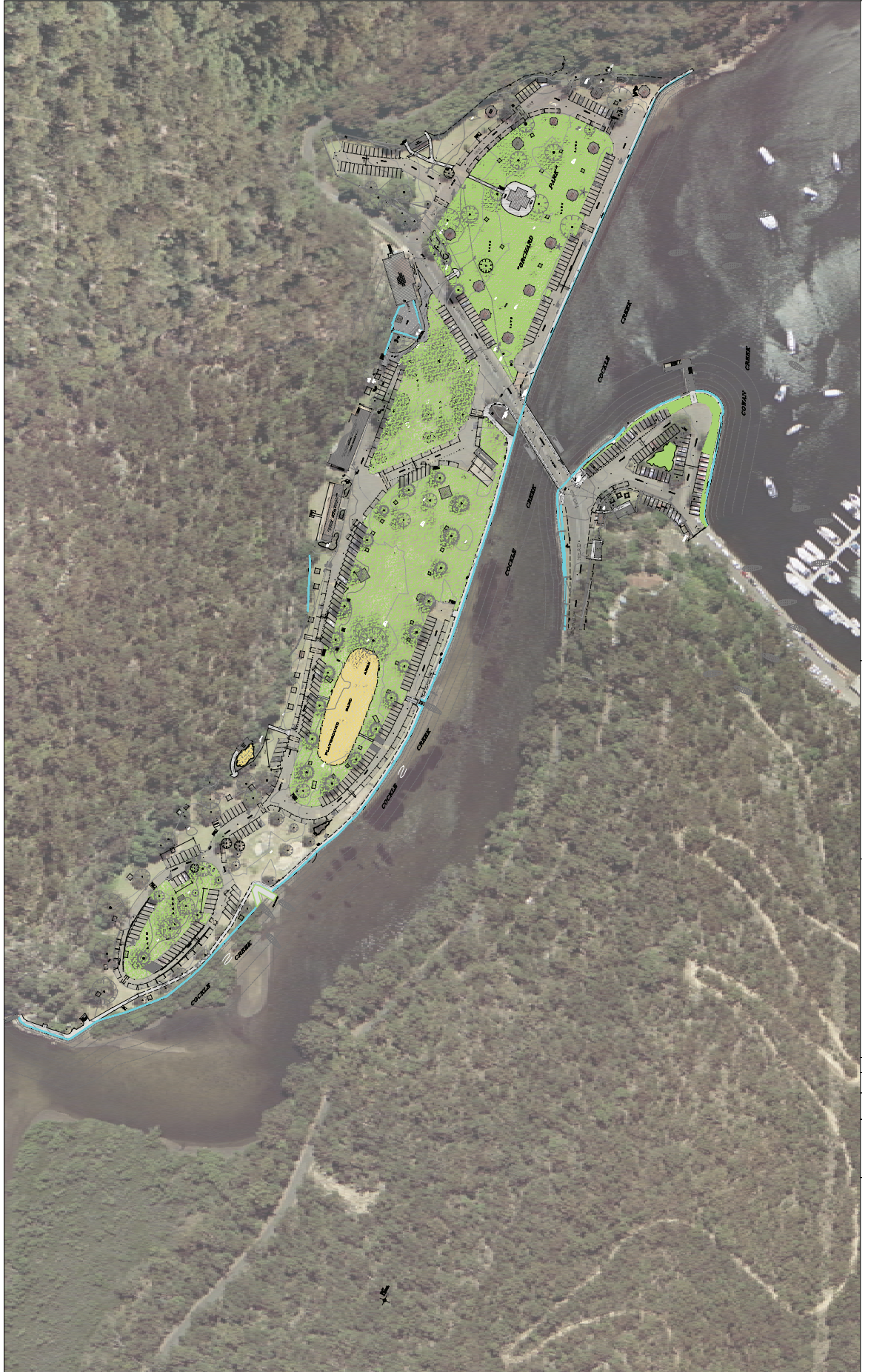


Figure 1.2. Existing aerial and cadastral plan of Bobbin Head 2006 - NTS

Part 3 - Bobbin Head LMP provides the vision for the landscape improvements and visual character for Bobbin Head, as informed by the CMP. The LMP defines the existing and future characteristics of the sub-precincts of Orchard Park, Orchard Park South, the Wharf Area, Gibberagong Park, and Gibberagong South. The LMP contains the analysis of the landscape including the bushland setting, the environment, landscape elements (soil, topography, buildings, trees etc.) and visual characteristics of the parklands. Opportunities and constraints leading from the analysis are also incorporated including the natural, cultural and landscape heritage. Policies and objectives implementing the actions for landscape design are set out in this document. The LMP is cross referenced to all volumes and should be read in conjunction with Volume 1, MP, CMP, and Volume 3, Appendices. The conclusion provides a summary for the Masterplan.

Volume 3 - Appendices, Bobbin Head and Apple Tree Bay

The Appendices contain all supporting information, specialist consultancy advice, reports, abbreviations and a bibliography.

Summary Submissions Report

Volume 3, Appendix 4, Summary Submissions Report summarises the masterplan process including the consultation that took place, and recommendations made in respect of the public exhibition of the Draft Masterplan. The recommendations are incorporated into the final Masterplan.

2.0 The Vision

Bobbin Head will be conserved and enhanced as an early twentieth century cultural landscape set within the natural environs of the Ku-ring-gai Chase National Park in accordance with the CMP, LMP and MP. Current and future generations of visitors will be able to picnic and enjoy passive land and water-based recreation within the unique landscape setting of Orchard Park, Orchard Park South, Gibberagong Park, Gibberagong South, and the Wharf Area and will enjoy the facilities of the restored 'Bobbin Inn', other buildings and infrastructure. Visitors will learn about the history, significance, sustainability and natural attributes of the Ku-ring-gai Chase National Park through a series of imaginative designs and interpretative signage.

Bobbin Head and the Ku-ring-gai Chase National Park

The location of Bobbin Head at the base of the bushland valley spanning Cowan Creek, overlooking the Hawkesbury River, has made it a special place throughout history. These qualities will be preserved and enhanced. The history of pre-European habitation by the Aboriginal Guringai community, and subsequent non-indigenous occupation, mudflat reclamation and '*pleasure ground*' development, emphasise, the aesthetic cultural and historic significance of the parklands.

Bobbin Head

Bobbin Head provides a welcome refuge from the city. The park amenities and landscape design will be improved in a sustainable way to ensure that future generations continue to appreciate the facility. Contrasts between the natural environment and cultural landscape will be strengthened. The landscape design will be enhanced to reflect the natural patterns in the landscape and waters that characterise Bobbin Head.

The dominance of vehicles will be reduced and improvements to the paths, road and traffic will be introduced by consolidating roads and parking at the rear of the park. Pedestrian and cyclist safety will also be improved throughout Bobbin Head. Bobbin Inn, the picnic shelters, *The Pavilion*, *Gibberagong Environmental Education Centre* and *The Station* will also be improved over time. Facilities for disabled persons will be upgraded to current standards. National Park walking tracks leading to Bobbin Head provide access for visitors to surrounding bushlands. A meaningful connection to the natural bushlands will be encouraged through education, information and wayfinding strategies.

Orchard Park and Orchard Park South

The historic 1930s landscape design of Orchard Park, Orchard Park South, and the Wharf Area comprising semi-formal and diverse plantings, in combination with the Art Deco style Bobbin Inn, The Pavilion and shelters, provide a parkland that is pleasant and visually contrasting with the natural environment. These qualities will be re-interpreted as testimony to Orchard Park's cultural landscape significance.

Orchard Park will be raised above current salt water flood levels to improve the landscape and picnic shelter conditions. Bobbin Head Road will be realigned to improve the address and entry to Bobbin Inn. Parking at Orchard Park will be reconfigured to the rear of the parklands to improve pedestrian access to the water and expand on the provision of shady picnic space.

Wharf Area

The 1930s landscape design will be re-interpreted with new heritage shelters and reconfigured parkland. Parts of the Wharf Area will be raised to avoid seawater inundation. This area, the first reclaimed, provides parking and entry to The Marina, which accommodates the boats that have moorings on Cowan Creek. The Wharf Area also provides an entrance to Bobbin Head Track, a location for Coast Alive and is the public transport node (bus stop) for Bobbin Head. All amenities in this area will be rationalised and improved, including the wharf which will be upgraded with a jetty facility, providing a drop off point for the ferry, and provided with maps and an interpretation area.

Gibberagong Park and Gibberagong South

The 1950s reclamation and naturalistic landscape design of Gibberagong Park and Gibberagong South stretching along Cockle Creek into the mangrove mudflats, including the promenade, suspension cable-stay bridge and boardwalk, are at once interesting and provide education amenity as an 'entrance' to the bushlands. New shelters, picnicking, seating, amenities building and barbeque facilities are proposed. Parking will be relocated to the west of the park to increase parkland space.

The children's playground will be upgraded to include educational and safe play equipment with sculptural qualities for children and infants. Access to the water for canoes will be retained with an upgraded ramp, and additional parking for the convenience of users. The informal landscape design will be contemporary, comfortable, dynamic, flowing, patterned, textured and sculptural to create delight, and interest and have a passive recreation area, with framed views of the slopes, gorges and creeks. The tree-shaded promenade will also provide space for picnicking, fishing and seating. Gibberagong Parks will be dappled with light, colour and shade, textures and forms will provide tactile interest and there will be framed views to Cowan Creek.

Proposed Future Gibberagong Track

Future bushland tracks provide the opportunity for visitors to interact with the natural environment to exercise and see other views and perspectives of the park. A loop track extension from the southern bushland end of the existing Gibberagong Mangrove Boardwalk is to be considered, being a 1.5 hour loop back to the Wharf Area. This track will have educational and interpretive signage with an emphasis on Aboriginal culture, endemic flora and fauna. The track will cross the creek on a bridge providing magnificent views of the creek, and it will parallel Bobbin Head Road on a contour above creek level.

Proposed Future Apple Tree Bay Track

Refer to Volume 2, Apple Tree Bay for the vision for Apple Tree Bay and the associated track between Bobbin Head and Apple Tree Bay.



P2. Bobbin Inn from the Wharf Area, 2006 (source: CM*)



P3. Seawall at Gibberagong Park, 2006 (source: CM*)



P4. Gibberagong Bridge, 2006 (source: CM*)



P5. The Wharf Area from Orchard Park, 2006 (source: CM*)

3.0 Masterplan Objectives and Outcomes

This Masterplan will guide the conservation and future management of the Bobbin Head parklands. The objectives of the Masterplan, as required by Department of Environment and Conservation, include:¹

Management

- Provide the foundation for integrated management that retains and enhances the significance of the parklands.
- Provide sound planning, design and management guidelines, addressing appropriate conservation, use and landscape management.
- Improve park user experiences through safety and improving pedestrian / vehicle access / parking within Bobbin Head.

Education

- Raise perceptions of Bobbin Head as a special place for visitors and the general community.
- Provide for clear expression of values of Bobbin Head in the greater context of Ku-ring-gai Chase National Park and the wider park network in Sydney's north region.

Recreation and Consultation

- Plan to better meet recreational / user expectations through improved facilities and access in a national park context.
- Reflect community views in the development of the plan.
- Review visitor facilities and develop concepts for improved design solutions, including heritage picnic shelters, new picnic shelters, park furniture and a playground.

Conservation

- Develop design plans that capture the natural and cultural heritage of the parklands and interpret these layers through sensitive design solutions.
- Prepare adaptive re-use possibilities / conservation principles that meet the National Parks and Wildlife Service's heritage guidelines, and are functional and accessible.²

These requirements are summarised in the Masterplan from details of the Landscape Management Plan and Conservation Management Plan under the following subject headings which consider the management of the area in a '*whole of landscape*' approach:

- Conservation
- Sustainability
- Education
- Tourism
- Nomenclature
- Experience
- Importance
- Visual and environmental outcomes
- Contrast
- Integration
- Noise
- Lighting
- Whole of landscape approach

¹⁺² Tender Brief for Preparation of a Masterplan including: Conservation Management Plans and Landscape Management Plans Bobbin Head & Apple Tree Bay Precincts Ku-ring-gai Chase National Park, 2005; NSW NPWS.

3.1 Conservation

Refer to Volume 1, Part 2 CMP.

Conservation of the heritage significance and the cultural landscape of the parklands sets out the following objectives:

Objectives:

- To develop a design solution that captures the natural and cultural heritage of the parklands and interprets these layers through sensitive design solutions.
- To limit development of the recreational areas to those areas of the National Park already disturbed by clearing and reclamation.
- To maintain a balance between the conservation and recreational needs of the park through careful planning and design.
- To enhance cultural and social associations by reinterpreting Orchard Park's 1930s landscape layout.
- To ensure that threatened species of flora and fauna in the parklands and in the National Park continue to be protected.
- To respect and conserve sites and items of Aboriginal heritage.
- To promote the adaptive re-use and conservation of heritage buildings and other parkland structures.
- To educate visitors about the cultural and natural heritage of Bobbin Head (refer to Volume 3, Appendix 1.1 Flora and Fauna Report).



P6. Historic Photograph c.1900-1930, Cowan Creek from Bobbin Rock, undated (source: PICMAN No.08795)

3.2 Sustainability

3.2.1 Background

Sustainability improvements are concerned with (at least) the maintenance of and (at best) the improvement of the quality of life within the carrying capacity of supporting ecosystems. The 1992 Australian National Strategy for Ecologically Sustainable Development set out four main tenets of sustainability (The ESD Strategy):

- **The Precautionary Principle**
Measures to prevent environmental degradation should not be postponed due to lack of full scientific certainty.
- **Intergenerational Equity**
Resources are left in trust for the benefit of future generations.
- **Conservation and Biological diversity**
Measures should be undertaken to preserve genetic, species and ecosystem diversity and integrity.
- **Environmental Economic Valuation**
The true cost of environmental impacts should be factored into the market economy.³

The Department of Environment and Conservation endorses the National Strategy for Ecologically Sustainable Development to improve sustainability.⁴

3.2.2 Introduction

A sustainable approach to the revitalisation associated with Bobbin Head is considered a primary focus for the on-going development of the parklands.

Objectives

- The sustainable outcomes will improve the parklands' overall environment footprint.
- The general public will be informed and educated about sustainability, improvements to the environment, and the manner in which sustainability improves the quality of life and biodiversity. Various education and information systems will be employed.
- Specialised research will be undertaken to investigate the most appropriate systems and opportunities for Department of Environment and Conservation management to improve the sustainability index of Bobbin Head, and consequently Ku-ring-gai Chase National Park.
- The National Parks and Wildlife Service will continue to improve sustainability issues, including indexing in the future development of the parklands as an on-going process.

3.2.3 Environmental Sustainability

Sustainability informs the Vision for parkland improvements to achieve new best practice standards in sustainability and design through research, implementation, management and conservation.

3.2.3.1 General

A holistic approach is taken towards improving overall sustainability. There is a variety of sustainable approaches that could be employed, generally being integrated and systemic. This Masterplan proposes principles and opportunities rather than specific outcomes. This approach ensures systems and methodologies are consistent with the parkland and recreational requirements, and are visually interesting. The details of the integrated ESD systems will be carefully designed at detail design stages of the implementation of the Masterplan.

³ 1992 Australian National Strategy for Ecologically Sustainable Development.

⁴ www.environment.nsw.gov.au

3.2.3.2 Conservation

Refer to Volume 1, Part 2 CMP, Chapter 6.0 for details of conservation policies.

Conservation is an essential principle of sustainability.⁵ The following would improve sustainability of the parklands:

Objectives⁶

- Protect and conserve the cultural heritage landscape, natural bushland and water environments.
- Minimise the disturbance to local flora, water ways / systems and fauna.
- Conserve natural bushland areas.
- Conserve cultural, social and heritage associations, and identify adaptive re-use of elements where possible.
- Maintain and enhance community values associated with the natural and recreational parklands.
- Maintain viability of local ecosystems.
- Conserve and re-use materials of the parklands.
- Incorporate interpretation into the landscape design to increase awareness of natural resources and to identify Aboriginal use of the natural environment.
- Enhance visitor comfort and improve their experience through intelligent design.
- Reduce waste through education.
- Educate visitors about values that lead to unsustainable behaviour.

3.2.3.3 Environment

The following Opportunities improve the sustainability of the parklands.

Opportunities

- Consider renewable energy sources, such as solar power.
- Consider reducing hard surface areas to a minimum.
- Consider using materials that are selected through an approved renewable resource or as having low energy indexing.
- Continue recycling program to reduce paper and waste in the parklands.
- Consider incorporating a water reuse system for irrigation, fire protection and maintenance.
 - Terminate current sub-drainage system to prevent saline inundation.
 - Harvest rainwater for external uses (eg, amenities building, cleaning, irrigation etc.).
 - Improve the parkland sustainability.
- Reduce pollution in all systems / ecologies in the parklands.
- Improve the parkland landscape sustainably:
 - Reconstruct the seawall utilising natural materials and traditional methodologies.
 - Raise the parklands at Orchard Park and the Wharf Area to prevent saline inundations and consequent saline soil conditions.
 - Prepare a Construction and Environmental Management Plan to reduce pollution and to improve construction methodologies.
 - Sensibly reuse and / or re-condition existing materials to improve sustainability:
 - ~ Re-use saline soils for backfill at sea wall areas.
 - ~ Re-use sandstone seawall material for compacted fill or elsewhere in the parklands.
 - ~ Re-use shelters and other amenities, adapt for contemporaneous function and provisions.
- Reuse compacted fill and asphalt removed from current parking layouts as fill for new parking and road layouts.

⁵ Williamson T, Radford A, Bennetts H, 2003; *Understanding Sustainable Architecture*, Spon Press, London.

⁶ Extracted from the Ku-ring-gai Chase National Park Plan of Management, 2002.

Actions

The following Actions should be taken to improve environmental sustainability.

- All environmentally sustainable systems should be visible and carefully designed.
- Reduce the overall energy consumption of the amenity with renewable energy / passive energy resources to reduce reliance on the national power system, reduce the use of portable water, reduce pollution and energy consumption.
- Convert consumptive resources into renewable / reusable resources.
- Reduce the overall environmental impacts (footprints), use renewable sources of materials.
- Utilise labour that is cost effective and easily sourced.
- Utilise low maintenance landscape, techniques, establishment and management.

3.2.3.4 Materials and Finishes

Appropriate and careful selection of use of materials generally improves durability and consequently sustainability.

Opportunities

- Consider employing contractors and labour with proven track records in environmentally sensitive construction.
- Consider materials with high durability indexing / performance criteria only.
- Consider utilising recyclable and / or waste materials wherever possible.
- Consider the introduction of native grasses to minimise expanses of maintained exotic grasses.
- Consider the heritage significance of existing materials.

Actions

- Plant low maintenance native shade trees and endemic plant species in Gibberagong Parks.
- Where exotic species are employed (Orchard Park), use in a limited controlled manner; low maintenance plant types with proven records of establishment and low weed propagation.
- Employ labour trained in environmentally sustainable use.
- Ensure materials achieve rating standards.
- Employ best-practice horticultural techniques for the establishment and maintenance of the landscape.
- Create landscape that is rich in biodiversity.
- Schedule materials and finishes to ensure consistency.
- Utilise renewable resources and materials, wherever possible.
- Taking into account the need to protect and enhance the heritage values of the place, where appropriate, adopt a schedule of finishes to achieve material consistency from National Parks and Wildlife Service Park Facilities Manual.

⁷ Williamson T, Radford A, Bennetts H, 2003; *Understanding Sustainable Architecture*, Spon Press, London.

3.2.3.5 Public Awareness in Appreciating Sustainability

Education is an important aspect in appreciating sustainability. Values that society treasure and think are sustainable often create environmental stress and lower sustainability indexing. As cultural values change with regard to the environment and as we learn more about the natural environment, education is central in modifying behaviour and attitudes in relation to Bobbin Head.⁷

The following could be achieved through signage and website information:

Opportunities

- Ensure that the parklands demonstrate the sustainable approach.
- Endorse the use of sail boats over that of power boats.
- Consider establishing measurement and credibility systems for visitor, stakeholder and management endorsement.
- Consider management techniques to ensure that stakeholders and lessees employ ESD requirements.
- Educate visitors about the role of ESD in the general environment.
- Educate the public about health and safety benefits associated with ESD and associated principles.
- Educate the public about cultural, social and heritage associations and identify adaptive re-use of elements to improve community values about the environment.
- Provide education about waste management techniques to educate visitors.

3.2.3.6 Utilise the Services of Specialists in Sustainability

- Develop workshop environments and inter-relationships with other government organisations and cross-department coordination to assist with the development of a sustainable strategy for the parklands.
- Encourage community review of processes and outcomes to educate and achieve general endorsement of ESD strategies.

3.2.3.7 Economic and Management Sustainability

Economic sustainability of the parklands is an essential component of the management of the parkland.

Opportunities

- Determine life cycle costs.
- Design for low-imported energy use and lower running costs.
- Access grants for research and development, especially in relation to new technologies related to ESD.

Actions

- Recognise management and contractor expertise in cost effective design solutions.
- Employ effective cost planning controls to improve sustainability.
- Implement National Parks and Wildlife Service Asset Maintenance System (AMS).

3.2.3.8 A Sustainable Approach to Construction

Prior to construction commencing, the preparation of a Review of Environmental Factors is required to assess the impacts of activities in reserves and those impacts on the natural and cultural heritage. The National Parks and Wildlife Services have developed the 'Proponents Guidelines for the Review of Environmental Factors' for activities on land reserved under the National Parks and Wildlife Act 1974 which require assessment and approval from the National Parks and Wildlife Service. These guidelines are supported by a 'Construction Assessment and Approvals Procedure' document. This document contains objectives to ensure construction procedures are carried out in accordance with the Environmental Planning and Assessment (EP&A) Act and the National Parks and Wildlife Act 1974, including, all State (and National) building laws to ensure that all technical and environmental protection requirements are achieved prior to and during construction.

A sustainable approach to construction includes: employing effective cost planning and construction controls, employing localised and specialist labour who are trained in Environmentally Sustainable Methodologies and employing management techniques that are safe and comply with all Occupational Health and Safety Act requirements in a sustainable manner.

3.3 Education

Refer to Volume 3, Appendix 1.5 Recreational Planning Report.

Education is an important aspect of conservation. It ensures that values and information may be passed on to future generations while developing an appreciation of the natural and cultural environment.⁸ Education will assist in the development of values that will enhance the understanding of the natural and cultural heritage, thereby improving one's experience of the place.

Objectives:

- To educate the general public about the importance of National Parks.
- To educate visitors about the indigenous and non-indigenous cultural and natural heritage of Bobbin Head.
- To further develop Gibberagong Parks into educational parklands.
- To educate visitors about the adaptive re-use of elements and to improve community values about the environment.
- To develop an interpretation strategy that both educates and enhances the experience of the visitor.

3.4 Tourism

Bobbin Head, and especially Orchard Park, have their origins as a local tourist destination – a pleasure ground for the public.⁹ Bobbin Head was prepared by the government to be an international tourist destination.¹⁰

The potential for future growth in natural and cultural tourism is substantial. It is, therefore, also important for park managers to understand future trends in visitor use of parks. This will be critical for the management of the park and for building the capacity to manage changes and shifts in visitation patterns and park usage.¹¹

Towards 2020 'Nature in Tourism' plan will provide the strategic principles and directions for the development, delivery and management of nature based tourism in NSW.¹²

Department of Environment and Conservation's Living Parks¹³ document builds on the Towards 2020 – New South Wales Tourism Masterplan that states the NSW Government's commitment to the future of tourism. The Tourism Masterplan is a whole-of-government strategy that identifies issues likely to confront the state as a visitor destination and outlines how the NSW Government will work with the tourism industry to position the state to achieve its tourism potential.¹⁴

Branch Visitation Management Plans are available for each field branch of the Department of Environment and Conservation. These plans provide a framework for visitor management and guide recreational opportunities that balance natural, cultural and community values.

⁸ Extracted from the Ku-ring-gai Chase National Park Plan of Management, 2002.

⁹ Volume 1, Part 2 CMP.

¹⁰ Jehne R, 1992; *Conservation Plan for Stone Buildings on the Eastern side of Cockle Creek, Bobbin Head*, NPWS, Hurstville, Sydney, p20.

¹¹ Department of Environment and Conservation (NSW), 2006; *Living Parks – A Sustainable Visitation Strategy*, Department of Environment and Conservation.

¹² Tourism New South Wales, 2003; *Towards 2020 - New South Wales Tourism Masterplan*, Tourism New South Wales.

¹³⁺¹⁴ Department of Environment and Conservation (NSW), 2006; *Living Parks – A Sustainable Visitation Strategy*, Department of Environment and Conservation.

The Department of Environment and Conservation's Living Parks Action Plan recommends actions for visitation planning. Reference to the detail of these outcomes is contained in Living Parks¹⁵ which includes the following general outcomes:

- Visitation planning and management to conserve park values, and are coordinated and integrated.
- Commercial uses associated with visitor use are consistent with park management objectives.
- Facilities, infrastructure and services are designed to be environmentally sustainable.
- Visitors are better informed of the opportunities offered within the parks and information provided that enhances visitor experiences, understanding and appreciation.
- The provision of a range of opportunities for the visitors to enjoy, appreciate and learn about natural and cultural heritage of NSW.
- The provision of facilities necessary to deliver, present and protect quality visitor experiences.
- Partnerships formed with the private, non-profit and public sectors provide benefits to all partners, enhance achievement of park conservation objectives, and further develop trust and understanding between partners.
- Partnership opportunities that recognise the needs and aspirations of Aboriginal people and communities, while facilitating the appreciation of Aboriginal culture.
- Research partnerships lead to improved visitation management through improved knowledge.

Objectives:

- To promote Bobbin Head as a special destination for visitors and the general community.
- To provide a premier natural and cultural tourism experience at Bobbin Head.
- To provide high quality facilities catering to tourists including bus / coach parking; toilets and information.



P7. Orchard Park Marker, 2006
(source: CM*)

3.5 Nomenclature

The name of a place is important in acknowledging the origins and processes, people and events of a place. It is important that place names increase user awareness of the place. It is thought that Bobbin Head (Bobbin Point or Bobbing Rock) derived its name from a rock located within the vicinity of The Marina, which became partially submerged during tidal fluctuations and appeared to bob up and down in the water.¹⁶ The policy for nomenclature is:

Objectives

- To conserve and interpret the established names of various elements.
- To ensure that any currently un-named or inappropriately named areas or amenities are correctly named.
- To formalise and educate the public on the new naming of precincts, sub-precincts and features.
- To promote the park through naming ceremonies, plaques and information systems.

¹⁵ Department of Environment and Conservation (NSW), 2006; *Living Parks – A Sustainable Visitation Strategy*, Department of Environment and Conservation.

¹⁶ Jehne R, 1992; *Conservation Plan for Stone Buildings on the Eastern side of Cockle Creek, Bobbin Head*, NPWS, Hurstville, Sydney, p.7.

3.6 Recreation

Refer to Volume 3, Appendix 1.5 Recreational Planning Report.

Increasing urbanisation and growing population places on-going stresses on the environment and parklands. Expectations for Bobbin Head are for the provision of a variety of outdoor recreational opportunities. Both the grounds and the waterways of the lower Hawkesbury River are major features of the park.

Several initiatives have been recommended for the improvement of recreational experience at Bobbin Head. These include upgrades to the landscape, foreshore and visual amenity. Facility upgrades include barbeque and picnic facilities, general park furniture, canoe launching ramp, amenities buildings as well as a general upgrade to refreshment services at Bobbin Inn. Consideration is also given to future extension to the existing mangrove boardwalk at the southern end of Gibberagong to form a loop track. The introduction of an integrated interactive interpretation and signage strategy throughout Orchard Park, Gibberagong Park and the Wharf Area would also provide an enhanced recreational experience.

Enhancing the experience of park visitors is an important value. Positive memories and good experiences provide the basis for return visits. Considerable effort and resources are employed to enhance visitor experiences at Bobbin Head and Ku-ring-gai Chase National Park.

Objectives:

- To improve and update the facilities within Bobbin Head to cater to the variety of recreational needs of the community.
- To achieve a balance between recreation and conservation so that natural resources are not depleted at the expense of recreation.
- To provide a safe environment for recreation.



P8. Boys fishing at Gibberagong Park, 2006 (source: CM*)

3.7 Picnic Shelters

There are currently three types of small group picnic shelters throughout Bobbin Head parklands, they are:

- HOCR: 10 (ten) Original 1930s High Octagonal Coned Roof picnic shelters (sheet metal roof). OPN04. Refer to P10.
- LOCR: 1 (one) Replica 1930s Low Octagonal Coned Roof picnic shelters (sheet metal roof).
- LOCR: 6 (six) Original 1930s Low Octagonal Coned Roof picnic shelters (sheet metal roof), one of the shelters has internal partition repairs. Refer to P11.
- RPS: 3 No. 1950s Rectangular Picnic Shelters. GP04

The CMP requires conservation of some shelters and modifications to others – Refer to Policy 6.4.31 and 6.4.32.

The LMP design requires rationalisation of the shelter type to simplify the language and family of shelters in the parklands. This design strategy will also assist in defining area characteristics within the parklands.

Refer to Volume 1. Part 3 LMP, Chapter 7.0.

Masterplan recommendations for the shelters include:

ORCHARD PARK, ORCHARD PARK SOUTH AND THE WHARF AREA

Retain 17 (seventeen) HOCR and LOCR shelters in Orchard Park, Orchard Park South and the Wharf Area to interpret and strengthen the original 1930s landscape design, in accordance with the CMP. If new shelters are required, construct in accordance with CMP Policy 6.4.32.

Refer to Volume 1, Part 2 CMP, Policy 6.4.32.



P9. Historic photo of picnic shelters at Orchard Park South, undated. (source NPWS Archives)

HOCR: Original 1930s High Octagonal Coned Roof picnic shelters.

Conservation

5 (five) of these shelters which are in good original condition could be conserved to ensure their longevity. The conservation works and final location should be documented by a heritage specialist at a later stage, however the works would be minimal and non-invasive. These shelters should be located at the waterfront to assist with the visual integrity of the 1930s parklands.

Adaptive reuse

4 (four) of these shelters could be modified to make the shelters usable by groups and ergonomically comfortable, while retaining the original characteristics of the picnic shelters. Refer to P12.

LOCR: Original 1930s Low Octagonal Coned Roof picnic shelters

Conservation

4 (four) of these shelters which are in good original condition should be conserved to ensure their longevity. The conservation works and final location should be documented by a heritage specialist, however, the works would be minimal and non-invasive. These shelters should be located at the waterfront to assist with the integrity of the 1930s parklands.

Adaptive reuse

4 (four) of these shelters should be modified to make the shelters usable by groups and ergonomically comfortable, while retaining the original characteristics of the picnic shelters. The replica shelter should be adaptively re-used. Refer to P12.

GIBBERAGONG PARK AND GIBBERAGONG SOUTH

Remove picnic shelters

Consideration of removal of the Rectangular Picnic Shelters (with tiled roofs) from Bobbin Head completely, as they create visual confusion.

New picnic shelters

Provide a new 'family' of single style, modular shelters for Gibberagong Park and Gibberagong South. The shelters are to be robust, durable, distinctive, comfortable, ergonomic and functional. Refer to CMP Policy 6.3.11-17 inclusive, and Policy 6.4.1 & 6.4.2. New shelters are to be complementary and appropriate to the existing 1930s shelters and should meet the design principles for facilities as guided by the National Parks and Wildlife Service Park Facilities Manual. Therefore this Masterplan recommends:

1. Consideration should be given to the siting, detailing and appropriateness of the forms of the 1930s shelters being seen in association with new shelters.
2. It is recommended that optional design studies including form and function for a few shelter types be undertaken by an architect.

E08 Barbeque shelters

Existing barbeque shelters when they are required to be replaced over time, ensure that the shelters and facilities form a family of shelters consistent with the picnic shelters.

PICNIC SHELTERS - COLOURS, FINISHES AND MATERIALS

Orchard Park

The original 1930s shelters are known to have been painted in various colour schemes during the past few decades. The CMP recommends a paint scrape and colour analysis of the original picnic shelters to determine the original colour schemes. The original colour scheme may be considered to assist in interpreting the original 1930s design.

Any new selection of materials should be assessed in relation to the 1930s landscape design of Orchard Park and the outcomes of the colour analysis aforementioned. Refer to Policy 6.4.31.

Gibberagong Parks

The new shelters in Gibberagong Parks should have a distinctive quality of their own, and material, finishes and colours (if any) should reflect contemporary or timeless qualities that harmonise with the parklands and the natural environment.

3.8 Parkland Furniture

Currently there exists a variety of furniture types and styles, implemented during past stages of parkland development:

National Parks and Wildlife Service furniture from the 1980s includes:

- E03 Orchard Park gateway
- E04 Lamp posts
- E05 Wayfinding signs
- E010 Garbage bin stations
- E012 Picnic table and seats (steel and timber)
- E010 Picnic Platforms. Refer to P13.
- OPN05 Bobbin head Information Structure

Some of the furniture is not sensitive to the 1930s design of Orchard Park, consequently Item E03 Orchard Park Gateway should be considered for removal. The furniture is generally suited to relocation or gradual removal and replacement with new, ergonomic, low maintenance, high quality furniture.

Other furniture

E02 Bench and Picnic Table – concrete seat

This furniture is uncomfortable and visually obtrusive and should be removed from Bobbin Head.

Furniture built-into shelters should be treated or regarded as contemporaneous with the shelter, and reference should be made to the policies in the CMP for conservation or adaptive re-use.

Opportunities

The following recommendations for furniture in the parklands of Bobbin Head are made in relation to Policies 6.1 and 6.3:

Orchard Park, Orchard Park South and the Wharf Area

The 1930s photographs of the parklands show minimal parkland furniture, possibly due to financial constraints. In the redevelopment and interpretation of the 1930s landscape design any furniture (other than built-in picnic shelter furniture) should be discreet and integrated with existing structures to interpret the 1930s design.

New furniture should be designed to be high quality, comfortable, durable and sympathetic to the 1930s design to assist with interpretation. It is recommended that the furniture for this area be distinctive from furniture seen in Gibberagong Park and Gibberagong South.

Gibberagong Park and Gibberagong South

During the replacement of existing furniture, provide a new family of parkland furniture types for Gibberagong Park and Gibberagong South. The furniture should be robust, durable, distinctive, comfortable, ergonomic, elegant and functional. Refer to CMP Policy 6.3.11-17 inclusive, and Policy 6.4.1 & 6.4.2.

Provide a new 'family' of single-style furniture for Gibberagong Park and Gibberagong South. The furniture is to be robust, durable, distinctive, comfortable, ergonomic and functional. New park furniture is to be complementary and appropriate to both the 1930s design of Orchard Park and the characteristics of Gibberagong Park and Gibberagong South.



P10. Original 1930s High Octagonal Coned Roof picnic shelter (source CM* 2006).



P11. Original 1930s Low Octagonal Coned Roof picnic shelter (source CM* 2006).



P12. Original 1930s built-in furniture (source CM* 2006).



P13. Picnic Platform (source CM* 2006).



P14. The Pavilion - built-in furniture (source CM* 2006).

4.0 Visual and Environmental Objectives

The recreational parklands of Bobbin Head are built on reclaimed mud flats. The flat, semi-formal landscape, asphalt paving, exotic vegetation and built structures contrast with the colours and textures of the natural bushlands. The formal landscape of the Wharf Area and Orchard Park give way to an increasingly informal landscape at Gibberagong Parks. This eventually concludes with the naturalistic setting of the mangrove walk in Gibberagong South. The visual and aesthetic policy proposes to balance contrast with integration in a sympathetic manner.

Objectives

- To improve the amenity of Bobbin Head by enhancing the waterfront experience at the Wharf Area, Orchard Park and Gibberagong Parks for passive, recreational use.
- To improve views and pedestrian access to the water's edge
- To minimise visually obtrusive elements such as signage, fencing and services through carefully integrated design, which is to be consistent with the park setting.
- To minimise the visual dominance of parking on the foreshore and in the parklands.
- To minimise the visual dominance of roads and car park surfaces.
- To provide wear resistant surfaces along pedestrian desire lines, to limit grass wear from pedestrian traffic.
- To improve the landscape design and maintenance, taking heritage values into account.
- To maintain the existing boat moorings, with no increase.
- To improve amenities generally.

Refer to Volume 1, Part 3 LMP.

4.1 Contrast

The contrast between Bobbin Head and its surroundings, and contrasts between the sub-precincts within Bobbin Head, is evident on both macro and micro scales. Contrasts are evident in landform, colour, texture and spatial definition. The most significant contrast is between the formal landscape of Orchard Park and the surrounding natural landscape.

Objectives

- To preserve contrasts in the landscape, to ensure the legibility of the cultural landscape against the indigenous / natural landscape.
- To plant shady trees to create contrasts in light and shade.
- To enhance contrast, and to heighten the aesthetic qualities of the environment.

Refer to Volume 1, Part 3 LMP, Chapter 7.0.

4.2 Integration

Bobbin Head is part of a larger landscape and should integrate into the surrounding natural environment on all levels. Integration of the parkland elements (landscape and built elements) will assist in improving the sustainability of the asset, and will visually integrate the man-made recreational parklands into the natural environment. The LMP and concept design for the parklands guide parkland development to achieve visual integration.

Objectives

- To embrace an integrated approach to all aspects of design.
- To ensure that Bobbin Head integrates with its surrounding natural environment including but not limited to landscape design, road network and circulation and material selection.
- To balance active recreation needs with tranquility and serenity of the parklands.

Refer to Volume 1, Part 3 LMP, Chapter 7.0.



P15. Orchard Park from the Wharf Area, 2006 (source: CM).*



P16. Wharf Area across Foleys Bay, 2006 (source: CM).*

4.3 Noise

Bobbin Head is well-known and admired by visitors for its inherently tranquil environment. Community responses to the appeal of the parklands are documented in Appendix 1.5 - Recreational Plan. Noise is principally generated by traffic (moving through the parklands) boating, active recreational pursuits by adults and children and excessive noise is generally inconsistent with the tranquil environment:

Objectives:

- To ensure that the road and landscape design assists in reducing noise pollution.
- To identify noise sources and to work to reduce the impact of the noise sources wherever possible.
- To balance active recreation needs (kick about area, playgrounds etc.) with tranquility and serenity of the parklands and to consider noise mitigation measures where feasible.
- To consolidate potentially noisy areas alongside each other to preserve other quieter areas.
- Activities resulting in noise emissions that are likely to disturb fauna or inconvenience visitors should be minimised as far as practicable. These activities, if unavoidable, should be undertaken at times or locations that will cause least disturbance to fauna or inconvenience to visitors.

4.4 Lighting

An integrated lighting strategy is to be considered in the future to ensure a balance between utility / recreational needs and the requirements of the natural environment.

Objectives

- To minimise impact on the natural character and experiences of Bobbin Head setting through lighting provisions, and to provide lighting to areas only where access is permitted after dark.
- To generally provide recessive / subtle light sources where required for function, safety or security, with vandal resistant light fittings.
- All lighting should be warm in colour and be used in fittings that emit no light above the horizontal plane.
- To reduce light spill and minimise the effects of artificial lighting on surrounding wildlife.

Refer to Department of Environment and Conservation Park Facilities Manual, Volume B Facilities Catalogue, Section 8.0.

4.5 Whole-of-Landscape

The Whole of Landscape Approach is a holistic management strategy that requires that all actions are considered as impacting or influencing all other actions. Therefore an integrated approach is required to ensure that the whole landscape is considered at all times.

Objectives:

- To ensure that no single issue dominates another.
- To strive for a balance in all aspects of management to ensure that the whole of landscape is considered at all times.
- To ensure that management is holistic and balanced in its approach.

Refer to Volume 1, Part 3 LMP.

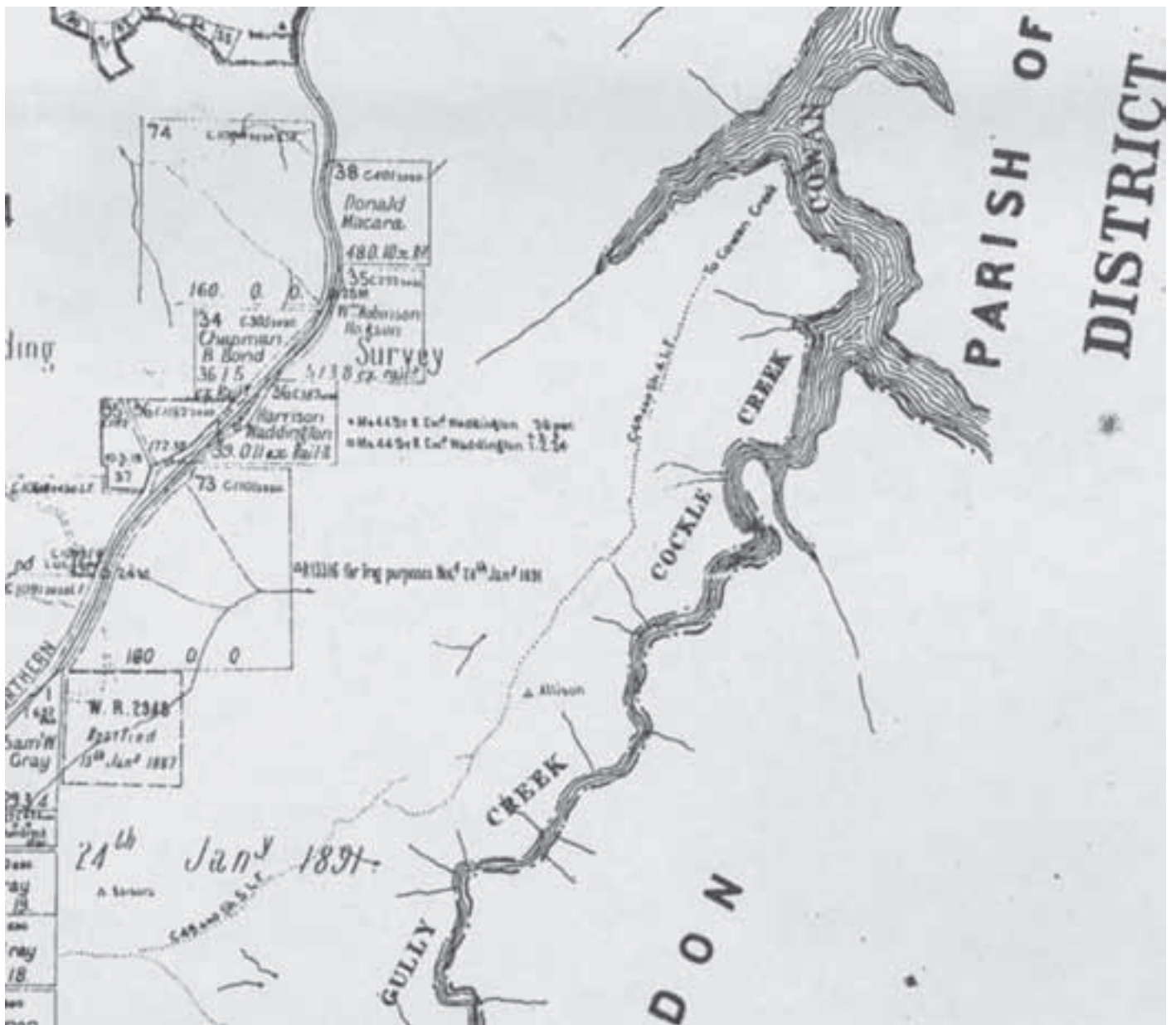


Figure 5.1. Parish of Broken Bay, showing early track leading to Bobbin Head, 1891 (source: Mitchell Library / 1891)



P17. Portrait of Eccleston Frederick Du Faur, undated. (Source: NPWS Archives)

5.0 Summary Conservation Management Plan

Refer to Volume 1, Part 2 CMP for details. The following is an abridged history.

5.1 Historic Overview

The eastern coast of Australia was formed approximately 200-250 million years ago. The Dry Schlerophyll Forest and associated fauna species seen in the Ku-ring-gai Chase National Park evolved continuously from that period. Archaeological finds located within the Bobbin Head area attest to the long-term Aboriginal occupation of the region. The Aboriginal people known to have inhabited the Bobbin Head area were the Guringai tribe.

European occupation of the region began when Governor Phillip first explored Broken Bay, and on 5 March 1788 he camped at Resolute Bay near West Head. The waters of the Hawkesbury, including Cowan Creek were first mapped by John Hunter in 1789. The Cowan Creek area was initially used for logging, smuggling, trading, transport and by escaped convicts. The topographic setting of the area limited development such as farming, and by the late 1800s the area was used as a recreation spot for boating, fishing and picnicking. Access was principally by boat.

Captivated by the natural beauty of its valley and waters, Eccleston Du Faur, a local resident and man of vision, successfully lobbied for the establishment of Ku-ring-gai Chase National Park in 1894. The Park remained in Trust management until 1967 when it was gazetted under the National Parks and Wildlife Act and fell under the management of National Parks and Wildlife Service of New South Wales.

Bobbin Head developed under the Department of Environment and Conservation as the primary recreation spot for the Ku-ring-gai Chase National Park, providing picnic shelters, kiosks and various recreational amenities. The introduction of the motorcar led to the development of roads, bridges and further increased the popularity of Bobbin Head. Major works in the Park were carried out between the 1930s - 1950s. These included the reclamation of mudflats, installation of picnic shelters, The Pavilion, 'Bobbin Inn' and exotic plantings. Minor improvements and works continued including the addition of the Mangrove Boardwalk and bridge in the 1990s.

Continued parkland maintenance and improvements are necessary and will assist in the economic sustainability of Bobbin Head. This area is to be managed in accordance with the Bobbin Head Conservation Management Plan in order to conserve its heritage significance.



P18. Historic Photograph, Orchard Park, undated (source: NPWS Archives)

5.2 Summary Statement of Significance

Refer to Volume 1, Part 2 CMP, Chapter 4.

Bobbin Head, Ku-ring-gai Chase National Park is a place of cultural significance for historic, aesthetic, scientific / research and social values at local level. Bobbin Head is a 1930s pleasure ground located within Ku-ring-gai Chase National Park an area of high natural significance at State level for its natural conservation values. The selection of the name, Ku-ring-gai Chase National Park, is a dedication to the local Aboriginal language groups that occupied the land.

Bobbin Head has exceptional social significance at the local level for its leisure and recreational heritage including water-based recreation activities. Bobbin Head attracted a million visitors in 2005 from surrounding residential areas and the wider Sydney region. Bobbin Head provides an open space pleasure ground that supports a wide variety of recreational activities. The place also has strong associations with nature conservation and a diversity of recreational activities and cultures. Bobbin Head was developed as the primary recreational area and pleasure ground within Ku-ring-gai Chase National Park. The presence of Aboriginal archaeological relics and sites in close proximity to Bobbin Head has high social significance to the Aboriginal community and represent a range of past activities.

Bobbin Head has high historic significance at local level for its associations with Ku-ring-gai Chase National Park, gazetted in 1894 as the second national park in NSW and the first national park devoted to nature conservation. Ku-ring-gai Chase Trust administered the conservation area from 1894 to 1967 and National Parks and Wildlife have administered the place from 1967 to the present (2006). Bobbin Head provides evidence of the evolving history of conservation management.

Bobbin Head has high historic significance at local level for its associations with prominent persons including the various Presidents of the Ku-ring-gai Park Trust and Trust members who managed Bobbin Head from 1894 until 1967. Prominent persons include Eccleston Du Faur, founder of Ku-ring-gai Chase National Park, Richard Beaumont Orchard instigator of the 1930s development of Orchard Park as a pleasure ground and Howard Joseland (1860-1930) Honorary Architect for the Trust.

Bobbin Head has high aesthetic significance at a local level associated with its setting within the Ku-ring-gai Chase National Park, a place of natural heritage significance. Bobbin Head's scenic qualities are associated with the diverse cultural plantings and landscape elements of the semi formal park contrasting with the indigenous landscape and surrounding waterways.

Bobbin Head has high social significance at a local level for the use of the area for educational activities. Bobbin Head has moderate scientific / research significance for its archaeological potential associated with former buildings and structures.

Bobbin Head has high historic significance at a local level for its associations with the Unemployed Relief Funds and Labour utilised throughout the 1920s, 1930s and 1940s which contributed to the development of the park as a primary recreational parkland.

Significance Assessment

The following Chapter 6.0 contains summaries of the significance assessments established in the Conservation Management Plan. The Levels of Significance are not included, reference should be made to the Conservation Management Plan - Volume 1, Part 2, Chapter 4 for the detailed Significance Assessment.

5.3 Natural Heritage Significance

The Ku-ring-gai Chase National Park is of scientific / research significance. The Ku-ring-gai Chase National Park is listed on the Register of the National Estate for its scientific importance as a remnant of the natural environment of Sydney. The natural ecosystems surrounding Bobbin Head associated with the mud flats, woodlands, sandstone geology, marine and creek ecologies will have importance for future generations.

Opportunities

- Protect and conserve native and threatened species of flora and fauna of Ku-ring-gai Chase National Park surrounding Bobbin Head.
- Interpret Natural Heritage Significance for visitors.
- Promote the environmental aspects of the National Park and the relationship of the recreational parklands to the wider area.

Actions

- Protect and conserve the biodiversity within Ku-ring-gai Chase National Park as there is a direct association with the recreational parklands.
- Identify limits of the recreation parklands and do not disturb the neighboring natural bushlands and water ways without a Review of Environmental Factors.
- Reduce pollution impacts such as noise, air, waste and water.

Refer to Volume 1, Part 2 CMP, Policy 6.7.

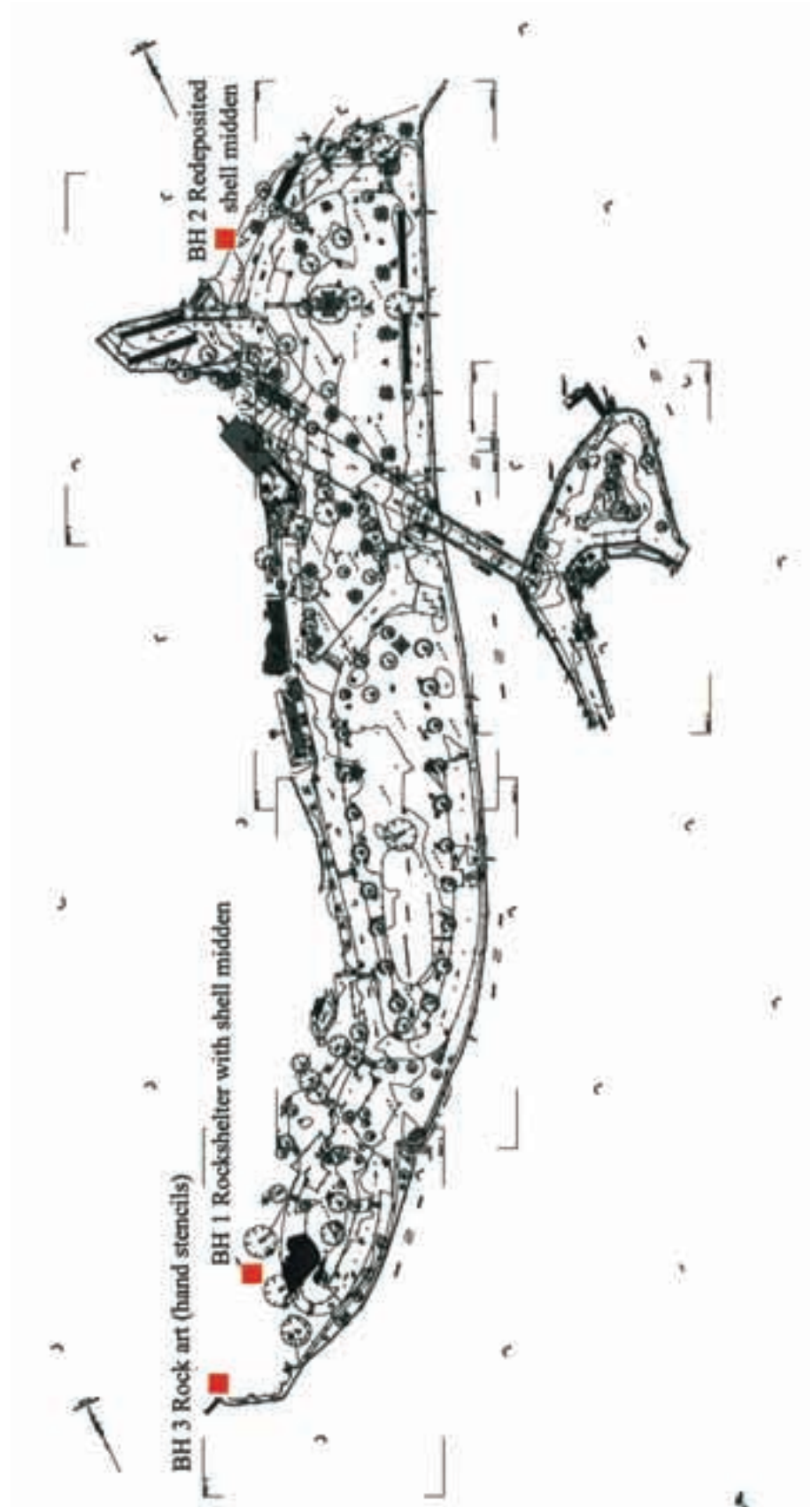


Figure 5.2. Revised archaeological site locations at Bobbin Head parklands, 2006 (source: AMBS)
- Scale 1:1000@A1

5.4 Aboriginal Cultural Significance

Refer to Volume 3, Appendix 1.2 Aboriginal Research and Analysis Report.

Bobbin Head and the surrounding areas within Ku-ring-gai Chase National Park have Aboriginal cultural significance, the Aboriginal community being the traditional inhabitants and custodians of the area.

The area at the west of the Bobbin Head recreation parklands which consists of un-reclaimed land is considered to be archaeologically significant. The selection of the name, Ku-ring-gai Chase National Park, is a dedication to the local Aboriginal language groups that occupied the land.

Opportunities

- Interpret Aboriginal cultural significance and sensitivities of the area to increase visitor awareness of archaeological sites.

Actions

- Protect and conserve culturally significant areas, especially the bushland edges of the parklands at Gibberagong Parks and Orchard Park.
- Employ appropriate management strategies for Aboriginal heritage including education, interpretation and management of Aboriginal heritage.
- Information and interpretation panels to provide visitors with information on the cultural heritage of the Guringai people.
- Department of Environment and Conservation to consult with the MLALC in the further development of the Masterplan and associated works at key time frames.

Refer to Volume 1, Part 2 CMP, Policies 6.8 and 6.9.



P19 Aboriginal Rock Shelter, Gibberagong South 2006 (source: AMBS)

5.4.1 Archaeological Potential

Bobbin Head, especially Orchard Parks and Gibberagong Parks have Aboriginal and European archaeological potential. The level of significance of individual remains is not determined at this stage. Further assessments are required (Refer to Volume 1, Part 2 CMP, Policy 6.9).

Ku-ring-gai Chase National Park is important archaeologically because it exhibits a large number and a diverse range, of potential archaeological sites that represent a range of past activities. Archaeological features of Aboriginal origin are located in close proximity to Gibberagong South and the undisturbed parkland areas. Relevant and appropriate policies for the conservation policies and protection of and education of visitors about these archeological areas of interest are necessary.

Opportunities

- Educate visitors about Archaeological Significance.
- If un-reclaimed land at the base of the sandstone escarpment is impacted on, test excavations are to identify any cultural material and appropriate impact mitigation measures are to be formulated with the MLALC.

Actions

- Conserve and manage archaeological sites in agreement with MLALC and other relevant authorities.
- Protect and conserve archaeologically significant areas, including those at the bushland edges of the parklands, especially at Gibberagong Park.
- Improvements to recreation facilities are to avoid impact to identified sites.
- Employ rock art specialists so that, if required, appropriate management of identified sites can be implemented.
- Establish appropriate impact mitigation measures to avoid indirect impact to archeologically sensitive sites.
- Information and interpretation panels to provide visitors with information regarding the archaeological sites, relics and artifacts as regarded appropriate by MLALC and other relevant authorities.
- Any archaeological work is to be undertaken in accordance with the required approval process under the Heritage Act and the NSW National Parks and Wildlife Act.

5.5 European Cultural Significance

Bobbin Head has historic and social significance. Bobbin Head has historic associations with Ku-ring-gai Chase National Park, gazetted in 1894 as the second national park in NSW and the first national park devoted to nature conservation.

Bobbin Head developed as a premier recreation area of the Ku-ring-gai Chase National Park. Bobbin Head has social significance. As an '*entrance*' to the natural bushland surroundings of the Ku-ring-gai Chase National Park, Bobbin Head is a major tourist destination.

Opportunities

- Interpret European Cultural Significance of Bobbin Head and the National Park for visitors.
- Promote studies of the social significance of the parklands by undertaking oral histories with the local and wider area.

Actions

- Protect, enhance and conserve the Cultural landscape.
- Provide a suitable location for photographic, map and masterplanning display. (Possibly at 'Bobbin Inn').
- Adopt information and interpretation media to provide visitors with information regarding the history and social heritage of Bobbin Head.

Refer to Volume 1, Part 2 CMP, Policy 6.1, 6.3 and 6.4.

5.5.1 Archaeological Potential

Refer to Volume 1, Part 2 CMP, Policy 6.9.

Bobbin Head has European archaeological potential associated with buildings, such as wharves, stables, garages, seawalls, former bridges and other structures that have since been removed from the site.

Opportunities

- Interpretation should be considered for areas with archaeological potential, in particular, former stables, garages, seawalls and former bridges.
- Interpret European Archaeological significance of artifacts within Bobbin Head and the National Park.

Actions

- Protect and conserve significant European Artifacts.
- Feature archaeological sites and provide information about the artifacts and conservation processes where appropriate.
- Undertake archaeological monitoring in accordance with the relevant policies and Acts.
- Appropriate care should be taken during any excavation required for new works.
- Archival recording and watching briefs should be undertaken as required.

5.5.2 Landscape Significance

Bobbin Head is a place of social, historic and aesthetic significance. The formalised layout of Orchard Park, Orchard Park South and the Wharf Area, dating to the 1930s has been modified, however, some original plantings remain and the format of the early layout is partially evident. The layout and design of built features including Bobbin Inn, The Pavilion and picnic shelters are intact. While some elements have been modified over time, roads relocated, and seawalls re-built and modified and the park's level raised, the overall 1930s character of the park is maintained. Layout and design indicates that Orchard Park was the principal portion of the three parks that made up Bobbin Head.

Gibberagong Park and Gibberagong South parklands were essentially developed in the 1950s and extensive landscape works carried out in the mid 1950s and 1980s.

Refer to Volume 1, Part 2 CMP, Policy 6.4.

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5.5.2.1 Wharf Area

The Wharf Area has aesthetic, historical and scientific significance. This area was the first of the Orchard Park areas to be reclaimed. The area has been primarily associated with boatsheds, boatbuilding and boat-hiring for recreational use. Various wharves have been designed for this precinct. This area was the first in Orchard Park to be formalised with facilities for visitors including amenities, stables (later garages), bus waiting shed and ranger's office / residence (Superintendent's Cottage) and first aid room. Much of the character of the original 1930s layout of the Wharf Area has been modified. Picnic shelters have been removed and area has been converted from a picnic area to car parking for the Marina.

Refer to Volume 1, Part 2 CMP, Chapter 4.0 and Policy 6.4.

5.5.2.2 Orchard Park and Orchard Park South - Significance

Refer to Volume 1, Part 2 CMP, Chapter 4.0 and Policy 6.4.

Orchard Park and Orchard Park South have historic and aesthetic significance. Orchard Park was designed by the Trust committee headed by the president, guided by garden and horticultural professionals from Royal Botanic Gardens and the Forestry Department.

5.5.2.3 Gibberagong Parks Significance

Gibberagong Parks have moderate historic, aesthetic and social significance at local level.

Gibberagong Parks were reclaimed in two phases in the 1950s for additional parking and recreational areas. The associated landscape design incorporated a loop road, taking in the foreshore and rear of the parklands with a central children's playground and informal kick-about area. The loop road was defined by an avenue of Coral and Norfolk Pine trees. The Coral trees were removed (2003) and the road layout was modified in the 1980s. The remaining loop of Norfolk Pines and 1970s children's playground equipment in a sand bed currently defines the park space. In the 1990s the Mangrove Boardwalk was established, providing a track, through the mangrove of Cackle Creek.

Refer to Volume 1, Part 2 CMP, Chapter 4.0 and Policy 6.4.



P20. Bobbin Head Bridge at the Wharf Area, 2006 (source: CM*)



Figure 5.3. Plan of built structures at Bobbin Head - NTS

5.5.3 Buildings: Significance and Opportunities and Actions for Adaptive Reuse.

Refer to Volume 1, Part 2 CMP, Chapters 4.0 and 6.0.

There are numerous assorted buildings throughout Bobbin Head. Each building performs a function relevant to the parklands and current uses. In some cases the buildings were modified and uses were changed. The continued use, and upgrade of the buildings and utilities is important for the park's functioning and sustainability. Opportunities and actions for reuse are summarised below.

NOTE: The CMP is the primary policy document for resolution should conflict in meaning or interpretations arise between various Chapters in Part 1 and 3.

ORCHARD PARK AND ORCHARD PARK SOUTH

5.5.3.1 'Bobbin Inn'

'Bobbin Inn' has historic, aesthetic and social heritage significance. The building has been the formal meeting and social place for Bobbin Head and provides the parkland focus, as a venue for dances, cabarets, jazz performances, restaurant, cafe meals and refreshments. The 1988 additions to the northern exterior verandah, emergency exit stair, ramps and yard have little heritage significance.

Opportunities

- Bobbin Inn has historic significance associated with its function as a refreshment building with attendant facilities.
- The National Parks and Wildlife Service Information Centre is a suitable use, but could be re-configured.
- Possible future uses for the building, which would be in keeping with its historic uses, would include a restaurant, conference centre, entertainment / dance venue and function hiring.
- Sympathetic extensions to the rear facade to improve internal operations are possible.
- Some sympathetic internal modifications are possible to improve operations.
- Consider improving the ground floor verandah area to include new umbrellas, furniture, remove kiosk, improve finishes and materials.
- Remove verandah kiosk.
- Consider replacing verandah planter balustradeing and replace with frameless glass balustrade or full length stairs.
- Consider alterations to increase floor space on both levels at the rear only.

Actions

- Conserve and maintain the exterior facades, roof and exterior building elements.
- Upgrade toilets and accessibility provisions to Disability Discrimination Act compliance requirements for all parts of the building, including the ground floor verandah.
- Additions and alterations (lifts, stairs, emergency exits, kitchens, toilets, storage, yards etc.) should not detract from the principal façade and overall form of the building, and should be located at the rear or west façade. Alterations / extensions should be sensitive, contemporaneous and in-keeping with the style and scale of the building. Consider screening the rear yard and staircase.
- Improve café / refreshment facilities.
- Provide interpretation, wayfinding and education facilities, improve information centre.
- Provide external lighting.
- Provide new fire protection provisions as required.

Refer to Volume 1, Part 2 CMP, Policy 6.4.21 - 6.4.26.



P21. Bobbin Inn, Orchard Park, 2006
(source: CM*)

5.5.3.2 The Pavilion

The Pavilion has historic, aesthetic and social heritage significance. Designed as the central structural form for the 1930s formalised layout of Orchard Park, the building is the primary picnic shelter for Bobbin Head. The pavilion has been modified to exclude steps. The pavilion is rented out on a daily basis for group picnics.

Opportunities

- Conserve and retain the structure.
- Upgrade barbeque, seating and tables.

Actions

- General finishes and materials upgrade.
- Increase / raise height of structure with parkland levels.
- Replace all current services, upgrade seating and tables to contemporary standards and ergonomic design, in keeping with the design format of the existing.
- Install feature and functional lighting.

Refer to Volume 1, Part 2 CMP, Policy 6.4.28-6.4.30.

5.5.3.3 Picnic Shelters

Refer to Volume 1, Part 1 MP, Chapter 3.7.

5.5.3.4 Information Shelter and Gate Structure

The Information Shelter and Gate Structure have little historic significance.

Opportunities

- Relocate information, heritage and wayfinding panels.
- Provide alternative information, heritage and wayfinding systems.

Actions

- Remove Information Shelter and Gate Structure.
- Install new information / wayfinding / heritage panels in the parklands.

5.5.3.5 Orchard Park Marker and Drinking Fountains

The Orchard Park Marker and Drinking Fountains have historic and aesthetic significance. The entrance markers to Orchard Park were constructed as part of the formalised layout of the park, and as part of the naming of the park in honour of Richard Beaumont Orchard, the President of the Trust from 1932 to 1941. There are drinking fountains associated with the markers.

Opportunities

- Restore the markers, replace missing features.

Actions

- Raise the markers to the new park levels.
- Expose the southern marker in a new location, remove landscape screening.
- Restore the basins, taps, water fountains.
- Interpret the original layout.

Refer to Volume 1, Part 2 CMP, Policy 6.4.11.

5.5.3.6 Orchard Park Amenities Building

The Orchard Park Amenities Building has heritage significance. The sandstone amenities building is on axis with The Pavilion at the rear of Orchard Park in Sunny Corner. The building provides male and female amenities for Orchard Park users, as the toilets in Bobbin Inn are currently for café patron use only. The toilets are not Disability Discrimination Act compliant.

Opportunities

- Conserve the building.
- Extensions are possible to the rear of the building to provide additional amenities or access provisions to a sympathetic design.

Actions

- Access ramps may be required. The ramps may take the form of structures or landscaped design. Care is required to ensure that the existing building fabric is not impacted on by the new structures.
- Upgrade to comply with Disability Discrimination Act standard requirements.

Refer to Volume 1, Part 2 CMP, Policy 6.4.34-6.4.36.

GIBBERAGONG PARK AND GIBBERAGONG SOUTH

5.5.3.7 Gibberagong Environmental Education Centre

The 1961 Gibberagong Environmental Education Centre has little historic / scientific significance. Under the management of the Department of Education, several thousand students use the Gibberagong Environmental Education Centre each year, mostly for one-day programs. The upper floor of the building provides education and ablution facilities, dormitories, kitchen facilities, staff rooms and other associated functions. The lower floor, originally designed for service trucks and workshops, has been converted to laboratories, information areas and storage spaces, including canoe storage.

Refer to Volume 1, Part 2 CMP, Policy 6.3.4 and 6.4.21.

Opportunities

- Continue to function as Field Studies Centre due to demand for such infrastructure.
- Opportunities for other user groups to use the building should be considered (both levels).
- In the future, subject to lease agreement, make the building generally accessible to the public.
- Modify the facades, plans and interiors to adaptively re-use as required.

Actions

- Upgrade all areas of the building to Disability Discrimination Act compliance standards.
- Generally improve interior and exterior materials and finishes.

5.5.3.8 The Station

The Station (Picnic Shelter) has moderate historic significance. Formerly a garage built in 1951 for public use, the building was converted to a barbecue and picnic facility with disabled toilets in 1994.

Opportunities

- To continue to function as barbecue area due to demand for such an amenity.
- Additional or upgraded barbecue and picnic facilities to be investigated.

Actions

- General upgrade of finishes and materials.
- Check that disabled toilets achieve Disability Discrimination Act / BCA compliance.
- Consider renaming of the building.

5.5.3.9 Gibberagong Amenities Building

The Gibberagong Amenities Building has little historic significance.

Opportunities

- Adaptive reuse of the building for services, non-public facilities.
- Storage for equipment, landscape provisions etc.
- Adapt or remove with all associated stairs and ramps.

Actions

- Close from public use.
- Build new toilet facilities to Disability Discrimination Act compliance in a new location.

5.5.3.10 Gibberagong Parks Picnic Shelters

Refer to Volume 1, Part 1 MP, Chapter 3.7.

5.5.3.11 Gibberagong Parks Barbecue Shelters / Facilities, Tables and Picnic Platforms

The Gibberagong Parks BBQ shelters / facilities and tables have little historic or aesthetic significance. Contemporary community values suggest that new furniture and facilities would be preferred.

Opportunities

- Generally upgrade.
- Replace wherever required – reuse materials wherever possible.

Actions

- Relocate facilities to suit new landscape design proposal.
- Replace over time with new facilities.

Refer to Volume 1, Part 1 MP, Chapter 3.8.



P22. Gibberagong Park playground, 2006 (source: CM*)

5.5.3.12 Children's playground

The children's playground has historic significance. The children's playground equipment has little significance.

Opportunities

- Retain the children's playground in the general area currently occupied by the facility.
- Improve play equipment.
- Form the playground to allow for different age groups.
- Provide passive surveillance opportunities to the playground for safety.
- Consider noise mitigation measures to reduce noise interference to surrounding parkland areas.
- Consider interpreting the miniature train.

Actions

- Provide shade trees for the playground area.
- Provide new safety fencing and gate structure to be sculptural and to integrate aesthetically into the parklands.
- Provide low maintenance equipment and facilities.
- Provide safe swings, climbing frame and slide structures only that integrate sculpturally into the landscape.
- Provide education and discovery facilities that are interesting for children.
- Ensure that the children's playground area is a high quality facility, safe, sympathetic to the parkland landscape design and sculptural.

5.5.3.13 Vehicular Bridge

Bobbin Head Bridge has moderate heritage significance at Local level. The bridge was built as a precast concrete bridge in 1956. This bridge and Bobbin Head Road / Ku-ring-gai Chase Road are managed by the RTA NSW.

Opportunities

- To maintain and improve safety, visibility and viewing features of the bridge.
- Interpret the former bridge locations and structures.

Actions

- Adjust levels to allow for new landscape levels at Orchard Park.
- Check safety provisions, especially for pedestrians and cyclists.
- Repair and maintain balustrading, lighting and finishes generally.

WHARF AREA

5.5.3.14 Bus Waiting Shed

The 1939 bus waiting shed has historic significance. Proposed road alignment adjustment will allow for more landscape space in front of the structure. Currently, public buses do not attend Bobbin Head.

Opportunities

- Adaptive re-use of the structure for bus stop (future) picnic shelter, information and interpretation area, public telephone area. Emergency waiting area.
- Consider stopping area in front of structure for vehicles.

Actions

- Consider adaptive re-use.

5.5.3.15 Wharf Area Kiosk

(former Ranger's office, Ambulance Room and Chief Rangers Office)

Currently used by Coast Alive, this building has heritage significance. The structure was completed in 1941 and was subsequently converted.

Opportunities

- Retain function as Coast Alive Centre.
- Adaptive re-use for other functions such as an information centre.
- Retain and / or adapt interior and exterior.
- Alterations and additions may be considered to provide additional opportunities and functions. Additions should be sympathetic and located towards the rear of the building. The front façade should not be altered.

Actions

- Consider improvements and adaptation.

5.5.3.16 Substation

Opportunities

- Upgrade façade, screen planting and safety facilities.

Actions

- General maintenance and upgrade.
- Retain function.

5.5.3.17 Wharf Area Amenities Building

The Wharf Area Amenities Building has historic significance. Built in 1932, this sandstone building was the first permanent amenities building constructed at Bobbin Head.

Opportunities

- Conserve the building.
- Extensions are possible to the rear of the building to provide additional amenity or access provisions to a sympathetic design.

Actions

- Access ramps may be required. The ramps may take the form of structures or landscaped design. Care is required to ensure the existing building fabric is not impacted by the new structures.
- Upgrade to comply with Disability Discrimination Act compliance.

Refer to Volume 1, Part 2 CMP, Policy 6.4.34.



P23. The Wharf Area from the Wharf, 2006 (source: CM⁺)

5.5.3.18 Wharves

Numerous wharves have been located in the Wharf Area, therefore the wharf has historic significance due to boating. It is also the Ferry drop-off facility. However, the current wharf / jetty has little heritage significance.

Opportunities

- Replace and relocate the wharf or pontoon / jetty within the Wharf Area as required.
- Upgrade structure as required.

Actions

- Interpret the historic locations of the wharves.



Figure 5.4. Detail of the Wharf Area - NTS (Detail extract of Masterplan Refer to Figure 1.3 for legend)

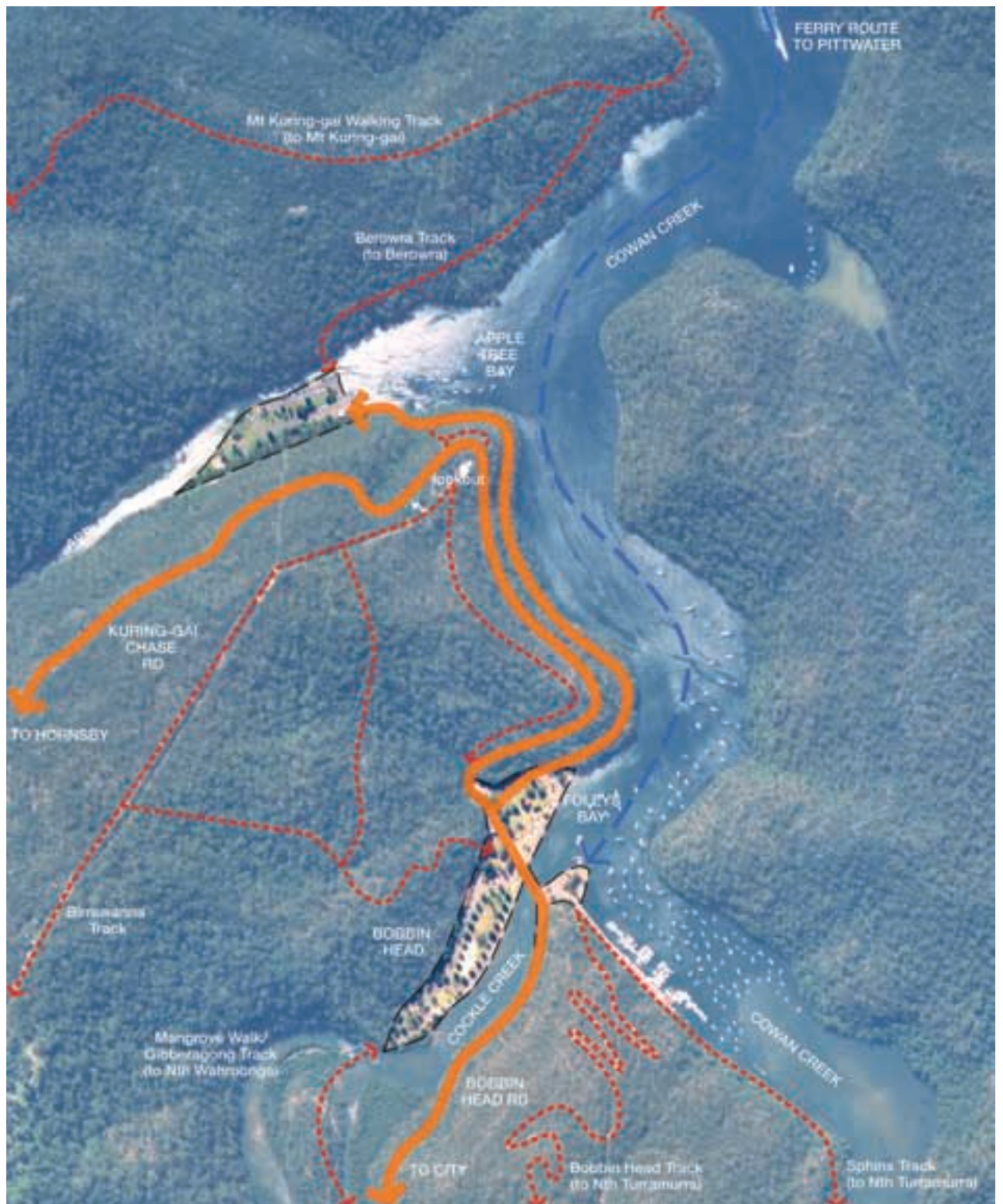


Figure 5.5 Aerial plan of tracks, Bobbin Head - NTS

5.5.4 Tracks

The planning of walking tracks requires minimising the overall impact of the track on the natural environment. New track proposals are regarded as future works.

5.5.4.1 Gibberagong Mangrove Boardwalk to the Wharf Area via Cockle Creek Track

The existing Gibberagong Mangrove Boardwalk ends approximately 300m south of Gibberagong South. The proposal is to extend this track in a loop to the Wharf Area, paralleling Bobbin Head Road at a lower contour. A bridge or creek crossing would be required to be constructed. It is unlikely that the whole track would be accessible for mobility impaired persons.

Opportunities

- Include wayfinding, information, education and heritage interpretation panels.
- Provide seating and stopping areas.
- Upgrade boardwalk structure where subsidence has occurred.

Actions

- Upgrade and maintain the existing track, boardwalk and bridge.
- A Review of Environmental Factors (REF) would be required for this proposal. This would include assessments of impacts on flora, fauna, Aboriginal Heritage, general environmental and other planning and safety issues.

Refer to Volume 1, Part 2 CMP, Policies 6.5.7, 6.4.19, and 6.4.20.

5.5.4.2 Bobbin Head to Apple Tree Bay Track

A new feature and scenic track between Bobbin Head and Apple Tree Bay is proposed to link existing tracks and provide an opportunity for pedestrian connection between the two recreational parklands. It is unlikely that the whole track would be accessible for mobility impaired persons.

Opportunities

- Include wayfinding, information, education and heritage interpretation panels.
- Provide seating and stopping areas at feature areas.
- A boardwalk and bridging structure may be required in some sections due to the topographic forms.

Actions

- A Review of Environmental Factors (REF) would be required for this future proposal. This would include assessments of impacts on flora, fauna, Aboriginal Heritage, general environmental and other planning and safety issues.

Refer to Volume 1, Part 2 CMP, Policies 6.5.7, 6.4.19, and 6.4.20.

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6.0 Summary Landscape Management Plan

Refer to Volume 1, Part 3 LMP for details. The following is a summary only.

The Landscape Management Plan was developed to identify, direct and achieve long term conservation and landscape management outcomes for Bobbin Head, based on research and analysis. This in turn gives rise to opportunities, giving directions to the future uses for the parklands while protecting the significance of the place and elements, resulting in coordinated landscape planning principles and detail design guidelines for the parklands.

6.1 Analysis Summary

Refer to Volume 1, Part 3 LMP Chapter 4.0 for detail analysis of Bobbin Head as follows:

Topography and Geology

Bobbin Head is situated at the base of a valley; the parklands have a flat profile, which contrast with the surrounding valley topography. The parklands are composed of reclaimed land made up of imported fill and contained by a continuous seawall at the water's edge.

Soils

Bobbin Head is formed on in-filled estuarine bays. The surface soils are compacted and impermeable. There is evidence of significant soil acidity and nutrient deficiencies in the park.

Hydrology and Drainage

The land generally drains away from the natural edges of the parklands towards the flat foreshore areas. The stormwater system also allows seawater to flood the parklands during King Tides. There are several of creeks and subterranean drains which run from the valley under the parklands to the creeks.

Microclimate

The microclimate of the parklands varies significantly across the area. The water's edge is an exposed zone with minimal shade and large areas of heat-reflecting hard surfacing. The middle of the park (behind the water's edge) has a greater degree of protection and shade with less hard surfacing. At the rear of the park the adjacent steep slopes and vegetation provide a relatively protected environment with shaded areas.

Flora and Fauna

A combination of exotic, non-endemic and endemic native tree species exists at Bobbin Head. Naturally occurring endemic vegetation occurs on the steep slopes at the periphery of the parklands. Additionally, a mangrove community occurs adjacent to Cockle Creek at Gibberagong South.

Recreation and Visitor Facilities

Visitation numbers have increased dramatically in recent years, placing additional demand on facilities.

Volume 3, Appendix 1.5 Recreational Planning Report, Chapter 5 summarises some of the key recommendations for recreation.

Access, Circulation and Car Parking

The majority of visitors to Bobbin Head arrive by car. Conflicts between pedestrians and vehicles / cyclists are occurring along Bobbin Head and Ku-ring-gai Shase roads where they traverse the park.

Heritage

Bobbin Head has been a popular recreational destination for more than one hundred years. The Conservation Management Plan provides detailed information on the European heritage of Bobbin Head and recommends the conservation and interpretation of the 1930s landscape character of Orchard Park and the Wharf Area. There is currently no interpretation regarding Bobbin Head's Aboriginal significance.

Parkland Character and Visual Quality

Bobbin Head has a relatively restricted visual catchment defined by the surrounding ridgelines within the National Park. Views from and towards the water are an important aspect of Bobbin Head's attraction and appeal. There is a transition from a formal parkland character in Orchard Park to the informal parkland character dominated by native trees in the southernmost part of the parklands. The majority of the water's edge is dominated by car parking and suffers from a lack of shade.

6.2 Opportunities

The LMP analysis of the existing parklands leads to an understanding of the opportunities and constraints which guide the future planning of the park. Key opportunities are:

- Restore and interpret the 1930s landscape design for Orchard Park, including reinstating earlier structure circulation alignments, and vegetation patterns and character.
- Improve the amenity of the waterfront areas by reducing the hard surfacing and providing greater shelter and shade. This applies to all areas including Orchard Park, Gibberagong Parks and the Wharf Area.
- Provide a continuous and shaded waterfront promenade through Orchard Park and Gibberagong Parks.
- Concentrate the car parking to the rear of the parklands thereby providing improved pedestrian access to waterfront areas.
- Reduce the dominance of car parking and improve recreational amenity in Gibberagong South.
- Improve pedestrian safety along Bobbin Head Road.
- Improve the visual setting of 'Bobbin Inn'.
- Provide a new walking track to Apple Tree Bay.
- Establish a loop trail from Gibberagong South through the mangrove boardwalk, to the rainforest area upstream and back
- Provide greater interpretation and educational awareness of the cultural and natural values of the park and environs.
- Improve the condition and vigour of park vegetation by improving soils and managing vegetation.
- Improve sustainability provisions.

6.3 Management Actions

This Chapter outlines specific actions for Bobbin Head in relation to its planning and management. These actions are supported by design principles which inform the approach to implementation of the actions to ensure a coordinated, consistent design is achieved for Bobbin Head. They should also be used as a general reference in relation to all future planning or management activities affecting the parklands.

Refer to Volume 1, Part 3 LMP, Chapter 6.0 for Design Principles and Actions.

6.3.1 Conservation

European Heritage

The Conservation Management Plan recommends that the 1930s landscape character of Orchard Park North and South and the Wharf Area be reinstated and interpreted (Refer to Volume 1, Part 2 CMP, Policy 6.4.27). There are structures in the park that originate from the 1930s, which should be retained and upgraded. Some of the tree specimens also originate from this period and should be retained where possible. New facilities and plantings should be sympathetic to and reinforce the desired 1930s character, while coordinating with elements in other parts of the park.

Aboriginal Heritage

Ku-ring-gai Chase National Park contains extensive evidence of Aboriginal occupation. Management should aim to protect archaeological sites and interpret Aboriginal Heritage in a way that instils interest and promotes an appreciation of Aboriginal culture and the Aboriginal Heritage of the area.

6.3.2 Environment and Sustainability

Parkland Vegetation and Soils

Much of the vegetation at Bobbin Head is underperforming, primarily as a result of hostile soil conditions. Management of vegetation and associated soils is critical to the ongoing amenity of the park and should be an undertaken proactively as an integral component of the parkland's maintenance regimes.

Flora and Fauna

Ku-ring-gai Chase National Park is particularly important in conserving a large area of relatively undisturbed vegetation. At Bobbin Head, endemic flora occurs primarily on the natural slopes at the parkland perimeters and provides a visual counterpoint to the manicured landscape of the cultural park setting. The steepness of the terrain and the denseness of the existing vegetation tend to discourage access and damage in most areas. Ongoing maintenance is required to ensure that the parkland does not affect the native flora and fauna deleteriously.

Water Quality

Maintaining appropriate water quality controls at Bobbin Head is important in order to protect the quality of the water in Cowan Creek.

Water Sensitive Environmental Design (WSED)

The implementation of WSED at Bobbin Head involves the application of a broad range of measures aimed at reducing the reliance on the urban water supply system.

6.3.3 Landscape Character and Visual Quality

The attractive setting of Bobbin Head is a primary reason for its high visitation levels. The semi-open, grassed nature of the parklands currently allows good visual permeability between trees to areas both within the parklands and to the adjacent waterways and natural slopes. Views and vistas are an important aspect of the experience of visiting Bobbin Head and should be retained, requiring consideration be given to the locating of vegetation and other elements which might potentially obscure views. This is important to ensure a harmonious visual relationship between the parklands and its surrounds

6.3.4 Recreation and Visitor Facilities

Most park facilities at Bobbin Head require upgrading and new facilities and infrastructure will be needed to cater to increased visitor numbers and changing user requirements. Facilities need to be distributed through the park and sited to provide favourable aspect and shade to picnickers. The design should ensure that this infrastructure is sensitive to the cultural setting and coordinated with the existing facilities and visually appropriate.

6.3.4.1 Signage and Wayfinding

Information and wayfinding systems are required to assist visitors with all aspects of the parklands: environment, recreation, Aboriginal and non-indigenous heritage, sustainability, archeology, regulations, restrictions, waste management, safety security and hospitality. A consistent, visible, legible and integrated system utilising high quality informatics, brand and graphic design is required for all areas. Park furniture should be of high quality and appropriate to the parkland characteristics:

Actions

- Establish an integrated way-finding strategy to assist with the orientation of users both inside the Park and in the surrounding pedestrian and vehicular road network.
- Implement a coordinated suite of interactive interpretive system that focus on both the natural and cultural (European and Aboriginal) values of Bobbin Head and its environs.
- Use high quality, durable, vandal-resistant infrastructure (eg, sturdy materials, tamper-proof fastenings, anti-graffitti coatings).

Design Principles

- Ensure new signage structures are sympathetic to the cultural significance of the place and visually integrate. Installation of signage should not damage significant fabric of a heritage item.
- Locate signage to avoid obstruction of views.
- There should be an efficient use of mounting structures through consolidation so as to reduce visual clutter. Signage may be mounted on existing infrastructure such as lamp posts.
- Signage should be ergonomically designed, changeable where required and legible from intended distances.
- Park signage is to meet NSW National Parks and Wildlife Service Signage Design Standards.

Refer to Volume 2, Part 2 CMP, Policy 6.13 and 6.14.

6.3.4.2 Utilities and Services

Services and utilities are required for the proper and effective functioning of the park. Generally, services and utilities are required to be located underground. In certain circumstances making features of utilities could be considered.

Actions

- Remove or properly terminate existing redundant systems.
- Existing services such as stormwater drainage, electrical systems, telecommunications, sewerage, water supply, irrigation, fire fighting systems and security systems are to be concealed, safe and vandal resistant.
- Consideration must be given, in planning and upgrading, to upgrade underground service services to the parklands that are subsiding, especially in areas where there is a potential to increase levels to counter future inundation.

- Environmental Construction Management Plans must include services location and identification.
- Design to be cost effective and robust; reticulation and future provision allowances for services is required.
- Where service infrastructure is located within high traffic areas and exposed, such infrastructure are to be powder coated to blend-in and / or be screened by appropriate landscape.

Design Principles

- Ensure new services are located to minimise damage to infrastructure and vegetation should service access be required.
- Re-use existing systems where possible.
- Location of large, above-ground infrastructure (eg, substations, large cabinets and overhead powerlines) is not permitted within identified main thoroughfares and vistas.

6.3.4.3 Materials and Finishes

Materials and finishes are the most sensory of all aspects of the parkland upgrade. Colour, texture, durability and finish assist in developing a palette that appeals to the visitor. Material selection is a critical component of the development of new works, especially in a heritage and conservation environment.

Actions

- Undertake an assessment of colour, material and finishes for the shelters, buildings and signage.

Design Principles

- Sandstone, brick, timber and steel should be primary materials used for any new built elements.
- Select materials which are durable with minimal maintenance requirements and integrate well throughout the parklands.
- Ensure materials are harvested in an ecologically sustainable manner.
- Ensure materials are able to be installed and managed with a minimal impact upon the environment.
- Use vegetation as the first preference for screening, shading and spatial definition.
- Meet principles as outlined in National Parks and Wildlife Services Park Facilities Manual, Facilities Planning Volume A, and Volume B Facilities Catalogue.

6.3.5 Security

Vandalism to park infrastructure and car and boat break-ins occur regularly at Bobbin Head, particularly after hours, owing to the uncontrolled access to the parklands. Consideration of the layout of elements and the choice of materials and fittings may reduce the incidence of anti-social activities and enhance the sense of security for visitors using the park. National Parks and Wildlife Service is considering providing lighting in the park for night-time use.

6.3.6 Access, Circulation and Car Parking

Future planning should seek consolidation of the vehicular road and parking. This can be achieved by relocating car parking to the rear of the park, freeing the water's edge for picnicking and recreation and reducing conflicts between pedestrians and vehicles. It is important to maintain car parking numbers due to the significant and growing visitor demand.

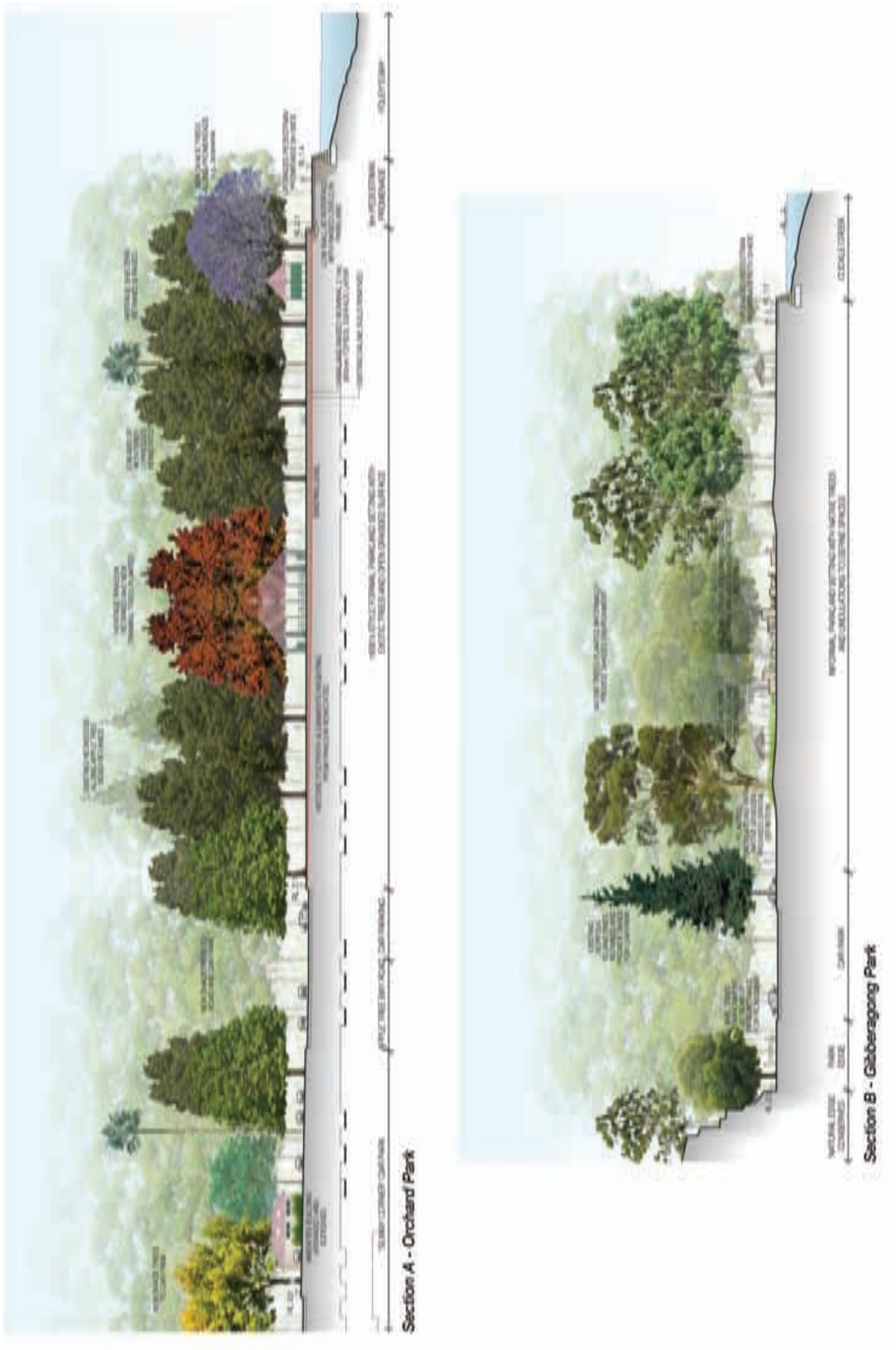


Figure 6.1. Bobbin Head Sections - NTS

6.4 Design Description

Refer to Volume 1, Part 3 LMP, Chapter 7.0 for the full description of the Bobbin Head Masterplan design.

The revitalised landscape design for Bobbin Head aims to conserve and interpret significant existing fabric and proposes new works to improve facilities and address the increasing visitor demands at Bobbin Head. The recognition of the natural and cultural values of the park is reflected in the proposed new works, including adaptation of existing built forms, and new built forms that reflect greater visual and physical connectivity and encourage a diversity of recreational and educational uses alongside conservation of the natural and cultural environment. Bobbin Head has been divided into five sub-precincts to facilitate detail description:

Orchard Park and Orchard Park South

The 1930s landscape character of Orchard Park is proposed to be reinstated and interpreted, with historic shelters and formally laid out exotic plantings providing a shaded setting for picnicking and other relaxing recreational activities. This would be as part of the reconstruction of Orchard Park to avoid sea water flooding. 'Bobbin Inn', the historic shelters, and the Pavilion will be upgraded to better cater to visitor requirements, and facilities will be upgraded and improved, generally, with additional facilities implemented to cater to increasing visitor demands. Car parking is proposed to be relocated to the rear of the parklands to improve pedestrian access and safety and allow upgrading of the foreshore promenade along the Cockle Creek.

Successful implementation of the design requires resolution of saline inundation, which is causing an ongoing decline in the aesthetic and environmental characteristics of the park.

It is proposed that Orchard Park and Orchard Park South be raised above King Tide levels, involving reconstruction of the seawall with an additional waterfront promenade, raising Bobbin Head Road, the removal of saline soils, installation of drainage and infilling with suitable fill including a layer of topsoil and installation of an irrigation and drainage system.

Wharf Area

The Wharf Area was one of the first reclamation areas forming Bobbin Head. The area was variously modified. It is proposed that car parking be concentrated to the rear of the parkland allowing a broader area of waterfront area for recreational space. The relationship of the peninsula of land that makes up the Wharf Area to Orchard Park (across Cockle Creek) is evident from historic photographs. Therefore, the 1930s landscape character of the Wharf Area, as an extension of Orchard Park, is proposed to be interpreted, with formally laid out exotic plantings and picnic shelters to match those in Orchard Park as seen in photographs from the 1930s. The area is subject to saline inundation and this area of the park is required to be raised. Upgrades are being proposed for the existing Wharf, the sandstone bus shelter and the Coast Alive kiosk. The design also includes the proposal of entry treatments along Bobbin Head Road to mark the sense of arrival, and to slow traffic.

Gibberagong Park including Gibberagong South

Car parking is proposed to be removed from waterfront areas and relocated to the rear of the parklands, creating a safer pedestrian environment and opening up a large area of parkland with unimpeded access to the waterfront. Native trees will provide shade and amenity for users and frame and direct views to Cockle Creek. The proposed landscape design of Gibberagong Parks is to reflect natural patterns in the landscape, with gentle landscape variations laid out in a pattern symbolising the sand ripples of the estuarine habitat which once occupied the parklands. The undulations will also provide a buffer between the parkland space and the road network. New shelters, picnicking, seating, amenities building and barbeque facilities will be provided and the children's playground is proposed to be replaced with a new playground which is to include sculptural and interpretive play elements for children and infants. An area for informal ball games will be maintained at the northern end of the parklands, associated with the playground area. The consolidation of active recreation into one area of the parkland will provide the opportunity for quieter park spaces towards the southern end of Gibberagong South. The waterfront promenade will be upgraded and access to the water for canoes retained with additional parking for this recreational activity. Interpretive signage will focus on the natural, cultural and Aboriginal aspects and significance of the park. Future upgrades to be considered would include the Gibberagong Environmental Education Centre and a possible extension to the Mangrove Boardwalk to form a loop track.

The design of Bobbin Head Masterplan fulfils the Vision as set out in Volume 1, Part 1 Masterplan, Chapter 2.0 as well as the actions set out in the Plan of Management 2002.

Reference should be made to the Volume 1, Part 2 LMP Chapter 7.0 for Design Principles and Actions required to achieve the Vision.

7.0 Summary Recreational Planning

Refer to Volume 3, Appendix 1.5 Recreational Planning Report and Volume 3, Appendix 4 Summary Submissions Report. This is a summary of the Recreational Planning Report.

A range of recreational pursuits is currently enjoyed by visitors to Bobbin Head. These include family recreation in the form of picnics and barbecues, boating (powered and non-powered), hiking, walking, informal games and playground use, a variety of nature-based activities, and fishing. The underlying appeal of each activity in the parklands, is the sense of attachment to and association with nature.

7.1 Consultation

The community was consulted extensively in the period leading up to the masterplanning process and during the formulation stages of this Masterplan. Four streams of consultation were undertaken as part of the masterplanning process:

- Consultation with External Stakeholders (groups with specific interests and parkland users).
- Consultation with the general public.
- Consultation with National Parks and Wildlife Service / Department of Environment and Conservation management and personnel.
- Consultation with government and non-government agencies.

The outcomes of the consultation are generally covered in the Recreation Report. (Refer to Appendix 1.5 - Recreational Planning Report and Volume 3, Appendix 4, Summary Submissions Report.) The general objective for consultation was to ensure that planning and policy decisions were consistent with community requirements, aspirations and user-needs for the parkland development and with the general requirements of the Ku-ring-gai Chase National Park Plan of Management, 2002.

7.1.1 Community Consultation

In the period leading up to the Masterplanning process, the Department of Environment and Conservation undertook general surveys regarding the Ku-ring-gai Chase National Park use, opinions and other information regarding Bobbin Head. These include:

- 1997 Easter Visitor Survey (Ku-ring-gai Chase National Park).
- 2004 / 05 Parks Visitor Survey (Central Branch Parks).

The Summary Submissions Report identifies general comments and matters raised by the general public regarding the Draft Masterplans for Bobbin Head and Apple Tree Bay. Recommendations are included in the Masterplans as a result of the public exhibition and submissions made in response to the Draft Masterplans.

The 'Detailed Submissions Report' for Bobbin Head and Apple Tree Bay 2006 Draft Masterplan supports the summary report and provides a comprehensive assessment of the submissions received. Reference to this report is required to view copies of the original submissions.

The Masterplanning process included considerable consultation with various public interest groups. The consultation process is captured in the Masterplanning documents as part of the design methodology. The Draft Masterplan public exhibition period was widely advertised from the outset of the Masterplanning process in January / February 2006.

Paid advertising of the Draft Masterplan public exhibition period (May / June 2006) was undertaken in newspapers with a readership estimated to be in excess of half a million people.

Submissions received;

- Eight submissions were received in various written formats by email, fax and by post.

The low submission rate is ascribed to the following factors:

- A thorough community and stakeholder consultation process was undertaken during the Masterplanning of Bobbin Head and Apple Tree Bay, with all major issues incorporated into the Draft Masterplan.
- General availability of Department of Environment and Conservation / National Parks and Wildlife Service personnel and the Consulting Team (5 months) to resolve issues raised by interest groups and the general public during the whole of the Masterplanning process, including two External Stakeholder Meetings and two Community Workshops and presentations. Minutes of these meetings are available in a detailed submissions report.
- Extensive consultation with Department of Environment and Conservation / National Parks and Wildlife Service personnel and especially the Ku-ring-gai Chase National Park rangers, which helped the Masterplanning team understand the issues associated with the parklands.
- Stage 1 Community consultation concluded with 211 responses with most issues incorporated into the Draft Masterplan.
- Stage 2 Presentation of the Preliminary Draft Masterplan to community groups and external stakeholders in a workshop format with most issues incorporated into the masterplan. A minute of this meeting is available in the detailed submissions report.
- Consultation with RTA.
- Consultation with the National Parks and Wildlife Service Advisory Committee.
- The continuous availability of pre-prepared Feedback Forms to the general public regarding the Masterplan.
- A carefully considered consultation and Masterplanning process designed and managed by Department of Environment and Conservation and National Parks and Wildlife Service.
- Masterplans that achieve the project objectives.

Consequently, the extensive consultation and associated design resolution led to general acceptance of the content of the Draft Masterplans.

Amendments and professional editing of the Draft Masterplan occurred under the direction of the Department of Environment and Conservation Management to achieve final Masterplan status.

Presentation of recommendations made in the Summary Submissions Report were presented to the National Parks and Wildlife Service Advisory Committee for committee approval.

The final Masterplan with amendments is recommended to be endorsed by Department of Environment and Conservation / National Parks and Wildlife Service in August 2006.

7.1.2 External Stakeholders Meetings

Four external stakeholders' meetings were completed as part of the Masterplanning process. Participation was organised by the Department of Environment and Conservation on an invitation only basis. The list of participants, dates of consultations and minutes of the workshops and meetings, as well as individual consultations with stakeholders and collated results of these external stakeholder consultations are included in the Summary Submissions Report.

7.2 Visitor Use – Visitor Profile

Refer to Appendix 1.5 Recreational Planning Report.

Recent data (2005) estimated visitor use of Ku-ring-gai Chase National Park to average 2000 people per week.¹⁹ National Parks and Wildlife Service data and ranger observations show that visitation rates vary widely between weekends and weekdays and between holidays and non-holidays. The Easter survey (1997) found that Bobbin Head was the second most popular location in Ku-ring-gai Chase National Park at 34%, second only to West Head Lookout at 35%. The majority of these visits are half day visits, with approximately a third staying for a full day. Disparity between half day, full day and under 2 hour visits is not significant.

¹⁹ Estimate calculated from 2005 visitor data provided by Department of Environment and Conservation.

Recent surveys consistently show visitors coming from a catchment of 10-20km radius. Visitors over 55 years old make up the majority of respondents and it is observed that The Pavilion and The Station are especially popular with the elderly and special needs groups that visit Bobbin Head on organised trips.

According to the 1997 Easter Survey for Bobbin Head, the main reasons for visiting were picnic (27%), followed by barbecue (19%), sightseeing (11%), boating (10%), fishing (8%) and bushwalking (8%). The 2004 / 2005 Visitor Survey of the Bobbin Head area showed that rest and relaxation (64%), picnic (55%), socialising with family and friends (53%), short walk (44%) and fishing and boating (30%) were the primary visitor uses.

7.3 Community Values

Refer to Appendix 1.5 Recreational Planning Report.

Consistent with the findings of the 2004 / 05 Visitor Survey and the 1997 Easter Visitor Survey, key attributes valued by visitors to Bobbin Head were '*scenery and views*', followed by '*outdoors / natural environment*' and '*quietness / tranquility*'.

Bobbin Head was rated by respondents as a destination with greater '*cultural*' and '*educational*' value than Apple Tree Bay and this should be an important consideration for the masterplanning process.

7.4 Visitor Use Planning Recommendations

Refer to Appendix 1.5 Recreational Planning Report.

Several initiatives and recommendations for improving the recreation experience for visitors have been identified in the Recreational Planning Report. These include:

- Improved parkland safety.
- Improved provision and safety for walking / hiking.
- Improved provision of playgrounds and other informal play facilities.
- Introduction of a commercial boat hiring service for non-powered craft.
- Develop additional hire facilities to promote canoeing within Bobbin Head.
- Increase and upgrade the parkland facilities such as picnic areas, shelters, barbecues, park furniture and public toilets.
- Upgrade food and beverage provisions.

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8.0 Precinct Land Use and Circulation

Refer to Volume 3, Appendix 1.3 Traffic and Transport Planning Report.

Circulation and parking are a critical elements of the Masterplan. Increasing demands for the use of Bobbin Head have placed pressure on the provision of parking. Within the limited land allocation, and accepting that further reclamation, or reduction of the bushland for recreation purposes, is not a consideration, a balance between the provision of circulation and parking and the provision of recreational space is required.

There are two principal entries to Ku-ring-gai Chase National Park to access Bobbin Head. The entries are connected by a major thoroughfare – Ku-ring-gai Chase Road / Bobbin Head Road - that dissects Bobbin Head parklands. The road is managed by RTA (NSW). The road is narrow and winding with some 'hairpin bends'. Safety issues have been recorded by road users including cyclists, pedestrians and vehicle drivers, due to existing road conditions. Traffic on this road is generated by both vehicles, cyclists, and pedestrians towards recreational destinations especially Bobbin Head, and through traffic movements at weekday peak hours.

Objective

- To optimise the parkland space through redesign of the parking area.
- To create a safe and pleasant road network for the use of a variety of vehicle types.
- To improve safety for pedestrians, cyclists, disabled persons and vehicles through improved traffic management, conflict management areas, signposting and other safety measures.
- To reduce harm to native fauna.
- To improve safety and security in the parklands.

Actions

- All road and parking designs will comply with Austroads and RTA guidelines.
- Increase parkland recreation area especially along the water's edge.
- Limit the amount of asphalt surfaces.
- Reduce the dominance of car parking on the parklands.
- Relocate the parking towards the rear of the parklands.
- Protect the natural landscape: do not disturb existing bushland areas;
- Create a traffic management strategy and install safety measures to resolve / manage conflict between pedestrians, cyclists and vehicles.
- Investigate appropriate measures to reduce 'road-kill' on all roads.
- Install entry treatments to Bobbin Head parklands including different pavement treatment. Investigate the installation of two pedestrian crossings, one at each entry, to reinforce a slow speed environment.
- Department of Environment and Conservation to work closely with the RTA in the further development of Ku-ring-gai Chase Road / Bobbin Head Road as part of the Masterplan.

8.1 Pedestrian

Bobbin Head is a high pedestrian zone, especially on peak days. Pedestrians include school children taking part in education program in the Wharf Area or at the Gibberagong Environmental Education Centre. Conflicts can arise between pedestrians and vehicles on parkland roads. There is a space pinch point in front of 'Bobbin Inn' as pedestrians cross Ku-ring-gai Chase Road Road to Orchard Park.

Objectives

- To create a safe and pleasant environment to increase visitor enjoyment of Bobbin Head.
- To improve safety for pedestrians, cyclists, disabled persons and vehicles through traffic management, conflict management areas, signposting and other safety measures.

Actions

- Create a traffic management strategy to resolve / manage conflict between pedestrians and vehicles.
- Address pedestrian desire lines and provide paths and crossings at locations at or closest to these lines taking the historic landscape design into account.
- Introduce traffic calming devices to reduce speed of vehicles in the parklands.
- Special identified 'Shared Zones' are encouraged within sub-precincts.

8.2 Mobility Impaired / Disabled

All parkland amenities should consider equal access for the aged and disabled. All amenities must comply with the provisions of the Disability Discrimination Act.

Objectives

- To provide non-discriminatory access to all essential facilities and buildings for the mobility impaired and disabled.
- To limit areas of inaccessible or difficult access and provide early warning for such.

Actions

- All amenities and new facility provisions are to comply with the requirements of the Disability Discrimination Act.
- Locate facilities on ground level, wherever possible.
- Where facilities and features are elevated, provide ramps for access.
- Provide Braille displays on interpretation panels and important signage.
- Disabled carparking to be provided at a minimum of 2% of the total number of lots across the site.
- Disabled facilities to be provided, include, but should not be limited to, – toilets, public telephones, interpretation signage, picnic tables, and carparking lots.
- Provide 5 minute parking areas for the use of mobility-impaired visitors.
- Signpost areas of the parkands that are inaccessible (due to physical constraints) or difficult for disabled persons to access.

8.3 Public Transport

Refer to Volume 3, Appendix 1.3 Traffic and Transport Planning Report.

There is currently a lack of direct public transport to Bobbin Head:

- There is a public bus connection between Turrumurra Station and Ku-ring-gai Chase National Park entrance.
- A scenic ferry operates from Palm Beach Wharf with pick-ups at Pittwater daily. There is only one arrival and one departure from Bobbin Head per day.
- Private and stakeholder / interest buses arrange visits to the parklands through the National Parks and Wildlife Service.

Objectives

To promote public transport to Bobbin Head in order to ease pressures on private vehicle parking provisions.

Opportunities

- Direct public transport to Bobbin Head is to be encouraged.
- Direct bus services from train stations in the vicinity are to be encouraged.
- Ferry services from other wharves in Sydney are to be encouraged.
- Consideration should be given to negotiating public transport provisions with private or semi-private providers, especially for peak visitor times.
- Coaches are unable to safely negotiate some of the hairpin bends on Bobbin Head Road and Apple Tree Bay Road. Management is required to ensure that operators are aware of the limitations of the road network, prior to the vehicles entering the Ku-ring-gai Chase National Park road system.

8.4 Private Vehicles

Refer to Volume 3, Appendix 1.3 Traffic and Transport Planning Report.

The most common ways to access Bobbin Head are by private transport such as cars, cars with trailers, and chartered buses.

8.4.1 Cars

A balance between circulation and parking provision with that of parkland space should be continuously assessed. Department of Environment and Conservation proposes to optimise parking provisions without increasing current peak parking allowances. Bobbin Head loses its tranquility and aesthetic sensitivities when there are too many visitors and private vehicles. Bobbin Head Road is managed by the RTA, and the through-route of traffic compounds the vehicle dominance of the parklands.

Objectives

- To clarify the hierarchy of circulation of the parklands to ensure safety and improve legibility.
- To maintain current car parking numbers, while improving safety and amenity of Bobbin Head.

Actions

- Locate parking towards the back of the parklands away from the waterfront.
- Circulation and parking requirements must be designed according to minimum standards of current Austroads and RTA guidelines.
- Adopt traffic management measures to acknowledge that the Bobbin Head Road through route is located in a predominantly pedestrian and recreational parklands.
- Improve traffic slowing and safety provisions throughout the parklands and especially on Bobbin Head and Apple Tree Bay Roads.
- Minimise impermeable hard surfaces and locate parking away from prime vistas.
- Safety features are to be implemented where conflicts with pedestrians, cyclists and disabled persons occur.

- Satellite parking facilities are to be considered in the future (possibly at the entrance of Ku-ring-gai Chase National Park) to accommodate more cars and buses during peak periods. Shuttle transportation would be considered between this car park and Bobbin Head.
- Safety features and road surfaces are to be quiet and designed to reduce noise pollution.
- Landscape design is to ensure that sightlines and safety features are legible.
- Improve security associated with cars and trailers especially for over-night stays.
- Safety provisions for cyclists on Bobbin Head Road, Ku-ring-gai Chase Road and Apple Tree Bay Road are to be improved.

8.4.2 Trailers

Trailers at Bobbin Head would generally carry canoes for launching at Gibberagong Canoe Launch. Other boat trailers only pass through Bobbin Head on the way to and from boat launching areas such as Apple Tree Bay and the Marina. Boat trailer stopping at Bobbin Head is to be minimised.

Objectives

- To ensure that access routes to boat launching areas accommodate cars with trailers.
- To provide sufficient parking for cars with canoe trailers at Gibberagong Canoe Launch.
- To ensure that traffic slowing measures consider trailers and noise pollution.
- To minimise trailer / car parking at Bobbin Head

Actions

- Limit watercraft launching at Gibberagong Parks to canoes only.
- Ensure that traffic slowing measures consider trailers and associated noise pollution.
- Ensure that canoe trailer bays are designed to allow rear parking overhang and additional width requirements (3x12m).

8.4.3 Private Buses

Gibberagong Environmental Education Centre is generally served by buses with students during the school term. Corporate and other large groups using the parks facilities also charter buses and require parking areas within the park. Disabled persons mini-buses also frequent Bobbin Head.

Objectives

To ensure that access routes to Bobbin Head accommodate a variety of buses and coaches.

Actions

- Private buses and coaches are to be encouraged to use Bobbin Head facilities.
- Bus parking bays should be located away from prime vistas, preferably against cliff faces or the rear of the park.
- To provide sufficient parking for buses at Gibberagong Parks and Orchard Parks near amenities buildings.
- To provide pick-up and drop off areas for buses. Incorporate safety and signposting provisions for special uses, as required.
- To locate parking for buses in visually unobtrusive locations with convenient location to amenities.
- Coaches are unable to safely negotiate some of the hairpin bends on Bobbin Head Road and Apple Tree Bay Road. Management is required to ensure that operators are aware of the limitations of the road network, prior to the vehicles entering the Ku-ring-gai Chase National Park road system.
- Provide pay-and-display facilities at Apple Tree Bay for long-term parking.
- Provide signage at Orchard Park restricting large buses and coaches from entering Apple Tree Bay Road.

8.5 Boating

There are no boat launching activities in Bobbin Head. Boating activities occur in other areas of Ku-ring-gai National Park including a public boat ramp at Apple Tree Bay and private moorings at the Marina.

Objectives

- To maintain the existing atmosphere and character of Bobbin Head, which is conducive to passive recreation.
- To maintain or reduce current moorings and facilities for boats, in accordance with the Ku-ring-gai Chase National Park Plan of Management.

Actions

- Boat launching and other boat related activities, with the exception of canoeing and canoe launching, are not permitted at Bobbin Head due to space provisions.
- Maintenance or reduction of moorings is required to maintain vistas and views of the waterways for those parkland users who do not have the benefit of private boating.
- Promote boating hire from Bobbin Head.
- Promote dedicated canoe trailer bays at the canoe ramp to Cowan Creek.
- Provide canoe stands and wash-down facilities at the canoe launch area.
- Improve canoe ramp facilities at Cockle Creek.

8.6 Cycling

Cycling, especially mountain biking and road racing, has become increasingly popular in recent years. There are several biking trails maintained for mountain bikers in the Ku-ring-gai Chase National Park. There are no off-road cycling facilities along Bobbin Head or Ku-ring-gai Chase Road. Cyclists generally share roads with vehicles. Cycling within the parklands is permitted, within the limits of passive recreational use.

Objectives

- To promote cycling as an alternative way to access Bobbin Head.
- To provide safer cycle access routes to and within Bobbin Head.
- To improve / increase cycle facilities at Bobbin Head.

Actions

- Cycling is encouraged as an alternate way to access Bobbin Head.
- Introduce traffic calming devices to reduce speed of vehicles in the parklands.
- Limit cycle use within the parklands to specific areas.
- Signage is to be provided restricting cyclists from accessing walking tracks.
- Provide lockable bicycle racks in a visible area.
- Provide systems to assist cyclists on roads.

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9.0 Masterplanning

9.1 Methodology

The Masterplan includes a balanced approach to conservation management (CMP) and landscape management planning (LMP) in its formulation. Opportunities and constraints identified by both the CMP and LMP throughout the design process have guided the design of the Masterplan. The resulting illustrative Masterplan for Bobbin Head is an amalgamation of the key strategies determined by the conservation management, landscape management, recreational management and action priorities planning for the precinct.

This Masterplan is compliant with statutory requirements including The Ku-ring-gai Chase National Park and Lion Island, Long Island and Spectacle Island Nature Reserves Plan of Management (2002) (PoM). The Masterplan would also fulfil non-statutory obligations.

Community Consultation is an integral part in the Masterplanning process.

Figure 10.1 following illustrates the key steps and components of the Masterplanning process.

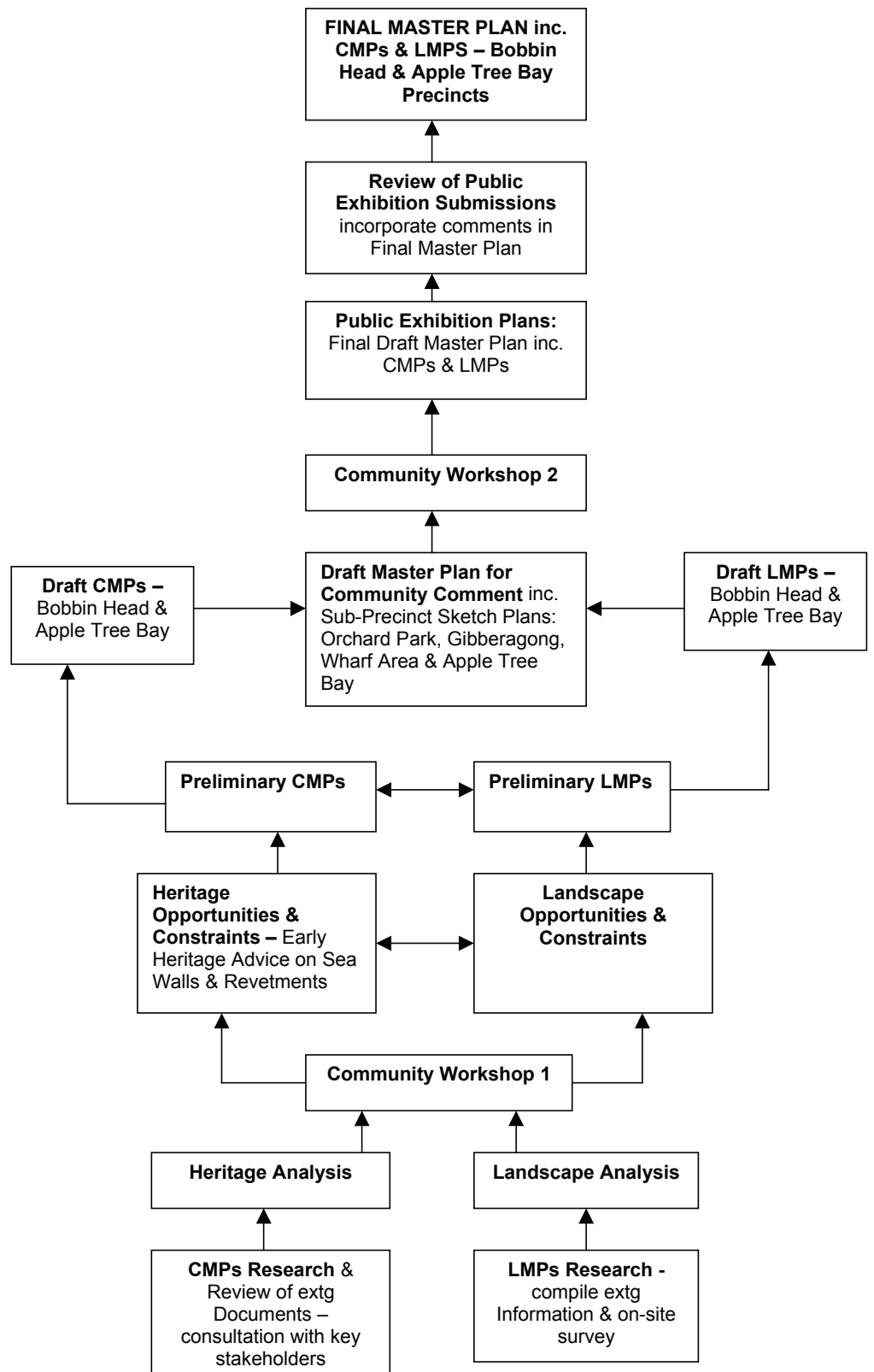


Figure 10.1. Masterplanning Process, 2005 (Source: Bobbin Head and Apple Tree Bay Masterplan Tender Document)

9.2 Planning Context

The Ku-ring-gai Chase National Park is managed through a layered structure which includes planning instruments, policies, guidelines, as well as collaboration with other government agencies. This Masterplan was formulated within the planning context of statutory and non-statutory requirements as set out below.

9.2.1 Statutory Compliance

National Parks and Wildlife Act (1974)

The Act legislates for the care, propagation, conservation and study of wildlife, natural environments and natural phenomena, as well as the promotion of the appreciation and enjoyment of nature as the main purposes of a National Park. This Act also legislates for the protection to Aboriginal Heritage.

Environment Protection and Assessment Act SEPP 4 (1979)

Under this Act, development on land administered by National Parks and Wildlife Service does not require consent from Local Government subject to internal assessment under Part 5 of the EPA Act. The SEPP generally overrides any existing relevant regulations in Local Environmental Plans (LEP) which may affect these lands.

Fisheries Management Act 1994

This Act covers the conservation, development and sharing of fishery resources of the State for the benefit of present and future generations, in particular threatened species and key fish habitats. The Fisheries Management Act also promotes ecologically sustainable development including the conservation of biological diversity. This Act would cover all aquatic life including fish, crustaceans, oysters and other aquatic molluscs.

Threatened Species Conservation Act 1995 (TSC Act)

This Act legislates for the conservation of bio-diversity, the promotion of ecologically sustainable development, prevention of extinction, promotion of the recovery of threatened species, protection of critical habitats, elimination of and management of threats to the survival of threatened species, ensuring the proper assessment of impacts on these species and encouraging conservation through co-operative management.

NSW Heritage Act (1977)

This Act provides for the conservation of environmental heritage, including places, buildings, works, relics, moveable objects and precincts of State and Local heritage significance.

The Aboriginal and Torres Strait Islander Heritage Protection Act 1984

This Act complements State legislation and is intended to be used only as a 'last resort' where state laws and processes prove to be ineffective. Under this Act the responsible Minister can make temporary or long-term declarations to protect areas and objects of significance under threat of injury or desecration. The Act also encourages heritage protection through mediated negotiation and agreement between land users, developers and Aboriginal people.

Environmental Planning and Assessment Act (1979)

The Environmental Planning and Assessment Act (EP&A Act) requires that consideration be given to environmental impacts as part of the land use planning process. In NSW, environmental impacts include cultural heritage impacts.

Sydney Regional Environment Plan (SREP) No. 20 Hawkesbury Nepean River

Under SREP 20, Ku-ring-gai Chase National Park is considered an environmentally sensitive area due to its reserved status. SREP 20 states that the environmental quality of these areas must be protected and enhanced through control of future land use changes and through management of existing use.

The Ku-ring-gai Chase National Park and Lion Island, Long Island and Spectacle Island Nature Reserves Plan of Management (2002)

The Plan of Management (PoM) is the current statutory control regulating management and operations of the Ku-ring-gai Chase National Park. This Masterplan, with amendments, will be consistent with the PoM (2002).

Following the systematic assessment of the cultural and heritage significance of Bobbin Head, the CMP (Volume 1 Part 2 CMP, Policy 6.5.27) recommends the conservation and interpretation of the 1930s landscape character of the park. This view contrasts with the Plan of Management (2002) Clause 4.1.6 Policies and Actions point 5, p27, which states '*However no attempt will be made to replicate all the 1930s plantings or to reconstruct all the picnic shelters, pathways or other landscape features of the 1930s*'.

The Plan of Management (2002) was written prior to a full CMP being undertaken for Bobbin Head, and the social and landscape significance of Orchard Park was not fully addressed. The Masterplan will be endorsed and adopted prior to the amendments to the Ku-ring-gai Chase National Park. This current Plan of Management (2002) will be reviewed and amended within the next four years.

Building Code of Australia

All buildings within Ku-ring-gai Chase National Park should comply with the Building Code of Australia (BCA). Categorisation of buildings in Bobbin Head is to be determined by their future use. If the buildings of heritage significance require upgrades, all works to the buildings are not to adversely affect significant fabric, nor intrude upon significant interiors.

Disability Discrimination Act (1992)

This Act deems it illegal to discriminate against persons with disabilities or their associates regarding the means of access to premises.

Hornsby Shire Council LEP (1994)

All the sub-precincts of Bobbin Head except the Wharf parklands fall under the boundaries of Hornsby Shire Council. 'Bobbin Inn' is listed in the LEP as an item of heritage significance. Ku-ring-gai Chase National Park is listed as having State heritage significance.

Ku-ring-gai Municipal Council Planning Scheme Ordinance (2003)

Neither Ku-ring-gai Chase National Park, nor any item associated with the place, is listed in the Ku-ring-gai Municipal Council planning instrument.

9.2.2 Non Statutory Considerations

Obligations from Charters including the Burra Charter; International Cultural Tourism Charter, Australian Natural Heritage Charter

These Charters stipulate that places of significance are worth keeping as they enrich our lives. The overall cultural significance of a place is embodied in its setting, use, meaning and contents. Research and recording of information is also a high priority. Adopting these Charters sets a precautionary approach to all alterations to Bobbin Head.

The primary non-statutory planning and facilities obligations are derived from:²³

- *Burra Charter*. The Australian ICOMOS Charter for Places and Cultural Significance, 1999.
- Living Parks – A sustainable visitation strategy, Department of Environment and Conservation (NSW) 2006.
- Facilities Planning – Parks Facilities Manual, Volume A Facilities Planning and Volume B Facilities Catalogue, Parks and Wildlife Division, Department of Environment and Conservation (NSW).

International Union for the Conservation of Nature and Natural Resources (IUCN) (1994)

²³ NPWS Corporate Plan 2000-2003

Guidelines for Protected Area Management Categories.

This document, adopted by National Parks and Wildlife Service for the purposes of preparing plans of management, defines a national park as:

'a natural area of land and / or sea, designated to protect the ecological integrity of one or more ecosystems for present and future generations, exclude exploitation or occupation inimical to the purposes of designation of the area, and provide a foundation of spiritual, scientific, educational, recreational and visitor opportunities, all of which must be environmentally and culturally compatible.' (ICUN, 1994)

- Compliance with Department of Environment and Conservation Corporate Values and Policy (refer to Chapter 10.2.5).
- Department of Environment and Conservation management obligations for both natural and cultural resources within a local, regional, state, national and international context.
- Department of Environment and Conservation policy, planning and management documents including the NSW National Parks and Wildlife Service Cultural Heritage Strategic Policy; NSW National Parks and Wildlife Service Field Management Policies; NSW National Parks and Wildlife Service Weed Management, NSW National Parks and Wildlife Service Pest Animal Management, Interim Guidelines for approvals and Risk Management Strategic Plan.
- Ku-ring-gai Chase National Park - Interim Fire Management Strategy (2005).
- Rural Fires Act (1997).

9.2.3 Other Legislative Guidelines and Policies

Other legislative documents incorporating policies that are to be considered in Masterplanning and associated management of Bobbin Head include:

- The New South Wales Occupational Health and Safety Act (2000).
- Austroads and RTA Guidelines for traffic design.
- Tenancy requirements and lease agreements.

9.2.4 Government Agency Consultation

The management of Bobbin Head includes liaison with a number of additional government agencies and groups including but not limited to:

- NSW Roads and Traffic Authority
- NSW Heritage Council and Heritage Office
- NSW Maritime Authority
- Hornsby Shire Council
- Ku-ring-gai Council
- NSW Heritage Council and Heritage Office
- Various local Aboriginal Land Councils and their respective Elder groups
- NSW Rural Fire Service
- NSW Fisheries

9.2.5 National Parks and Wildlife Service Corporate Values and Policy

The NSW National Parks and Wildlife Service (National Parks and Wildlife Service) is the government body responsible for developing and maintaining the parks and reserve system, and conserving natural and cultural heritage, in New South Wales, Australia.

The National Parks and Wildlife Service works with people and communities to protect and conserve natural and cultural heritage, through an integrated system of ecologically sustainable landscape management. The state's network of protected areas is the centrepiece of this system.

Corporate values of the National Parks and Wildlife Service:²⁴

- Respect for Aboriginal culture and heritage
- Social cohesion
- Active community involvement
- Fairness and equity
- Professionalism
- Transparency in Department of Environment and Conservation decision making
- Ethical conduct

9.2.6 The Values of our Parks

NSW Parks have a long and proud history of providing a diverse range of experiences and facilities for visitors to enjoy and learn about their rich natural and cultural heritage. Parks have long been a significant element in our society's recreational and leisure environment and have helped to shape strong social commitments to conservation outdoor recreation.²⁵

The masterplanning of Bobbin Head will adhere to the following values:

Natural Values

Parks encompass some of the most scenic and biologically diverse lands in the State.

Cultural Values

The conservation aspects of parks protect some of the State's most culturally significant places while providing public access. These include places considered important to the Aboriginal communities.

Economic Values

The management and maintenance of the parks, combined with visitor expenditure contribute to the economic activity of the local region.

Social Values

Parks provide a range of social benefits including recreation, tourism, education and social interaction between groups and families. They also support community wellbeing and provide opportunities for improving general community health through outdoor recreation.

²⁴ NPWS Corporate Plan 2000-2003.

²⁵ Department of Environment and Conservation (NSW), 2006; *Living Parks – A Sustainable Visitation Strategy*, Department of Environment and Conservation.

9.3 Authorship

Conybeare Morrison International prepared the Masterplan. William Morrison was Company Director, Colin Polwarth, Associate, and Michelle Yik, Urban Designer, prepared the Masterplan.

9.3.1 Specialist consultation

The formulation of this Masterplan entailed specialised technical consultation in various fields. The following is a list of consultants engaged and their respective reports which have informed the outcome of this Masterplan. These additional reports can be found in Volume 3, Appendices, Appendix 1.

Location - Volume 3	Field	Consultant	Reports / Recommendations
Appendix 1.1	Flora and Fauna	Australian Museum Business Services	Flora Constraints Report Fauna Advice
Appendix 1.2	Aboriginal Heritage	Australian Museum Business Services	Aboriginal Heritage Report
Appendix 1.3	Transport Planning	Arup	Traffic Report
Appendix 1.4	Geotechnical	Douglas Partners	Geotechnical Advice
Appendix 1.5	Recreational Planning	Stratcorp	Recreational Planning Report
Appendix 1.6	Soils	Sydney Environment and Soils Laboratory Pty Ltd	Soil Report
Appendix 1.7	Marine Engineering and Structure	TLB Structural Engineering	Seawall Flood levels Structure of Sunny Corner Amenities Building Structure of Bobbin Inn
Appendix 1.8	Quantity Surveying	Bay Partnership	Quantity Surveying Report
Appendix 2	Bobbin Head Seawall	Conybeare Morrison International	Conservation Management Plan
Appendix 3	Apple Tree Bay Seawall	Context Landscape Design	Landscape Management Plan
Appendix 5.1	Flora	Tree Wise Men	Arborists Reports
Appendix 6.1	Recreation	Kayak & Canoe Inc	Kayak & Canoe Report
Appendix 6.2	Conservation	Hornsby Conservation Society	Conservation Reports
Appendix 7.1	Heritage	Conybeare Morrison International	Heritage Listings
Appendix 7.2	Landscape	Context Landscape Design	Concept Planting Plan

Table 10.1. Specialist Consultation Reports

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10.0 Implementation

10.1 Actions Priority Plan

The staging of the Masterplan is to be considered over a number of years. Staging will be assessed and prioritised as funds become available. The Masterplan will be cost planned and works prioritised as follows:

Short-term improvements:	1-3 years
Medium-term improvements:	3-5 years
Long-term improvements:	5-10 years
Other	Potential Future Developments

10.2 Future Masterplanning

Bobbin Head has a long history of masterplanning as a managed development. Early records of the developments and improvements to the area are contained in Trustee Minutes and in various other documents. During the National Parks and Wildlife Service management era, masterplanning decision processes were recorded in minutes of meetings and in various drawings and photographic reports. More recently the process was formalised into Masterplan reports. Masterplanning requires updating at regular intervals to ensure high quality standards are maintained and that current policy directions change according to changing values:

- Masterplanning upgrades should be undertaken to coincide with upgrades to the Ku-ring-gai Chase National Park PoM.
- Masterplanning re-writes should be undertaken on a 20 year program to ensure that environmental, recreation, parkland and associated amenities are contemporary and of the highest standards.

10.3 Implementation Strategy

10.3.1 Commitments by the NSW Government

The New South Wales Government will invest an additional \$38 million into the protection and presentation of Sydney's National Park areas. More than \$5.5 million will be committed to Sydney's northern national parks with \$1.5 million of that identified for major upgrades at Bobbin Head to include sea walls, walking tracks and visitor facilities.

The Government's increased investment will mean revitalised National Parks. Visitors will be better able to experience and enjoy our Sydney parks and reserves without compromising this precious natural and cultural resource.²⁰

This Masterplan is part of the revitalisation project. \$1.5 million has been allocated to the two precincts (Bobbin Head and Apple Tree Bay) as part of a \$38 million Revitalising Sydney's National Parks initiative, a four year program to upgrade the natural and cultural features of the parks and reserves in and around Sydney.²¹

Further capital funding will be sought for the progressive implementation of this Masterplan.

²⁰ Revitalising Sydney's National Parks. NSW Government Budget Commitments 2005-2008. Department of Environment and Conservation (NSW) May 2005.

²¹ Hornsby Advocate; 20 April 2006; P.13

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10.3.2 Staging Strategy

The staging strategy for construction of the parklands and facilities are documented in the summary below. This is an indicative approach to the proposed improvements to Bobbin Head over a number of years. The staging strategy is as follows:

- **Short-term improvements (1-3 years)**
 - Reconstruction of sandstone seawalls at Orchard Park and Gibberagong Park.
 - Construction of new foreshore promenade at Orchard Park.
 - New parking and irrigation provisions at Sunny Corner and Apple Tree Bay Road.
 - Provision of pay and display parking meters.

- **Medium-term improvements (3-5 years)**
 - Provision of Bobbin Head and Ku-ring-gai Chase Roads entrance slowing features.
 - Removal of saline topsoils and raising of parklands and roads to new levels at Orchard Park and Orchard Park South.
 - New parking provisions to Ku-ring-gai Chase Road and Bobbin Inn.
 - Construction of sandstone retaining wall to Orchard Park.
 - Pavilion and picnic shelters raised / restored / rebuilt in Orchard Park.
 - Soft landscape works and conservation or adaptive reuse of built structures.
 - New bike stands / bin and recycling area provisions.
 - Sustainability provisions.

- **Long-term improvements (5-10 years)**
 - Removal of saline topsoil at Wharf and raising of parklands and roads to new levels.
 - Road modifications to ensure road/bridge connection.
 - Removal of existing wharf and replace.
 - New parking provisions at Gibberagong Park and Gibberagong South.
 - New children' playground and new shelters and BBQ facilities.
 - Soft landscape works provisions at Wharf, Gibberagong Park and Gibberagong South.
 - Conservation or adaptive reuse of built structures at Wharf and Gibberagong Park.

- **Potential Future Options**
 - Upgrade of Bobbin Inn to DDA/BCA compliance includes new additions to rear and side of building, new upper level kitchen and servery and new terrace stairs.
 - Upgrade of Gibberagong Field Studies Centre to DDA compliance including increased security provisions and future development for the conversion of the lower ground floor and increased optimisation of existing spaces

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11.0 Conclusion

Masterplanning of Bobbin Head has occurred continuously in various forms since the Ku-ring-gai Chase National Park was first gazetted in 1894, and will continue into the future with regular updates. This process is necessary to ensure that the parklands provide, in a sustainable manner, their important and multifarious functions to the community they serve, while protecting the natural and cultural heritage.

This Masterplan presents the most comprehensive and fundamental improvements to Bobbin Head since the 1950s reclamation. The Vision embraces the significant existing cultural landscape, reinterprets the more important and visually pleasing characteristics of the parklands, and reduces or negates the impacts of undesirable qualities.

Sustainability and safety are primary issues associated with the revitalised parklands. In association with a general upgrade and improvement of amenities, the upgraded parklands will delight current and future generations, by the results obtained from reinvigorated standards.

Safety on Bobbin Head Road will be improved and traffic will slow. The roads and parking in the parklands will be consolidated towards the back of the parklands, optimising landscape space for passive recreation at the shady foreshore / promenade. The 1930s landscape and formalised design of Orchard Park and the Wharf Area will be reinterpreted as contrasting forms and colours against the natural bushland setting with Bobbin Inn acting as the central refreshment and social building.

The landscape design for Gibberagong Parks will be improved with new spatial, textural and tactile layouts including: shady native trees planted along the foreshore and in the parklands, a sculptural and integrated playground, new picnic and barbeque facilities, new amenities building and the proposed future extension loop walking track along the Gibberagong Mangrove Boardwalk to the Wharf Area.

Canoeists will have improved launching and parking facilities, and supervised hiring of canoes will be promoted. The Gibberagong Environmental Education Centre and Coast Alive will retain their current roles as central education facilities for school groups and the young people. The parklands will be improved with education, wayfinding, information and heritage (non-indigenous and Aboriginal) interpretation facilities provided throughout the park and along tracks.

The proposed future walking track between Bobbin Head and Apple Tree Bay will become a destination in itself. The dramatic views, rest areas and the serenity of Cowan Creek will be opened up to the general public. The future track will complete the Bobbin Head and Ku-ring-gai Chase Track network for the Ku-ring-gai Chase National Park.

The Masterplan establishes the Vision. Management will implement the principles and actions to achieve the Vision, with priorities established over a number of years, but subject to update and continuous improvement. The Masterplan is simultaneously subject to regular reviews and updates to ensure that the Vision is consistent with current community values. Future generations will continue to benefit from the cultural and natural landscape, fully understanding the implications, methods and strategies employed to achieve the Vision.

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