



North Wallarah Peninsula Masterplan

Executive Summary

Developer:

Lensworth Wallarah Peninsula Pty Ltd

Project Director:

Ekistics Australia

Date of Issue:

3rd February, 2003

Disclaimer:

The information contained in this document has been produced solely for the purpose of a Masterplan Development Application to Lake Macquarie City Council. The information is not to be used for marketing, sales, promotion or any use other than the identified purpose stated above.

Copyright:

This document is copyright to Lensworth Wallarah Peninsula Pty Ltd. No part of this document is allowed to be copied or retained in an electronic data storage system without the direct and written permission of the author and owner of the information, Lensworth Wallarah Peninsula Pty Ltd.

Contents

Lensworth	i
Foreword	iii
Vision	v
Role of the Lensworth Wallarah Peninsula Masterplan	vii
1 Introduction	1
1.1 Population Growth and Sustainability	1
1.2 Land Availability and Lifestyle Choice	4
1.3 Economic Development	4
2 The Wallarah Peninsula Conservation Outcome	5
2.1 Community Consultation	5
2.2 Statutory and Strategic Framework	5
2.3 North Wallarah Peninsula Local Environmental Study (LES)	6
2.3.1 Development Type 1	7
2.3.2 Development Type 2	7
2.3.3 Development Type 3	8
2.3.4 Development Type 4	9
2.4 Conservation Strategy	10
2.5 Local Environmental Plan (LEP)	12
2.6 North Wallarah Peninsula Conservation and Land Use Management Plan	14
3 Flora and Fauna of Wallarah Peninsula	17
4 The Wallarah Peninsula Masterplan	21
4.1 The Development Land Use Plan	21
4.2 Public Lands	23
4.2.1 Wallarah National Park	23
4.2.2 6(a) and 6(c) Lake Foreshore	27
4.2.3 The Habitat Corridor (zoned 7(e) – Environmental Protection – Conservation)	33
4.2.4 Mawsons Lookout	37
4.2.5 The Coastal Lands (zoned 7(c) – Environmental Protection)	40
4.3 Primary Access	42
5 North Wallarah Peninsula Management Plans	45
6 Subdivision and Title Systems	47
6.1 Land Title Options	47
6.2 Forms of Subdivision	47
6.3 Land Management	48
7 Monitoring	49
7.1 The Assurance Process	49
7.2 The Cornerstones	51
7.3 Outcomes	51
7.3.1 Ecological Stewardship	51
7.3.2 Environmental Management	52
7.3.3 Community Lifestyle	52
7.3.4 Sustainable Development	52
7.4 Reporting and Communication	53
7.4.1 Wallarah Peninsula State of the Environment Report	53
7.4.2 Website	54
7.4.3 Newsletters and Fact Sheets	54

8	The NSW Coastal Policy Validation	55
8.1	Goals and Objectives of the Coastal Policy	55
8.1.1	Goal One – To protect, rehabilitate and improve the natural environment.	55
8.1.2	Goal Two – To recognise and accommodate the natural processes of the coastal zone.	56
8.1.3	Goal Three – To protect and enhance the aesthetic quality of the coastal zone.	56
8.1.4	Goal Four – To protect and conserve cultural heritage.	57
8.1.5	Goal Five – To promote ecologically sustainable development (ESD) and use of resources.	57
8.1.6	Goal Six – To provide for ecologically sustainable human settlement.	58
8.1.7	Goal Seven – To provide for appropriate public access and use.	59
8.1.8	Goal Eight - To provide information to enable effective management of the coastal zone	60
8.1.9	Goal Nine – To provide for integrated planning and management.	60
8.2	SEPP 71	61
8.2.1	Relationship between the North Wallarah Peninsula Masterplan and SEPP71	61
	Appendix A - Summary of Management Plans for the North Wallarah Peninsula Masterplan	65

Lensworth

Lensworth's continued growth as one of Australia's pre-eminent developers can be attributed to its philosophy to:

- i) respect the unique attributes of the land for development;
- ii) promote ecological sustainability;
- iii) undertake community consultation to determine the land's future; and
- iv) complete meticulous planning.

At all projects, the Lensworth team works in partnership with state and local governments, builders, environmental and indigenous groups and the community to achieve fair outcomes for all stakeholders. This approach has been adopted at Lensworth Wallarah Peninsula to combine the concepts of conservation with sustainable urban development.



Foreword

The NSW coastline is renowned for its natural beauty and sublime living environment. Its entire length is punctuated by curved bays and sandy beaches separated by jagged headlands and cliff faces. Sensitive inter-tidal estuaries, rivers and lakes provide open lifelines to extensive coastal water bodies. Heathland, coastal forests and pastures, span open spaces creating vestiges of critical remnant habitat.

The lifestyle of the NSW coastline is embedded in the psyche of urban beach lovers, holiday-makers, country visitors and teenage escapees. “Seachange” is a commercial reflection of that psyche. What has become a recent marketing euphemism is a reflection of lifestyle choices that began before the population shift from the bush to the city.

A 250km stretch of the NSW coastline is also part of the most heavily populated area of our continent. Almost 25% of Australia’s population lives in the area covered by the metropolitan region of Sydney and the three regional centres of Wollongong, the Newcastle Hunter and the Central Coast.

The evolving conflict in these areas between protecting natural assets on the one hand and demand from people wanting to enjoy them on the other, is reflected in the importance placed on land use planning and development outcomes along the coast and in documents such as the NSW Coastal Policy and the recently gazetted SEPP 71 (Coastal Protection).

It is also a reflection of the importance and the opportunities surrounding the Lensworth Wallarah Peninsula project. Like all significant parcels of coastal land, the future land use outcomes of Wallarah Peninsula have both a local and broader context. That context is directly linked to recognising the quality and the need for protection of the natural assets within and surrounding the land.

The demand for coastal living environments will continue, unabated. Significant strains will continue to be evidenced in relation to environmental and socio-economic expectations. To respond to these issues, care is needed in the way we use and manage the diminishing coastal assets. Innovative solutions are required to ensure that urban settlement occurs in a manner that maintains and enhances those elements that made the lifestyle so attractive in these areas to begin with.

The Lensworth Wallarah Peninsula project lies squarely in the middle of these competing streams of demand.

The Wallarah Peninsula is ninety minutes north of Sydney. It is a spectacular coastal setting surrounded on three sides by water. The land overlooks the Pacific Ocean to the east. To the west and north the views capture Lake Macquarie, Australia’s largest coastal lake, four times the size of Sydney Harbour. The Watagans provide a majestic mountain backdrop. The foreground landscape

is ringed with surfing beaches at Blacksmiths, Caves Beach and Pinney Beach. Swansea channel is a gateway to the ocean at Black Neds Bay and anchored within this landscape are the enduring villages of Swansea, Pelican, Nords and Cams Wharf and Catherine Hill Bay.

The journey approaching or departing the boundaries of the Wallarah Peninsula stimulates an awakening of the senses to the natural beauty of the area. Approaching from Sydney, the Hawkesbury River closes the door on the metropolis you leave behind. Half an hour later you reach Munmorah State Recreation Area at the southern end of the peninsula. By then your mind and body have become encompassed in the surrounding bushland punctuated by peeks of the ocean and lake. Leaving Wallarah Peninsula, rising from the coastal flats to a sweeping ridge, a panorama of Lake Macquarie is your parting image.

The Wallarah Peninsula project covers 605ha of this magnificent natural setting. Either arriving or departing you know you have experienced a special place.

Vision

“The Wallarah Peninsula will be a community where the lifestyle of the people and the health of the environment share sustainable outcomes.”



This vision recognises that the natural environment and human enjoyment are intimately linked. It reinforces that the health of one contributes to the success of the other.

The Wallarah Peninsula project is committed to sustainable development outcomes. This means development that does not adversely impact natural resources, but rather uses them in ways that benefit the community now and into the future. The Wallarah Peninsula will demonstrate that the integration of a healthy environment with a vibrant community can support a sustainable future.



Walarah Peninsula coastline (Source: Ekistics)

Role of the Lensworth Wallarah Peninsula Masterplan

The components of the North Wallarah Peninsula Masterplan submission are defined in the statutory documents. The Masterplan is a Development Application under Part 4 of the Environmental Planning and Assessment Act. The Local Environmental Plan (LEP) and Conservation and Land Use Management Plan (CLUMP) are statutory documents that have already been approved and gazetted. They define the zones where development can occur. They also define what the developer must provide in the Masterplan submission.

This outline is provided in Sections 3.2 and 3.3 of the CLUMP.

The Masterplan must also be consistent with:

- the LES (Local Environmental Study);
- Aims and provisions of the LEP and CLUMP;
- Relevant State and local government policies

A key requirement of these documents is the need for the developer to provide detailed Management Plans that will act as guiding instruments as to how development should occur on the land. A summary of the management plans is included as an appendix to this document. The detailed Management Plans are submitted as a package of eight (8) plans.

To assist in understanding the role of the Management Plans and to provide a framework for future reporting and monitoring on site, the eight plans have been categorized under the four key Cornerstones that have driven the philosophy and planning for the Wallarah Peninsula project.

The Cornerstones encapsulate the reasons for the Management Plans and reinforce the role of the Management Plans in response to the statutory documents.

The statutory documents allow the developer to submit either a single Masterplan for the whole site or a Masterplan for each sector. Lensworth Wallarah Peninsula Pty Ltd has elected to prepare a single Masterplan for the land.

The Masterplan is a comprehensive document covering the whole site. If necessary, minor changes to the approved Masterplan can be reviewed as part of future Development Application processes. The need to lodge a new Masterplan would only occur in the event of gross changes being proposed to the approved Masterplan documentation.

The four (4) Cornerstones for the Wallarah Peninsula project

1. Ecological Stewardship: this incorporates the	
a) Ecological Site Management Plan	
b) Bushfire Management Plan	
2. Environmental Management: this incorporates the	
a) Physical Infrastructure Management Plan	
b) Construction Management Strategy	
3. Community Lifestyle: this incorporates the	
a) Open Space and Public Access Management Plan	
b) Social Equity Management Plan	
4. Sustainable Development: this incorporates the	
a) Built Form Management Plan	
b) Visual Integration Management Plan	

Introduction

The Wallarah Peninsula is part of the southern coastal fringe of Lake Macquarie. It is an area of high environmental quality and finite natural assets. These assets require protection and sustainable management for the benefit of future generations.

Lake Macquarie is a sub region of the Hunter Coast. The region is continuing to experience strong urban growth. The Coastal Urban Settlement Strategy (Planning NSW 1994) identified the increasing pressure for land in Lake Macquarie, the Hunter and other regions. The Settlement Strategy utilized detailed regional analysis of planning and environmental issues to identify where urban growth should occur and a range of actions required to address the potential impacts arising from that growth.

The basic principles of the Settlement Strategy are to:

- Recognise environmental limitations;
- Concentrate population on the major existing centres to make the best use of public and private investment; and,
- Permit urban expansion around the perimeter of those centres which can expand economically without environmental detriment.

The Coastal Urban Settlement Strategy is considered a key strategy document for the management of coastal growth in the Lake Macquarie region. The Strategy requires that all Local Environmental Plans:

- “recognise and protect those natural and scenic areas which are essential to maintaining ecosystems and the present character of the landscape.”
- “must be based upon the principles of total catchment management”, ie. the co-ordinated use and management of land, water, vegetation and other natural resources, and
- be based upon “ecologically sustainable development”, ie. development that seeks to meet the needs of present generations without compromising the ability of future generations to meet their needs.

The Lensworth Wallarah Peninsula project has responded to this strategic document by incorporating these principles in the Masterplanning outcomes governing the land. In addition, the outcomes of the Masterplan documents align with the objectives of the Lake Macquarie Lifestyle 2020 Strategy, the NSW Coastal Policy and SEPP71 (Coastal Protection).

1.1 Population Growth and Sustainability

Migration from Sydney accounts for almost half of the new people moving to the Lake Macquarie area each year and lifestyle is given as the most important reason (Hunter Regional Growth Strategy). The strongest demand for land in the region is along the coastal areas and this trend is expected to continue.

The population of Lake Macquarie is expected to increase by approximately 1,000 people per annum (or 0.5% pa) to reach 210,000 people by 2015. The LMCC Lifestyle 2020 Strategy warns

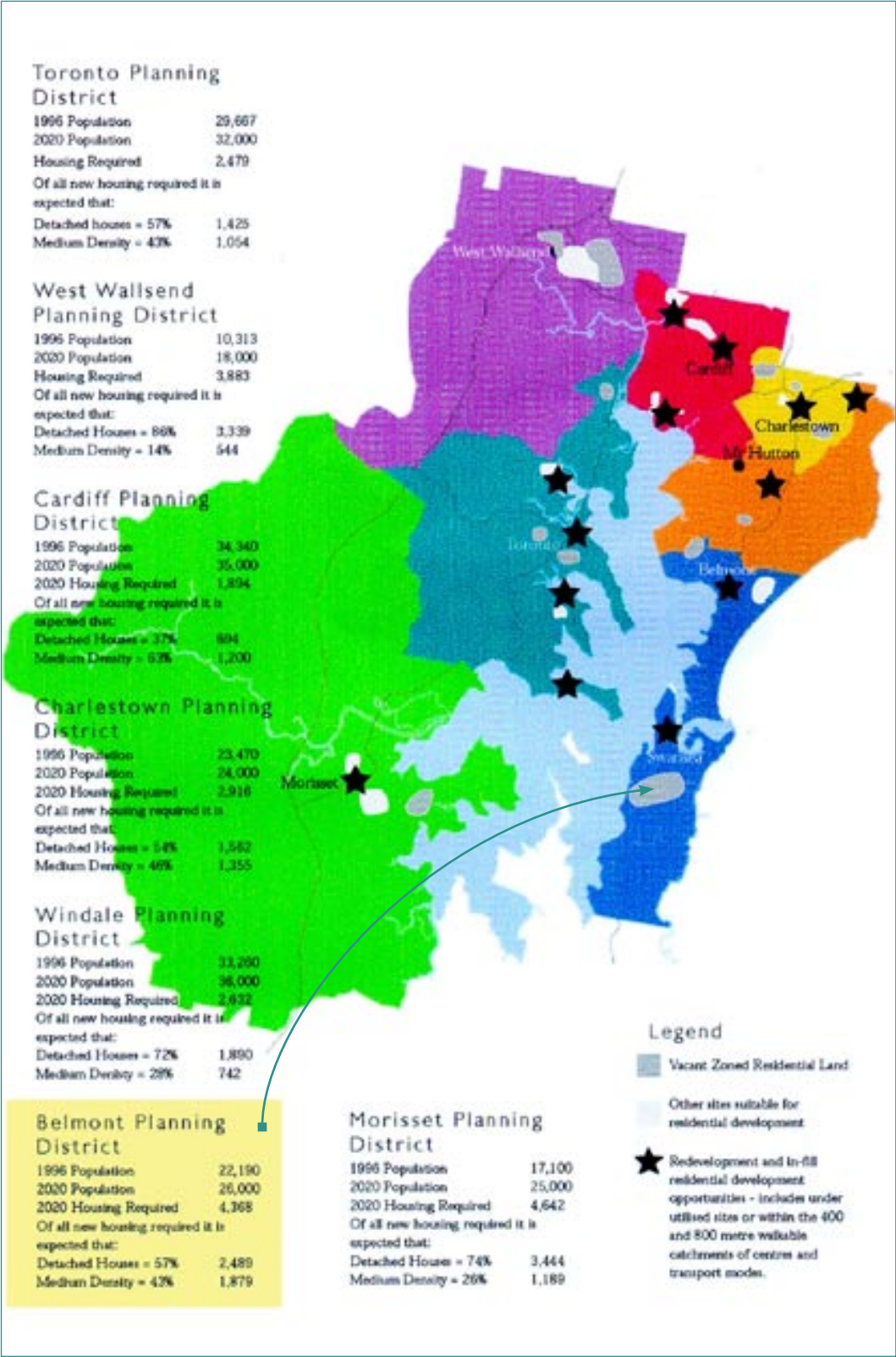


Figure 1.1
Projected Growth
and Housing
Provisions for 2020
(Source: Lake
Macquarie City
Council)

that over that time *“when land availability and reducing household size are combined, a total of 19,900 homes will be required to house the growing Lake Macquarie population. Not only will there need to be new homes for natural population growth, but also new homes to compensate for existing households becoming smaller.”* The Lake Macquarie Lifestyle 2020 Strategy also identified that there is a potential need for approximately 4,350 home in the Swansea/Belmont/Wallarah Peninsula area between the years 2000 and 2020 (refer **Figure 1.1**). The increase in demand for housing is also expected to bring an increase in the variety of housing types needed to meet that demand.

The current approved Section 94 Plan for North Wallarah Peninsula, prepared by Lake Macquarie City Council, estimates that the population for the development area will be approximately 5,600. This was based on LMCC current occupancy rates for traditional three bedroom houses of 2.8 residents per household. Over the next 15 years, which is the possible timeframe for this development, home occupancy rates are expected to decline to 1.8. This is supported by LMCC projections and is in line with the rest of Australia. Already 48% of Lake Macquarie dwellings house less than two people. The LMCC area also has more lone persons and couples with no children than the state average (LMCC Lifestyle 2020 Strategy). The household occupancy rates are falling because people are living longer, not marrying or marrying later in life, living as single parent households or seeking alternative home options for later in life. This trend began in the 1970s and will continue as lifestyles and life choices continue to diversify.

This potential shift in demographics indicates that a population of 5,600 at Wallarah Peninsula may require between 2,000 and 3,000 dwelling units of various forms to meet demands. The final number of houses constructed at Wallarah Peninsula will depend on the demographic profile of the buyers and the kind of product that is demanded. This mix is likely to include single family lots of various sizes, attached homes, unit development and strata title, part-time living and investment properties.

The land use outcomes and housing densities for the Wallarah Peninsula site have been determined by the LES development type suitability mapping, CLUMP and Management Plan guidelines. These documents provide safeguards and controls over the type of development and where it occurs. Total yield will have to meet these guidelines.

Over the next 15 years, the population is expected to continue to become older. By 2020 the majority of the population in the region is expected to be in the 30-60 year age bracket, with marked increases in the number of people over 55 years (ABS and Lifestyle 2020). This will change the demand for housing to reflect a fall from 65% to 57% of people wanting detached housing and an increase from 35% to 43% wanting attached housing.

The Lake Macquarie Lifestyle 2020 Strategy investigated a number of scenarios to determine the most sustainable, equitable and efficient future development direction for the City. Within the Strategy there was *“recognition that strengthening existing centres through encouraging population growth in and around them will aid in their ability to serve the every day needs of the local community”*. Further that *“it is essential that the existing centres of Lake Macquarie be supported*

and strengthened to ensure their continued viability and vitality, not simply as places of business but as places for people.”

A key principle of the concept design and planning of the Wallarah Peninsula project has been to adopt a strategy that ensures the development outcomes support and enhance the redevelopment of the surrounding Swansea community. Major infrastructure connections, community contribution initiatives and public amenities are envisaged to be part of a sustainable outcome where the new community of Wallarah Peninsula participates and contributes to the social equity of the existing communities of the region.

1.2 Land Availability and Lifestyle Choice

Lake Macquarie is described as a low density dispersed urban environment. In 1998, Lake Macquarie had 11,500 lots zoned for residential development. Seventy-five percent (75%) of these were on the western and north western sectors of the City and were in the low to medium price range. However 70% of the demand for housing is in the medium to high price range on the east side of the Lake.

The Wallarah Peninsula project is projected to meet part of this demand by providing a variety of housing densities and types that will suit a range of lifestyle and lifecycle needs.

1.3 Economic Development

Providing new and innovative housing in a lifestyle community like Wallarah Peninsula will enhance the socio-economic sustainability and revitalisation of the region. Housing mix is a key requirement of attracting skilled and flexible workforces in technology, research and development, finance and business services, tourism, health and wellness, education, environmental services, small business and home based business. Lifestyle choices of work share, part-time home office and continuing education are also elements of the market mix that are expected to be attracted to the unique natural setting of the Wallarah Peninsula. The participation in existing communities and villages of Lake Macquarie, by the new population, will add to the opportunities to reinforce and sustain the unique lifestyle these communities already enjoy.

An environmentally sensitive approach to new community development, as proposed at Wallarah Peninsula is consistent with the employment targets and jobs creation programs identified in the Lifestyle 2020 Strategy for Lake Macquarie.

During the life of the Wallarah Peninsula project, \$500 million is expected to be invested in the area. This makes the Wallarah Peninsula project one of the largest private investment initiatives in the history of Lake Macquarie and the Lower Hunter. Approximately 1,500 jobs will be created annually and the flow-on employment is projected to be over 1,200 permanent jobs.

The Wallarah Peninsula Conservation Outcome

Lensworth Wallarah Peninsula Pty Ltd (LWP) has made a continuous commitment to environmental assessment of the development outcomes of the Wallarah Peninsula site.

While the location of the land makes it ideally suited to residential and recreational users, all stakeholders recognise that there are significant constraints on the site because of its environmental sensitivity. A transparent planning process has been undertaken to ensure an equitable development outcome.

2.1 Community Consultation

Community consultation was undertaken prior to, during and after the preparation of the LES. It was also undertaken during the preparation of the Conservation Land Use Management Plan and exhibition of the LEP. The LEP exhibition continued for 65 days after an extension of the original exhibition period. The preparation of the Masterplan is a further opportunity for community input into the development proposal. The consultation process will continue as each significant area of the site seeks development approval.

2.2 Statutory and Strategic Framework

A three-part package of planning documents has been created and legally bound together to provide a comprehensive framework for a conservation outcome on the site and to provide guidelines for the assessment of development applications and management of future development (refer **Figure 2.1**).

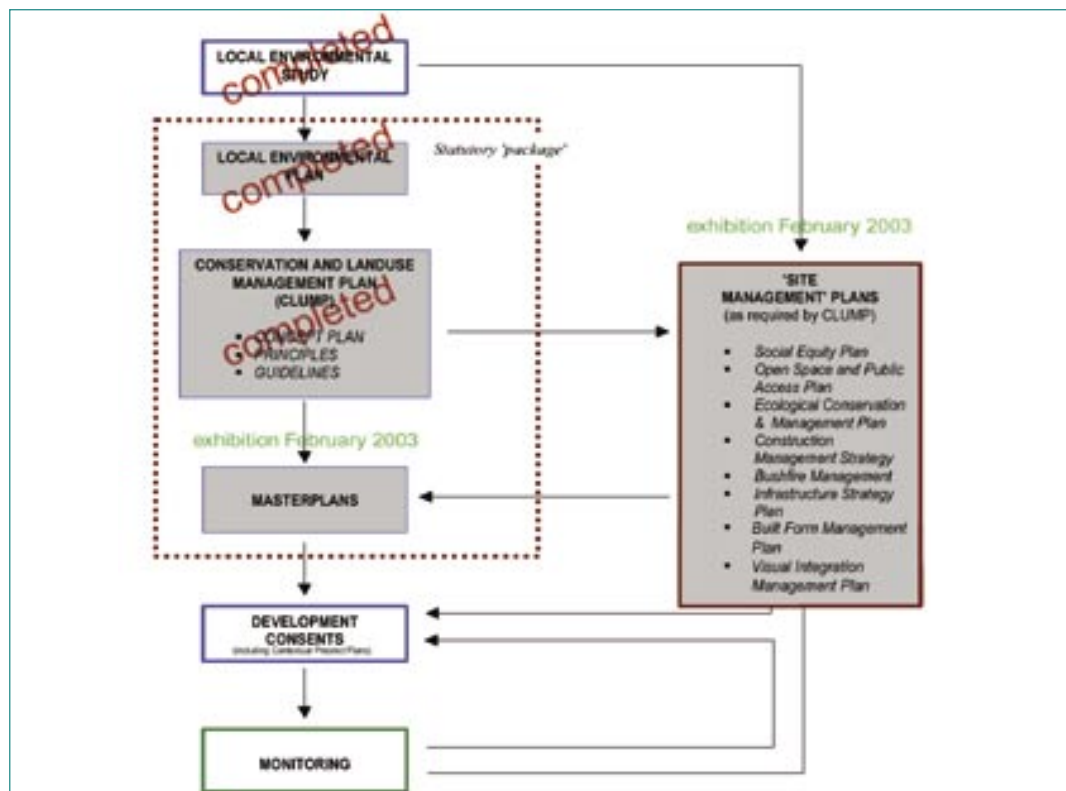


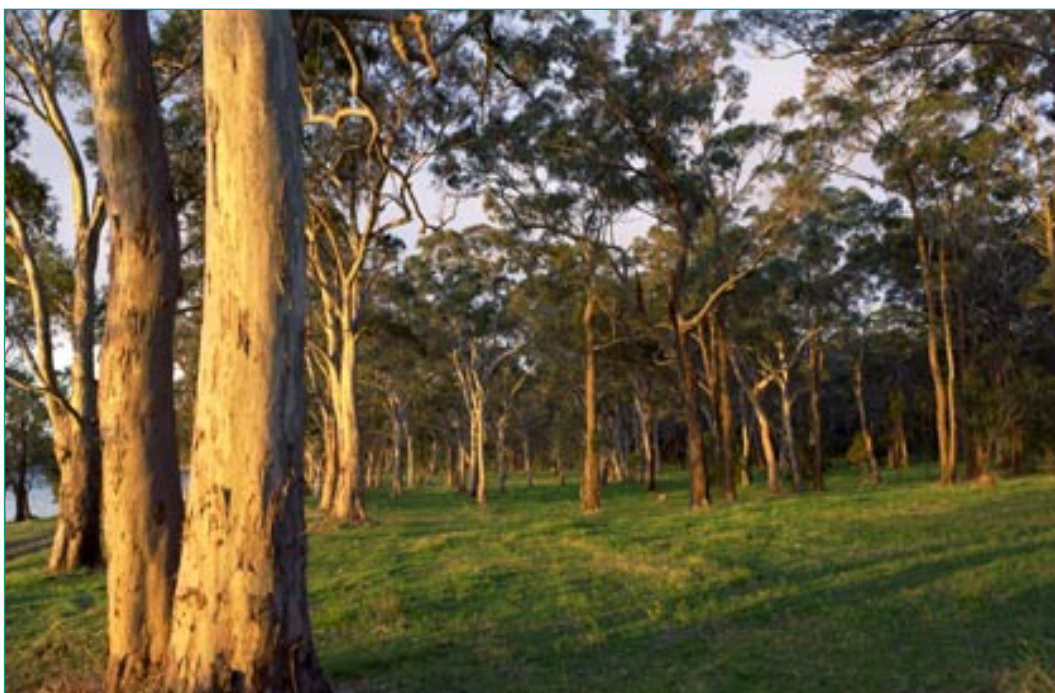
Figure 2.1
Statutory and
Strategic Framework

2.3 North Wallarah Peninsula Local Environmental Study (LES)

The North Wallarah Peninsula LES, commissioned by LMCC and undertaken by their consultants Woodward Clyde (now URS) was the preliminary technical assessment that led to a framework for a thorough understanding of the opportunities and constraints of the site. Many of the issues addressed in the LES relate to the natural values of the site combined with its coastal location between the Pacific Ocean and Lake Macquarie. The LES included:

- An outline of the study methodology, background to the current planning regime and the outline of the consultation process;
- Analysis of the existing environment including land uses, scenic resource assessment, flora and fauna, archeological, climate and air quality, hydrological considerations, geophysical factors, natural resources, bushfire assessment, contamination and community facilities; and
- Economic considerations including demographic characteristics, employment opportunities, dwelling choices, journey to work patterns and commercial land use potential within the local demand areas.

The LES findings initiated further negotiations on behalf of LMCC and in consultation with Lensworth Wallarah Peninsula Pty Ltd, to ensure a sustainable development outcome for the site. These additional consultations focused in detail on the capability of the landscape to accept urban impacts and identified where development was best suited. This was achieved by assessing certain development densities and their suitability on the site based on visual, geophysical and ecological criteria (refer **Figures 2.2 through 2.5**). Four development densities were assessed – defined as Type 1, Type 2, Type 3 and Type 4. (See CLUMP Section 2.4)



*Lake Macquarie
foreshore
(Source: Nicky Ryan)*

2.3.1 Development Type 1



Figure 2.2
Typical representation of
Development Type 1

- Large low-density development lots at the perimeter of urban development.
- Lot sizes generally in excess of 1ha.
- High retention of natural vegetation.
- Selective canopy removal within a designated building envelope and fire protection zone.
- Canopy and understorey retention within the lot boundaries beyond the fire protection zone.
- Access provided for fire trails and identified walking tracks.

- Vehicle access to be provided by existing fire trails or via new road networks constructed for Development Types 2, 3 and 4.
- No cut excavation or filling to be undertaken on natural slopes greater than 10% (6°) other than as required for access.
- Individual building footprints less than 500m².

2.3.2 Development Type 2



Figure 2.3
Typical representation of
Development Type 2

- Clusters of development lots planned as a transition between Development Types 3 and 4 and the larger low-density lots of Development Type 1.
- A building envelope identified for each lot, to take account of bushfire protection requirements.
- Generally larger lots (up to 1ha) with substantial unbuild areas.
- Selective canopy removal within the identified building envelope with partial retention of the understorey within the lot.

- No excavation or filling to be undertaken on natural slopes greater than 10% (6°) other than as required for access.
- Individual building footprints less than 750m².

2.3.3 Development Type 3

- Cluster of residential dwellings planned as individual precincts of 20 – 40 lots.
- A building envelope identified for each lot, to take account of bushfire protection requirements.
- Lot size from 750 – 1250m².
- No excavation or filling to be undertaken on natural slopes greater than 10% (6°) other than as required for access.
- Individual building footprints shall be less than 65% of the area of the lot. (NB: this requirement has been added as part of the masterplanning process.)

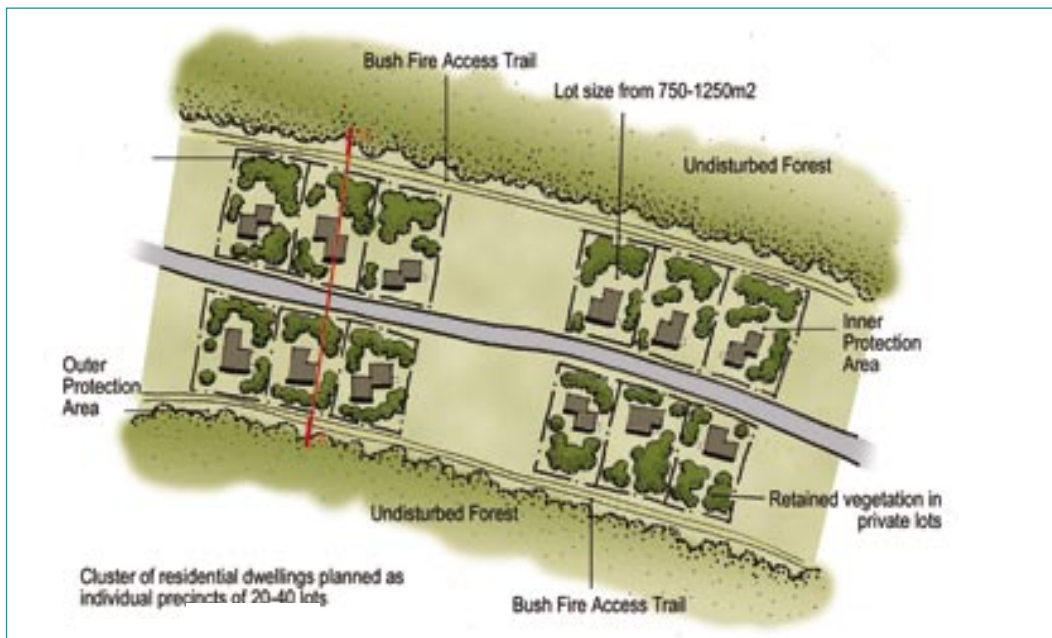


Figure 2.4a
Typical
representation
of Development
Type 3a -
Ridgetop access



Figure 2.4b
Typical
representation
of Development
Type 3b -
Midslope access

2.3.4 Development Type 4

- Urban village settlement, with diverse urban forms including terraces, small cottages, large homes, traditional suburban residential development, attached housing, apartments, a neighbourhood centre and retail/tourist uses/small commercial and home-based businesses.
- Landscaping using indigenous species to enhance the natural vegetation retained in road reservations and public open space particularly along drainage lines.



Figure 2.5
Typical representation of
Development Type 4

2.4 Conservation Strategy

A viable population and natural distribution of native species and communities in the regional landscape has been achieved at North Wallarah Peninsula by adopting the Conservation Strategy (refer **Figure 2.6**), detailed in Section 2.3 of the CLUMP, as the base for any future land use.

The Conservation Strategy creates a conservation reserve system across the site that ensures a reciprocal relationship between the development area and local biodiversity. The Conservation Strategy has resulted in the following outcomes:

- Creation of the 180ha Wallarah National Park. The national park retains and protects representative samples of all vegetation associations occurring on the site together with their wildlife habitat values.
- The protection of sub-populations of *Tetratheca juncea* within Wallarah National Park is deemed sufficient to provide adequate conservation of this species in the Wallarah Peninsula vicinity of Lake Macquarie local government area.
- Creation of an ecological/fire management buffer zone around the perimeter of Wallarah National Park to protect the national park's ecological values from the impacts of any proposed development on adjacent land.
- Creation of a Forest Red Gum Reserve along the eastern foreshore of Lake Macquarie. The Forest Red Gum association is a keystone winter-flowering species.
- Creation of a habitat corridor 100 meters wide between Wallarah National Park and the Forest Red Gum Reserve.
- Conservation of all identified Aboriginal heritage items of local and regional significance.
- Dedication of additional public lands on the lake foreshore as part of S94 contributions to ensure retentions of foreshore habitat and public access.
- Commitment to the preparation of integrated Plans of Management for all public lands within the North Wallarah Peninsula LEP area.

These initiatives ensure sufficient protection of the site's ecological values to permit certain development outcomes validated against the defining principles in the LES, LEP and CLUMP.

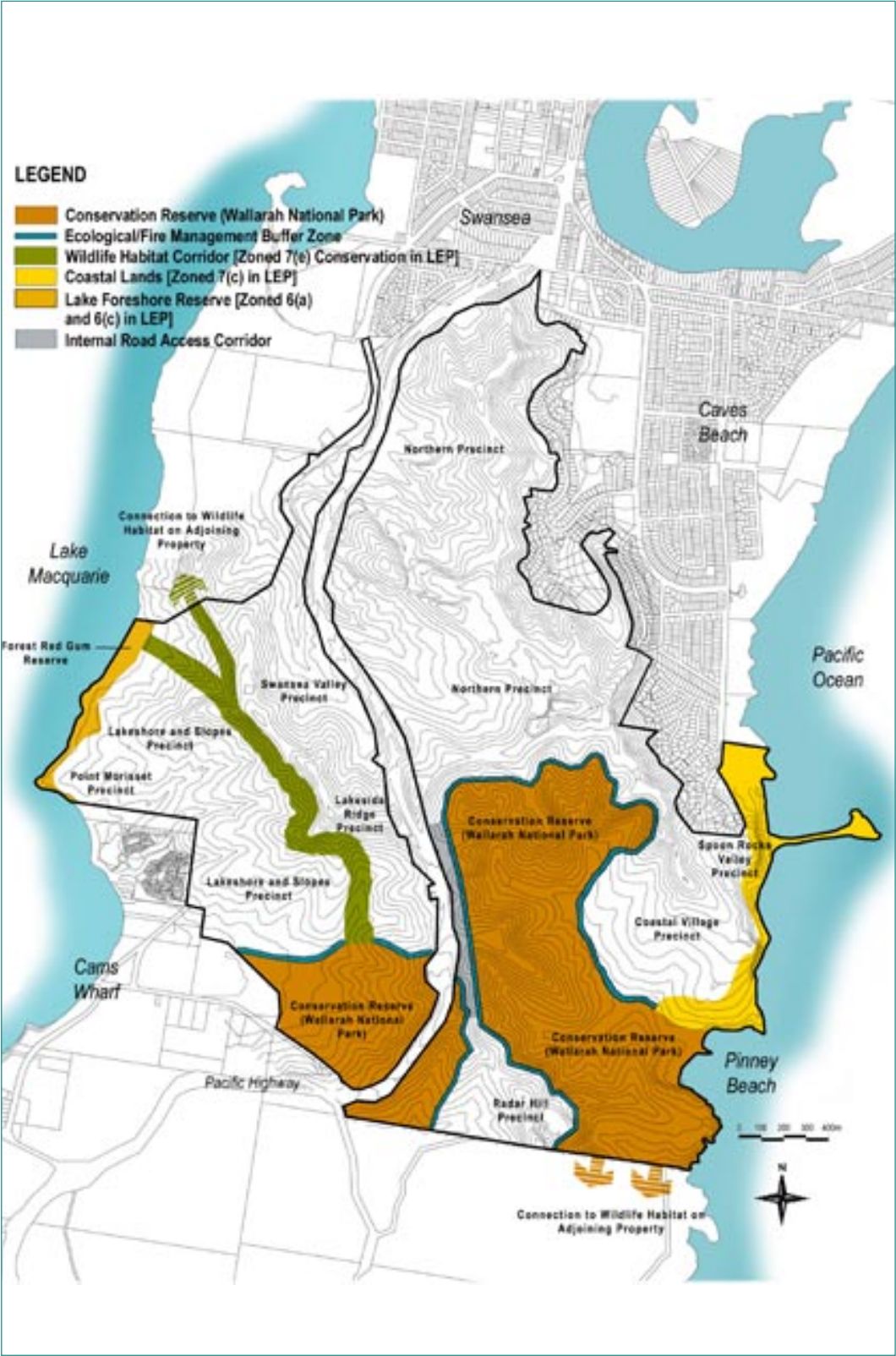


Figure 2.6
Conservation Strategy

2.5 Local Environmental Plan (LEP)

The “Lake Macquarie Local Environmental Plan 2000 – North Wallarah Peninsula” is the statutory zoning document that defines the areas for development, conservation and public ownership.

This plan applies to land in the City of Lake Macquarie in the vicinity of Caves Beach, Swansea and Cams Wharf, shown edged heavy black on the map (refer **Figure 2.7**). The land is known as North Wallarah Peninsula. This LEP is not part of the citywide LEP (Draft 2001).

The “Aims” of the LEP (as per the North Wallarah Peninsula LEP certified 15 November 2000) are to:

- (a) “provide for the development of certain land at North Wallarah Peninsula that is consistent with the integration of natural and developed landscape and conservation values attributed to the land, and*
- (b) ensure that the Council and approval bodies acknowledge and consider the conservation principles that have been identified for the land at North Wallarah Peninsula, and in the Conservation and Land Use Management Plan.*
- (c) direct the future use of North Wallarah Peninsula in a manner that ensures sensitivity to the physical, social and natural environmental values, and environmental heritage, of the land, and*
- (d) achieve ecological sustainability through an harmonious integration between the natural and developed landscape, and*
- (e) to properly integrate humans within their environment.”*



Figure 2.7
North Wallarah Peninsula
Local Environmental Plan

2.6 North Wallarah Peninsula Conservation and Land Use Management Plan

The Conservation and Land Use Management Plan (CLUMP) was prepared by Lake Macquarie City Council (LMCC) in accordance with Council resolution of the 24 November 1997. Preparation of the CLUMP involved extensive consultation with the community, Planning NSW, National Parks and Wildlife Service (NPWS), government reference agencies and Lensworth Wallarah Peninsula Pty Ltd.

The CLUMP builds on and supports the LES and LEP. It sets up a flexible framework that reflects a vision for the planning and implementation of the highest quality of community development that respects the special values of the site identified in the LES.

Key features of the CLUMP include:

- Requirements for the preparation of masterplans that will direct the sensitive development of the mixed use areas.
- A Conservation and Land Use Plan delineating the large scale conservation and mixed use development areas.
- A set of Strategic Planning Principles consistent with the NSW Coastal Policy (1997).
- Descriptions of development types and precinct character statements to assist Council and the developer to determine appropriate land uses and built forms for particular portions of the site.
- A requirement that any change to the CLUMP invokes the mandatory processes of the Environmental Planning and Assessment Act for the preparation of a draft LEP.
- Flexibility in the planning process to ensure that a diverse range of development types can be designed in response to the particular ecological, visual and geophysical characteristics of the site as well as changing social, demographic and market circumstances.

A representation of the CLUMP is illustrated by the Conservation and Land Use Plan (refer **Figure 2.8**).

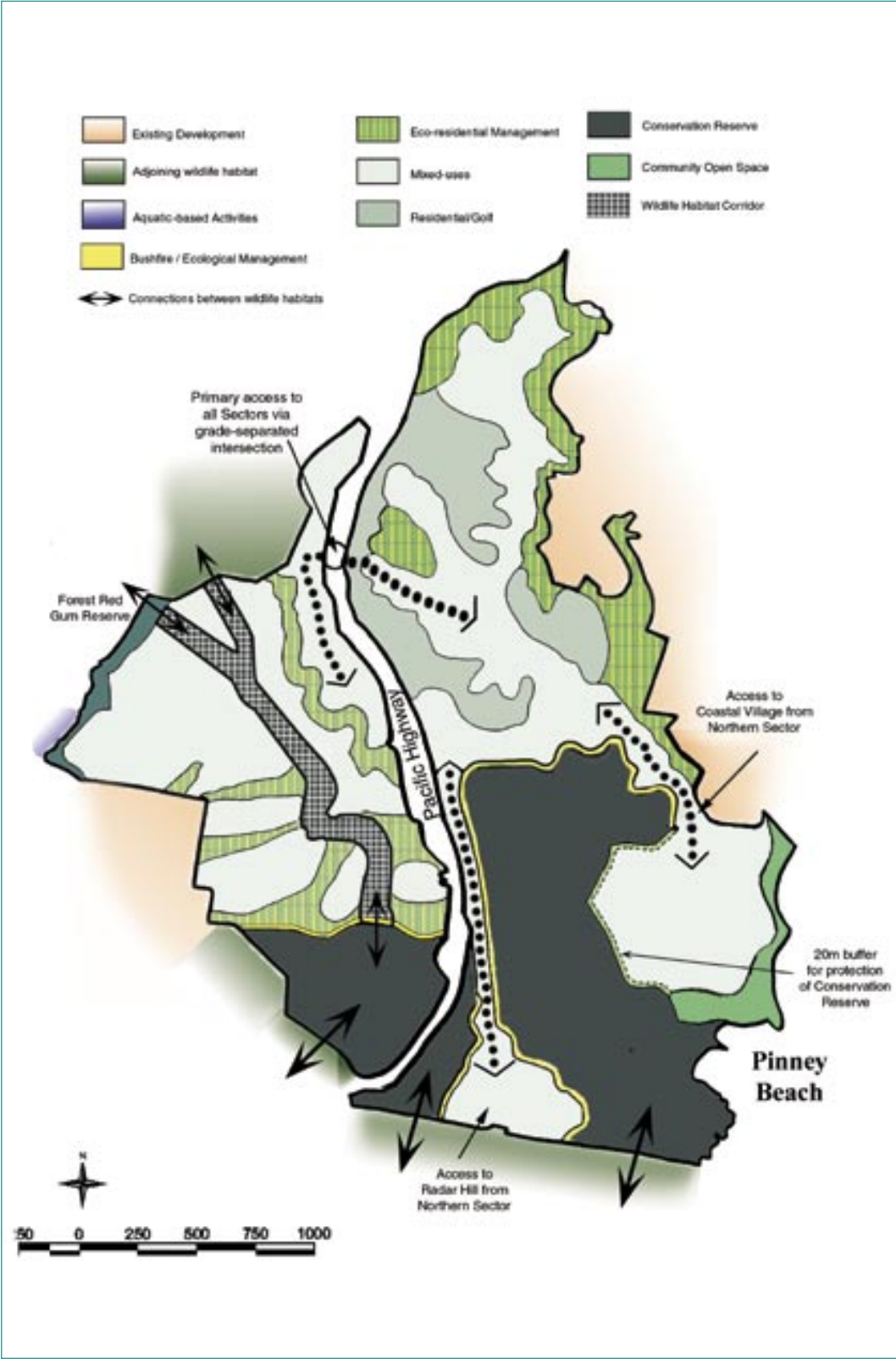


Figure 2.8
Conservation and
Land Use Plan



The Wallarah Peninsula links the ocean to Lake Macquarie (Source: Ekistics)

Flora and Fauna of Wallarah Peninsula

3



Flora

- 01 Coast Rosemary
- 02 Match Heads
- 03 Drumsticks
- 04 Coastal Tea Tree
- 05 Stiff Bottlebrush
- 06 Eggs & Bacon, Parrot Pea

Fauna

- 07 Black Cockatoo
- 08 Short-beaked Echnida
- 09 Powerful Owl
- 10 Masked Owl

Vegetative Community

- 11 Riparian Creekline





Flora

- 12 Leafy Purple Flag
- 13 Spiny Headed Mat-Rush
- 14 Coastal Banksia
- 15 Smooth Barked Apple
- 16 Hairpin Banksia
- 17 Black-eyed Susan
- 18 Flannel Flower
- 19 Banksia spinulosa
- 20 Casuarina Seed Pods



Fauna

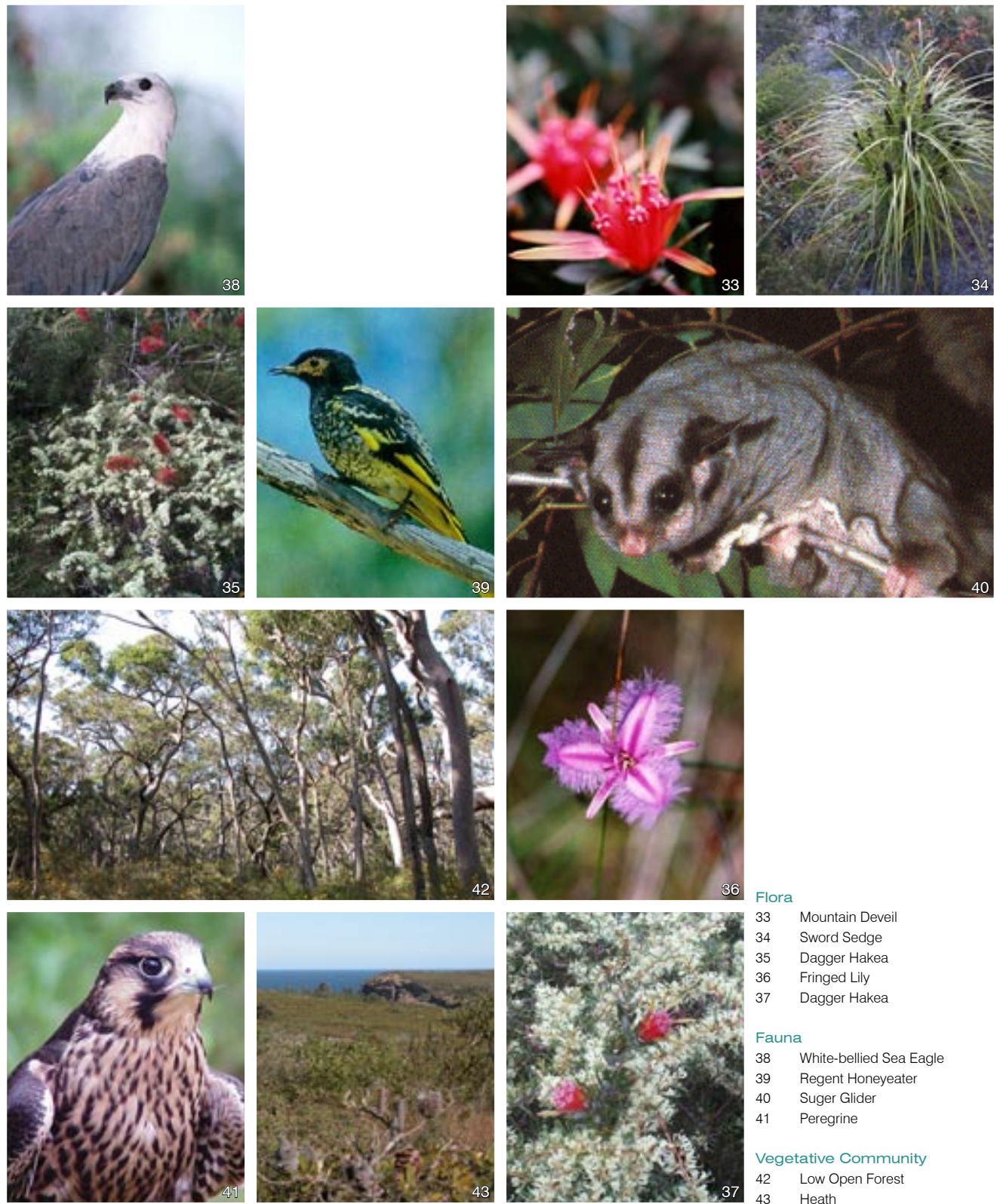
- 21 Squirrel Glider
- 22 Bell Miner
- 23 Kookaburra
- 24 Pelican
- 25 Top Knot
- 26 Rainbow Lorikeet
- 27 Feathertail Glider
- 28 Crested Strike-tit



Vegetative Community

- 29 Spotted Gum Forest
- 30 Red Gum Forest
- 31 Wet Sclerophyl Forest
- 32 Scrubland





The Wallarah Peninsula Masterplan

The Wallarah Peninsula community is envisaged to be a community of choices - choices of lifestyle, choices of housing, and choices of natural setting. But most importantly, it is a community that recognises that new development must reconcile the choice between the competing demands of protecting the natural assets of the area and the demands for opportunities to live in these areas along with public access and use of those assets.

This concept is encapsulated in the vision for the project that is aimed at bringing together lifestyle choices and environmental health in a sustainable outcome.

4.1 The Development Land Use Plan

The Development Land Use Plan (refer **Figure 4.1**) is the outcome of the detailed consideration of natural assets of the site assessed against the proposed areas of development. Each area of development has a defined Development Type and a defined level of suitability.

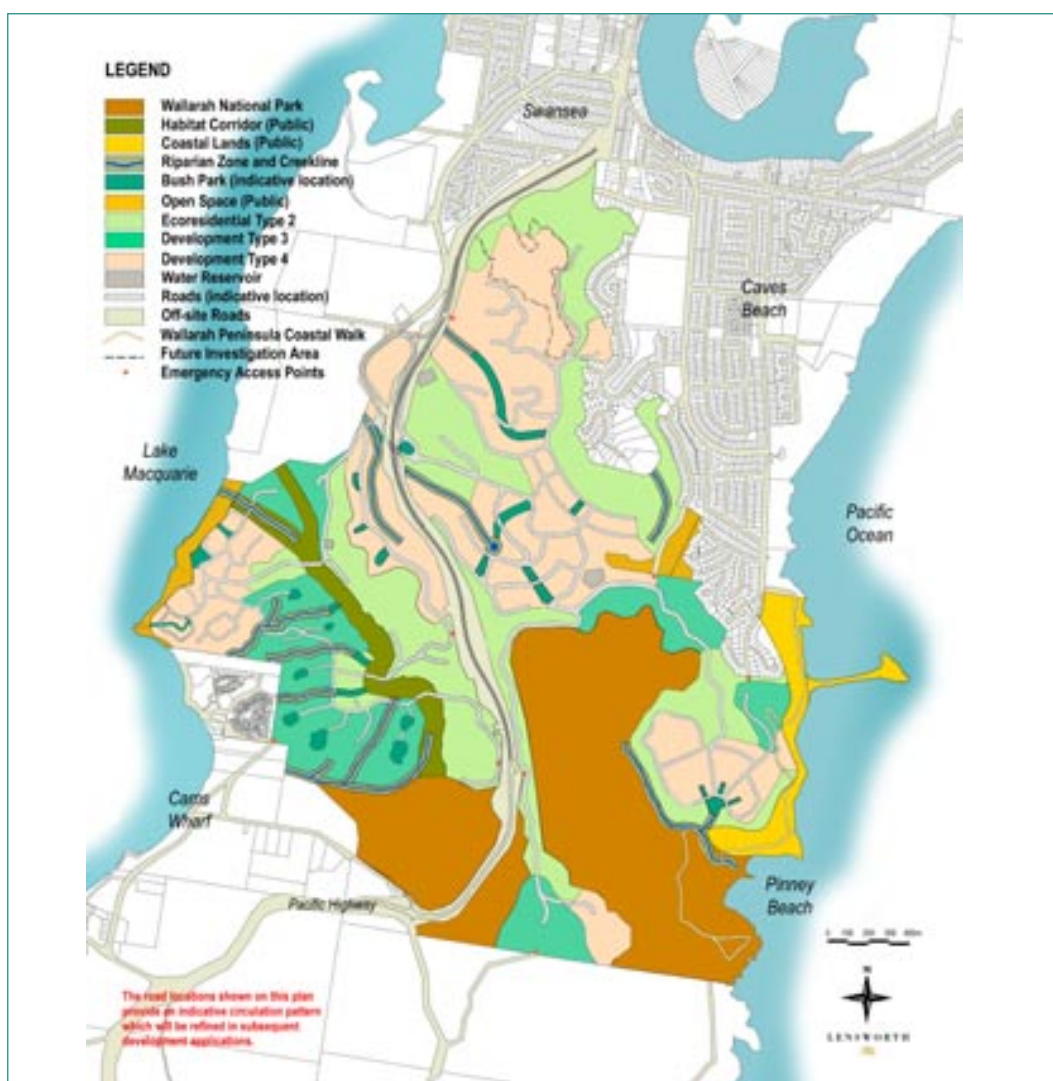


Figure 4.1
Development
Land Use Plan

The Development Land Use Plan is only one part of the overall Masterplan submission that includes eight Management Plans. The eight Management Plans cross reference each other to guide the development outcomes and to ensure that the LES, LEP and CLUMP requirements are met.

4.2 Public Lands

Other than the Wallarah National Park, there are four other areas within the LEP boundary that will require special management documentation because of their current or eventual public ownership. These areas have been zoned for public ownership because of the need to ensure their ecological protection or to ensure public access.

The Masterplan submission recognises that these areas will require a collaborative approach to planning that involves all stakeholders. To assist in this process, implementation strategies and Proposed Public Open Space Concept Plans for their management have been prepared and are presented in detail in the Open Space and Public Access Management Plan.

In summary the four special areas of public land that require their own management outcomes are:

- 6(a) and 6(c) Lake Foreshore;
- Habitat Corridor;
- Mawsons Lookout; and
- Coastal Lands 7(c).

4.2.1 Wallarah National Park

Interim Management Guidelines (IMGs) have been prepared by the National Parks and Wildlife Service (NPWS) for Wallarah National Park. The IMG are intended to guide management of the national park for the first two to three years until a formal plan of management, as required by the NSW National Parks and Wildlife Act 1974, is prepared.

The primary objectives for management of Wallarah National Park are to conserve significant cultural features, biodiversity (plants, animals and their habitats) and scenic landscape elements, and to provide public access for enjoyment and education. The IMG consider public access, visitor facilities, integration with surrounding land uses, educational opportunities, wildlife conservation, preservation of the park's special features, preservation of Aboriginal heritage, bushfire management, pest and weed management and community programs.

Significance of Wallarah National Park

As a result of studies undertaken for the LES and extensive consultation with NPWS, the land for Wallarah National Park was transferred from LWP to the NSW government in July 2001. The national park is expected to be formally gazetted early in 2003. It consists of 180 hectares of coastal and lake land, in three sections on the east and west of the Pacific Highway. The national park encompasses:

- Significant biological resources including littoral rainforest, coastal heath and threatened species habitat;
- Significant recreational resources including the popular Pinney Beach;
- Significant physical and landscape features including scenic values and the coastal environment;
- Significant Aboriginal heritage; and
- *Tetratheca juncea*.

Walarah National Park will form part of the system of NPWS coastal conservation reserves between Newcastle and Broken Bay. This system of reserves includes Lake Macquarie State Recreation Area (SRA), Pulbah Island Nature Reserve (NR), Moon Island NR, Tingira Heights NR, Glenrock SRA, Awabakal NR, Munmorah SRA, Bird Island NR, Wyrrabalong National Park (NR),

Bouddi NP, Brisbane Water NP and Wamberal Lagoon NR.



Figure 4.2
Regional open space
including NSW National
Park and Wildlife
Services locations

Management of the national park within this context and the environmentally sustainable outcomes identified for the Wallarah Peninsula in the LES, LEP and CLUMP provide an opportunity to demonstrate the benefits for conservation and public enjoyment in a national park.

People and the Park

A major focus for management of the national park and the Wallarah Peninsula as a whole, is community involvement, education, recreation, enjoyment and appreciation. All aspects of management will aim to protect the ecological and cultural values of the area, while providing quality experiences for the community.

The national park provides a wealth of recreational opportunities and management will aim to enhance these values and provide opportunities for all sectors of the community to enjoy them. These opportunities include:

- Walking, including the scenic coastal walk;
- Fishing;
- Surfing;
- Swimming;
- Photography;
- Nature appreciation, including of significant plants and vegetation;
- Scenery / landscape appreciation;
- Bird watching; and
- Research and data collection.

The national park will contribute to regional recreational values, particularly through its proximity to other reserves in the area such as Lake Macquarie and Munmorah State Recreation Areas (refer **Figure 4.2**), and the opportunities provided on adjoining land by LWP and LMCC. Recreational links between reserves in the region will be investigated.

Visitor numbers and activities

The facilities proposed in the national park reflect the intention to promote these activities, the popularity of the coastal section and an anticipated increase in visitors, primarily arising from the increased numbers of neighbours as development of adjoining land proceeds. On the lake foreshore and in the Lake Sector, facilities will be provided by LWP and LMCC outside the national park.

Visitor monitoring will be implemented to establish accurate numbers and better data on the range of activities conducted in the national park, to allow better planning and management of facilities as numbers and activities change.

Public access

A network for pedestrian and bicycle access (refer **Figure 4.3**) will be provided, including some sections of management trails which will be designated for multiple uses, including walking and cycling. A system of primary management trails will be maintained to minimise impacts on pedestrians. Public vehicle access will not be provided in the national park.

For traffic and safety reasons the majority of access to the park will be via the land zoned 10(a) in conjunction with the Wallarah Peninsula project. This includes a proposal for a vehicle underpass under the Pacific Highway, north of the national park, and possibly via a pedestrian bridge further south.

Principal public entry points to the national park are expected to be:

- Via the existing coastal walk from the north and south;
- From Cams Wharf (existing LMCC reserve with facilities, toilets and boat ramp);
- From the Coastal Sector of the Wallarah Peninsula project; and
- From the Lake Sector of the Wallarah Peninsula project.

The provision of information facilities at key visitor entry points to the Wallarah Peninsula will be investigated.

A bushfire management plan will be prepared for Wallarah National Park. Provision for closure of the national park in extreme fire weather conditions will be included in the bushfire management plan.

Neighbouring interests

The national park will be closely tied to the Wallarah Peninsula project being managed by Lensworth Wallarah Peninsula Pty Ltd. It is anticipated that many visitors will be associated with the development of the Wallarah Peninsula and numerous points of access to the national park will be via development areas. The national park will be bounded by the development to the north, north east and a small section in the south (Radar Hill). Planning and management for the national park

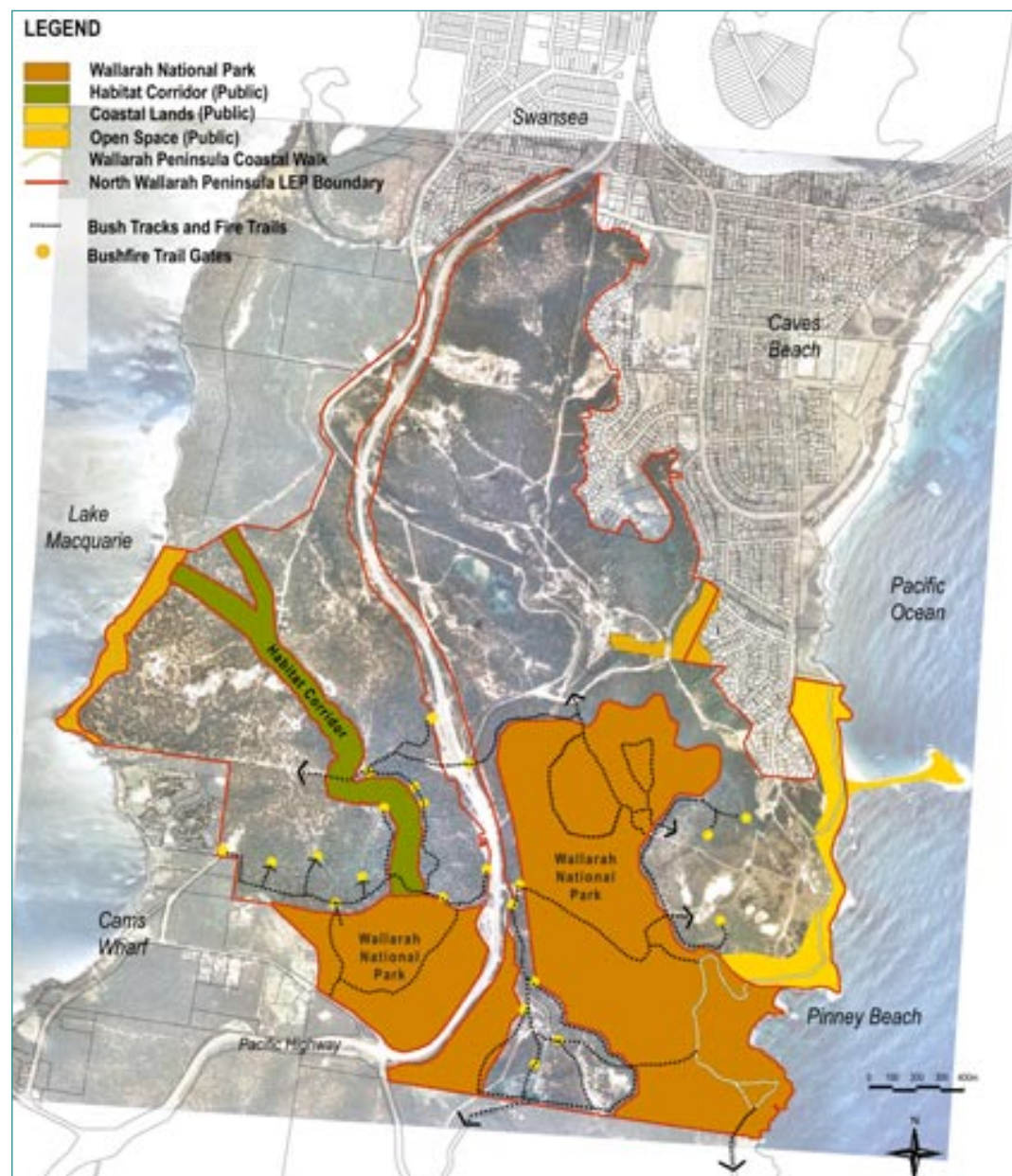


Figure 4.3
Public access within
Walarah National Park

will be conducted in liaison with Lensworth Wallarah Peninsula Pty Ltd and consideration will be given to provision of NPWS visitor information in the Lake Sector of the Wallarah Peninsula project.

The national park also has connections with land to the north, managed by Planning NSW and LMCC, and designated as a coastal protection zone accessed via the Coastal Walk. In the south west, the national park has direct connections with a habitat corridor through the Wallarah Peninsula project. The majority of the south eastern section of the national park adjoins privately owned bushland. The Coastal Walk connects the national park with private land to the south. The NPWS and LWP will encourage complementary management of the Coastal Walk on all land tenures.

Education opportunities

Due to the variety of natural and cultural heritage in the national park and its proximity to residential areas, there are diverse opportunities for education.

Interpretation on walking tracks and at points of interest in Wallarah National Park will have a variety of themes, such as exploration of significant vegetation communities, appreciation of scenic values, understanding Aboriginal heritage and threatened species awareness. These will be complemented by alternative experiences provided elsewhere on the Wallarah Peninsula by Lensworth Wallarah Peninsula Pty Ltd.

It is anticipated that Lensworth Wallarah Peninsula Pty Ltd and the NPWS will work with local schools and other educational institutions for mutual benefit. Educational activities which complement existing curricula and provide opportunities for long term monitoring and data collection will be fostered. Pilot programs to support this concept may include species ecology, flora and fauna survey programs and feral animal and weed management.

The NPWS has resources to complement such programs, including the Community Biodiversity Survey Manual and teachers' kits. The NPWS Central Coast Hunter Range Region Discovery program will be extended to the national park providing walks, talks and tours to educate visitors about the natural and cultural values of the area.

The opportunity for an innovative approach to education is available on the Wallarah Peninsula and may include site adoption programs where schools or classes monitor a site on a long-term basis. LWP may provide traineeships for leading students including introductory programs in aspects of conservation and land management (eg: bushfire management, asset management, coastal management). Lensworth Wallarah Peninsula Pty Ltd may also provide opportunities for sponsored educational tours to other conservation areas as a reward for outstanding efforts.

The opportunities for interpretation and community education extend to stewardship programs and opportunities for community involvement in, for example, bush regeneration projects and ecological monitoring. The local community which will develop as a result of the Wallarah Peninsula project will provide a unique opportunity to enhance recreation values in an innovative sustainable manner.

A series of community activities and on site programs are proposed which relate to natural and cultural cycles and events. Activities may focus on:

- Vegetation diversity;
- Bush foods fair;
- Aboriginal heritage;
- Habitat events; and,
- Migrations.

4.2.2 6(a) and 6(c) Lake Foreshore

The foreshore reserve is located in the Lake Sector of the Wallarah Peninsula development. The land extends along approximately one (1) kilometre of Lake Macquarie foreshore from Point Morisset in the south to slightly past Murreys Beach in the north. Part of the foreshore reserve land is currently owned by Lensworth Wallarah Peninsula Pty Ltd (LWP) and will be progressively transferred to LMCC as development proceeds on the Wallarah Peninsula. The remainder of the land is owned by LMCC.

The objectives of 6(a) zoning are:

- To provide areas of open space that meet a variety of community needs;
- To enable open space to cater for changing community needs and aspirations over time;
- To provide open space which allows for the development of a variety of recreation and leisure activities commensurate with the size, preference and needs of the population, recognising the Council's role as a tourist location;
- To allow for leisure and recreation-oriented developments which:
- Promote worthwhile community benefits;
- To not have an adverse impact on the amenity of adjacent areas; and
- To not have an adverse effect on water quality, land and surface condition and important ecosystems.
- To restrict development on the land so zoned to development which recognises, conserves and manages the ecological values of the land.

The objectives of 6(c) zoning are:

- To provide for the acquisition of privately owned land, which is proposed to be used principally for the purpose of public open space and recreation; and
- To allow any other purpose, with the consent of the Council, provided that the purpose does not:
 - Adversely affect the usefulness of the land for the purposes for which it is required, and
 - Prejudice proposals for the acquisition of lands.

The following uses are permitted in the 6 (a) zone:

- Buildings for the purpose of landscaping or gardening; buildings or uses under the care, control and management of the Council; drainage; recreation areas; refreshment rooms; roads; subdivision; telecommunication facilities; tourist facilities; utility installations (other than gas holders and generating works).



Figure 4.4
Lake Foreshore
Public
Open Space
Concept Plan

In the 6(c) zone:

- Agriculture; buildings for the purpose of landscaping or gardening; buildings or uses under the care, control and management of the Council; drainage; recreation areas; refreshment rooms; roads; subdivision; telecommunication facilities; tourist facilities; utility installations (other than gas holders and generating works).

Foreshore Reserve land use categories and objectives

The Local Government Act 1993 establishes a number of categories for community land and identifies objectives for each of these categories. The particular category that an area of community land falls within must be identified in a Plan of Management for that land. The Foreshore Reserve would be categorised as 'Natural Area' and 'General Community'. Within the 'Natural Area' category there are two sub-categories, 'Bushland' and 'Foreshore'. The location of these land use categories is illustrated in the Proposed Public Open Space Concept Plan- Lake Foreshore (refer **Figure 4.4**).

The objectives for the proposed land use categories are as follows:

Natural Area (Bushland) - The core objectives of this land sub category, as defined by the Act, include:

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

Natural Area (Foreshore) - The core objectives of this land sub category, as defined by the Act, include:

- To maintain the foreshore as a transition area between the aquatic and the terrestrial environment, and to protect and enhance all functions associated with the foreshore's role as a transition area, and
- To facilitate the ecologically sustainable use of the foreshore, and to mitigate impact on the foreshore by community use.

General Community - The core objectives for management of community land categorised as general community use are:

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

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

Specific objectives for the Foreshore Reserve were identified through the LES and CLUMP process and then formalised in the Management Plans. These include:

- To provide for appropriate community use of the foreshore reserve that allows for establishment of community and sense of place values;
- To protect and enhance the natural foreshore environment;
- To protect Aboriginal heritage features in the area; and,
- To protect the visual and scenic quality of the foreshore.

Values and opportunities for use

The Foreshore Reserve would be a key area for general community use, through provision for recreation in a natural setting and interpretation of natural and cultural features. The reserve would also provide valuable wildlife habitat and allow for the protection of cultural heritage and scenic values.

The ecological values of the foreshore reserve have been defined through studies of the area that were undertaken as part of the LES, that supported the LEP. The values were then reinforced in the CLUMP and Management Plans. The area is significant as it contains Forest Red Gum and Swamp Mahogany communities, which provide valuable wildlife habitat. These communities are an important winter food resource for populations of key arboreal fauna species, such as the Squirrel Glider (*Petaurus norfolcensis*). This vegetation will also provide a vital link from the Habitat Corridor to the Lake.



Lake Macquarie
foreshore reserve

The cultural values of the Foreshore Reserve have been defined through the archaeological study of the area that was undertaken as part of the LES. The Management Plans that have been prepared for the development of the area have also identified these cultural values and measures for their preservation and enhancement. Cultural values may be attributed to the Foreshore Reserve in relation to the existence of a scarred tree in the north of the area, adjacent to the Habitat Corridor, and a possible Aboriginal midden site on the foreshore at Point Morisset. The scarred tree has been identified as having moderate-high archaeological significance, while the midden is considered to have low-moderate significance.

The Lake Macquarie Scenic Quality Plan identified Point Morisset as having a high scenic quality. The plan describes landscapes with high scenic quality as predominantly natural with highly diverse landform and vegetation types and patterns, with water being a strong visual component and lakeshore views being of diverse indented shore with forested hillside backdrop. The importance of the trees in screening the development area is paramount.

The area was historically used as an informal camping area and is also used for informal recreation, such as fishing and swimming, where boat access is possible.

Opportunities for use of the Foreshore Reserve are identified in the following table.

Outcome	Action
Provide access to the foreshore for residents of the Wallarah Peninsula	Construct north-south walking trail / boardwalk through the reserve, and viewing platforms, to provide low-impact community access and recreation (establish links to adjoining land to the north / south if / as land is acquired, to provide continuous foreshore walking trail).
Provide for community use of the foreshore and Lake	<p>Establish pedestrian/cyclist paths (catering for wheelchair access) in locations identified in the Open Space and Public Access Management Plan (OSPAMP).</p> <p>Construct jetty for various recreational uses, including fishing, temporary boat mooring (up to half-day) and access for a water-based transport connection with areas across the Lake.</p> <p>Establish enclosed swimming area adjacent to jetty.</p> <p>Designate / establish sandy beach for recreation, replenishing sand as necessary.</p> <p>Establish launching area for small watercraft. (e.g. canoes, rowing craft, dinghies etc.) No trailer boat launching.</p> <p>Establish picnic facilities in the vicinity of the jetty / swimming area.</p> <p>Establish appropriate facilities associated with natural amphitheatre to allow for community festivals, performances, film screenings and other activities as deemed appropriate by Council.</p> <p>Provide small-scale, unobtrusive car parking facilities in suitable locations along the boundary of the development and the foreshore reserve.</p> <p>Install appropriate lighting along paths, jetty, etc. to provide a safe environment for the community.</p> <p>Install boat security racks for small craft ('tinnies')</p>
Allow for provision of services for users of the foreshore reserve	Provide for the development of appropriate, small-scale commercial facilities (e.g. cafe) in the vicinity of the jetty, if / as the need for provision of such facilities is identified.
Provide for community awareness of, access to and enjoyment of watercourses	<p>Install footbridge / viewing platform over watercourses in appropriate locations</p> <p>Install signage along paths to indicate creek crossing (including name of creek if applicable)</p>
Provide for community education / interpretation of natural and cultural features and establish 'sense of place' values	<p>Install interpretive signage along walkways (including at northern and southern boundaries, to link foreshore walking trail to the site) and at viewing platforms, relating to natural features of the foreshore reserve and Lake, and to the scarred tree located adjacent to the habitat corridor.</p> <p>Install interpretive signage and public artwork that blend with the environment and are linked to recreational facilities, to identify historical and natural features / spaces and enhance a sense of identity / place amongst the community.</p>
Protect and enhance the aesthetic quality of the foreshore reserve	<p>Ensure visual integration of all structures and facilities with the existing landscape</p> <p>Use natural landscaping techniques and avoid 'hard' and obtrusive structures / materials / designs.</p> <p>Regenerate Forest Red Gum community.</p>
Provide adequate protection to humans, property and fauna in the event of fire	Install and maintain adequate bushfire controls at the interface of the reserve and precinct developments in accordance with the Built Form Management Plan.

4.2.3 The Habitat Corridor (zoned 7(e) – Environmental Protection – Conservation)

The habitat corridor is a vital component of the site conservation strategy. It provides a physical north-south link for flora and fauna and reduces the potential to fragment habitats by development. The corridor facilitates a number of ecological connections leading from the Wallarah National Park into the clusters of residential development; the Forest Red Gum Reserve and the Lake Macquarie foreshore. The management for the habitat corridor will be subject to a separate plan of management to be developed by LMCC.

The land is currently owned by Lensworth Wallarah Peninsula Pty Ltd (LWP) (with the exception of a road reservation, which is controlled by Lake Macquarie City Council (LMCC)) and will be progressively transferred to LMCC as development proceeds on the Wallarah Peninsula.

The habitat corridor, over the majority of its length, is generally aligned with the western, well-vegetated face of a steep (in certain locations greater than 30%) ridgeline running in a northwesterly direction across the Wallarah Peninsula site. At the southern and northern extremities, the corridor descends from the ridgeline and is aligned with riparian corridors. The watercourses have been mapped in consultation with the Department of Land and Water Conservation (DLWC) and are deemed to be 'rivers' under the Rivers and Foreshores Improvement Act 1948. The southern watercourse flows to Wallarah National Park and the northern one flows into Lake Macquarie. The width of the habitat corridor is approximately 100 metres.

The area bounding the habitat corridor is generally owned by Lensworth Wallarah Peninsula and for the majority will form part of the Wallarah Peninsula development. These lands are zoned for sustainable mixed-use development, with any development proposal on these lands required to be in accordance with provisions of the LEP, Conservation and Land Use Management Plan (CLUMP) and Masterplan.

Zoning of the land

The land within the habitat corridor is zoned 7(e) – Environmental Protection 'E' (Habitat Corridor) under the Lake Macquarie Local Environment Plan 2000 – North Wallarah Peninsula. The objectives of this zoning are:

- to conserve land or items of special environmental significance;
- to maintain natural habitats for native plants and animals within the local ecological sub-system;
- to maintain a network of natural or semi natural habitats and to re-establish missing sections of natural environmental habitats; and
- to enable the development of land for other purposes where it can be demonstrated by the applicant that the proposed development cannot reasonably be undertaken elsewhere and that appropriate steps are taken to minimise the impact of the development on the land and the nearby land.

Development for the purpose of drainage, roads, utility installations, bushfire control and bushfire hazard reduction is permitted with development consent.

Management land use categories

The Local Government Act 1993 establishes a number of categories for community land and identifies objectives for each of these categories. The habitat corridor would be categorised as

'Natural Area'. Within this category there is one sub-categories, 'Bushland'. This category and its land use objectives follow:

Natural Area (Bushland) - The habitat corridor consists predominantly of bushland, which is generally high quality and in an undisturbed condition. It consists of two community types - Smooth-barked Apple Forest and Spotted Gum / Ironbark Forest. Objectives for this land use are:

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

Specific objectives relating to the land are:

- To protect and enhance the ecological value of the wildlife corridor;
- To provide vehicle and pedestrian access across the corridor;
- To provide for community enjoyment and interpretation of the natural environment;
- To allow for the installation and maintenance of utilities to service the development; and
- To provide for adequate bushfire management activities.

The primary outcome for the habitat corridor is to protect and enhance its ecological values. A secondary priority is to establish controlled access at specific locations through the corridor to link residential areas to the east and west.

The distribution of uses within the habitat corridor is illustrated in the Proposed Public Open Space Concept Plan- Habitat Corridor (refer **Figure 4.5**).

Values of the Habitat Corridor

The ecological values of the habitat corridor have been identified in the Local Environmental Study (LES), which supported the LEP, and reinforced in the CLUMP and Management Plans for the area.

The corridor provides a vital connection between the National Park in the south and the Forest Red Gum and Swamp Mahogany communities along the Lake foreshore in the north. These foreshore communities provide significant habitat and are integral to maintaining the viability of populations of key arboreal fauna species, such as the Squirrel Glider (*Petaurus norfolcensis*). The Habitat Corridor will allow for year-round access to food resources for these key fauna species. As such, the integrity of these species in the Lake Sector relies on the effective functioning of the corridor. While the primary value of the habitat corridor is ecological, it also has potential recreational, social and aesthetic values and will contribute substantially to the scenic quality of the Lake Sector.

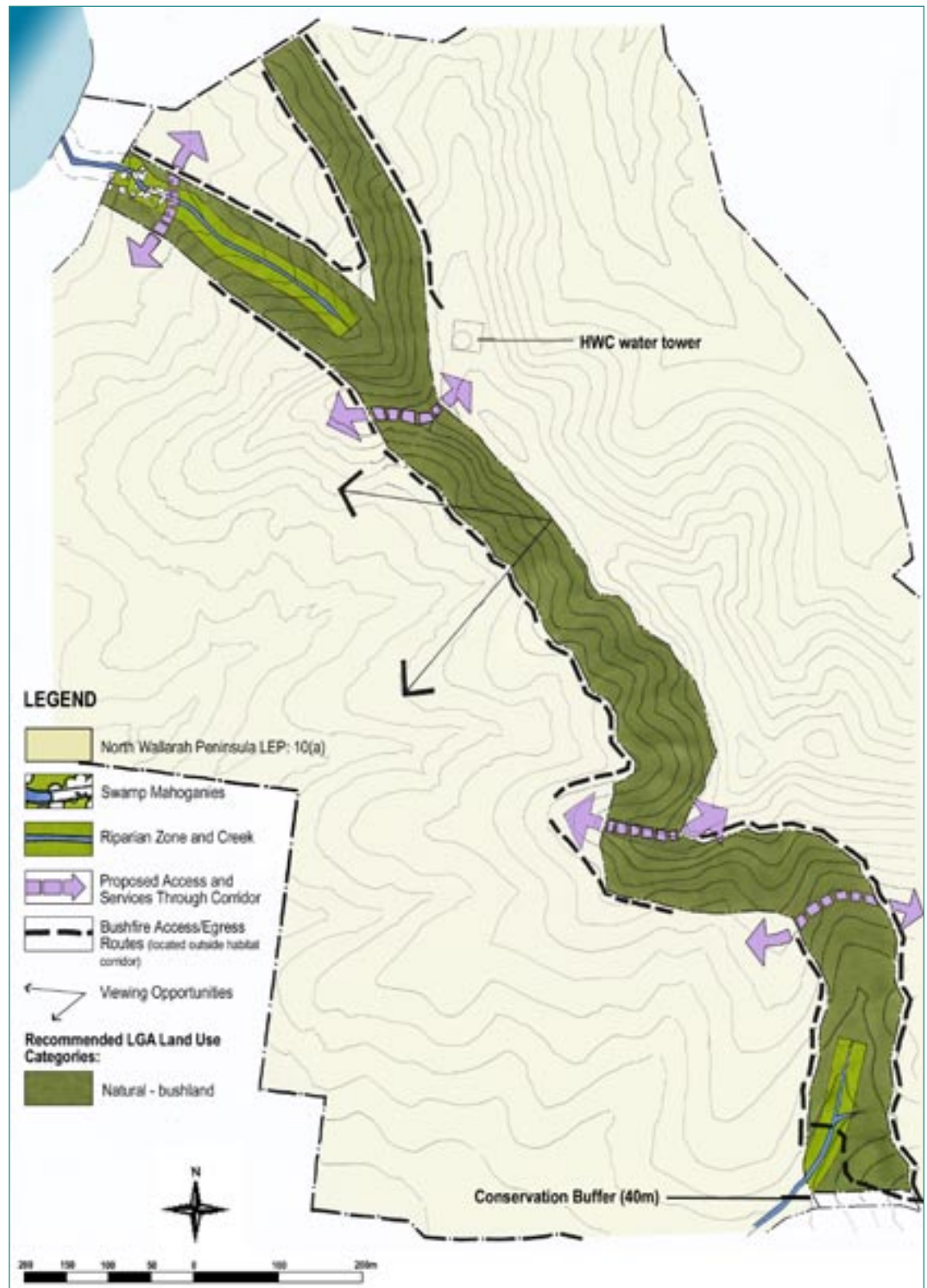
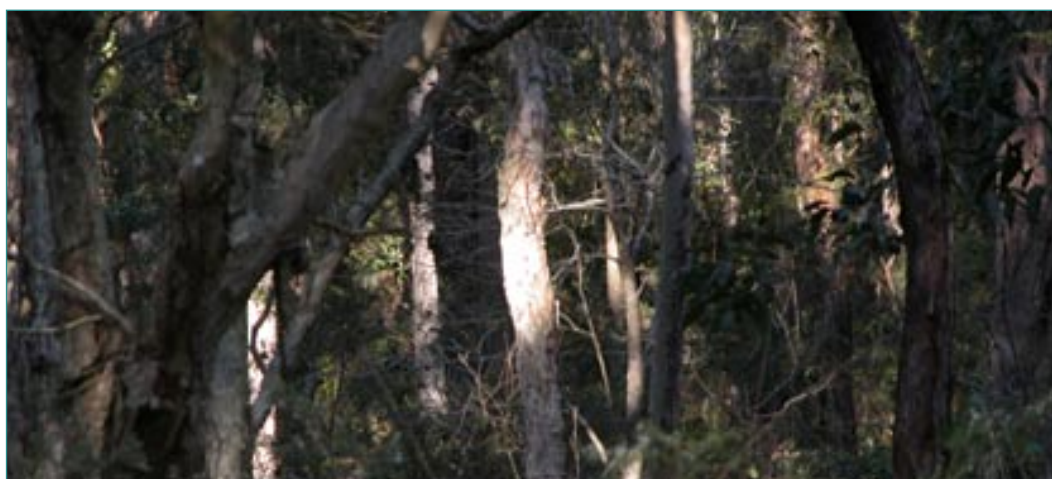


Figure 4.5
Habitat Corridor Public
Open Space Concept Plan

Opportunities for use of the habitat corridor have been identified and are outlined in the following table.

Outcome	Action
Provide appropriate and safe shared access routes through the corridor to provide connectivity between residential sectors	<p>Establish access routes for pedestrians, cyclists and vehicles as identified in the Open Space and Public Access Management Plan and the Physical Infrastructure Management Plan.</p> <p>Install signage in appropriate locations to indicate the designated access points, provide direction and specify permitted uses of the area.</p> <p>Install low impact lighting along public access routes as per PIMP.</p>
Provide for pedestrian access along the corridor and opportunities for passive recreation	Install north-south walkway, adjacent to wildlife corridor to provide pedestrian access and allow for community recreation and enjoyment of the natural environment (walkway to be a shared use with fire trails where coincident) .
Provide for community appreciation / enjoyment of scenic values associated with the wildlife corridor and Lake.	<p>Construct formalised viewing platforms at appropriate locations within or adjacent to the wildlife corridor.</p> <p>Install interpretive signage in association with the viewing platforms.</p>
Provide for community access to / enjoyment of watercourses	<p>Install footbridge / viewing platform over watercourses in appropriate locations.</p> <p>Install signage along roads / paths to indicate creek crossing (name of creek if applicable).</p>
Provide for community education / interpretation of the natural environment	Install interpretive signage relating to local ecology and functioning of the corridor.
Provide adequate utility services through the corridor to facilitate development in the area	Establish / enhance utility services in locations identified in the PIMP.
Provide adequate protection to humans, property and fauna in the event of fire	<p>Install and maintain adequate bushfire controls at the interface of the habitat corridor/ precinct developments in accordance with the Bushfire Management Plan.</p> <p>Fuel management activities (controlled burning, hand and mechanical controls) consistent with the fire frequency threshold for the vegetation communities present in the corridor (as per Bushfire Management Plan)</p> <p>Ensure that the location of lookouts complements the functioning of the bushfire system.</p> <p>Installation of fire trails as detailed in the Bushfire Management Plan.</p>
Weed Control	<p>Remove introduced plant species using appropriate techniques and maintain as necessary.</p> <p>Provide public information on the correct disposal techniques for pruning/clippings from exotic plant and grass species.</p>



Dense undergrowth of the Habitat Corridor

4.2.4 Mawsons Lookout

A Plan of Management (PoM) will need to be prepared by Lake Macquarie City Council in accordance with the Local Government Act 1993 and the Local Government Amendment (Community Land Management) Act 1998, as well as the strategic and statutory documentation associated with the North Wallarah Peninsula Local Environmental Plan (LEP) 2000 for the land known as Mawsons Lookout. These documents, prepared by Lake Macquarie City Council (LMCC), include the North Wallarah Peninsula Local Environmental Study 1999 (LES) and the North Wallarah Peninsula Conservation Land Use Management Plan (CLUMP).

Current zoning of the land

The land covered by this Plan of Management is zoned 10(a) – Special Development “A” (or Sustainable Mixed Use Development) under the Lake Macquarie Local Environmental Plan 2000 – North Wallarah Peninsula.

The objectives of this zoning are:

- to achieve a planned urban outcome, based on principles of ecological sustainability, at a village settlement scale, enhancing quality of lifestyle, social equity, and ecological awareness;
- to promote development that is compatible with the amenity of adjoining and surrounding residential development, does not adversely affect the capacity and safety of road networks and can connect to a water supply, and sewerage and drainage system;
- to ensure that development contributes to a sustainable, vibrant community, and reflects holistic consideration and integration of social, economic and environmental design issues;
- to promote the ecological compatibility of development with conservation outcomes identified for the land in the North Wallarah Peninsula Local Environmental Study, copies of which are available from the office of the Council,
- to provide for a range of development types identified in the Conservation and Land Use Management Plan,
- to achieve favourable land use outcomes by focusing on environmental, social, economic, community and amenity factors rather than individual land use types; and
- to provide a wide range of housing and accommodation choices through a variety of urban settlement forms.

Activities on the land also need to be consistent with the CLUMP and Wallarah Peninsula Masterplan.

Management land use categories

In accordance with requirements of the Local Government Amendment (Community Land Management) Act 1998, the land that is the subject of the Plan of Management would be categorised as Natural Area with one sub-category being ‘General Community Use’. The objectives for this category are graphically illustrated in the Proposed Public Open Space Concept Plan - Mawsons Lookout (refer **Figure 4.6**).

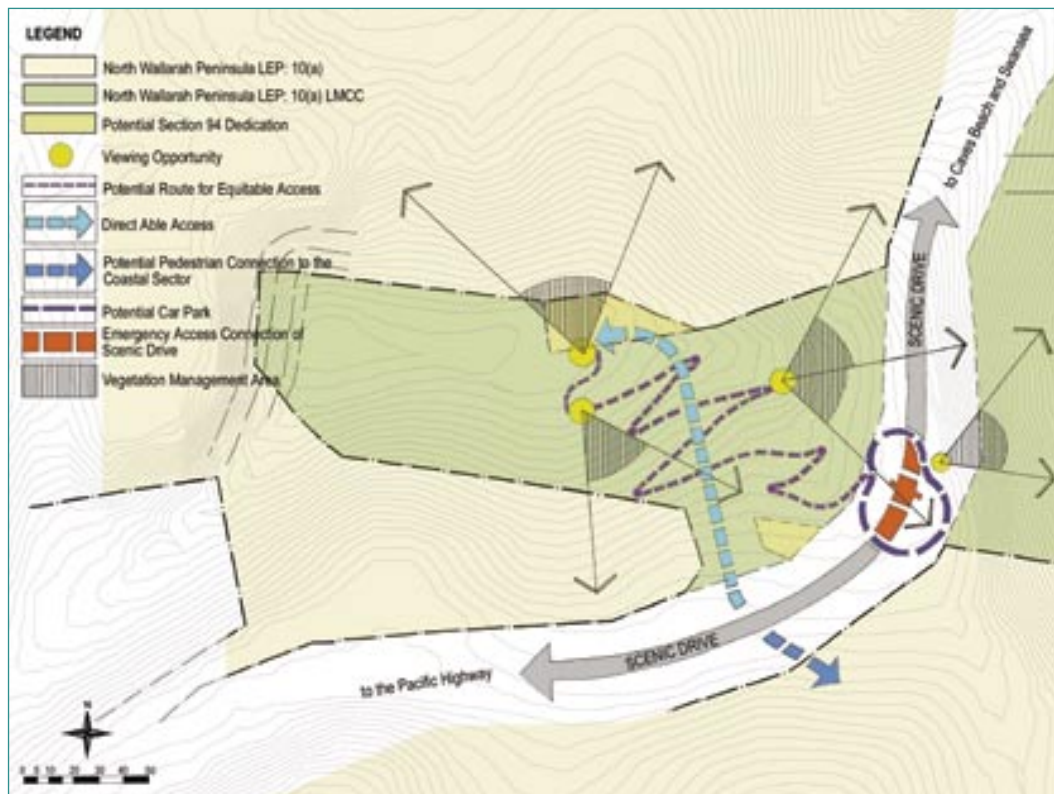


Figure 4.6
Mawson Lookout
Public Open
Space Concept Plan

Mawsons Lookout is currently accessible to the general public for viewing purposes. The current access allows for vehicular movement to the top of Mawsons Lookout. The lookout consists of a gravel car parking section, a formal concrete platform to capture viewing opportunities and an asphalt road accessed via Scenic Drive. The core objectives for management of community land categorised as 'general community use' are to promote, encourage and provide for the use of the land, and to provide facilities on the land, to meet the current and future needs of the local community and of the wider public.

Specific objectives were derived through consultation with the community and relevant state and local government bodies throughout the course of the development of North Wallarah LES 1999. These provide for Mawsons Lookout and associated facilities to be designed in a manner that reflects its natural character utilising the following objectives:

- Provisions for low scale furnishings;
- Provisions for viewing areas;
- Provisions for interpretive features;
- Remediation and rehabilitation of damaged areas;
- Restricted vehicular access;
- Provisions for car parking access to the lookout;
- Provisions for security. Give the local community and visitors alike an opportunity to participate with the landscape without feeling threatened or being distracted by human impacts that would otherwise influence the safe, natural perception of the environment;



Views of Wallarah Peninsula from Mawsons Lookout

- Provisions for bushfire management system;
- Provisions for safe pedestrian and disabled access; and
- Provisions for community facilities.

Values of Mawsons Lookout

Mawsons Lookout is utilised by local residents and visitors alike. It provides significant views of the Wallarah Peninsula and provides an opportunity to appreciate the scenic quality of the region while maintaining pedestrian access. However, the current use of the area has resulted in long-term degradation and high levels of local vandalism. The redevelopment of Mawsons Lookout can provide for improved access opportunities and an increased level of passive surveillance. Education and interpretative signage can enhance the communities understanding of the scenic quality. Present roles of the site include: bushwalking; contemplation; sightseeing; and picnicking.

The future use for this land categorised ‘General Community Use’ should be generally limited to uses compatible with retaining and improving the quality of land for the general community. Specifically, future use of this area should be limited to:

- Non-invasive pedestrian activities such as bushwalking and viewing;
- Works for the revegetation and rehabilitation of the bushland, including weed removal and planting;
- Remediation of the western face of the lookout platform;
- Works for the construction of, and the use of, designated viewing points;

- Works for the construction and ongoing management of bushfire management infrastructure as identified in the Bushfire Management Plan;
- Works for the termination and re-use of Scenic Drive as a small carpark for the visitors to Mawsons Lookout;
- Works for ensuring that future emergency access is possible via the terminus of Scenic Drive;
- Works for construction of universal access pathways and signage consistent with the Built Form Management Plan and the site interpretation strategies of the Open Space and Public Access Management Plan; and
- Drainage works, where no alternative drainage route is possible.

The scale and intensity of these works will be kept to a minimum, and will be at a level compatible with the retention and improvement of the quality of land for general community use.

4.2.5 The Coastal Lands (zoned 7(c) – Environmental Protection)

The Coastal Land is Crown Land and falls under the jurisdiction of the Crown Lands Act and its management requirements. A document will need to be prepared that sets forth a management regime for this land. A series of recommended management strategies and categories follow that borrow from the Local Government Act 1993 and the Local Government Amendment (Community Land Management) Act 1998. Any management document for the Coastal Land will also need to be consistent with the North Wallarah Peninsula Local Environmental Plan (LEP) 2000, the North Wallarah Peninsula Local Environmental Study 1999 (LES) and the North Wallarah Peninsula Conservation and Land Use Management Plan (CLUMP).



The 7(c) land includes the designated Coastal Walk

The management document will be complementary to the planning outcomes developed for the Wallarah Peninsula and Masterplan prepared for the adjacent lands. The management document should adopt a holistic and integrated approach to ensure consistent management to the entire site.

Current zoning of the land

The Coastal Land is zoned 7(c) – Environmental Protection “C” (or Coastal Lands) under the Lake Macquarie Local Environmental Plan 2000 – North Wallarah Peninsula.

The objectives of this zoning are:

- to set aside land for the purpose of protecting sensitive coastal area;
- to restrict the type and scale of development which may be allowed on lands possessing sensitive coastal environments to those compatible with such environments; and
- to allow development only where it can be demonstrated that it can be carried out in a manner that does not detract from the scenic quality of the lands.

Activities on the land also need to be consistent with the CLUMP and North Wallarah Peninsula Masterplan.

Objectives for outcomes

Objectives for the coastal lands were generally derived from two main sources:

- Although the coastal lands are Crown Land, the general objectives for each of the relevant land categories (bushland and escarpment) as required by the Local Government Amendment (Community Land Management) Act 1998 have been used as guidelines for the public open space concept plan; and,
- Specific objectives through consultation with the community and relevant state and local government bodies throughout the course of the development of North Wallarah LES 1999.

The core objectives for management of community land categorized as ‘bushland’ are:

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

The core objectives for management of community land categorized as ‘escarpment’ are:

- To protect any important geological, geomorphological or scenic features of the escarpment; and
- To facilitate safe community use and enjoyment of the escarpment.

The coastal lands, specifically the Wallarah Peninsula Coastal Walk, and associated facilities should be designed in a manner that reflect its natural character. The following outcomes are possible within the concept presented in the Proposed Public Open Space Concept Plan - Coastal Lands (refer **Figure 4.7**).

- Provisions for furnishings;
- Provisions for viewing areas;
- Provisions for interpretive features;
- Rehabilitation of damaged areas;
- Restricted vehicular access;
- Prohibition of bicycles on the Coastal Walk;
- Reduction of the visual impact of urban areas from the Coastal Walk by incorporating the walk within re-vegetated natural area.
- Maintain control of access to the beaches;
- Coastal Walk to connect to other walks;
- Provide access for disabled persons;
- Minimise lighting at night;
- Movement along the Coastal Walk to be restricted to bush tracks;
- Provisions for the boardwalks; and
- Provisions for community facilities.

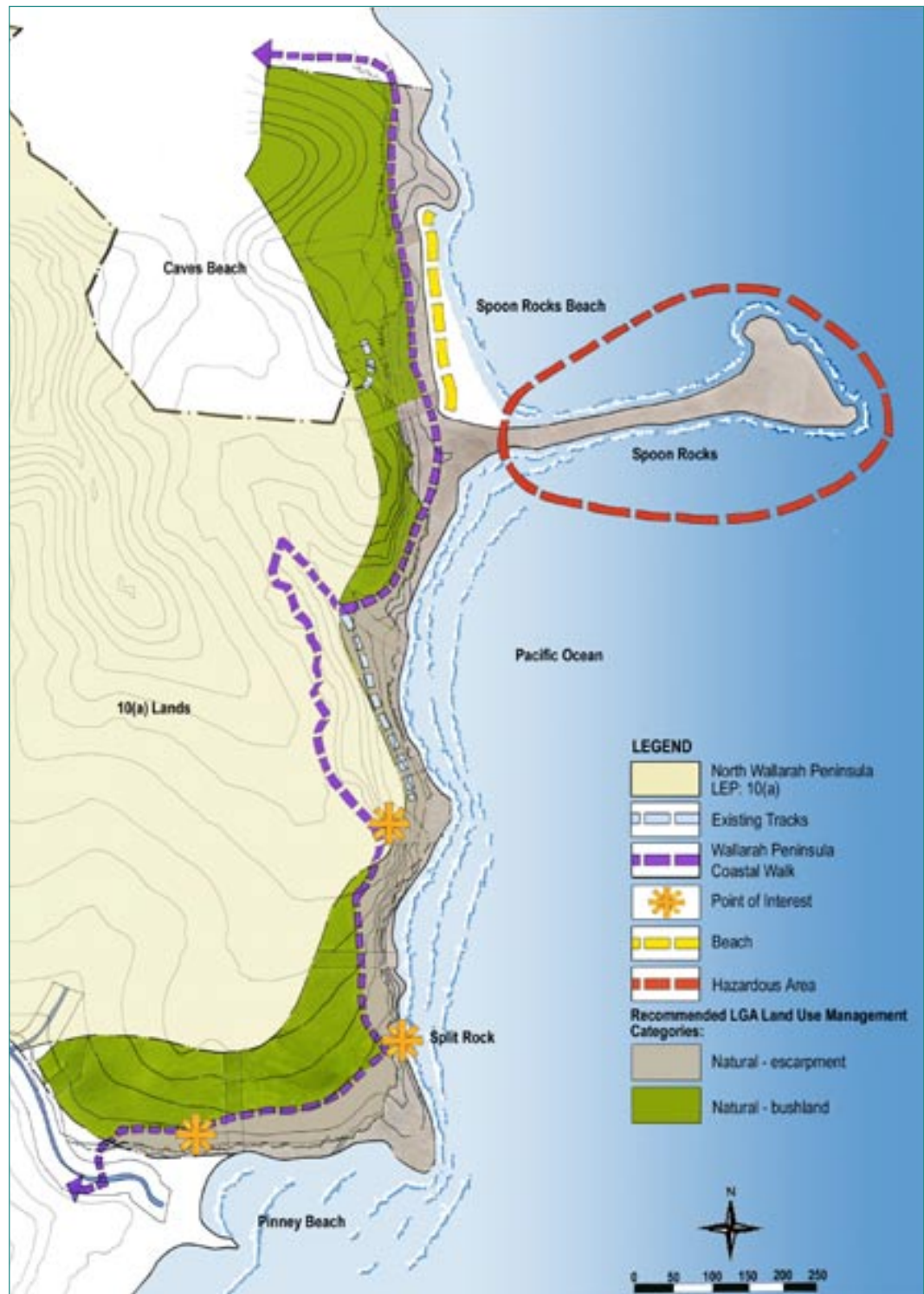


Figure 4.7
Coastal Lands
Public Open
Space Concept Plan

4.3 Primary Access

A requirement of the CLUMP is that the construction of the site access must occur prior to development proceeding on the Wallarah Peninsula.

The provision of a primary site access in the form of a grade separated interchange was established through the rezoning of the site. In particular the CLUMP identified the need for a primary single access point in the form of grade separated interchange on the Pacific Highway. The interchange needs to incorporate ramps that allow the traffic movements travelling both north and south along the Pacific Highway. As a result of community concerns during the rezoning of the Wallarah Peninsula, the interchange will provide a single access to the site, with no permanent connections proposed to the existing communities of Caves Beach and Cams Wharf.

The planning approval, design and construction of the interchange, is proceeding in parallel with the Masterplan studies. The approval authority of the interchange is the Roads and Traffic Authority (RTA), with approval required under Part V of the Environmental Planning and Assessment Act 1979. The RTA will maintain the role of Proponent and Determining Authority for the proposal.

A Review of Environmental Factors (REF) has been prepared for the interchange. The REF for the interchange will be subject to an exhibition period and public comment is invited. In addition, the RTA has consulted with LMCC, Planning NSW, National Parks and Wildlife Services (NPWS) and DLWC regarding the proposal and the input from these authorities has been incorporated into the design and approval process.

The interchange will be located at the northern intersection of the old and new highway alignments approximately 2km south of the Swansea roundabout. The topography in this location provides sufficient elevation to construct an underpass of the operational highway (refer **Figure 4.8**).



Figure 4.8
*Visual Simulation of
the North Wallarah
Peninsula Interchange*

North Wallarah Peninsula Management Plans



One of the primary functions of the CLUMP is to provide certainty in the outcomes of Masterplanning and development. This certainty has been reinforced by the requirement for the developer to prepare a Masterplan comprising Management Plans that become the guideline instruments defining how development will proceed on the site.

Eight Management Plans have been submitted:

- 1 Ecological Site Management Plan
- 2 Bushfire Management Plan



- 3 Physical Infrastructure Management Plan
- 4 Construction Management Strategy



- 5 Open Space and Public Access Management Plan
- 6 Social Equity Management Plan



- 7 Built Form Management Plan
- 8 Visual Integration Management Plan



A holistic approach to masterplanning of the Wallarah Peninsula and surrounding areas has been adopted in the preparation of the Management Plans to ensure close interaction between each of the disciplines.

A summary of each of the eight (8) Management Plans is provided in Appendix A.



*Coastal Walk
to Spoon Rocks*

Subdivision and Title Systems

6.1 Land Title Options

The principles of the Wallarah Peninsula project focus on the retention of the character and quality of the landscape as the basis for underpinning the environmental outcomes. The retained landscape will require an undertaking from a number of parties for maintenance and protection. These undertakings can be determined through instruments including covenants, deeds of agreement, contribution programs and 88b instruments. The Wallarah Peninsula project intends to utilise various title systems to create the appropriate ownership and obligations over the land to ensure the landscape character is retained.

6.2 Forms of Subdivision

Within NSW the subdivision of land can be effected by the use of:

- The conventional Torrens Title subdivision process;
- The Community Titles Legislation; and
- The Strata Titles Legislation.

It is envisaged that all three methods will be utilised within the Wallarah Peninsula project. However a number of principles will generally apply irrespective of the process. These principles are:

- Land that is identified in the Local Environmental Plan as 6(c) or 6(c) Open Space or 7(e) Environmental Protection will be dedicated to Council as Public Reserves.
- Roads will be dedicated to Council as Public Roads.
- Walking and bicycle trails and pathways established for the purpose of providing public access to the Wallarah Peninsula landscape will generally be dedicated to Council as Public Pathways.
- Parks identified in the Section 94 Contributions Plan and as detailed within the Social Equity and Open Space and Public Access Management Plans will be dedicated to Council as Public Reserves.
- Fire trails will usually be contained within land dedicated to Council as Public Road or Public Pathway.
- Lots containing private (shared) amenities or retained bushland held in common ownership by a number of individual landowners will be created as 'Community Lots' owned by a Community Association.
- Private individual lots (land) will be defined by either a Community Plan of Subdivision or a Conventional Plan of Subdivision and owned by individual Registered Proprietor/s.
- Private lots (Strata) will be defined in a Strata Plan of Subdivision prepared for individual buildings (e.g. attached housing).

6.3 Land Management

The Management Plans comprising the Wallarah Peninsula Masterplan identify a range of issues related to ongoing land management outcomes on private land, some of these issues include:

- Retention of bushland;
- Protection of riparian zones;
- Management of bushfire fuel levels and other bushfire management matters;
- Control of invasive weeds;
- Retention of ecological values;
- Stormwater management on individual lots (e.g. water tanks and infiltration basins);
- Built form controls;
- Theme and character of buildings; and
- Design review of building design.

While conventional covenants (under Section 88b of the Conveyancy Act) can be used to implement some of the land management controls, the Community Titles Legislation provides a much simpler mechanism to implement the necessary controls and to provide funding and management mechanism for the resourcing of shared land management outcomes (e.g. bushfire fuel management).

It is therefore anticipated that the Community Titles Legislation will be used over a significant portion of the Wallarah Peninsula Project, especially in those areas where ongoing management of the natural landscape and strong control of the built form are required.



*Shared management
will be incorporated for
bushfire management*

Monitoring

Section 3.4 of the CLUMP proposes, subject to funding being available, a monitoring program to *“identify positive and demonstrable procedures that will act together to minimise the impacts of development on natural systems . . . and . . . provide information to maximize the effectiveness of actions taken.”*

In response to this proposal an Assurance Process is envisaged that reinforces the vision for the land and ensures that a legacy is provided for the community and the environment.

The Assurance Process is about protecting the inherent natural and built values of Wallarah Peninsula in the long term, monitoring and evaluating environmental performance, and reporting and communicating performance to the broader community. Importantly, the assurance process will determine whether the desired result is being achieved.

7.1 The Assurance Process

There are six (6) main steps in the Assurance Process. These are:

- Reinforcing a vision;
- Defining Cornerstones that frame the vision;
- Determining the outcomes which are measurable;
- Linking the vision and the Cornerstones with the technical guidelines of the Management Plans;
- Review and assessment; and,
- Reporting and communication.

Figure 6.1 illustrates that there are two (2) main groups associated with the Assurance Process, that is, Lensworth Wallarah Peninsula and external stakeholders.

Lensworth Wallarah Peninsula would ensure the Assurance Process is undertaken. It would also be responsible for the management of all external individuals/groups involved in Wallarah Peninsula from consultancies to volunteers and advisors.

There are many ongoing important external stakeholders at Wallarah Peninsula. These include:

- Government authorities which could provide assistance and/or advice;
- Non-government organisations which could provide advice and/or be a champion; and
- Academic institutions which could provide students in return for data to be used for their purposes.

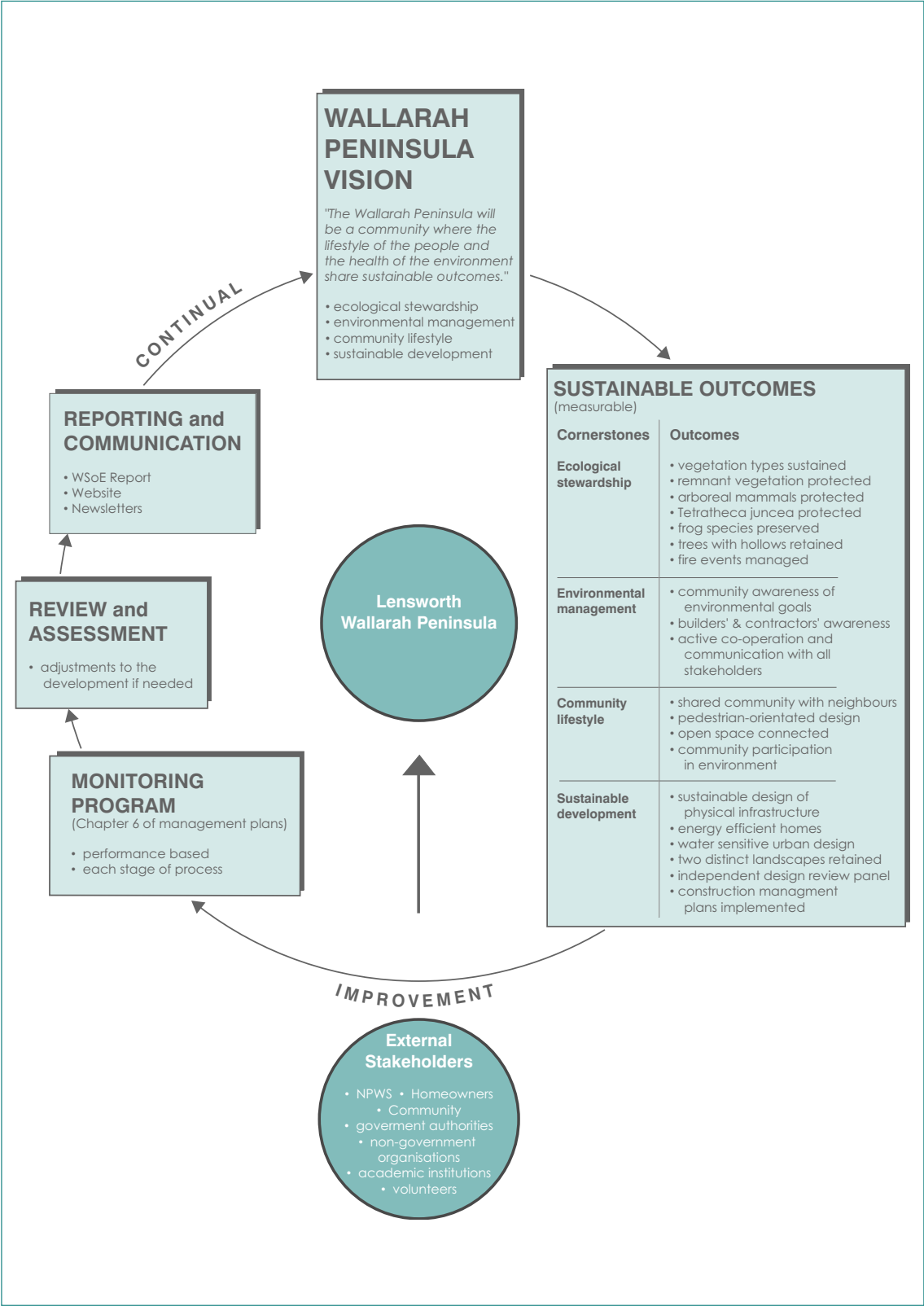


Figure 7.1
Assurance Process

7.2 The Cornerstones

Four (4) Cornerstones are proposed to assure that the vision and sustainable outcomes are achieved.

The Cornerstones are:

- **Ecological Stewardship:** The biodiversity of the ecosystems across the Wallarah Peninsula is retained and managed for the future.
- **Environmental Management:** Physical impacts, infrastructure and community outcomes all respond to and respect the environment.
- **Community Lifestyle:** The development offers a high quality of life for people who live, work and recreate at Wallarah Peninsula.
- **Sustainable Development:** The built forms in Wallarah Peninsula have a sustainable relationship with the natural environment.

7.3 Outcomes

The outcomes link the vision and the Cornerstones with the Management Plans.

The outcomes are the overarching results achieved by implementing each of the Management Plans. Importantly, the outcomes would be measurable and would be reported in the Wallarah Peninsula State of the Environment Report.

The outcomes for each of the Cornerstones are described below.

7.3.1 Ecological Stewardship

- The vegetation types on Wallarah Peninsula before development are still represented and are sustainable post-development.
- Remnant vegetation on Wallarah Peninsula sustains fauna within their existing or extended territories.
- Arboreal mammals move along the extensive system of habitat corridors across Wallarah Peninsula.
- *Tetratheca juncea* continues to thrive in Wallarah National Park.
- Frog species, being the main species indicating the health of a riparian zone, continue to inhabit and thrive within the riparian zones.
- Trees with hollows on the development lots are used by birds and arboreal mammals.
- Fire events do not consume more than 60% of ground biomass (ground cover, low shrubs and fine fuel layer).

7.3.2 Environmental Management

- The design of the physical infrastructure (such as roads and stormwater) is governed by the characteristics of the natural environment (particularly vegetation, water cycle and topography) rather than the infrastructure specification or standard design formulas (such a typical traffic volume).
- Builders, contractors and other workers have an awareness of the values and sensitivities of the Wallarah environment and their potential impact on the environment.
- There is active co-operation, communication and participation between residents, employees, managers, government authority representatives and visitors.
- All construction management plans are approved by Lake Macquarie City Council prior to any onsite work.
- Homes, through lot orientation, passive solar design and other design initiatives are energy efficient, achieving a minimum four star NatHERS or equivalent rating.
- Wallarah Peninsula is a water sensitive development through adaptation of a combination of water sensitive urban design, water efficient buildings (rainwater tanks, AAA-rating water fittings and fixtures) and water sensitive landscape design.

7.3.3 Community Lifestyle

- There is a sense of shared community at Wallarah Peninsula.
- Wallarah Peninsula is a series of pedestrian-orientated villages with an interconnected network of walkable streets, lanes and accessways and a network of accessible open space, conservation and community areas.
- Wallarah Peninsula provides a range of open space experiences based on its natural environment setting within a five minute walk of every residence.
- There is community participation in the governance of Wallarah Peninsula.
- Community facilities of Wallarah Peninsula are shared with existing communities.

7.3.4 Sustainable Development

- Wallarah Peninsula has two distinct landscapes or visual environments being the tall old forest along the gently sloping lake and the short coastal heath on the rocky coast. The built environment visually complements the environment to ensure that these two distinct landscapes remain.
- An independent design review panel provides advice and assesses the design quality in development applications prior to lodgment with Lake Macquarie City Council.

7.4 Reporting and Communication

Reporting and communication are essential to demonstrate to the broad community, including stakeholders, that the vision is being achieved. It is an important marketing tool. It is also essential to demonstrate transparency.

The main forms of reporting and communication would be:

- An annual Wallarah Peninsula State of the Environment report;
- An interactive community based website; and,
- Newsletters or fact sheets.

7.4.1 Wallarah Peninsula State of the Environment Report

State of the environment reporting in Australia aims to enhance the quality and accessibility of information relating to the achievement of ecologically sustainable development as formulated in the National Strategy for Ecologically Sustainable Development 1992. Although there are no specific requirements for state of the environment reporting, Australia has adopted the Organisation for Economic Co-operation and Development's pressure-state-response model. Under this model, the condition (state) of the environment, impacts (pressures) on the environment and management responses are detailed.

The Wallarah Peninsula State of Environment report would be prepared based on the data collected from the monitoring undertaken, as described in each of the eight management plans.

The National Parks and Wildlife Service has a new reporting system, called State of the Parks, to improve the quality and quantity of the information available to the public about natural and cultural heritage, the pressures faced by that heritage and the role the parks systems play in its conservation. This reporting system is bioregion and national park based also using a pressure-state-response model. As the Wallarah Peninsula State of the Environment report will also be bioregion based with the key sustainable development indicators reported on, this information would be provided for the Wallarah National Park section of the National Parks and Wildlife Service's document. In addition, the National Parks and Wildlife Service would provide some data for the Wallarah Peninsula State of the Environment report.

The CLUMP requires that monitoring data from the site be included in the State of the Environment report prepared by Lake Macquarie City Council. Data collected for the Wallarah Peninsula site would be consolidated by Council into the data for the Lake Macquarie Local Government Area.

The CLUMP also requires that the monitoring data collected on the Wallarah Peninsula be provided to regional academic institutions and research organizations.

7.4.2 Website

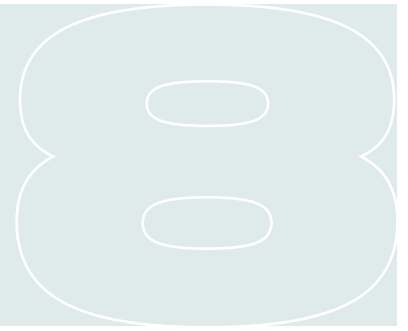
It is proposed that a community based interactive website will be prepared. Part of the website would be dedicated to the environmental performance of Wallarah Peninsula to further communicate the successes of the site. Advertisement of updates to the website would be communicated by way of a local on-line list, local newspaper advertising, or mailbox delivery to residents of nearby communities such as Swansea, Caves Beach, Catherine Hill Bay as well as new owners on the site.

7.4.3 Newsletters and Fact Sheets

There is an abundance of environmental information available on Wallarah Peninsula. Newsletters or fact sheets may be prepared and distributed to residents and stakeholders and be available for interested individuals and parties. The aim of the newsletters/fact sheets is to spread environmental information and facilitate increased environmental knowledge and awareness.

The newsletters/fact sheets would be prepared by or on behalf of Lensworth Wallarah Peninsula.

The NSW Coastal Policy Validation



8.1 Goals and Objectives of the Coastal Policy

The Wallarah Peninsula Project has carefully assessed the statutory requirements of the LES, LEP and CLUMP and integrated them with the Goals and Objectives of the Coastal Policy within the context of the development outcome. The Wallarah Peninsula planning goals and objectives are aligned to the goals of the Coastal Policy and have been validated by identifying how each of them has been implemented within the various Management Plans that guide the development design and outcome.

The goals are supported by site specific Considerations and Strategies within each Management Plan. The following sections identify some of the key outcomes detailed in the Management Plans as they relate to the Coastal Policy Goals.

8.1.1 Goal One To protect, rehabilitate and improve the natural environment.

Validation

- Physical Infrastructure Management Plan
- Ecological Site Management Plan
- Construction Management Strategy
- Bushfire Management Plan



Development Outcome

- Biodiversity of the site is improved, through conservation outcome, protection and rehabilitation measures.
- Riparian zones to identified 'Rivers' are protected
- Revegetation of developed areas will be defined by the Ecological Site Management Plan specifying native species.
- Assurance program, environmental monitoring and State of Environment reporting will be part of the development process over the next 10 years.
- Surface stormwater is managed through the principles of water sensitive urban design including the use of grass swales and infiltration drainage cells.
- Development activity minimises negative impacts on water quality in Pinney Lagoon and Galgabba Creek.
- Stormwater captured from rooftops as part of the Built Form guidelines.
- Site disturbance is rehabilitated as part of development.
- Fire trails are revegetated for use as walking trails and integrated with Wallarah National Park.
- Seed collection program has been in place for two (2) years to assist regeneration and maintain a viable vegetation community.
- A weed control program is part of the post-development site management.

8.1.2 Goal Two To recognise and accommodate the natural processes of the coastal zone.

Validation

- Bushfire Management Plan
- Ecological Site Management Plan
- Physical Infrastructure Management Plan
- Built Form Management Plan



Development Outcomes

- All classified rivers and streams have been identified and surveyed to establish setbacks and habitat corridors.
- All riparian zones incorporated as sustainable open spaces leading to Lake Macquarie and the coastal zone.
- The use of setbacks is employed in accordance with the current LMCC Coastline Management Plan.
- The principles of water sensitive urban design are incorporated.
- A bushfire management strategy that includes ecological protection will be implemented.
- Building designs will accommodate the climate of the lake and ocean settings and provide energy efficient solutions.

8.1.3 Goal Three To protect and enhance the aesthetic quality of the coastal zone.

Validation

- Open Space and Public Access Management Plan
- Bushfire Management Plan
- Ecological Site Management Plan
- Built Form Management Plan
- Visual Integration Management Plan



Development Outcome

- Scenic qualities protected with prime consideration given to the setbacks from the coastal zone, headlands and lake foreshore.
- The visibility of the development is minimised from external view areas by establishing defined escarpment contour boundaries.
- Detailed tree surveys and mapping have been undertaken to define species, height and canopy width.
- In all areas, development provides for limited tree clearing, partial screening and revegetation.
- Defined footprints for construction ensure critical natural areas are protected.
- Height of built form does not exceed the height of the tree canopy or ridgeline where applicable.
- All development and built form is governed by Built Form guidelines to minimise visual impact.
- Road widths, natural edges and drainage are designed to minimise vegetation clearing and interference with natural ground levels and tree root zones.

- Infrastructure services are integrated with the built form on both public and private land.
- Public access areas promote use of natural assets and waterfronts.
- Landscape management and development strategies are employed to maintain the natural quality of the site.

8.1.4 **Goal Four** **To protect and conserve cultural heritage.**

Validation

- Ecological Site Management Plan
- Open Space and Public Access Management Plan
- Social Equity Management Plan



Development Outcome

- Conservation of significant sites and the promotion of past and present cultural traditions through indigenous interpretation areas.
- Expertise and guidance from Local Aboriginal Land Council from project commencement.
- Survey and registration of all Aboriginal sites of significance.
- Natural and social systems are integrated within the development by recognising the equity of existing residents of Swansea, Cams Wharf, Catherine Hill Bay and Caves Beach.
- Integration of open space and access plans with regional and local NPWS assets such as Munmorah State Park, Point Wollstoncroft, and Pulbah Island.
- Development concept incorporates local and regional economic strategies.
- Transparent S94 Contributions Agreement.

8.1.5 **Goal Five** **To promote ecologically sustainable development (ESD) and use of resources.**

Validation

- Physical Infrastructure Management Plan
- Ecological Site Management Plan
- Construction Management Strategy
- Built Form Management Plan



Development Outcome

- Flexible mixed use planning to maximize diversity, housing choice and employment options within pedestrian neighbourhoods.
- Performance standards and monitoring systems will be established and implemented through the Wallarah Peninsula Assurance Process.
- Configuration of development to support site remediation in disturbed areas.
- Integrated urban design and infrastructure, including the Old Pacific Highway to Swansea.
- Sustainability rating for all built form.
- Urban design guidelines respect and respond to the natural site elements including solar access, breezes and views.

- The access network encourages pedestrian and cycle usage linking the northern villages of Swansea and Blacksmiths, as well as, Catherine Hill Bay with the project.
- The regional arterial roads are maximized for safe access to the Pacific Highway and local roads.
- Local bus routes are serviced and promoted.
- Existing traffic impacts assessed to ensure no negative impact.
- Water sensitive urban design incorporated in all built form and infrastructure.
- Waste management and waste minimization requirements are implemented for all building works.
- Energy efficient building design panels encouraged.
- The existing social infrastructure of the Swansea area is supported by the development.
- Roof water capture.

8.1.6

Goal Six

To provide for ecologically sustainable human settlement.

Validation

- Physical Infrastructure Management Plan
- Ecological Site Management Plan
- Construction Management Strategy
- Built Form Management Plan
- Social Equity Management Plan
- Bushfire Management Plan
- Open Space and Public Access Management Plan
- Visual Integration Management Plan

Development Outcome

- Dedication of Wallarah National Park.
- Respect for the urban design heritage of coastal and lake villages.
- Design and implementation of guidelines that promote a sense of community identity and distinct character for each area of the site.
- Compatibility and diversity of land uses and natural environments through masterplanning.
- Compact mixed-use villages minimise impacts on natural ecology and landscapes.
- A diversity of economic opportunities and employment provided through village scale and home-based business.
- Urban ecologies of landscaping, pedestrian access and flora and fauna are integrated into the settlement systems.
- Design guidelines and covenants incorporated into community and local government approval process.
- Built form designed to exist as part of the landscape.
- Certainty and flexibility promoted as part of the design guidelines and covenants
- Incorporation of a variety of lot sizes to support a broad demographic and market.
- Water sensitive urban design implemented.



- New technology available encourages home-based and small businesses.
- Encouragement of housing types and styles.
- Implementation of a conservation strategy based on sustainable site biodiversity.
- Diversified builders and end user product to enhance marketability.
- Commitment to man and nature achieving a harmonious relationship.
- Creation of vegetation remnant linkages and habitat corridors across the site including development areas.

8.1.7 Goal Seven To provide for appropriate public access and use.

Validation

- Open Space and Public Access Management Plan
- Social Equity Management Plan
- Bushfire Management Plan
- Built Form Management Plan
- Physical Infrastructure Management Plan



Development Outcome

- Creation of Wallarah National Park.
- Connection to Munmorah State Recreation Area and other NPWS areas promoted.
- Natural form of Lake Macquarie and the ocean retained by dedication to public ownership.
- Public access to the ocean and Lake Macquarie foreshores.
- Public domain interpretive and safety signage.
- Coastal pathway established linking Caves Beach to southern Pinney Beach.
- Designated walking trails with limited cross over across Pinney Lagoon, habitat corridor and riparian zones.
- Emergency access for bushfire management part of the infrastructure plan.
- Bushfire buffer zones established between conservation and development area.
- Pedestrian streets with limited vehicle access incorporated in urban design of villages.
- Regional community encouraged to participate in site and biodiversity preservation programs.
- Site safety and erosion control part of the site management plan.
- Permanent access to all areas of the site from the Pacific Highway via a new interchange.
- Vehicle and pedestrian systems connect the lake and coastal landscape with regional public areas.
- Passive and active recreational opportunities including cultural programs and events for the project area.
- Unstable geotechnical areas and subsidence areas set aside with protective barriers.
- Hazard zones for coastal cliff face, Radar Hill and Spoon Rocks identified and signed.
- Mawsons Lookout remediated and re-established as safe lookout.
- S94 Contributions Plan provides new community facilities and enhanced existing facilities.

8.1.8 Goal Eight To provide information to enable effective management of the coastal zone.

Validation

- Ecological Site Management Plan
- Open Space and Public Access Management Plan
- Social Equity Management Plan
- Built Form Management Plan
- Bushfire Management Plan
- Physical Infrastructure Management Plan

Development Outcome

- Management plan established between NPWS and new community for management of the Wallarah National Park.
- State of Environment reporting introduced as part of Assurance Process.
- Performance criteria and conservation initiatives, for each landowner, identified on title of lots.
- Water quality monitoring procedures implemented.
- “Online” technology utilised in providing up to date information to the community.
- Establishment of a project web site promoting ESD initiatives.
- Community members encouraged to become part of the site biodiversity and ecological data collection and stewardship programs.
- Local schools and community groups outside the site provided with an information program and activities calendar.
- Monitoring of tidal interface areas of the lake and ocean.
- Social awareness and feedback programs established to promote and improve community resources.



8.1.9 Goal Nine To provide for integrated planning and management.

Validation

- Conservation and Land Use Management Plan
- Ecological Site Management Plan
- Social Equity Management Plan
- Built Form Management Plan
- Bushfire Management Plan
- Open Space and Public Access Management Plan
- Visual Integration Management Plan
- Construction Management Strategy
- Physical Infrastructure Management Plan

Development Outcome

- North Wallarah Peninsula Project LEP provides certainty for the long-term use of the land.
- Conservation and Land Use Management Plan designed with controlling guidelines ensuring a sustainable outcome for the land.



- Ecological Site Management Plan ensures the preservation and maintenance of the site biodiversity.
- Social Equity Management Plan ensures community input, education and evaluation.
- Built Form Management Plan enhances the local character and protect individual investment in the community.
- Wallarah Assurance Process provides monitoring and reporting to State of Environment reports.
- Built Form Management Plan co-ordinates safe environmental and urban development including safety, training and volunteer programs.
- Visual Integration Management Plan ensures the scenic quality and visual integrity of the land is retained.
- Construction Management Strategy provides predevelopment qualifying and site education and post commencement reporting.
- Physical Infrastructure Management Plan integrates the ecological and urban outcomes to ensure physical aspects are managed.

8.2 SEPP 71 (Coastal Protection)

8.2.1 Relationship between the North Wallarah Peninsula Masterplan and SEPP71

The North Wallarah Peninsula Masterplan provides a detailed and comprehensive response to the requirements of :

- The North Wallarah Peninsula Local Environmental Plan (LEP) 2000, and
- The North Wallarah Peninsula Project Conservation and Land Use Management Plan (CLUMP).

The consideration, strategies and principles contained in the North Wallarah Peninsula Masterplan submission documents also illustrate and demonstrate proposals to address the requirements for the preparation of masterplans as required by Part 5 Section 20(2), items (a) to (q) of State Environmental Planning Policy No 71 – Coastal Protection. It is intended that the North Wallarah Peninsula Masterplan documentation comply with the requirements for a Masterplan under Part 5 of SEPP71, subject to Ministerial and PlanningNSW review.

The comprehensive package of LEP, CLUMP and Masterplan provides “adequate planning controls” under Part 5, Section 18(2) of SEPP71. The requirements of Section 20(2), items (a) to (q) have been demonstrated within the North Wallarah Peninsula Masterplan in the following manner:

- a) *Design principles drawn from an analysis of the site and its context.*
 - Built Form Management Plan
 - Open Space and Public Access Management Plan
 - Visual Integration Management Plan
- b) *Desired future locality character.*
 - Social Equity Management Plan
 - Built Form Management Plan

- c) *The location of any development, considering the natural features of the site, including coastal processes and coastal hazards.*
 - Social Equity Management Plan
 - Built Form Management Plan
 - Bushfire Management Plan
 - Open Space and Public Access Management Plan
 - Visual Integration Management Plan
 - Physical Infrastructure Management Plan
- d) *The scale of any development and its integration with the existing landscape.*
 - Social Equity Management Plan
 - Built Form Management Plan
 - Bushfire Management Plan
 - Visual Integration Management Plan
- e) *Phasing of development.*
 - Social Equity Management Plan
 - Built Form Management Plan
 - Physical Infrastructure Management Plan
- f) *Public access to and along the coastal foreshore.*
 - Social Equity Management Plan
 - Built Form Management Plan
 - Open Space and Public Access Management Plan
 - Construction Management Strategy
- g) *Pedestrian, cycle and road access and circulation networks.*
 - Social Equity Management Plan
 - Open Space and Public Access Management Plan
 - Visual Integration Management Plan
- h) *Subdivision pattern.*
 - Built Form Management Plan
 - Visual Integration Management Plan
 - Physical Infrastructure Management Plan
- i) *Infrastructure provision.*
 - Physical Infrastructure Management Plan
- j) *Building envelopes and built form controls.*
 - Built Form Management Plan
 - Bushfire Management Plan
 - Visual Integration Management Plan

- k) *Heritage conservation.*
 - Social Equity Management Plan
 - Open Space and Public Access Management Plan
- l) *Remediation of the site.*
 - Built Form Management Plan
 - Visual Integration Management Plan
 - Construction Management Strategy
 - Physical Infrastructure Management Plan
- m) *Provision of public facilities and services.*
 - Social Equity Management Plan
 - Open Space and Public Access Management Plan
 - Physical Infrastructure Management Plan
- n) *Provision of open space, its function and landscaping.*
 - Social Equity Management Plan
 - Open Space and Public Access Management Plan
- o) *Conservation of water quality and use.*
 - Ecological Site Management Plan
 - Built Form Management Plan
 - Open Space and Public Access Management Plan
 - Physical Infrastructure Management Plan
 - Construction Management Strategy
- p) *Conservation of animals (within the meaning of the Threatened Species Conservation Act 1995) and plants (within the meaning of that Act) and their habitats.*
 - Ecological Site Management Plan
 - Built Form Management Plan
 - Bushfire Management Plan
 - Open Space and Public Access Management Plan
 - Construction Management Strategy
 - Physical Infrastructure Management Plan
- q) *Conservation of fish (within the meaning of Part 7A of the Fisheries Management Act 1994) and marine vegetation (within the meaning of that Part) and their habitats.*
 - Ecological Site Management Plan
 - Built Form Management Plan
 - Bushfire Management Plan
 - Open Space and Public Access Management Plan
 - Construction Management Strategy
 - Physical Infrastructure Management Plan

In addition, the requirements of Part 5 (Master Plans) of SEPP71 are addressed by an undertaking in Section 1.2 (Development Application) of the Built Form Management Plan as follows.

As part of the Masterplan approval process, it is proposed that contextual precinct plans be lodged with the subdivision development application for a whole or part of a precinct. The contextual precinct plans are proposed to be guideline documents to provide an overview of the urban design intent for that particular precinct. Contextual precinct plans may be subject to approval by the Minister under provisions of SEPP71. They will be submitted as additional contextual information for the initial development application for part of each precinct (as defined in the CLUMP). The contextual precinct plan will act as a guiding document for the remaining development application stages of that precinct. Development applications will include:

- Building envelope plans that address:
 - building type and use,
 - building siting and orientation,
 - building setbacks,
 - building height,
 - location of ancillary buildings on private lots,
 - on-site parking location and access,
 - location and dimensions of private open space,
- Building design guidelines that address:
 - building materials, textures and colours,
 - roof form and pitch,
 - window and door proportions,
 - facade articulation and design.
- Survey of existing vegetation.
- Geotechnical survey and report detailing constraints on development.
- Landscape requirements and plant species list with planting prescriptions for public and private land.
- Public domain technical manual that addresses:
 - street hierarchy, widths, capacity, character and typical sections,
 - location of pedestrian accessways, widths, character and typical sections,
 - character and concept intent of open spaces, structures and furniture, including materials and typical details.
- Statement of environmental effects demonstrating compliance with the Wallarah Peninsula Masterplan.

The document entitled: “Concept Development Planning – A Reference for the Masterplan” addresses SEPP71 (Coastal Protection) Part 5 Section 20(2) items (a) to (q) in a conceptual context. This document has been provided with the Masterplan for information purposes but does not form part of the formal development application.

Appendix A – Summary of Management Plans for the North Wallarah Peninsula Masterplan

The eight management plans for the North Wallarah Peninsula project were prepared by a team of technical consultants consisting of:

- *Ecological Site Management Plan* - Manidis Roberts
- *Bushfire Management Plan* - Conacher Travers
- *Physical Infrastructure Management Plan* - Sinclair Knight Merz
- *Construction Management Strategy* - Sinclair Knight Merz
- *Open Space Management Plan* - EDAW (Aust) Pty Ltd
- *Social Equity Management Plan* - Environmetrics
- *Built Form Management Plan* - Architectus
- *Visual Infrastructure Management Plan* - EDAW (Aust) Pty Ltd

“Concept Development Planning - A Reference for the Masterplan”, has been prepared by a team comprising:

- Ekistics Australia: and
- Civitas.

1 Ecological Site Management Plan

The comprehensive Ecological Site Management Plan is one of the eight management plans that make up the Masterplan submission.

An appropriate conservation outcome for the site has been substantially achieved by implementation of the Conservation Strategy from the CLUMP. The Ecological Site Management Plan is largely concerned with ensuring that the objectives of the Conservation Strategy are recognised in the areas of proposed development.

The Ecological Site Management Plan makes a range of recommendations. These recommendations are in the form of ecological strategies. Considerations have then been developed that form the criteria by which the development types identified in the CLUMP for each precinct are assessed. These measures are intended to minimise the impact of each development type on the ecological values of the site as a whole.

The considerations and strategies are the guidelines for delivering the ecological outcomes required by the CLUMP, including:

- Integrating ecological management outcomes of Wallarah National Park into the rest of the site, including development areas, the habitat corridor, the coastal walk, the Forest Red Gum Reserve, and riparian zones of Pinney Beach Lagoon and Galgabba Creek. This will enable the entire Wallarah Peninsula to be managed as a single ecological area;
- Retaining understorey and canopy vegetation on lots to facilitate fauna movements across the entire site, to supplement the habitat corridor and riparian zones;
- Survey and mapping of all trees greater than 75mm trunk diameter within proposed development areas, including identification of large trees with significant hollows, and designing the subdivision pattern to maximise retention of these hollow-bearing trees;

- Using local native species in landscaping of future construction areas, private lots and regeneration zones;
- Protecting riparian zones as identified by the Department of Land and Water Conservation; and
- Protecting native fauna by, for example, placing a covenant on lots prohibiting cat ownership and placing restrictions on dog ownership.

The Ecological Site Management Plan also recommends that a weed management plan be prepared and implemented to manage all weeds on the site, and preparing and implementing a vertebrate pest management plan to manage any feral animals on the site. These recommendations would be implemented as part of the development process.

2 Bushfire Management Plan

The Wallarah Peninsula landscape is one of its defining characteristics. The quality of the remnant cabbage palm forest, coastal heathlands, spotted gum and *Angophora* stands are significant contributors to the site biodiversity.

In recognition of these qualities, the guiding principle of planning and design of the Wallarah Peninsula project has been to incorporate the beauty and amenity of the landscape into the lifestyle opportunities of the new community.

This has provided a significant challenge when preparing the Bushfire Management Plan. The Bushfire Management Plan addresses the desire to keep as much of the landscape within the development area as possible in a way that ensures ecological benefits and security to the residents.

The Wallarah Peninsula project has responded to all the statutory planning requirements including the recently legislated Planning for Bushfire Protection 2001. There have been comprehensive discussions and review with the NSW Rural Fire Service and its local officers at the LMCC and regional level. The management regime is comprehensive and complete. It ensures the phased development program does not impact the existing natural resources and that in turn the natural resources continue to provide ecological and lifestyle benefits.

The scope of the Bushfire Management Plan covers the two key elements of bushfire management:

1. The protection of the ecological (flora and fauna) and environmental elements (soils, water, air) of the landscape.
2. The protection of lives and property.

This has been accomplished by:

- Examining planning requirements at state and local level;
- Assessing the environmental landscape and contemporary fire regimes;
- Identifying significant issues to be addressed;
- Inter-relating the natural landscape bushfire issues with the development proposal and assessing the potential impacts on human settlement; and
- Providing a basis for monitoring the implementation of the plan.

The adjoining Wallarah National Park is a potential source for bushfires to enter the residential development areas. The land manager for the Wallarah National Park is the NSW National Parks and Wildlife Service. They will undertake fuel management works on their lands.

The Bushfire Management Plan makes the important assessment, that the implementation of a successful strategy requires a fully integrated and shared approach to management. The Management Plan identifies the commitments required by the developer and roles to be undertaken by local Rural Fire Service personnel and approved agencies.

3 Physical Infrastructure Management Plan

The key components addressed in this Management Plan are:

- An integrated approach to storm water management based on the LMCC Stormwater Management Plan and the principles of water sensitive urban design. The environmental values and stormwater objectives were developed to ensure the long-term viability of catchments of the Wallarah Peninsula.

Management objectives include:

- Managing adverse impacts in either stormwater runoff volumes and peaks or the velocity of discharges;



Separated road right of ways to retain canopy connections

- Preventing excessive erosion of waterways, slopes and banks;
- Minimising waterborne sediment loadings;
- Managing in-stream water quality;
- Improving efficiency in the use of water and reduce demand for imported mains water;
- Protecting riparian ecosystems, including restoring degraded ecosystems;
- Ensuring safe environment for residents; and,
- Promoting scenic, landscape and recreational values of stream corridors.

A key outcome of the stormwater strategy is the establishment of natural riparian corridors, determined in consultation with the DLWC. This outcome has been achieved by focusing on stormwater source treatment rather than the traditional end of line controls such as wetlands and detention basins.

- The traffic and access component of this Management Plan has examined permanent and emergency site access, vehicular movements both internal and external to the Wallarah Peninsula, a community transport system and the associated road infrastructure.

In terms of site access, a single primary access to the Wallarah Peninsula has been specified at the intersection of the Old Pacific Highway. This interchange provides for all traffic movements to and from the Wallarah Peninsula. No vehicular connections, with the exception of emergency care, proposed to Caves Beach and Cams Wharf communities.

The controlled reopening of the Old Pacific Highway will support sustainable linkages and public access between the Wallarah Peninsula and the Swansea community. It will also provide improved access to Swansea for residents in the area via new walkways and bicycle paths.

- The delivery of essential infrastructure to the Wallarah Peninsula including water supply, waste water transportation, electricity and telecommunications will be undertaken in accordance with the relevant supply authorities. These utilities will be installed in common underground trenches and services corridors to maximise vegetation retention on site.
- The geophysical constraints of the Wallarah Peninsula relate to a combination of natural features and past mining activities that have occurred on site. These constraints include:
 - Soil erosion;
 - Site instability within steep sloped areas;
 - Rock instability associated with Swansea and Radar Hill Open Cut mines;
 - Subsidence potential in areas which have been subject to underground mining;
 - A mine fire in the old workings of the Normaine Colliery;
 - An informal landfill site; and
 - A number of clay extraction pits.

Strategies for the remediation of these geophysical constraints have been outlined in this Management Plan to support the development type mix indicated on the Development Land Use Plan.

4 Construction Management Strategy

The Construction Management Strategy is a working tool which informs the preparation of future detailed site specific Construction Management Plans required for all construction works ranging from subdivision construction to building construction.

The Construction Management Strategy, in full, provides examples for the risk assessments, site emergency response, waste management and the environmental site inspection checklists to assist construction contractors in the preparation of the site specific construction management plans, for all subdivision and building works.

Other components of the Construction Management Strategy, include emergency response for the site and training and awareness with regard to environmental management.

The key strategies outlined in this plan include:

- Site personnel being trained in the specific responsibilities and work instructions relating to their day to day tasks;
- Construction works within 40m of classified rivers being undertaken in accordance with the conditions of approval issued by the Department of Land and Water Conservation;
- Construction works must be undertaken in accordance with a Council approved Soil and Water Management Plan for subdivision works and a Soil and Erosion Plan for building works;
- Construction techniques and limits of construction respond to maximizing remnant vegetation on site, with particular focus on areas of high ecological value as identified in the Ecological Site Management Plan;
- Construction techniques and limits of construction protection areas of Aboriginal heritage; and
- Waste management during construction supported by a waste management plan which is consistent with the Natural Heritage Trust's "Waste Reduction Guidelines".



Builder education and management programs

5 Open Space and Public Access Management Plan

The Wallarah Peninsula is surrounded by an array of open spaces and environmental assets. These assets have formed the framework for how the Open Space and Public Access Management Plan has been prepared. The Plan recognises that the onsite amenities have been “connected by nature” to these surrounding assets and that this connection should be protected and enhanced.

At a regional level, the direct connection with Lake Macquarie provides recreational opportunities and the possibility of water-based connections to State Reserves such as Pulbah Island, Point Wollstoncraft, and Wangi Wangi and other Lake Macquarie areas. Land-based open space connections include the nearby recreation areas of Cams Wharf, the Wallarah National Park and the site’s habitat corridor connecting the National Park with the adjoining bushland north of the site. The Wallarah Peninsula Coastal Walk adjacent to the Pacific Ocean on the site’s east boundary is already recognised by the public as a significant pedestrian connection from Caves Beach.

The public access connections utilise existing roads and bushfire trails to complement the future open space and public access network. The new bushfire trail system proposed for the development areas was developed in concert with the public access and existing bushfire trail network so that one network serves two purposes.



Public access and site participation programs will be encouraged

The Wallarah Peninsula contains special open space areas including existing and proposed public lands. These areas will have their own Plans of Management prepared by LMCC and exhibited for public comment. These public lands include the Wallarah National Park; 7(e) habitat corridor; 6(a) and 6(c) lake foreshore Forest Red Gum Reserve; and Mawsons Lookout. Concept plans have also been presented for the Coastal Crown Land 7 (c) areas of the site. However, the site has been considered as a whole, inclusive of these areas. To assist the ongoing consultation and collaborative planning arrangement between the developer and all stakeholders, the individual concepts for these management documents have been prepared for consideration at the time detailed Plans of Management are undertaken by LMCC for the public lands.

These concept studies are provided in recognition of the need to ensure there is a safe and sustainable interface between the development areas and the public areas.

Key elements of the Open Space and Public Access Management Plan include:

- Provision within the Wallarah National Park for bushfire management; interpretative signage; a coastal lookout; pedestrian connections; a Pinney Creek palm gully circuit; connections to the existing Coastal Walk; an easement from the Coastal Village Precinct to Radar Hill Precinct through the National Park; and access to Pinney Beach.
- No development (other than road crossings and services) within the Habitat Corridor. A series of bush tracks and shared bushfire trails will parallel the boundaries of the corridor.
- The Forest Red Gum Reserve on the lake foreshore will accommodate bush tracks and raised boardwalks, areas for both active and passive enjoyment, a swimming beach, community amphitheatre, lakeside promenade, jetty, small-scale commercial facilities and temporary boating facilities such as areas for tinny tie-up.
- The existing Coastal Walk will be enhanced by additional points of interest and rest areas.
- Mawsons Lookout will be reconfigured to provide for the stabilisation of the old quarry wall and closure of Scenic Drive. Vehicular access will be provided to a nearby carpark with only pedestrian and disabled access to the lookout. Additional view decks and lookout facilities will be provided to enhance public access and enjoyment.



*Connections to
neighbouring
communities and
facilities*

6 Social Equity Management Plan

An important aspect of sustainability is the way resources will be shared between the new Wallarah Peninsula villages and existing surrounding Lake Macquarie communities.

A key component of the shared outcomes of the project is the broad access to all the natural assets within the project area along with new community facilities.

The Social Equity Management Plan responds to the legislative requirements and the existing S94 Contribution Plan and provides Considerations and Strategies for how these requirements are implemented.

The Social Equity Management Plan is structured around five broad objectives:

- Resource management;
- Developing and enhancing public access;
- Facilitating social networks and sense of community;
- Creating a sense of place; and,
- Creating employment opportunities.

7 Built Form Management Plan

The Built Form Management Plan ensures that physical development will be considered within the context of the sustainability and ecological conservation objectives that underpin the vision for the site.

The plan provides performance based design guidelines to maintain flexibility in determining the location of development in response to the LES suitability mapping. This will allow detailed site planning at the development application stage to achieve the best configuration relative to the landscape. The performance based approach recognises market needs and preferences and the potential for changing approaches to planning, design and management.

The Built Form Management Plan addresses a number of central elements that underpin the approach to built outcomes at Wallarah Peninsula:

- Response to LES suitability mapping;
- Higher density development in areas of past degradation;
- Connectivity and shared outcomes with existing communities;
- Recognition of principles of ESD;
- Traditional coastal village scale and diversity;
- Amenities for public lands;
- Sustainable retail; and,
- Response to the NSW Coastal Policy Coastal Design Guidelines.



Housing integrated with the landscape

8 Visual Integration Management Plan

The Wallarah Peninsula is recognised for its contribution to visual amenity of the region and local conservation values. Regional influences include viewsheds to Lake Macquarie the Pacific Highway, and the Pacific Ocean. This Management Plan provides the appropriate planning strategies for the maintenance of the character of the landscape currently experienced.

Each of the three sectors of the site has unique landscape characteristics. Strategies have been identified to support the desired visual outcome put forth in the CLUMP and implemented in the Masterplan. These strategies will be implemented during development and address massing and density; layout and form; materials, textures and colours; and vegetation management.

The upper slopes of the central ridge in the northern portion of the site are visible from the urban development areas south of Belmont, specifically in the area of Blacksmith, Caves Beach and Swansea. Visual impacts due to new development in these areas will be mitigated with the application of appropriate visual integration strategies.

Mawsons Lookout near the community of Caves Beach is recognised for its ability to accentuate the scenic quality of the region with its panoramic viewscape enjoyed by its visitors. Mawson's Lookout will be remediated as part of the development outcome. The northern exposed rock face of the lookout is a result of previous quarrying. The physical scar is visible from near and distant views.

The LES suitability mapping associated with the visual assessment is a significant factor shaping the Visual Integration Management Plan. An assessment, based on site visibility and visual absorption capacity, was used to determine the extent to which development could occur upon the site whilst maintaining its visual integrity.

Site visibility is an assessment of the extent to which particular portions of the site are visible from surrounding areas. A number of influences are assessed including duration of view; number of viewers and distance. Vegetation cover and slope angle are the main factors influencing visual absorption capacity on site. A rating system of low, medium or high was applied to all development areas of the site.

The suitability levels as defined in the LES imply that areas proposed for development will require different degrees of management strategies. A process was adopted that identified specific planning and management considerations and strategies for each area of development depending upon the level of suitability in that area. This ensured that the visual quality of the site and region is not significantly reduced by the proposed development. These outcomes were utilised to validate the proposed Development Land Use Plan from a visual context.



*Visual simulation
of Lakeshore and Slopes
Precinct rooftop layout
with visual integration
strategies applied*

