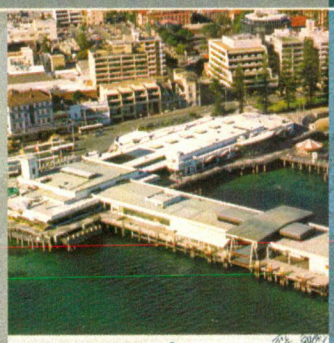
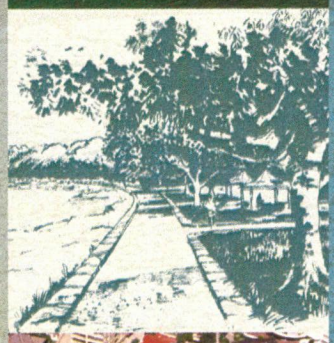
NSW GOVERNMENT
Department of Planning

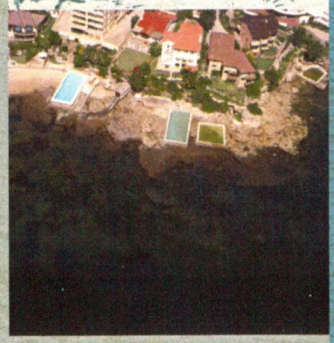
Sydney Harbour Foreshores and Waterways Area

Development Control Plan

2005







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Sydney Harbour Foreshores and Waterways Area – Development Control Plan

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1. Introduction

The framework and application of the plan are explained in this part.

1.1 ABOUT THE DEVELOPMENT CONTROL PLAN

Purpose of the Development Control Plan

Sydney Harbour and its tributaries is one of Australia's greatest cultural and commercial resources. This area, which includes the Parramatta and Lane Cove Rivers and Middle Harbour, constitutes a valuable natural and cultural resource, and acts as a major transport corridor, flora and fauna habitat and recreation area. It is also a significant natural scenic feature.

The regional environmental plan (REP) relevant to this area is Sydney REP (Sydney Harbour Catchment) 2005. The area relevant to this Development Control Plan (DCP) is the Foreshores and Waterways Area as defined in SREP (Sydney Harbour Catchment) 2005 and as identified in this DCP. The principal aim of SREP (Sydney Harbour Catchment) 2005 is to ensure that the catchment, foreshores, waterways and islands of Sydney Harbour are recognised, protected and maintained as an outstanding natural asset and public asset of national and heritage significance for existing and future generations. SREP (Sydney Harbour Catchment) 2005 also aims to achieve a high quality urban environment and provide a consolidated, simplified and updated legislative framework for future planning.

This DCP is a revision of the DCP for Sydney and Middle Harbours REP and Parramatta River REP and has been revised to accompany SREP (Sydney Harbour Catchment) 2005. Whilst this revision is only minor and updates cross-referencing with SREP (Sydney Harbour Catchment) 2005, it also introduces new design guidelines and visual assessment criteria for boat storage. A fuller, more comprehensive revision of the DCP is proposed in the future.

The DCP will need to be taken into consideration by land owners, developers and consent authorities when preparing or assessing development applications within the area covered by the Foreshores and Waterways Area of SREP (Sydney Harbour Catchment) 2005.

Performance-based criteria and guidelines relating to matters such as foreshore access, visual and natural environments, recreation and maritime industrial uses are established by the DCP with the aim of:

- protecting ecological communities within the area covered by SREP (Sydney Harbour Catchment) 2005;
- ensuring that the scenic quality of the area is protected or enhanced;
- providing siting and design principles for new buildings and waterside structures within the area; and
- identifying potential foreshore access locations in the area.

Inherent in the DCP's performance-based criteria and guidelines is the intent of a set of principles that have been developed as part of the State Government's overall strategy for guiding planning and development in the Foreshores and Waterways area. The planning principles for the Foreshores and Waterways Area are:

- development should protect, maintain and enhance the natural assets and unique environmental qualities of Sydney Harbour and its islands and foreshores,
- public access to and along the foreshore should be increased, maintained and improved, while minimising its impact on watercourses, wetlands, riparian lands and remnant vegetation,
- access to and from the waterways should be increased, maintained and improved for public recreational purposes (such as swimming, fishing and boating), while minimising its impact on watercourses, wetlands, riparian lands and remnant vegetation,
- development along the foreshore and waterways should maintain, protect and enhance the unique visual qualities of Sydney Harbour and its islands and foreshores,
- adequate provision should be made for the retention of foreshore land to meet existing and future demand for working harbour uses,
- public access along foreshore land should be provided on land used for industrial or commercial maritime purposes where such access does not interfere with the use of the land for those purposes,
- the use of foreshore land adjacent to land used for industrial or commercial maritime purposes should be compatible with those purposes,
- water-based public transport (such as ferries) should be encouraged to link with land-based public transport (such as buses and trains) at appropriate public spaces along the waterfront,
- the provision and use of public boating facilities along the waterfront should be encouraged.

In this context, therefore, the DCP also performs an important function as part of the planning and development strategy for Sydney Harbour, its tributaries and foreshores.

Where and When the Plan Applies
The Plan applies to all development proposals within the Foreshores and Waterways Area identified in SREP (Sydney Harbour Catchment) 2005 (refer to the Foreshores and Waterways Area map). It principally relates to the waterway and adjoining land identified on the maps accompanying this plan. It should be noted that this DCP does not apply to those parts of the Harbour not covered by SREP (Sydney Harbour Catchment) 2005, that is, Walsh Bay and Cockle Bay but does now apply to the Lane Cove River and the Bays precinct (Blackwattle, Johnstons, White and Rozelle Bays).

1.2 HOW TO USE THIS PLAN

To use this plan there are a number of key steps to consider.

Step 1: Does the Plan Apply?
Check the relevant accompanying map(s) and subsection 'Where and When the Plan Applies' as outlined in Section 1.1 of this DCP. If the plan applies, then address the following steps:

Step 2: Ecological Assessment
Determine the implications of the ecological controls for the site by referring to Part 2 of the DCP and the accompanying maps. Undertake any supplementary site specific investigations. Note: Part 6 (clauses 61 to 63 inclusive) of SREP (Sydney Harbour Catchment) 2005 need to be addressed.

Step 3: Landscape Assessment
Determine the implications of the landscape controls for the site by referring to Part 3 of the DCP and the accompanying maps.

Step 4: Design Guidelines
Address the design requirements applying to the proposal. These are outlined in Part 4 of the DCP for proposals below mean high water mark or at the land–water interface and Part 5 of the DCP for land-based developments. For instance, for private landing facilities see Sections 4.1, 4.5 and 4.8 and for a house facing the harbour see Sections 5.3, 5.4 and 5.6. Appendix D of this DCP relating to the visual impact assessment of marinas needs to also be considered.

Step 5: What Else Needs to be Considered?
Address any additional matters identified under Section 1.3 of the DCP.

Step 6: Development Application Requirements
Consult with the consent authority and address the points in Section 1.4 of this DCP. SREP (Sydney Harbour Catchment) 2005 specifies the consent authority for different types of development applications. See Figure 1.

1.3 WHAT ELSE NEEDS TO BE CONSIDERED?

When preparing and assessing a development application there are a number of matters to be considered in addition to the provisions of this DCP. These are summarised below but reference should be made to the original documents.

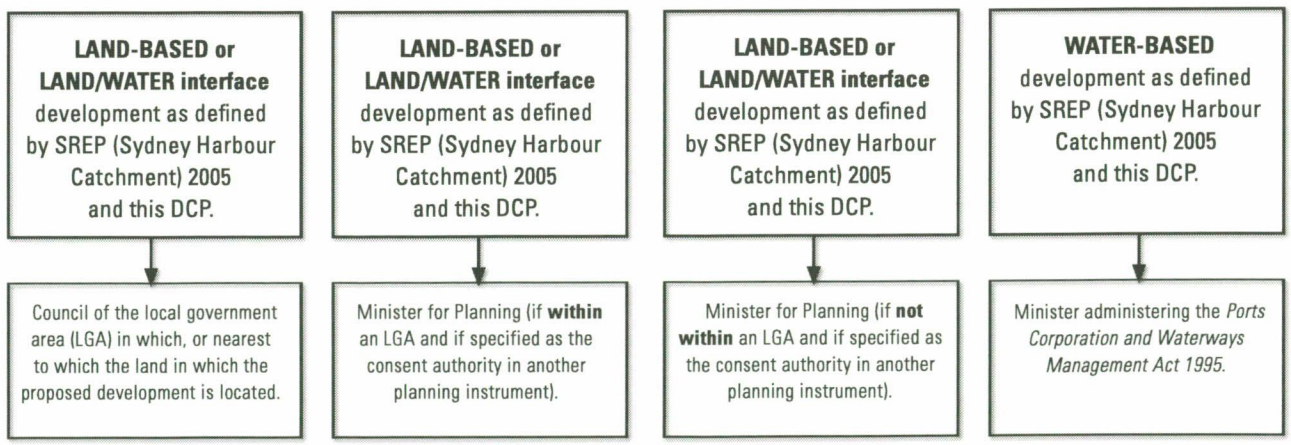
i. Section 79C of the *Environmental Planning and Assessment Act 1979*
This section of the Act specifies matters that need to be considered in the assessment of development applications.

ii. Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005
SREP (Sydney Harbour Catchment) 2005 applies to Sydney and Middle Harbours, and the Parramatta and Lane Cove Rivers. It contains aims and objectives, zoning provisions, special provisions setting out matters to be considered when assessing a development application (clauses 20–27 inclusive), and heritage provisions. Appendix B summarises the matters that SREP (Sydney Harbour Catchment) 2005 requires to be considered when development applications are being assessed and notes where these provisions are addressed in the DCP.

iii. Other Regional Environmental Plans or State Environmental Planning Policies
There are a number of REPs and State Environmental Planning Policies (SEPPs) applying to areas covered by SREP (Sydney Harbour Catchment) 2005. The most relevant is:

- State Environmental Planning Policy No. 19—Bushland in Urban Areas, which aims to protect

FIGURE 1. CONSENT AUTHORITIES AS SPECIFIED IN SREP (SYDNEY HARBOUR CATCHMENT) 2004



Note: Clause 5 of SREP (Sydney Harbour Catchment) 2005, which relates to the consent authority roles for the above development types should be referred to. The Minister for Planning may also become consent authority for certain types of development and/or development on certain sites under section 76A of the Environmental Planning and Assessment Act 1979.

and preserve bushland within urban areas. It sets out matters that a consent authority must consider when assessing development within areas zoned for urban bushland or in adjoining area;

- State Environmental Planning Policy No. 55 -Remediation of Land, the object of which is to provide for a Statewide planning approach to the remediation of contaminated land;
- State Environmental Planning Policy No. 64 —Advertising and Signage, which regulates advertising on navigable waters; and
- State Environmental Planning Policy No. 65— Design Quality of Residential Flat Development, which aims to improve the design quality of residential flat development in New South Wales.

iv. Local Environmental Plans or Development Control Plans

Councils also have local environmental plans and development control plans. These have to be considered in conjunction with SREP (Sydney Harbour Catchment) 2005 and the DCP when development applications are being prepared and assessed. Applicants should consult with their council to obtain details on applicable local controls.

v. Other Approvals

In addition to the matters covered in the previous sections, some proposals will require approvals under other legislation. Applicants need to determine whether other approvals are required and should refer to section 91 of the *Environmental Planning and Assessment Act 1979*, as amended, to determine whether the proposal is 'integrated development'.

1.4 DEVELOPMENT APPLICATION REQUIREMENTS

Before lodging an application it is advisable to consult with the relevant consent authority to ensure that all relevant issues are addressed and sufficient information is provided. A development application should include the following:

i. A development application form

ii.Owner's consent

The owner of the land must give consent to the lodgement of the development application. Where the owner of the land is the NSW Maritime Authority, it has set criteria which it uses to determine whether owner's consent will be granted. These are outlined in the NSW Maritime Authority "Land Owner's Consent Manual – Policies relating to the Development Use and Occupation of Waterway and Foreshore land".

iii. Plans

Plans showing:

- site dimensions, site area, contour levels, existing trees, other natural features, existing structures, northpoint and existing improvements. Location of buildings on adjoining properties in relation to the proposal is to be shown;
- dimension floor plans located on a site plan, roof plan, elevations and sections of proposed buildings showing type and colour of materials; and
- finished levels of floors, paving and landscaped areas.

Note: Schedule 1 of the Environmental Planning and Assessment Regulation 2000 should also be referred to.

iv. A statement of environmental effects (SEE) or an environmental impact statement (EIS)

A SEE or EIS must demonstrate that consideration has been given to the environmental impact of the development. It should set out measures to be taken to minimise any likely negative impact of the proposal and should address the following issues:

- visual impact having regard to the landscape character of the area and nature of the proposal;
- amenity—details of hours of operation should be provided for non residential development. With some proposals it may be necessary to provide an acoustic assessment report;
- soil erosion mitigation measures;
- run-off and stormwater control measures;
- vegetation protection measures addressing the performance criteria outlined in Part 2 of this DCP;
- parking and access—details of access and off street parking;
- transport and traffic impact—some developments may require a transport and traffic impact assessment report;

- bulk and scale—details of bulk and scale of structures including the size of any vessels associated with the development; and
- demonstrate how the proposal satisfies the requirements of this DCP (Appendix C provides an example checklist).

Note: Schedule 1 of the Environmental Planning and Assessment Regulation 2000 should also be referred to.

v. A photograph of the site
Principally in areas where development is visible from the water, a photograph(s) of the site should be provided showing the site viewed from the waterway, shoreline or public vantage point.

The photograph(s) should be taken at low tide, approximately 50 metres from the site, in good light with a 35 millimetre lens set at a 50 millimetre focal length.

vi. Application fee
The Environmental Planning and Assessment Regulation 2000 specifies development application fees based on the estimated cost of development.

Note: A Master Plan may be required for certain sites under Part 4 of SREP (Sydney Harbour Catchment) 2005.

2. Ecological Assessment

The different ecological communities in and around Sydney Harbour and its tributaries and their implications for development are identified in this part of the DCP. Objectives and performance criteria for protecting these communities are set out.

2.1 BACKGROUND

To support this DCP, terrestrial and aquatic ecological communities in and around Sydney Harbour and its tributaries were documented in a working paper entitled *Landscape and Ecological Characteristics of Sydney Harbour and its Tributaries.* The paper describes the communities, explains their conservation significance and identifies potential impacts from development. Based on this, performance criteria were devised to protect the important communities from the adverse effects of development. These criteria are presented in this part of the DCP.

2.2 GENERAL AIMS

The overall purpose of the performance criteria is to conserve biological diversity within and around Sydney Harbour and its tributaries. Within this context, criteria have been devised to ensure that:

- ecological communities, particularly those which form wildlife habitats, are protected and where feasible enhanced;
- development is sited to retain native vegetation, wetlands and natural foreshores;
- development is accompanied by revegetation and rehabilitation of degraded foreshores, where appropriate; and
- development does not impact adversely on water quality.

2.3 IDENTIFICATION OF ECOLOGICAL COMMUNITIES

To establish whether there are ecological communities that need to be considered when an application is being prepared, three steps must be followed.

Step 1: Refer to the Maps

A series of maps accompany the DCP that show, in general terms, areas of ecological significance. The first step is to

identify the general location of the site and establish if any communities occur there. *See* Figure 2.

Step 2: Determine the Conservation Status of Identified Ecological Community
The ecological communities that occur in the area have different levels of conservation value; these are shown in Table 1. The second step is to determine the value by using the community description given on the map and the values for each community from Table 1. The working paper that supports this DCP contains a description of the communities and explains how the conservation value of the communities was determined.

Step 3: Site Specific Investigation
Site specific investigations by appropriately qualified people should be undertaken to confirm actual conditions on a proposed development site. These are necessary because conditions may change over time and because the maps of ecological communities were produced from aerial photographs and are somewhat generalised.

These investigations should assess:

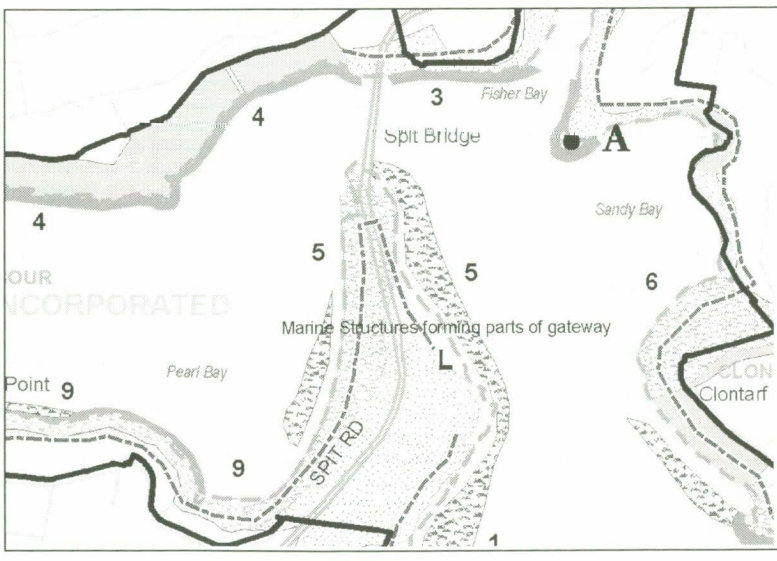
- the habitat values of development sites (and adjoining lands) for threatened species, populations and endangered ecological communities, and whether critical habitat is likely to be affected by the proposal;
- if these attributes are present then the conservation status of the land should be considered to be high, as a precautionary measure, and the relevant performance criteria applied in addition to any necessary 8 part-tests required under s.5A of the *EP&A Act*; and
- it should note that if the proposal is on land that is critical habitat, then a species impact statement is automatically required and concurrence of the DEC will be necessary before development consent may be granted.

2.4 STATEMENT OF INTENT AND PERFORMANCE CRITERIA

Taking into account the conservation significance of the ecological communities and the potential impacts of development, performance criteria for development within and adjacent to the communities have been devised. They are described in Tables 2–4 for terrestrial ecological units, and Tables 5 and 6 for aquatic ecological units.

The performance criteria are to be applied to developments within and adjoining the ecological communities. Where a development is proposed within or adjacent to communities of different conservation value, the performance criteria for the community with the higher conservation value will prevail unless it can be demonstrated that these are inappropriate.

FIGURE 2. EXAMPLE OF ECOLOGICAL COMMUNITIES OCCURRING WITHIN PART OF MIDDLE HARBOUR



Example: Performance criteria for two terrestrial ecological communities—'urban development with scattered trees' and 'grassland' and one aquatic ecological community—mixed sandy intertidal and rock shelf' would need to be considered for development proposed at location 'A'. A site inspection would also be required for verification purposes.

Extract map no. 15.
See map for legend.

TABLE 1. CONSERVATION VALUE OF ECOLOGICAL COMMUNITIES

Ecological Unit	Type	Conservation Status		
		High	Medium	Low
Closed Forest/Gully	Terrestrial	✓		
Open Forest Type A	Terrestrial		✓	
Open Forest Type B	Terrestrial	✓		
Woodland	Terrestrial		✓	
Heathland	Terrestrial	✓		
Saltmarsh	Terrestrial	✓		
Grassland	Terrestrial			✓
Urban Development (with scattered trees)	Terrestrial			✓
Rocky Platform	Aquatic	✓		
Mixed Rock Intertidal and Sand	Aquatic	✓		
Mixed Sandy Intertidal and Rock Platform	Aquatic		✓	
Sandy Beaches	Aquatic		✓	
Mudflats	Aquatic		✓	
Mudflats and Mangroves	Aquatic/Terrestrial	✓		
Mixed Rock Intertidal and Mudflats	Aquatic	✓		
Seagrass Beds	Aquatic	✓		

Notes:

1. *Descriptions of these ecological units are included in the working paper—where 'Rocky Platform' is referred to as 'Rocky Intertidal; 'Mixed Sandy Intertidal and Rock Platform' as 'Mixed Sandy Intertidal and Rock Shelf'; and 'Sandy Beaches' as 'Sandy Intertidal'.*
2. *Determination of conservation status is outlined in working paper.*
3. *The conservation value is for the whole ecological community. There may be instances where a site is located within a nominated ecological community but has been disturbed. This will require verification with each development proposal.*

TABLE 2. TERRESTRIAL ECOLOGICAL COMMUNITIES OF HIGH CONSERVATION VALUE

Statement of Intent	Performance Criteria for Development within High Conservation Communities	Performance Criteria for Development Adjoining High Conservation Communities
Vegetation Protection To conserve and enhance vegetation communities of high conservation significance.	• Native vegetation clearance is minimised. • Severance of vegetation corridors is avoided. • Mature trees containing hollows are preserved. • New plants are species endemic to the area. • Tree canopy is maintained. • Natural watercourses and any special natural features such as cliff faces and rock outcrops are protected. • Development does not shade plant communities to such an extent that plant growth might be unduly restricted. • The incremental and cumulative effects of development are considered having regard to the above performance criteria.	• Vegetation clearance is minimised. • Severance of vegetation corridors is minimised. • Mature trees containing hollows are preserved. • Disturbance in adjacent areas is temporary and rehabilitation occurs. • Tree canopy linkages to adjoining communities are maintained. • Stands of significant vegetation (mangroves and remnant rainforest) are protected. • Natural watercourses and any special natural features such as cliff faces and rock outcrops are protected. • The incremental and cumulative effects of development are considered having regard to the above performance criteria.
Weed Control To reduce the effects of weed invasion.	• Exotic species are generally not introduced. • The use of fertilisers, pesticides and other potentially harmful garden products is avoided.	• Introduction of exotic species is minimised and existing native vegetation within the site landscaping is generally retained. • The use of fertilisers, pesticides and other potentially harmful garden products is minimised.
Reduce Predation Pressure To minimise the risk of predation on native fauna species by domestic pets.	• Fencing to contain domestic pets is provided.	• Fencing to contain domestic pets is provided.

TABLE 2. (continued)

Statement of Intent	Performance Criteria for Development within High Conservation Communities	Performance Criteria for Development Adjoining High Conservation Communities
Soil Conservation To minimise impacts associated with soil erosion and water siltation.	• Measures to avoid soil erosion and siltation during construction and following completion of development are implemented. • Excessive cut and fill on the site is avoided. • Excessive paving or constructions of other non-porous surfaces is avoided.	• Measures to minimise soil erosion and siltation during construction and following completion of development are implemented. • Soil erosion and sedimentation is minimised by controlling the amount of vegetation cleared from the site. • The area of paving or other non-porous surfaces is minimised.
Pollution Control To reduce impacts associated with pollution.	• Controls are implemented to stop any pollutants or soil entering the area. • Any increase in suspended solids is temporary and does not exceed the current range of turbidity.	• Controls are implemented to direct any pollutants or soil from entering adjoining high conservation areas. • Any increase in suspended solids is temporary and does not exceed the current range of turbidity.

TABLE 3. TERRESTRIAL ECOLOGICAL COMMUNITIES OF MEDIUM CONSERVATION VALUE

Statement of Intent	Performance Criteria
Vegetation Protection To conserve and enhance vegetation communities of medium conservation significance.	• Vegetation clearance is minimised. • Severance of vegetation corridors is minimised. • Mature trees containing hollows are preserved, where feasible. • Disturbance in adjacent areas is carefully controlled. • Tree canopies are maintained. • Natural watercourses and any special natural features such as cliff faces and rock outcrops are protected. • The incremental and cumulative effects of development are considered having regard to the above performance criteria.
Weed Control To reduce the effects of weed invasion.	• Introduction of exotic species is minimised. • The use of fertilisers, pesticides and other potentially harmful garden products is minimised.
Reduce Predation Pressure To minimise the risk of predation on native fauna species by domestic pets.	• Fencing to contain domestic pets is provided.
Soil Conservation and Pollution Control To minimise impacts associated with soil erosion, water siltation and pollution.	• Measures to minimise soil erosion and siltation during construction and following completion of development are implemented. • Controls are implemented to prevent pollutants from entering the waterway. • Any increase in suspended solids is temporary and does not exceed the current range of turbidity.

TABLE 4. TERRESTRIAL ECOLOGICAL COMMUNITIES OF LOW CONSERVATION VALUE

Statement of Intent	Performance Criteria
Vegetation Protection To conserve and enhance vegetation.	• Mature trees containing hollows are preserved where feasible. • Natural watercourses and any special natural features such as cliff faces and rock outcrops are protected. • The incremental and cumulative effects of development are considered having regard to the above performance criteria.
Reduce Predation Pressure To minimise the risk of predation on native fauna species by domestic pets.	• Fencing to contain domestic pets is provided.
Soil Conservation and Pollution Control To minimise impacts associated with soil erosion, water siltation and pollution.	• Measures to minimise soil erosion and siltation during construction and following completion of development are implemented. • Controls are implemented to prevent pollutants from entering the waterway. • Any pollutants and any increase in suspended solids is temporary and does not exceed the current pollution and range of turbidity.

TABLE 5. AQUATIC ECOLOGICAL COMMUNITIES OF HIGH CONSERVATION VALUE

Statement of Intent	Performance Criteria for Development within High Conservation Communities	Performance Criteria for Development Adjoining High Conservation Communities
Controlling Shading To minimise impacts from shading on communities of high conservation value.	• Shading of seagrass communities is avoided. • Food sources for grazing organisms are protected. • Light penetration is not reduced, thereby maintaining algal growth in the intertidal zones. • Plant and algae growth in mudflats or mangroves is maintained and enhanced. • Light penetration to seagrass beds is maintained to prevent reducing productivity or killing seagrass communities.	• Shading of seagrass communities is avoided. • Food sources for grazing organisms are protected. • Light penetration is not reduced, thereby maintaining algal growth in the intertidal zones. • Plant and algae growth in mudflats or mudflat and mangrove ecological units is maintained and enhanced. • Light penetration to seagrass beds is maintained to prevent reducing productivity or killing seagrass communities.
Avoiding Harmful Effects of Reclamation To minimise the effects from reclamation.	• Reclamation mitigation measures outlined in NSW Fisheries *Estuarine Habitat Management Guidelines, Section 3.1—Reclamation and Dredging* are followed. • Beach formation is not adversely affected. • Generally contaminants are not disturbed, or only with great care, so that birds, fish and invertebrates are not adversely affected.	
Urban Run-off To minimise the effects from urban run-off.		Appropriate on-site control measures are to be implemented to ensure that: • there will be no transfer of pollutants into the intertidal zone; • the proposal will not increase nutrient levels in the intertidal zone; and • increase in suspended solids (turbidity) is only be temporary and does not exceed the current range of turbidity.

TABLE 5. (continued)

Statement of Intent	Performance Criteria for Development within High Conservation Communities	Performance Criteria for Development Adjoining High Conservation Communities
Dredging To minimise the effects of dredging.	• Mitigation measures outlined in NSW Fisheries *Estuarine Habitat Management Guidelines*, Section 3.1—Reclamation and Dredging are followed. • Any increase in turbidity does not adversely affect flora and fauna or their habitat. • Contaminants are not disturbed, or only with great care, so that birds, fish and invertebrates are not adversely affected.	
Physical Damage To minimise physical damage to communities of high conservation value.	• Activities and structures are not located within seagrass communities. • Activities and structures are sited, designed and carried out to avoid physical damage of communities of high conservation status. • Requirements of NSW Fisheries *Habitat Protection Plan No. 2: Seagrasses* are to be satisfied.	• Activities and structures adjacent to communities of high conservation value avoid physical damage to these communities.
Tidal Flows/Currents To minimise changes to natural tidal flow/currents.	• Structures are to be sited and activities carried out so that there is little or no change to tidal flows/currents in areas affecting ecological communities of high conservation status.	

TABLE 6. AQUATIC ECOLOGICAL COMMUNITIES OF MEDIUM CONSERVATION VALUE

Statement of Intent	Performance Criteria
Shading To minimise impacts on communities from shading.	• Shading of communities is not increased to an extent that would harm flora and fauna. • Food sources for grazing organisms are protected. • Light penetration is not reduced so that algal growth in the intertidal zones is protected.
Reclamation To minimise the effects from reclamation where it provides the optimum environmental outcome.	• Reclamation mitigation measures outlined in the NSW Fisheries Department's *Estuarine Habitat Management Guidelines*, Section 3.1—Reclamation and Dredging are to be followed and the applicant will need to demonstrate that the proposal will not adversely affect beach formation. • Harmful contaminants will not be disturbed, or only when this will not adversely affect birds, fish and invertebrates.
Urban Run-off To minimise the effects from urban run-off.	Appropriate on-site control measures are to be implemented to ensure that: • pollutants are not transferred into the intertidal zone; • the proposal will not increase nutrient levels in the intertidal zone; and • any increase in suspended solids (turbidity) is temporary and does not exceed the current range of turbidity.
Dredging To minimise the effects from dredging.	• Mitigation measures outlined in the NSW Fisheries Department's *Estuarine Habitat Management Guidelines*, Section 3.1—Reclamation and Dredging are to be followed.

2.5 OTHER MATTERS

In addition to the performance criteria contained within this DCP, the provisions of section 5A of the *Environmental Planning and Assessment Act 1979* concerning threatened species, must be addressed. This section of the Act outlines the factors that must be taken into account in deciding whether there is likely to be a significant effect on threatened species, populations or ecological communities, or their habitats.

2.6 SUMMARY

To determine whether a proposal is satisfactory, consideration will need to be given to:

- the general aims given in Section 2.2;
- the statement of intent and performance criteria in the relevant table (that is, Tables 2–6); and
- the provisions of section 5A of the *Environmental Planning and Assessment Act 1979*.

3. Landscape Assessment

The different landscape characters in and around Sydney Harbour and its tributaries are identified in this part of the DCP. Performance criteria to protect and enhance these landscapes are set out.

3.1 INTRODUCTION

SREP (Sydney Harbour Catchment) 2005 contains provisions requiring a consent authority to consider the visual impact of development from the waterway and foreshores. The visual impact of a development will vary depending on:

- the nature of the proposal—its height, width, siting, scale, colour, reflectivity and function;
- the landscape setting in which it is proposed;
- the degree of change created—whether it will be minimal or not; and
- the ability of the proposal to integrate with the landscape character.

To assist in considering the landscape characteristics where a development is proposed, the area has been divided into a number of different landscape character types. Performance criteria have been devised for each area.

The landscape character types were defined by analysing the different landscape elements that contribute to the character of the area. The elements and the method applied to categorise the area are described in the working paper that supports the DCP.

3.2 GENERAL AIMS

All development should aim to:

- minimise any significant impact on views and vistas from and to:
  - public places,
  - landmarks identified on the maps accompanying the DCP, and
  - heritage items;

- ensure it complements the scenic character of the area;
- protect the integrity of foreshores with rock outcrops, dramatic topography or distinctive visual features;
- provide a high quality of built and landscape design; and
- contribute to the diverse character of the landscape.

3.3 LANDSCAPE CHARACTER TYPES

The following section:

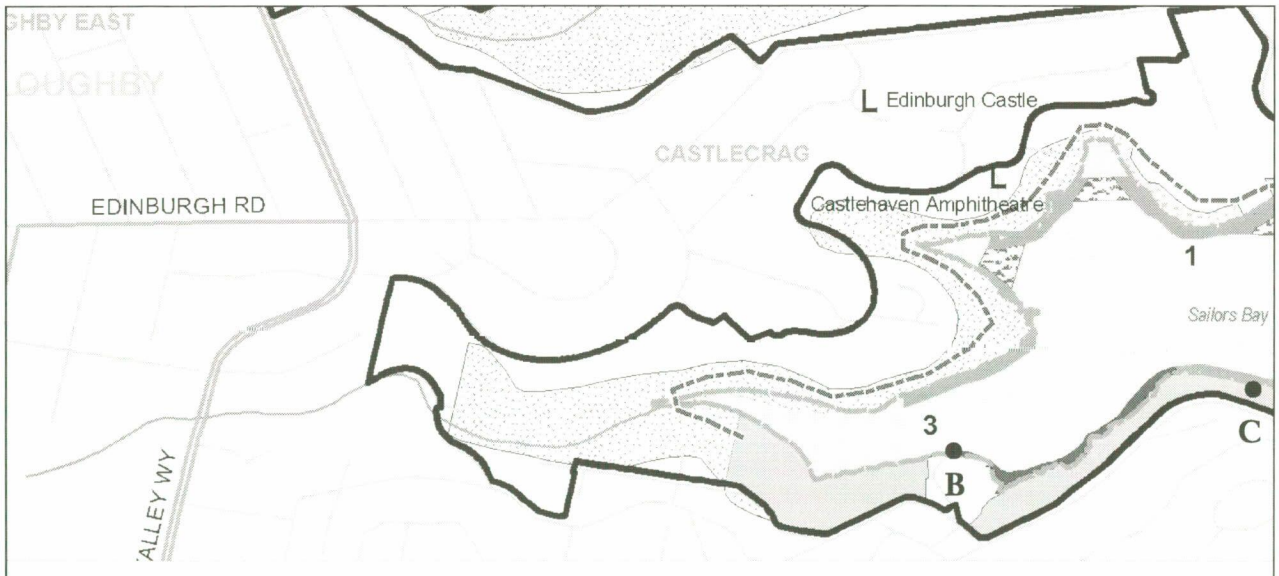
- provides a statement of character and intent for each landscape character type; and
- sets out performance criteria that are to be met for development within each landscape character type.

To identify the landscape character type that applies to a particular proposal, refer to the maps accompanying this DCP.

If the development site is on the border of more than one landscape character type, the development should be considered in the context of the statement of character and intent and performance criteria for all relevant landscape character types. The performance criteria that have been devised, apply from the waterway to the ridgeline viewed from the waterway. As the distance a development is sited from the foreshore increases, the number of landscape character types that could relate to the site to increase. The landscape character types which dominate the site's context should be considered when determining which landscape character types would apply to development sited away from the foreshore. See *Figure 3.*

All applications for development are to be accompanied by a photograph(s) of the site so that the landscape character of each development site can be assessed. The photograph(s) should represent as closely as possible what a viewer actually sees from the waterway, foreshore or other public place.

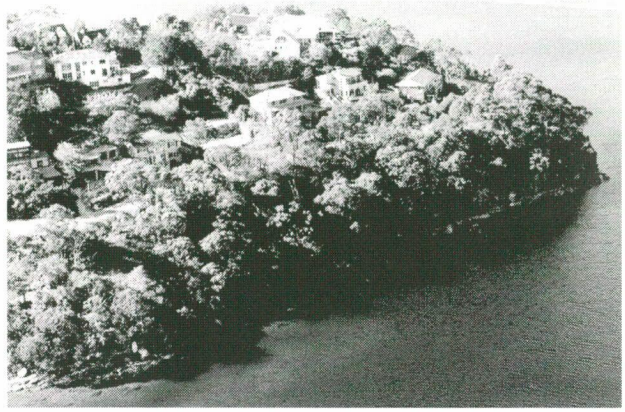
FIGURE 3. EXAMPLE OF LANDSCAPE CHARACTER TYPES IDENTIFIED FOR PART OF MIDDLE HARBOUR FORESHORE LAND

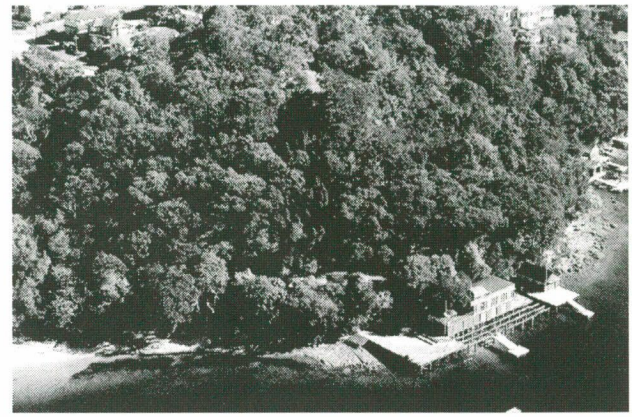


Example: Performance criteria for landscape character type 3 would need to be considered for development proposed at location B. Similarly, performance criteria for Landscape Character Types 1 and 3 would need to be considered for development proposed at location C.

Extract map no. 16. *See* map for legend.

3.4 PERFORMANCE CRITERIA
LANDSCAPE CHARACTER TYPE **1**





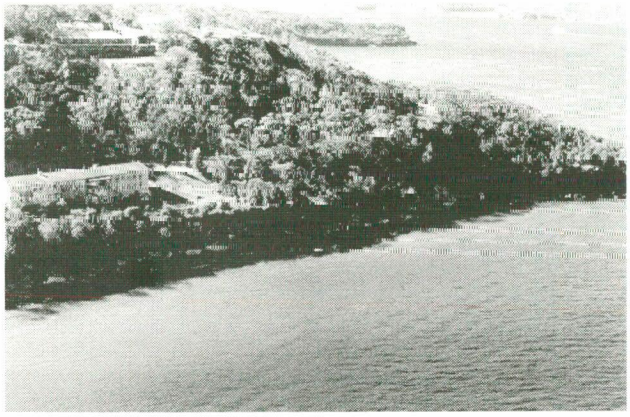
i. Area
Landscape Character Type 1 applies to Middle Harbour.

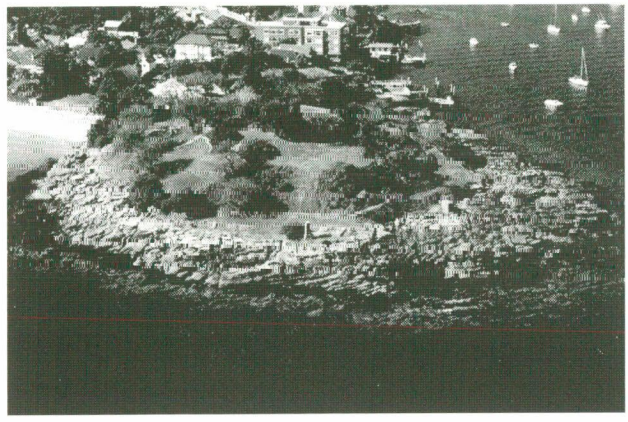
ii. Statement of Character and Intent
The foreshores have been subject to minimal development pressure and generally the shoreline and vegetation are well conserved. The bays and inlets create a sense of enclosure with natural elements, such as vegetation and headlands, dominating the landscape. Development should ensure that the key features which contribute to this landscape are protected.

iii. Performance Criteria
Any development within this landscape is to satisfy the following criteria:

- headlands, points and the shoreline are retained in their undeveloped state;
- development is sited and designed to maintain the visual dominance of the tree canopy and other key natural features;
- visual continuity of elements such as cliffs, rock shelves and beaches is not lost or broken;
- ridgeline development does not encroach into natural areas and does not detract from the natural appearance of the landscape;
- the sense of enclosure of the inlets is protected by minimising the intrusion of water-based structures;
- the predominance of the natural shoreline is retained. When considering a proposal, the cumulative and incremental effect of structures along the foreshores must be considered; and
- overall colours should match native vegetation and geological features as closely as possible with trim colours drawn from natural elements such as tree trunks and stone.

LANDSCAPE CHARACTER TYPE **2**





i. Area
Landscape Character Type 2 applies to the entry to Sydney Harbour.

ii. Statement of Character and Intent
This landscape forms the entry to Sydney Harbour. Development should ensure that the natural features which characterise the entry to Sydney Harbour are maintained. It should be sited so that the view of these natural features and landmarks are preserved. Development should be designed to complement existing features so that the contrast between the built and natural environs is minimised.

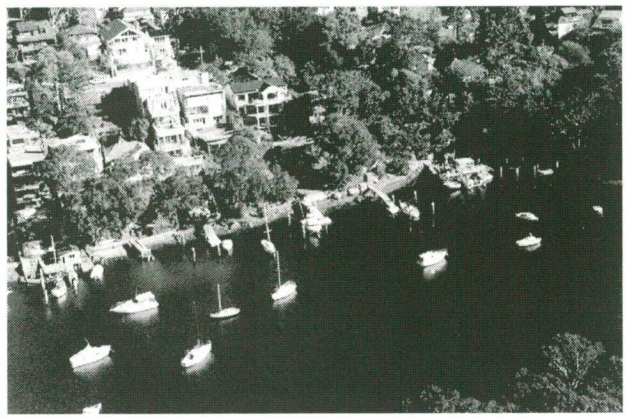
The intent in this area is to encourage development that:

- enhances the maritime and heritage significance of the Harbour through the protection of land uses that contribute to this character;
- maintains and preserves the dramatic natural entry into the Harbour; and
- has a direct relationship with the entry to the Harbour.

iii. Performance Criteria
Any development within this landscape is to satisfy the following criteria:

- natural elements including cliffs, rock shelves and beaches are retained and views of these features are not obscured;
- native vegetation on clifflines, ridgelines and along the shoreline is protected;
- roof lines are below the tree canopy to maintain the prominence of the skyline of trees along the headlands;
- built elements have a direct relationship with the entry to the Harbour, port, defence, tourism or recreation; and
- overall colours should match native vegetation and geological features as closely as possible with trim colours drawn from natural elements such as tree trunks and stone.

LANDSCAPE CHARACTER TYPE 3



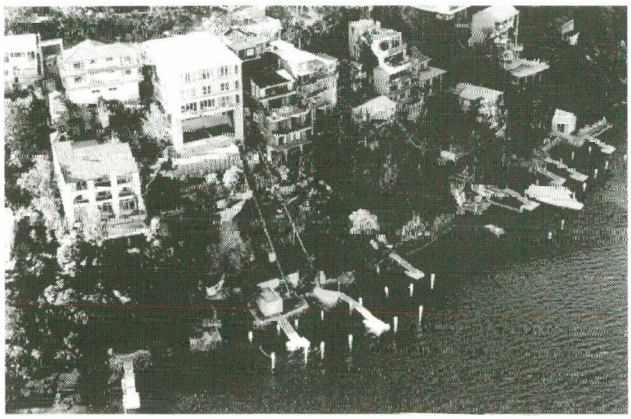
i. Area
Landscape Character Type 3 applies to the residential bays of Middle Harbour including Fisher Bay, Willoughby Bay, Powder Hulk Bay and Long Bay.

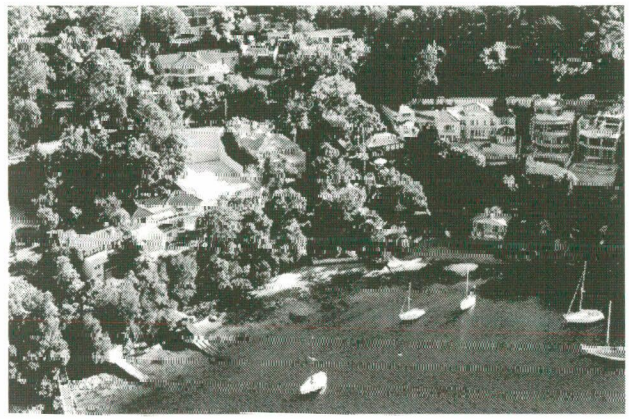
ii. Statement of Character and Intent
This area is characterised by the natural interface between water and land with rocky outcrops and steep topography dominating the foreshore. Residential development in the surrounding areas provides a backdrop. The intent in this area is to allow suitable development that is of an appropriate scale and siting to maintain ***natural shorelines*** and vegetation.

iii. Performance Criteria
Any development within this landscape is to satisfy the following criteria:

- development at the water's edge has been sited so that the view of the natural shoreline remains predominant;
- significant natural features such as rock outcrops, dominance of the tree canopy, native vegetation, ridgelines, rock ledges and platforms are protected and enhanced;
- development is sited and designed so that the visual dominance of the tree canopy on the slopes and along the skyline is maintained;
- development retains the character of the enclosed waterbody or bay by maintaining the visual dominance of the natural features and preserving key points and entry into these areas in their natural state; and
- overall colours should match native vegetation and geological features as closely as possible with trim colours drawn from natural elements such as tree trunks and stone.

LANDSCAPE CHARACTER TYPE **4**





i. Area
Landscape Character Type 4 applies to the residential long shores of Middle Harbour including Seaforth and North Seaforth.

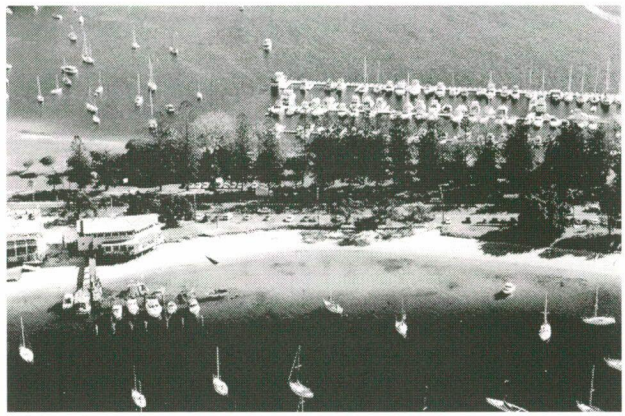
ii. Statement of Character and Intent
The area is characterised by long natural shorelines which contain significant clifflines, rock outcrops and ledges and native vegetation. Development occupies the upper slopes and ridgelines and the shoreline has been developed with ***boat sheds***, wharves and jetties.

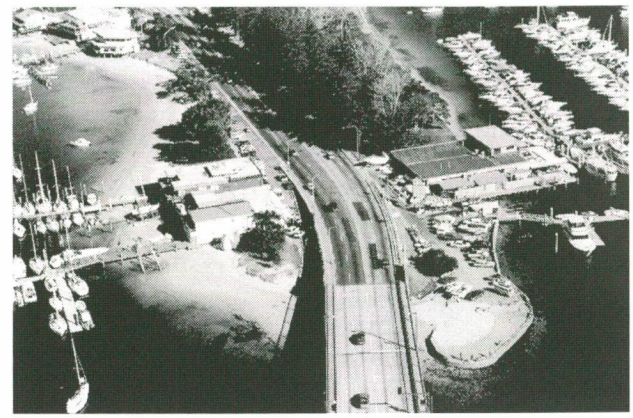
The intent in this area is to allow development which does not obscure the natural topographic features and vegetation which contribute to this landscape.

iii. Performance Criteria
Any development within this landscape is to satisfy the following criteria:

- it is sited and designed so that it does not break or contribute to the loss of the visual continuity of the landform;
- it is sited and designed so that the visual dominance of the tree canopy on the slopes and along the skyline is maintained;
- the visual significance of the clifflines, rock outcrops and ledges is retained;
- it is sited to avoid disturbing and obscuring rock outcrops and areas of native vegetation; and
- overall colours should match native vegetation and geological features as closely as possible with trim colours drawn from natural elements such as tree trunks and stone.

LANDSCAPE CHARACTER TYPE 5





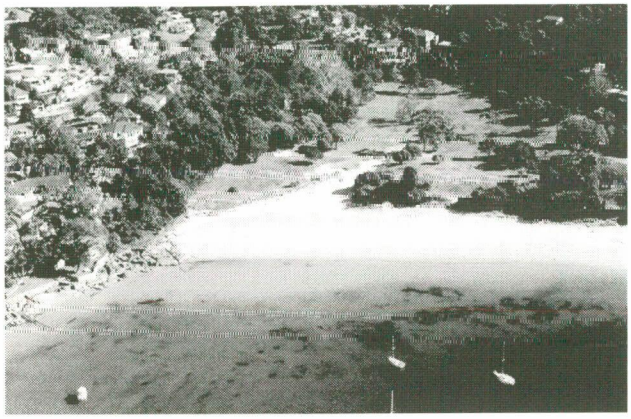
i. Area
Landscape Character Type 5 applies to the Spit.

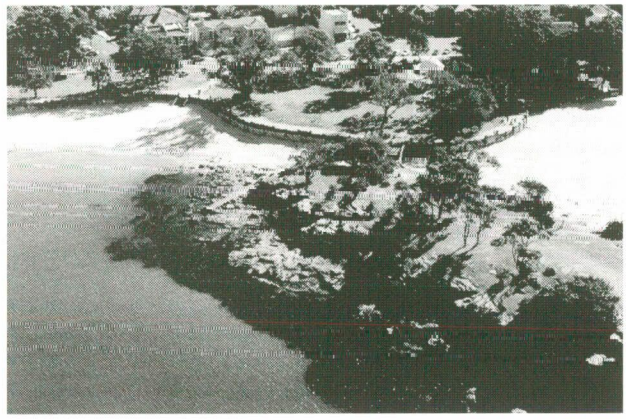
ii. Statement of Character and Intent
This area contains significant open space providing public access to the shoreline as well as ***maritime uses***. The intent is to allow similar development and uses to those currently occupying the foreshore.

iii. Performance Criteria
Any development within this landscape is to satisfy the following criteria:

- recreational activities which are characteristic of this area are preserved or improved;
- natural shoreline features are retained and views of these features are maintained;
- it is sited and designed to complement existing development and to retain the maritime character of the area; and
- maritime uses are preserved. Pressure for these uses to relocate is minimised. New development adjoining maritime activities is designed and sited to maintain compatibility with existing maritime activities.

LANDSCAPE CHARACTER TYPE **6**





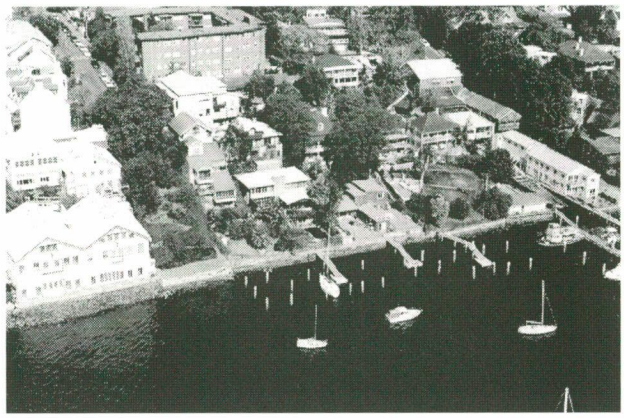
i. Area
Landscape Character Type 6 applies to the main beaches including Clontarf, Balmoral, Edwards and Chinamans.

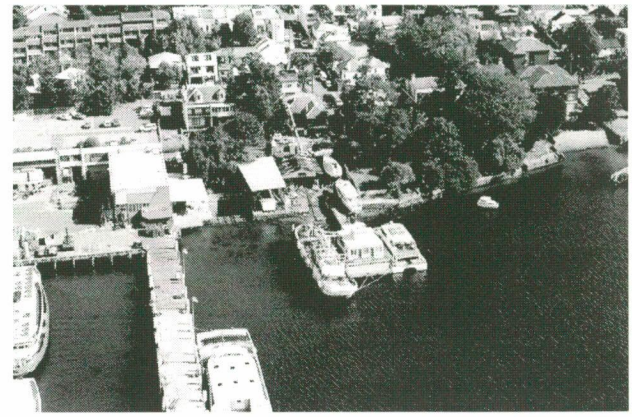
ii. Statement of Character and Intent
The key features of these areas are the uninterrupted sandy beaches and headlands where the backdrop of development is interspersed with vegetation. While development is suitable in parts of these areas, the key natural features should be retained and protected. Each bay has key beaches and headlands that contain significant vegetation and rocky outcrops which should be preserved. The leafy nature of the upper slopes and ridgelines provides an important contribution to the visual character.

iii. Performance Criteria
Any development within this landscape is to satisfy the following criteria:

- headlands, points and shorelines are retained in their current, generally undeveloped, state;
- it is sited and designed to maintain the visual character of shorelines and to maximise retention of existing vegetation;
- visual continuity of elements such as beaches is not lost or broken by development;
- the scale of the built form of development is consistent with predominantly low density residential;
- it is sited so that it follows the topography and minimises cut and fill of slopes; and
- overall colours should match native vegetation as closely as possible with trim colours drawn from natural elements such as tree trunks and stone.

LANDSCAPE CHARACTER TYPE 7





i. Area
Landscape Character Type 7 applies to the Balmain Area including Snails Bay, Mort Bay and Balmain.

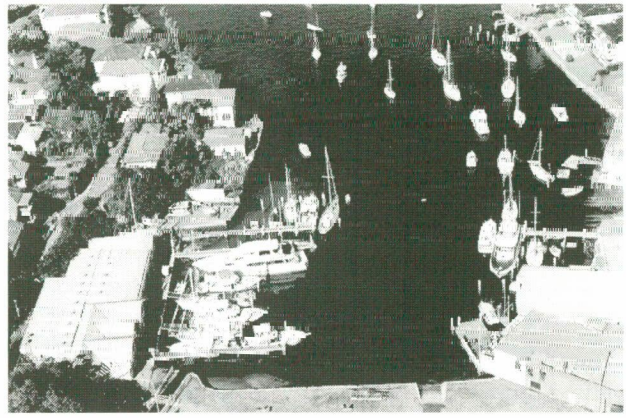
ii. Statement of Character and Intent
These areas have a high level of development with a mixture of waterside industrial, residential and maritime uses. The mixture of land uses and the pattern of the built environment contribute to the character of this area.

Development is suitable for these areas provided the character of the area is retained and the performance criteria are met.

iii. Performance Criteria
Any development within this landscape is to satisfy the following criteria:

- it retains the vitality of the area by retaining the mixture of land uses;
- new residential development is in a style, form and spacing compatible with existing residential development;
- vegetation is integrated within the development to minimise the contrast between natural and built elements; and
- measures are introduced to mitigate noise and amenity impacts between incompatible land uses.

LANDSCAPE CHARACTER TYPE **8**



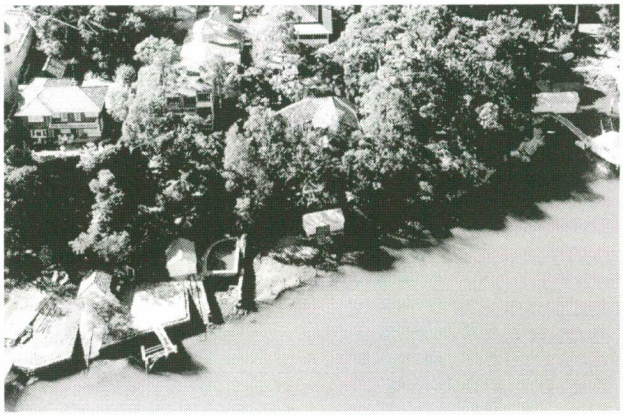
i. Area
Landscape Character Type 8 applies to areas including North Sydney, Elizabeth Bay, Neutral Bay, Mosman Bay, Cremorne and Manly.

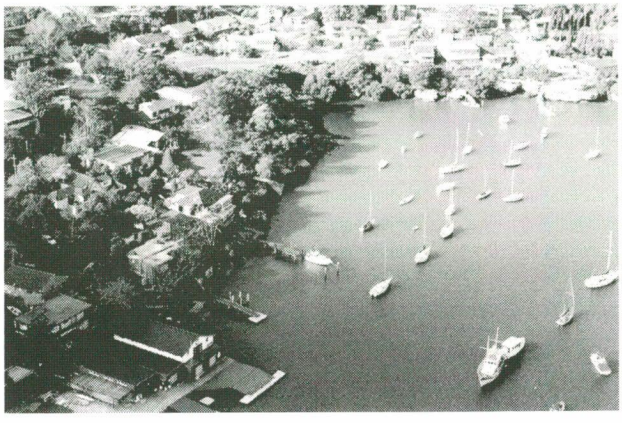
ii. Statement of Character and Intent
These areas have a high level of built form with waterside commercial, industrial and residential uses. The commercial and industrial uses play an important role in terms of tourism and maritime services which support water-based activities. There are special features in these areas that contribute to the visual character of the area that should be maintained.

iii. Performance Criteria
Any development within this landscape is to satisfy the following criteria:

- vegetation is integrated with land-based development to minimise the contrast between natural and built elements;
- design and mitigation measures are provided to minimise noise and amenity impacts between incompatible land uses;
- the maritime uses on the Harbour are preserved. Pressure for these uses to relocate is minimised. New developments adjoining maritime uses are designed and sited to maintain compatibility with existing maritime uses; and
- remaining natural features that are significant along the foreshore are preserved and views of these features are maintained.

LANDSCAPE CHARACTER TYPE **9**





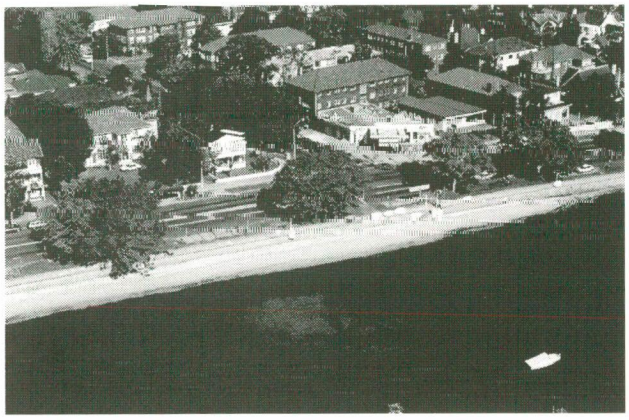
i. Area
Landscape Character Type 9 applies to the natural foreshores of the Harbour and Parramatta River including Greenwich Point, Gore Creek, Woodford Bay, part of Lane Cove and Parramatta Rivers, Mosman Bay, Cremorne Point, Little Sirius Cove, Fort Denison and Clark, Goat and Shark Island.

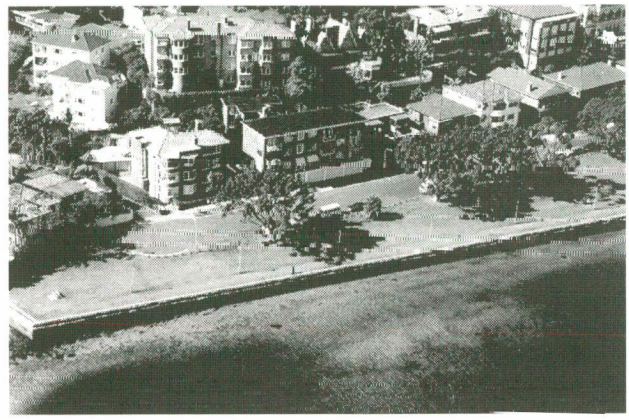
ii. Statement of Character and Intent
These areas are significant because they contain natural foreshores interspersed with more developed areas and provide a key feature and visual variety to the total landscape. The natural shoreline has significant visual features. However, it is also developed with swimming pools, retained edges and boat sheds. Sections of vegetated skyline have been preserved. The intent is to retain these natural features and only encourage development that is consistent with the scale, design and siting of that which exists.

iii. Performance Criteria
Any development within this landscape is to satisfy the following criteria:

- it is sited so remaining rock outcrops, clifflines or vegetated shorelines are protected and not obscured;
- it is sited to ensure that the continuous line of any natural feature is preserved and remains the dominant feature in the landscape;
- it is sited and designed to maintain the vegetation cover on the upper slopes and ridgelines;
- major points and entrances to the bays are preserved in their natural state;
- existing character, natural, cultural and heritage features of the islands are retained; and
- colours should match native vegetation as closely as possible with trim colours drawn from natural elements such as tree trunks and stone.

LANDSCAPE CHARACTER TYPE **10**





i. Area
Landscape Character Type 10 applies to the wide open bays of the Eastern Suburbs including Rose Bay, Watsons Bay, Double Bay, Rushcutters Bay.

ii. Statement of Character and Intent
The character of the area is dominated by wide open bays, retained edges, sandy beaches and adjacent park areas. Special natural features such as rock outcrops and platforms form part of the landscape and should be considered in terms of their scarcity within the local context.

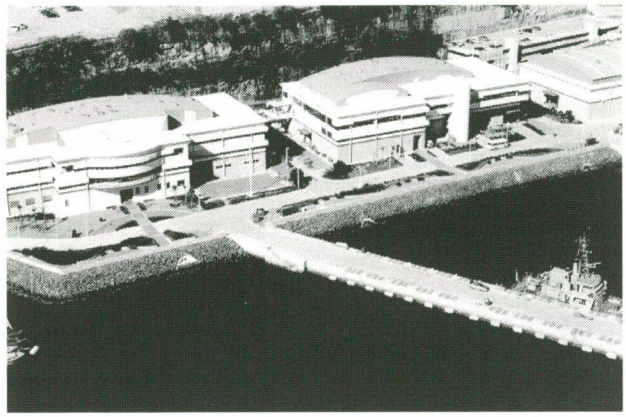
Development is suitable for these areas providing consideration is given to:

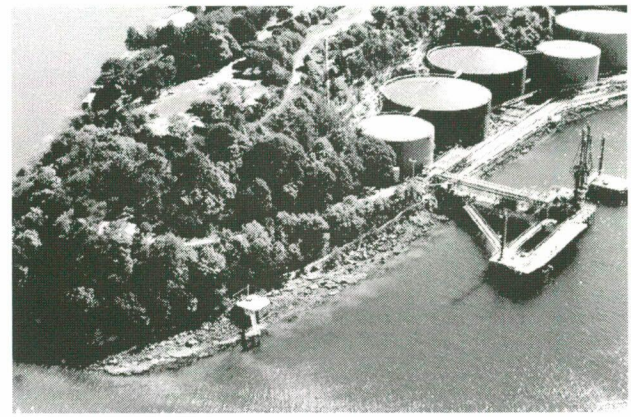
- preserving the special natural features that form an integral part of the character and vitality of the landscape including the natural shorelines, beaches, rock platforms and outcrops; and
- the role of commercial activities within these areas is recognised as providing an important recreational resource and improving public enjoyment of the harbour.

iii. Performance Criteria
Any development within this landscape is to satisfy the following criteria:

- it does not obscure, detract from or destroy special natural elements that are significant within the local context of the area;
- the open nature of the bays is not lost by overdevelopment of the foreshores; and
- it has been demonstrated that the commercial activities proposed within and adjacent to the foreshores are necessary and that their proposed use is compatible with existing and likely future land uses.

LANDSCAPE CHARACTER TYPE **11**





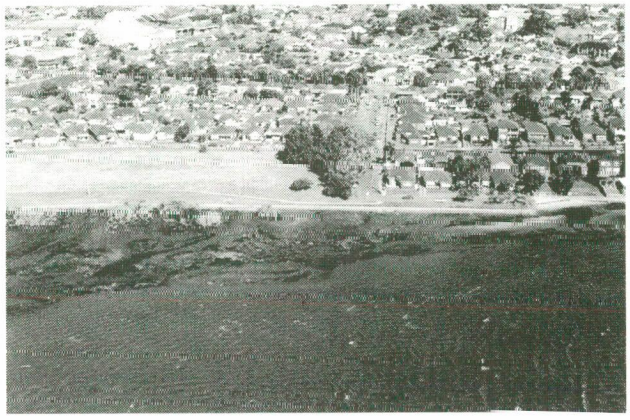
i. Area
Landscape Character Type 11 applies to the industrial areas of the Harbour including Cockatoo and Spectacle Islands, and Gore and Woolloomooloo Bays.

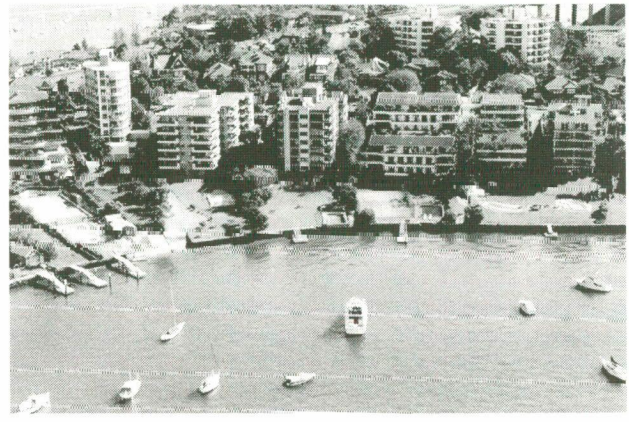
ii. Statement of Character and Intent
These areas have a high level of development largely comprising waterside industrial uses and have a strong visual presence within the Harbour. The important contribution made to the vitality and diverse activity on the Harbour by these elements needs to be recognised. Development has been designed and sited with regard to the natural features of the area; their importance within the landscape character needs to be maintained.

iii. Performance Criteria
Any development within this landscape is to satisfy the following criteria:

- design and mitigation measures are provided between incompatible land uses to minimise noise and amenity impacts;
- views of the remaining natural elements along the foreshore and behind existing development are preserved in a continuous unbroken line to soften the impact of the built form;
- the maritime nature of industrial uses on the harbour is preserved. Pressure for these uses to relocate is minimised. New developments adjoining maritime activities are designed and sited to maintain compatibility with existing maritime activities;
- it is designed to maintain the scale and height of existing development and to have regard for the visual dominance of the islands and the industrial elements within the harbour; and
- the existing character, natural, cultural and heritage features of the islands are retained.

LANDSCAPE CHARACTER TYPE **12**





i. Area
Landscape Character Type 12 applies to the distinctive bays of the Parramatta River including Leichhardt Bay, Rodd Point, Half Moon Bay, Hen and Chicken Bay, part of Canada Bay and Five Dock Bay.

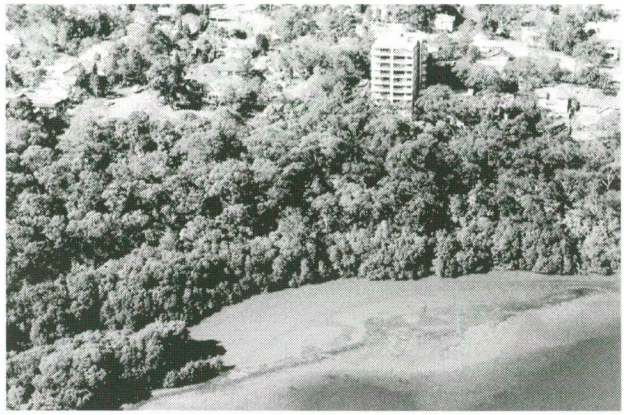
ii. Statement of Character and Intent
The character of these areas ranges from a flat to a sloping terrain. There are open spaces and some residential areas along the foreshore. The open space is predominantly grassed with few trees. The shoreline is mainly built up, often with a seawall, but pockets of natural shoreline do occur. Residential development forms the backdrop to these areas.

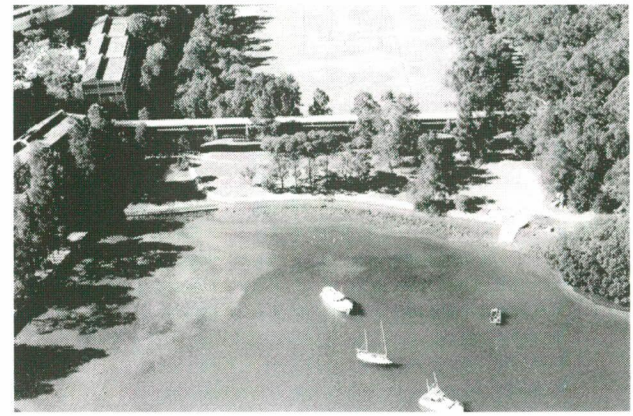
The intent for development within this area is to provide for appropriate recreational and similar uses of the foreshore, to rehabilitate or improve degraded foreshores and to protect valuable natural shorelines.

iii. Performance Criteria
Any development within this landscape is to satisfy the following criteria:

- it enhances the recreational focus of the foreshore;
- it is sited so that natural features are protected and views of these features maintained;
- pockets of natural shoreline are retained; and
- landscaping is incorporated into the proposal.

LANDSCAPE CHARACTER TYPE **13**





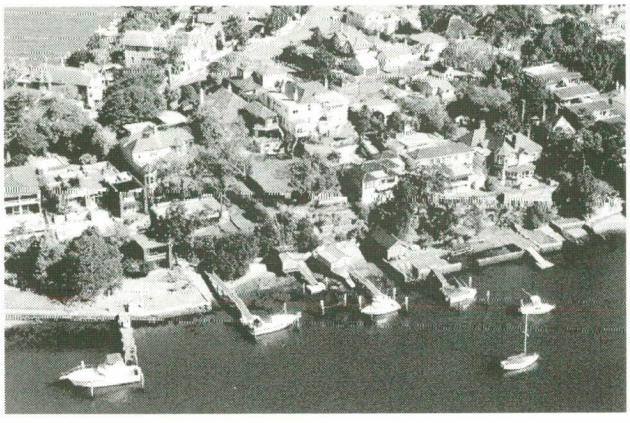
i. Area
Landscape Character Type 13 applies to the upper end of the Lane Cove River from Figtree Bridge and including Tamborine and Burns Bays.

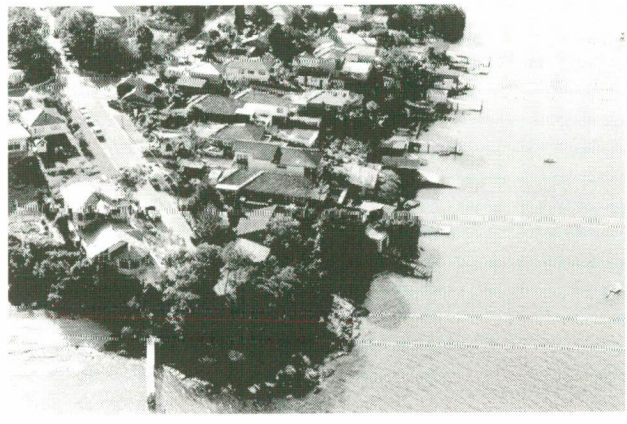
ii. Statement of Character and Intent
The key characteristics of these areas are the significant width of the foreshore covered with mangroves and also with native vegetation from the shoreline to the ridgeline. Minimal encroachment of development into the natural features has occurred and the natural environs remain the dominant landscape character. The intent for development within these areas is the retention of natural features as the predominant character and to maintain the special sense of enclosure and tranquillity.

iii. Performance Criteria
Any development within these areas is to satisfy the following criteria:

- it is sited and designed to protect the current natural foreshore and views of the ridgeline;
- it retains the character of the enclosed water body or bay by maintaining the visual dominance of the natural features and preserving key points and entry into these areas in their natural state;
- littoral vegetation is preserved and enhanced and consideration is given to its importance in maintaining a sense of enclosure within the waterway;
- the dense native vegetation from the shoreline to the ridgeline, along drainage lines and within visually prominent areas, is protected;
- views of the natural features from the waterway should, as far as possible, remain undisturbed and encroachment into natural areas should be avoided; and
- colours should match native vegetation as closely as possible with trim colours drawn from natural elements such as tree trunks and stone.

LANDSCAPE CHARACTER TYPE **14**





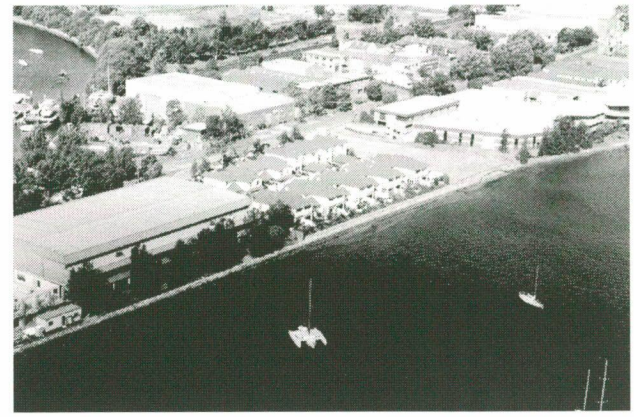
i. Area
Landscape Character Type 14 applies to the low topographic developed areas of the Lane Cove and Parramatta Rivers including Onions Point, Henley and Yacht Bay.

ii. Statement of Character and Intent
These areas are mostly developed with detached residential development on the upper slopes and boat shed and wharves along the foreshore. Further development in these areas must consider protecting key visual elements including rock outcrops, native vegetation, vegetation in and around dwellings and maintaining the density and spacing of development.

iii. Performance Criteria
Any development within these areas is to satisfy the following criteria:

- consideration is given to the cumulative and incremental effects of further development along the foreshore and to preserving the remaining special features;
- development is to avoid substantial impact on the landscape qualities of the foreshore and minimise the removal of natural foreshore vegetation, radical alteration of natural ground levels, the dominance of structures protruding from rock walls or ledges or the erection of sea walls, retaining walls or terraces;
- landscaping is carried out between buildings to soften the built environment; and
- existing ridgeline vegetation and its dominance as the backdrop to the waterway, is retained.

LANDSCAPE CHARACTER TYPE **15**



i. Area
Landscape Character Type 15 applies to the Parramatta River including Abbotsford Bay, Mortlake and further west.

ii. Statement of Character and Intent
These areas have a high level of built form characterised by industrial and institutional uses in the foreground and residential development in the background. Part of the Parramatta River Regional Park is located within this landscape.

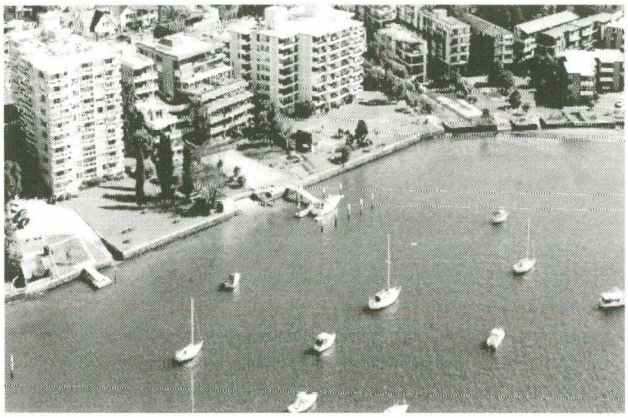
Development is suitable for these areas provided that the following issues are taken into consideration:

- the contribution industrial uses make to the economics and vitality of the river and their need for location on the waters edge;
- establishment of open space and recreational opportunities;
- mitigating against incompatible land uses; and
- preserving the mangrove screening along the foreshore and reducing the stark contrast of built elements behind these natural features.

iii. Performance Criteria
Any development within these areas is to satisfy the following criteria:

- The industrial uses along the river are maintained and preserved. Pressure for these uses to relocate is minimised;
- design and mitigation measures are provided between incompatible land uses to minimise noise and amenity impacts;
- remaining natural elements along the foreshore are preserved to maintain the natural screen along the foreshore; and
- vegetation is integrated within the development to minimise the contrast between natural and built elements.

LANDSCAPE CHARACTER TYPE **16**



i. Area
Landscape Character Type 16 applies to the dense residential areas of the Parramatta River including Fern and Drummoyne Bays.

ii. Statement of Character and Intent
These areas have a high degree of built form with waterside commercial, residential, and industrial development dominating the foreshore. The mix of uses provides a distinctive urban character which should be maintained.

The intent for these areas is to encourage appropriate waterfront development while protecting the character and amenity of developed areas, foreshores and the shoreline.

iii. Performance Criteria
Any development within these areas is to satisfy the following criteria.

- remaining natural elements along the foreshore are preserved;
- public wharves and jetties are retained to enable continued maritime activities;
- visual continuity of elements such as beaches is maintained and generally not broken by development;
- design and mitigation measures are provided between potentially conflicting land uses to minimise noise and amenity impacts; and
- landscaped areas should be provided and incorporated with open space linkages where possible to minimise the contrast between built elements.

3.5 SUMMARY
To determine whether a proposal is satisfactory, consideration will need to be given to:

- the visual impact factors identified in Section 3.1;
- the general aims in Section 3.2; and
- the statement of intent and performance criteria for the relevant landscape character type outlined in Section 3.4.

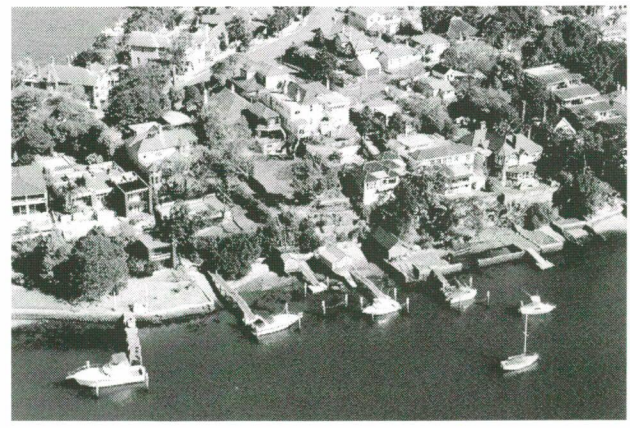
4. Design Guidelines for Water-Based and Land/Water Interface Developments

This part of the DCP contains guidelines for specific types of development that are water-based or located at the land/water interface. General requirements that apply to all water-based and land/water interface developments are provided, followed by requirements for specific types of developments.

4.1 INTRODUCTION

The Harbour and Parramatta River and their tributaries are for everyone's enjoyment and public access to the foreshore and waterway is fundamentally important. Design and siting of water-based and land/water interface development should recognise the importance of these principles.

Individual private facilities should not be visually dominant. Development should complement rather than compete with the other established elements.



Example of water-based and land/water interface developments.

Land/water interface and water-based developments are defined within SREP (Sydney Harbour Catchment) 2005. The types of development under both the land/water interface and water-based categories are listed in the Dictionary of SREP (Sydney Harbour Catchment) 2005. Examples of land/water interface development are commercial marinas, and water-based restaurants and entertainment facilities; while water-based developments include private landing facilities (which comprises wharves, jetties, and pontoons), private marinas and swimming enclosures.

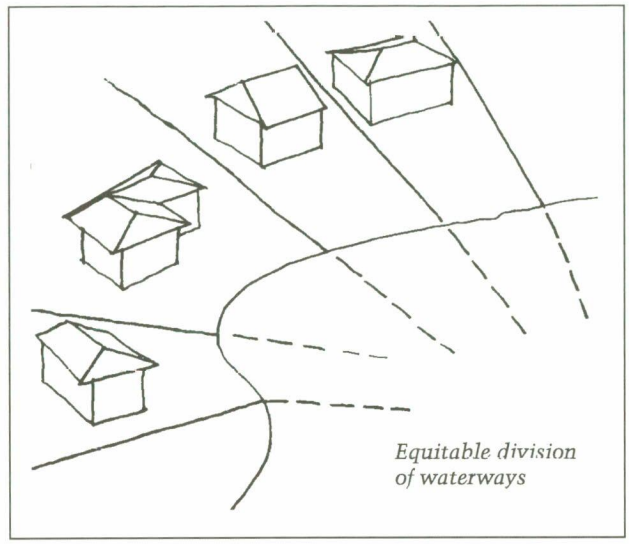
4.2 GENERAL REQUIREMENTS

The following objectives and requirements must be considered for all water-based and land/water interface developments:

- public access to waterways and public land is maintained and enhanced;
- congestion of the waterway and foreshore is minimised;
- conflicts on the waterway and foreshore are avoided;
- the development warrants a foreshore location;
- the development does not interfere with navigation, swimming or other recreational activities;
- the demand for the development has been established;
- the structure does not obstruct or affect the natural flow of tides and currents;
- development does not dominate its landscape setting;
- the extent of development is kept to the absolute minimum necessary to provide access to the waterway;
- shared usage of facilities is encouraged to minimise the number of structures and their cumulative impact on the environment of the Harbour and its tributaries; and
- development is setback at least 2.5 metres from the division of the waterway as established by the NSW Maritime Authority and illustrated in Figure 4.

The following sections set out guidelines for particular types of development that generally must also be observed. Any variations to these requirements will only be permitted where it can be established that the objectives are met and that it is, therefore, unnecessary or unreasonable to comply with the requirements.

FIGURE 4. DIVISION OF WATERWAY



4.3 FORESHORE ACCESS

Foreshore access is to be encouraged and promoted. Wherever possible, public access to and along the foreshore including the inter-tidal zone should be secured or improved. Foreshore links joining public open spaces or access points are most desirable. These can be obtained by right of way or dedicated or acquired strips of land and may link with tracks across beaches and rock platforms. Where foreshore links are not available, a link through adjacent streets is usually possible.

The maps accompanying this DCP indicate existing and potential pedestrian and bicycle access around the foreshore. When designing and assessing a development, consideration should be given to providing these access routes.

4.4 SITING OF BUILDINGS AND STRUCTURES

Most councils around the foreshores have set foreshore building lines governing the setback of structures from the waterway. In addition to these foreshore building lines, the following criteria should be observed when siting buildings and structures:

- where there is existing native vegetation, buildings should be set back from this vegetation to avoid disturbance to the vegetation;
- buildings should address the waterway;
- buildings should not obstruct views and vistas from public places to the waterway; and
- buildings should not obstruct views of landmarks and features identified on the maps accompanying this DCP.

FIGURE 5. FORESHORE ACCESS—GLADESVILLE RESERVE

Source: Parramatta River Foreshores Manual

4.5 BUILT FORM

Buildings and other structures should generally be of the same scale and of a design sympathetic to their surroundings; well designed contrasts will be considered where they enhance the scene. Many councils have development controls governing built form and the heights of buildings. The following guidelines are designed to reinforce the local requirements:

- where buildings would be of a contrasting scale or design to existing buildings, care will be needed to ensure that this contrast would enhance the setting;
- while no shapes are intrinsically unacceptable, rectangular boxy shapes with flat or skillion roofs usually do not harmonise with their surroundings. It is preferable to break up facades and roof lines into smaller elements and to use pitched roofs;
- bright lighting and especially floodlighting which reflects on the water, can cause problems with night navigation and should be avoided. External lights should be directed downward, away from the water. Australian Standards (AS4282–1997) Guidelines for Outdoor Lighting and Pedestrian Area (Category P) Lighting (AS/NZ 1158.3 – 1999) should be observed;
- except where otherwise required for navigation purposes, all lights on structures shall be shielded seawards and positioned to avoid disturbance to neighbouring properties;
- use of reflective materials is minimised and the relevant provisions of the Building Code of Australia are satisfied;
- colours should be sympathetic with their surrounds and consistent with the colour criteria, where specified, for particular landscape character types in Part 3;
- the cumulative visual impact of a number of built elements on a single lot should be mitigated through bands of vegetation and by articulating walls and using smaller elements; and
- the cumulative impact of development along the shoreline is considered having regard to preserving views of special natural features, landmarks or heritage items.

4.6 SIGNAGE

Signs can be obstrusive but they are often necessary and, if done imaginatively, can enliven a scene. A consistent series of signs, using a unified graphic style and construction and siting principles, should be used in particular areas to indicate public open spaces along the waterway.

The department has prepared the *Parramatta River Foreshore Signage Manual* (3rd Edition) which contains detailed design guidelines for signage on public open space along the Parramatta River. The requirements of the manual should be followed for publicly-owned land along the river.

In addition, councils have signage policies applying to each local government area. The following criteria are designed to reinforce the local

requirements and provide guidelines in the absence of any other signage policy. Signs on privately-owned land should meet the following requirements:

- their dimensions should be minimal and consistent with the commercial or community identity of the premises;
- they should not be brightly illuminated to avoid becoming navigational hazards. Lighting of signs should be directed downward, away from the water;
- they should preferably be placed on the facades of buildings, rather than on roofs or free standing; and
- signs that intrude on the skyline should be avoided.

State Environmental Planning Policy No. 64 –Advertising and Signage (SEPP 64) should also be referred to.

4.7 MARINAS (COMMERCIAL AND PRIVATE)

The zoning scheme under SREP (Sydney Harbour Catchment) 2005 limits 'private marinas' to existing highly developed residential waterfronts by allowing private marinas in one zone only (W6 Scenic Waters: Active Use zone). On the other hand, 'commercial marinas' are permitted in a variety of locations in order to support working waterfront functions and recreational use of the harbour. Accordingly, there are four zones (W1 Maritime Waters, W4 Aviation, W5 Water Recreation and W6 Scenic Waters: Active Use) in which commercial marinas are permitted.

Where marinas are permissible and are to be provided the following objectives and guiding principles must be considered:

Location

- Marinas (where permissible) are to be located where they can be used by as many people as possible and are easily accessed from land and water;
- marinas are to be located where there is adequate water depth or where minimal dredging of soft material will achieve an adequate water depth;
- marinas are to be located away from areas subjected to exposed wave environments;
- marinas are preferably to be located away from wetlands or the wetlands protection area (both as defined by the SREP) or where they or the vessels using them will physically damage or overshadow estuarine vegetation of high value. Clauses 61 to 63 inclusive of SREP (Sydney Harbour Catchment) 2005 indicate provisions relevant to wetlands protection;
- marinas are not to reduce the number of publicly available single (swing) moorings, jeopardise safe navigation or adversely impact other water users including small craft; and
- waterside structures are to minimise impacts on public water activities.

Design and Layout

- Buildings and other facilities are to be designed and sited so that natural or other attractive features are not obscured (*see also* Section 4.5 of this DCP);
- buildings are to be designed so that their dimensions are not excessive and can reasonably meet the functional requirements of the proposed uses;
- marinas are to enhance public access to and along the shore and, where relevant, the inter tidal zone;
- Secure storage is to be provided in a controlled environment;
- the extent of development over water including waterside structures, berths, fairways and access channels is to be minimised and result in minimal alienation of the waterway;
- marinas are to be in the form of a series of interlinked pontoons which shall be restrained and held in position by a minimum number of piles or mooring lines to anchor points in the seabed;
- design of marina restraints shall take into account the flexibility and performance of the pontoon systems under environmental loads;
- the colours, appearance and form of any associated buildings shall be compatible with the surrounding environment;
- shiny or reflective materials are not to be used;
- the depth and width of berths and fairways of commercial marinas shall accommodate either a yacht or motor vessel. Restricted berths are to be nominated only where this will lead to an optimal environmental outcome;
- commercial marinas are to provide a point of access to boats for disabled people where possible;
- marinas are to be designed to minimise the impact of vessels when in use on the environment including on air and water quality, marine habitat and bank stability; and
- marina layouts are to be designed in accordance with the following publications:
- Department of Environment and Conservation (NSW) "Environmental Information for Marinas, Boatsheds and Slipways" (November 1998).

- NSW Maritime Authority "Engineering Standards and Guidelines for Maritime Structures"
- NSW Fisheries Department's "Aquatic Habitat Management and Fish Conservation—Policy and Guidelines", 1998
- NSW Department of Primary Industries – Fisheries "Policy and Guidelines – Aquatic Management and Fish Conservation (1999)".
- NSW Department of Primary Industries – Fisheries "Habitat Protection Plan No. 2: Seagrasses"; and
- NSW Department of Primary Industries – Fisheries "Habitat Protection Plan No. 1: General".

Facilities and Services

- commercial marinas are to provide boating service facilities such as fuel, water, toilet facilities or sewage pumpout where practicable and where such facilities are not yet locally available;
- commercial marinas are to provide a mix and choice of boat storage facilities based on established demand as well as a range of marine services to the boating public; and
- commercial marinas are to provide benefits to both the general and boating public; and
- vessels at the marina are not to be used as a permanent residence. A covenant shall be included on the lease to enforce this requirement.

Visual Impact

Note: For detailed provisions on how to undertake a visual impact analysis see Appendix D in this DCP.

- the visual contrast (derived from an analysis of form, line, colour and texture) between the marina and the existing or planned future character of its setting is to be minimised;
- the visual impact of the marina on people in the visual catchment (derived from an analysis of the potential number of viewers, their location within the landscape, distance from the marina, and duration of view) is to be minimised;
- any visual analysis shall consider the impact of the largest motor vessel(s) capable of being berthed at the marina;
- the largest vessels (motorised or otherwise) to be berthed at the marina are to be located as far from shore as possible;
- waterside structures and berthed vessels associated with marinas are not to block views from foreshore public open space or views to foreshore public open space from the waterway;
- the bulk and scale of buildings and other structures on land is to be minimised through appropriate mitigation measures including landscaping, articulated walls, detailing of surfaces and by using smaller elements (see also Section 4.5 of this DCP);
- the visual impact of car parking from the waterway is to be minimised; and
- all signage is to be located on dry land below the roofline (or parapet) of buildings. Advertising signs are not to detract from the visual quality or amenity of the foreshores and waterways when viewed from the waterways.

Environmental Management

Pollution and waste:

- potential pollutant sources from the site must be controlled and meet established performance standards;
- appropriate controls are to be in place and managed to prevent any pollutants entering the environment;
- marinas for nine or more vessels are to provide adequate and readily accessible facilities for the collection and disposal of wastes from vessels;
- facilities for pumping out sewage holding tanks are to be provided onshore; and
- any waste that cannot be recycled is to be disposed of at an appropriate facility.

Traffic and Parking:

- land-based impacts including traffic volumes and parking demand meet established performance standards;
- adequate car and trailer parking (based on the number and type of berths, associated activities and number of employees) is to be available on-site. Off-site parking is acceptable only where it will not reduce community amenity or generate adverse traffic impacts; and
- the adverse impacts of traffic and parking generated by boat storage facilities in terms of congestion, safety, air quality and noise are to be minimised.

Noise:

- the adverse impacts of noise (considering hours of operation, existing background noise, expected departure/arrival times for vessels, noise level of marina patrons, noise level from repair and testing of vessels and motors) are to be minimised through appropriate design and management measures; and
- land-based impacts including noise emissions meet established performance standards.

Lighting:

- the adverse impacts of lighting on night navigation and neighbours are to be minimised through appropriate design and management measures.

Health and safety

- Marinas are to be a safe place to work and adequate environmental safety and emergency response plans are in place.

Private Marinas

To minimise alienation of the harbour's foreshores and waterways, there are only a limited number of locations that can accommodate private marinas. Where private marinas are to be provided they are to be designed to meet the following additional criteria:

- The private marina shall meet an established demand based on vessel ownership of residents living on the adjoining land;
- the private marina shall ensure at least 5 metres or 50% of the waterfrontage of each property remains undeveloped, whichever is the greater;
- the total length of structures is restricted to the minimum required to perform their function. This will be no more than 13m from the mean high water mark, or up to 16m if it means that dredging can be avoided. The length of the structure is measured along the centreline of the facility; and
- the size of vessels berthed in association with residential development shall not exceed 18 metres in length.

4.8 PRIVATE LANDING FACILITIES (INCLUDING JETTIES, RAMPS AND PONTOONS)

Jetties will only be allowed where excessive exposure to waves makes pontoons and ramps unacceptable. In these instances steps may be incorporated at the outer end of the jetty but must be without T or L heads.

Pontoons and ramps are the preferred form of private landing facility although they may require a short jetty component to achieve adequate depth of water. They are to be designed to meet the following criteria:

- to minimise alienation of the public waterway, the total length of structures is restricted to the minimum needed for their function. This is generally 13 metres with a maximum length of 16 metres from the mean high water mark (MHWM). The need for structures to be longer to reach an adequate depth of water is not, in itself, sufficient justification for extended structures. Where existing adjoining long structures would prevent access to a new structure of 16 metres, a length compatible with existing structures may be allowable;
- pontoons are to be of minimum size and to be as unobstrusive as possible. In general pontoons should be 3.6 metres x 2.4 metres, but, where circumstances demand, pontoons up to but not greater than 6 metres x 3 metres will be considered;
- ramps to pontoons shall be of such a length that the slope of the ramp at a zero tide is not steeper than 1 vertical in 2.7 horizontal;
- the minimum width of ramps and jetties shall be 1.2 metres and the maximum width 1.8 metres unless there is a demonstrated demand for a greater width;
- the depth of water at a pontoon or any associated vessel mooring shall conform with the requirements of the NSW Maritime Authority as construction approval authority;
- the surfaces of pontoons, ramps and jetties, including the tops of piles, are to be left untreated or stained or painted in colours compatible with the character of the area, except as required for safety reasons;
- ramps should be slatted or mesh to allow light penetration into the intertidal zone;
- handrails are not acceptable; and
- the decks of jetties shall be 2.5 metres above Zero Fort Denison Tide Gauge (ZFDTG) (1.575 AHD) and their piles shall be cut off at or below deck level. However, those piles necessary as fenders for vessels may extend above deck level in which case such piles, together with any free-standing mooring piles, shall be cut off 3.5 metres above ZFDTG (2.575 AHD).

4.9 MOORING PILES AND MOORING PENS

Freestanding piles to which vessels may be permanently berthed, may be positioned seaward of a private landing facility. This is subject to the following criteria being met:

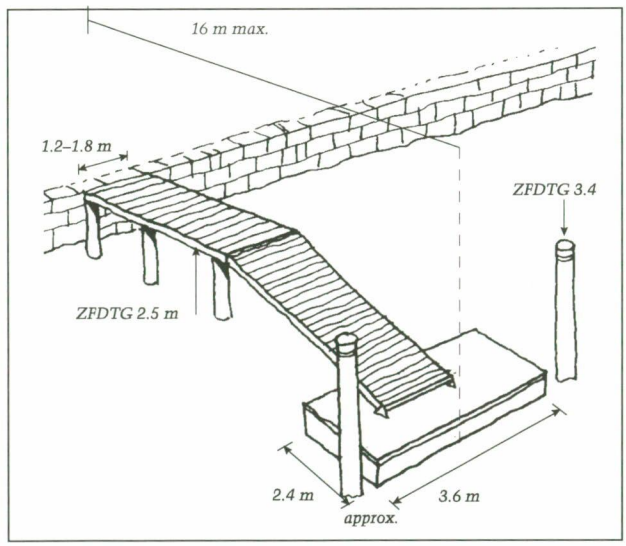
- piles are not to constitute a navigational hazard or obstruction;
- mooring and fender piles are to be single piles;
- piles of a material other than timber will be considered on merit;
- piles are to be cut off at 3.5 metres above ZFDTG (2.575 AHD);
- The size of vessels berthed in association with residential development shall not exceed 18 metres in length;
- vessels are not to be used as a permanent residence;
- a mooring pen shall meet an established demand based on vessel ownership of a permanent resident living on the adjoining land; and
- no more than one vessel may be permanently berthed in front of a single residence.

4.10 DREDGING

Dredging should be minimised. Where dredging is necessary for navigation or similar purposes the following criteria must be satisfied:

- heavy metals and other toxins often appear in bottom sediments and testing of samples may be required prior to approval. A statement must accompany a development application addressing the likelihood of contaminants, the mitigation measures proposed and indicate the proposed disposal methods;
- effective methods to control pollution need to be instituted during dredging;
- applicants proposing to undertake dredging are required to submit plans and accompanying information indicating:
  - purpose of proposed dredging;
  - existing depth of water;
  - proposed extent and depth of dredging;
  - quantity of material to be dredged;
  - type of material to be dredged (i.e. sand, mud, rock, presence of significant contaminants);
  - proposed method of dredging;
  - proposed method of disposal of dredged material; and
  - proposed mitigation measures both during and after construction.
- excavation or cutting of significant natural rock features, within or above the intertidal zone, is not acceptable, nor is dredging where it would cause erosion of shorelines or beaches;
- any submarine retaining walls or structures necessary for armouring a dredged batter should not create a safety hazard to foreshore users or extend above zero tide level; and
- applicants should note that approvals may be required for dredging from the NSW Environment Protection Authority (EPA) and the NSW Department of Primary Resources – Fisheries.

FIGURE 6. JETTIES, RAMPS, PONTOONS



4.11 SLIPWAYS

Slipways should be designed and constructed to meet the following requirements:

- close conformity with the natural foreshore profile;
- cutting or excavation of natural intertidal rock is not acceptable;
- slipways designed to have their inshore ends coincident with the top of an existing seawall are not acceptable. In these circumstances a re-entrant would need to be excavated into the existing wall;
- the slipway is to extend landward to allow the storage of the vessel wholly above MHWM;
- any work areas must be above the intertidal zone and appropriate pollution controls must be provided to prevent wastes/oils entering the waterway;
- Department of Environment and Conservation (NSW) "Environmental Information for Marinas, Boatsheds and Slipways (November 1998)"; and
- applications for slipways must include details of the size and displacement of the largest vessel likely to be slipped.

4.12 SKIDS

Skids are required to permit dinghies, runabouts and small sailboats to be drawn out of the water without the use of winches, trolleys or cradles.
A skid may also be used for rigging and launching small vessels and providing access to a boatshed.
Where skids are proposed they should meet the following requirements:

- skids are to be of piered construction. Solid fill skids are not acceptable;

FIGURE 7. SLIPWAYS

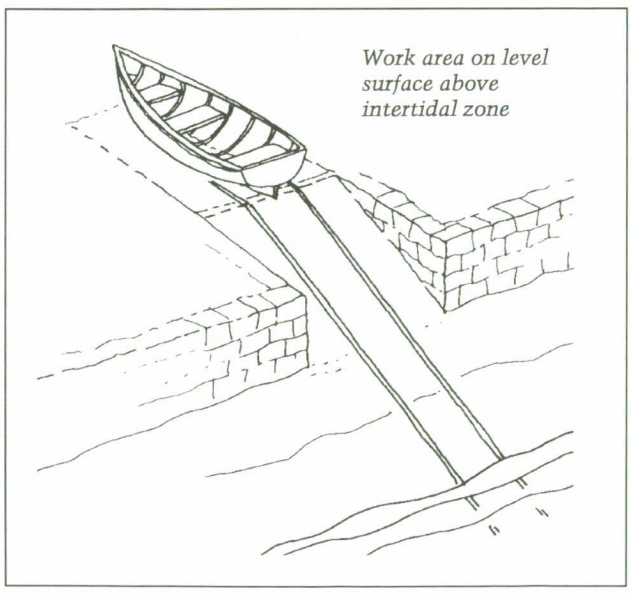
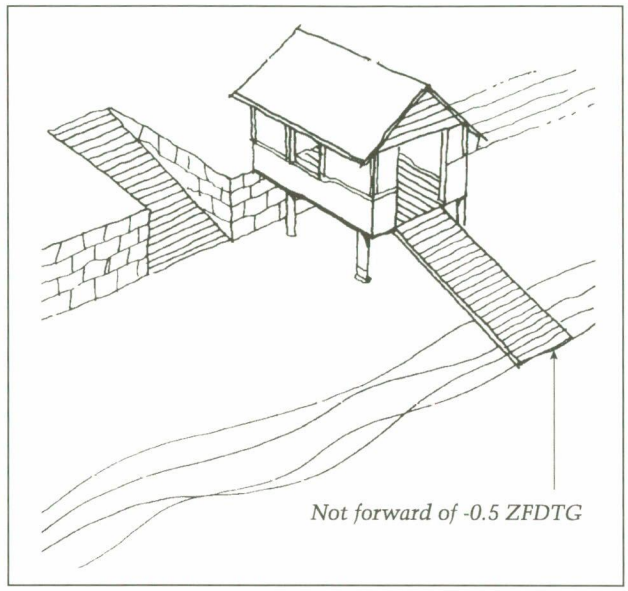


FIGURE 8. SKIDS



- skids are to be a minimum practical size and should not extend seaward of the –0.5 metres (ZFDTG) contour. Only in exceptional cases would skids be acceptable beyond this contour and applicants would need to demonstrate why such exceptional circumstances occur;
- skids are to follow the natural foreshore profile and, where appropriate, shall be recessed into existing walls and reclamations so that the portion of a skid protruding beyond a wall is kept to a minimum;
- skids are to be of a minimum width consistent with their proposed function;
- the slope of a skid shall not be steeper than 1 vertical in 2.7 horizontal;
- where the skid is of a slope of greater than 1 vertical in 8 horizontal, the skid shall be designed and constructed so as to provide a safe foothold by means of spaced decking or the use of cleats;
- skids should be of hardwood. Concrete and steel skids are not permitted; and
- vessel storage is not permitted on skids, apart from storage of small dinghies up to 2.5 metres in length.

4.13 BOAT LIFTS

Boat lifts catering for the dry storage of vessels over water are prohibited. Vessel storage is not permitted on jetties or other structures below the MHWM, apart from storage of small dinghies up to 2.5m in length. On the other hand, boat lifts which lift vessels from the water for storage above the MHWM are permitted subject to consent.

4.14 SWIMMING ENCLOSURES

i. Private Swimming Enclosures

A swimming enclosure will only be allowed where it:

- does not impede the tidal flow;
- does not interfere with watercraft;
- does not alienate public use of the waterway and foreshore; and
- is adjacent to a developed foreshore.

Where a swimming enclosure is allowed, it must meet the following criteria:

- consist of buoyed mesh or netting of a mesh size not less than 150 millimetres to prevent accumulation of debris;
- buoyed net structures are to be anchored or moored to ensure their positions are maintained at all times;
- the mesh shall not protrude above water level; and
- the enclosure shall not extend further than 13 metres beyond MHWM or beyond adjacent landing facilities, which ever is the lesser.

ii. Public Swimming Enclosures

The performance criteria for private swimming enclosures also apply to public swimming enclosures. However, where site conditions would prevent the construction of a buoyed enclosure, consideration will be given to a mesh or net barrier hung from a suspension cable supported by a minimum number of piles.

4.15 SWIMMING POOLS

Swimming pools are not acceptable structures for locations below MHWM and should be located landward of MHWM. See Section 5.13 for requirements for swimming pools above MHWM.

4.16 BOAT SHEDS

This section applies to boatsheds below MHWM and used for private purposes. The objectives are to:

- avoid the water's edge becoming overdeveloped;
- minimise the visual impact from the waterway; and
- ensure development is compatible with the surrounding landscape.

The following requirements apply:

- boat sheds will only be permitted below MHWM where:
  - there are no feasible alternatives to site the boat shed above MHWM,
  - there are existing boat sheds below MHWM, and
  - the provision of an additional boat shed will not result in an overdeveloped water's edge;
- boat sheds should be one storey;
- the building is used in accordance with the definition i.e. for the storage and routine maintenance of a boat or boats, is associated with a private residence and includes any skid used in connection with the building or other structure. Boat sheds are not to be used for any other purpose unless approved by the consent authority;

FIGURE 9. BOAT SHED

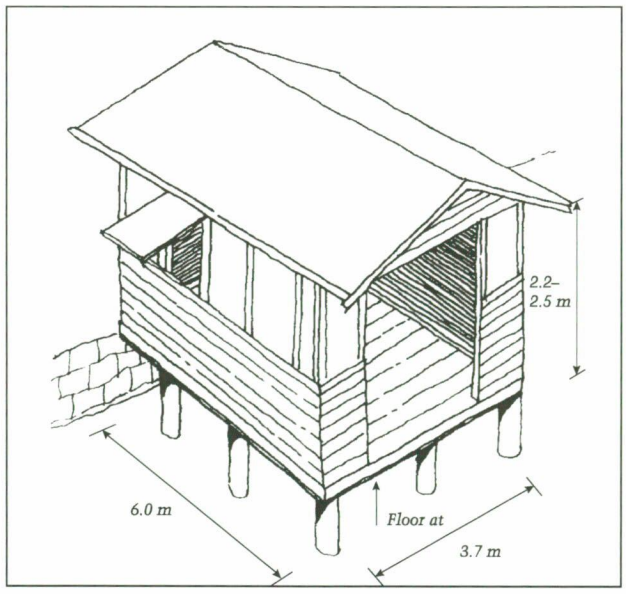
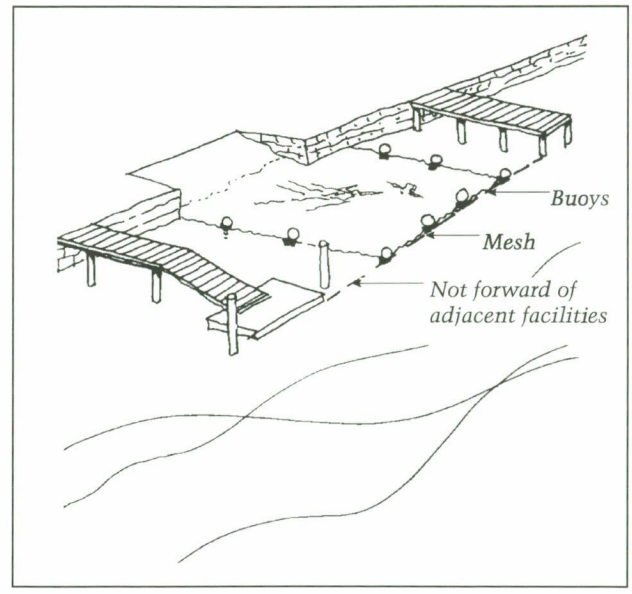


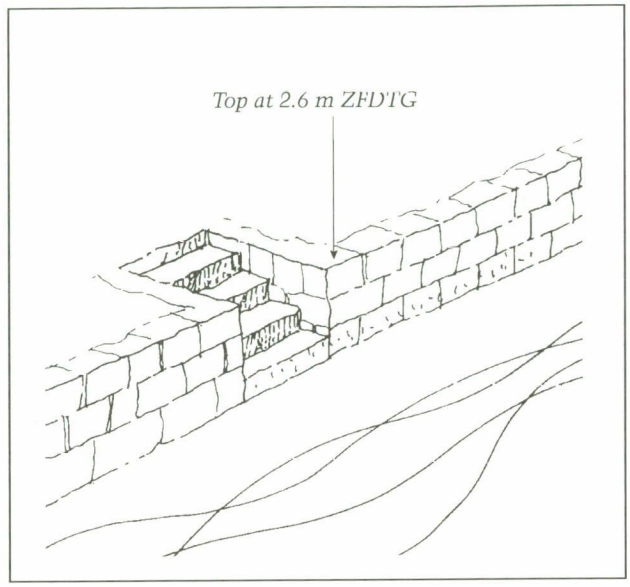
FIGURE 10. SWIMMING ENCLOSURES



- to provide sufficient height clearance the minimum headroom for a boat shed is 2.2 metres and a maximum of 2.5 metres to minimise visual impacts;
- the boat shed floor shall be 2.5 metres above ZFDTG gauge (1.575AHD);
- the maximum plan dimensions are 6 metres x 3.7 metres;
- roof pitch should not exceed 35 degrees and should be gabled. Other styles will be considered having regard to the general context and design of surrounding buildings;
- the use of roofs as decks is prohibited. Boat shed roofs shall be designed and constructed in materials which preclude or inhibit pedestrian access;
- the exterior colours should be compatible with the immediate surrounds and the landscape character in which the boat shed is proposed; and
- boat sheds built over the water should be of light-weight materials.

Timber, fibrous cement sheeting and fibrous cement siding with an applied finish are acceptable. With the exception of the floor and substructure, masonry, concrete and brick elements will be discouraged over the water. Shiny or reflective materials should not be used.

FIGURE 11. SEAWALLS

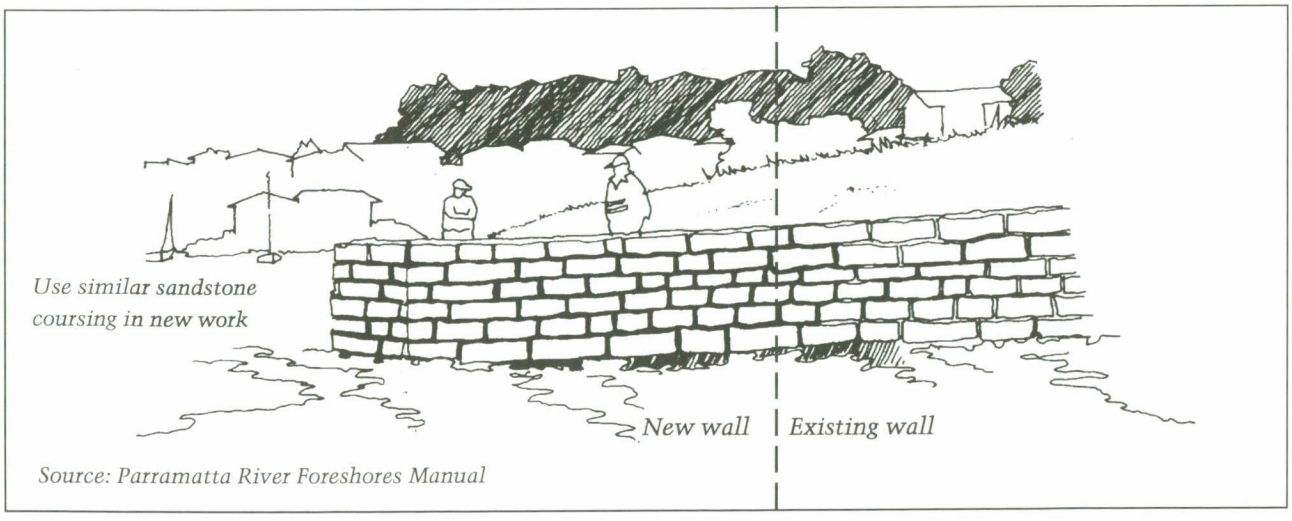


4.17 SEA WALLS

Seawalls can be required to protect the land from the sea or to stop accelerated erosion of the shoreline. However, where the foreshore is in its natural state, seawalls will generally be discouraged. Where seawalls are permitted the following requirements must be met:

- the development application must address the impact of the seawall on wave and current patterns, potential erosion and the resuspension of contaminants;

FIGURE 12. SEAWALLS—CONSISTENT MATERIALS



Source: Parramatta River Foreshores Manual

- the top of the seawall should be 2.6 metres above ZFDTG (1.675 AHD);
- natural sandstone blocks or sandstone facing over concrete walls are preferable to other materials. Cement rendered masonry wall with integral yellow oxide render of light tone is acceptable. The use of shotcrete or unrendered off form concrete will not be encouraged;
- where existing sandstone seawalls are being extended or upgraded, similar sandstone coursing to match existing walls should be used;
- rubble walls should be avoided and, if possible, existing rubble walls replaced; and
- high walls and long unbroken lengths of walls are best avoided. If these already exist, they should be broken by steps or vegetation to relieve their visual monotony.

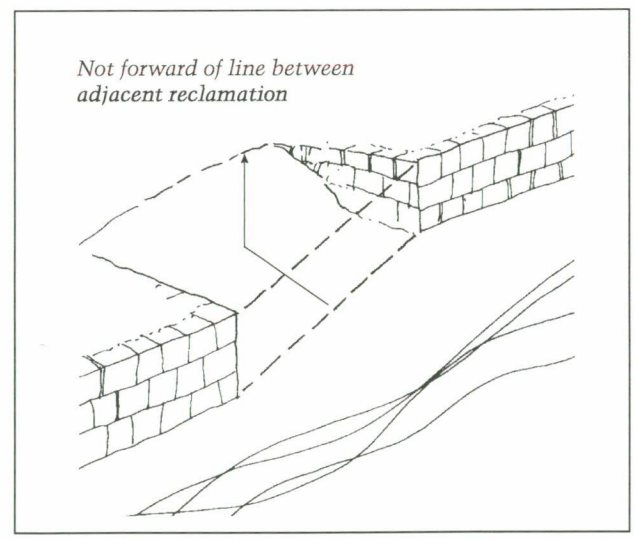
4.18 RECLAMATION

Reclamation will generally not be encouraged and it will be necessary to demonstrate that reclamation provides a valuable public facility or service or leads to environmental improvements, such as encapsulating contaminated sediments.

In these circumstances, the following requirements must be met:

- the quality of the reclaimed lands must be suitable for the proposed use;
- sea walls are to be designed, constructed and maintained to prevent any material entering waterways. The walls should join the seaward points of adjacent seawalls or reclamations; and
- the maximum height will be the same as for seawalls at 2.6 metres above ZFDTG (1.675 AHD).

FIGURE 13. RECLAMATION



5. Design Guidelines for Land–Based Developments

This part of the DCP contains guidelines for land-based developments. Sections 5.2–5.6 provide the guidelines to be applied to all land-based developments. The remaining sections relate to specific types of development.

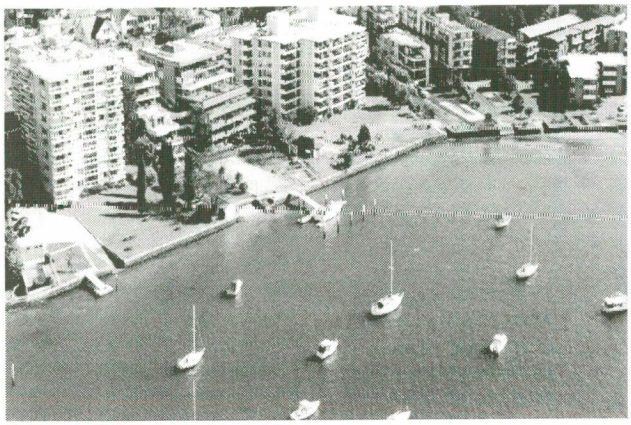
5.1 INTRODUCTION

The distinguishing characteristic of Sydney Harbour is its dramatic topography. This is reflected in large headlands and cliffs, as well as substantial areas of natural foreshores and the juxtaposition of built elements. Even in the most developed areas, it is still possible to perceive the underlying geomorphology and native vegetation. Clearly, it is the natural environment that is most sensitive and irreplaceable.

The combination of dramatic topography, natural vegetation and built elements provide an attractive background to the Harbour. In addition, views of many exceptional civic elements and memorable landmarks have been protected. It is important that this background is enhanced.

Individual private facilities, both on the land and over water, should form part of the background. There is no justification for these elements to be visually dominant; they are required to complement rather than compete with the other background elements.

This part of the DCP applies to development that would be located above MHWM. These areas are often covered by other planning instruments. This plan is intended to reinforce existing controls with the specific purpose of ensuring that development is sympathetic to the natural and cultural qualities of the area covered by SREP (Sydney Harbour Catchment) 2005.



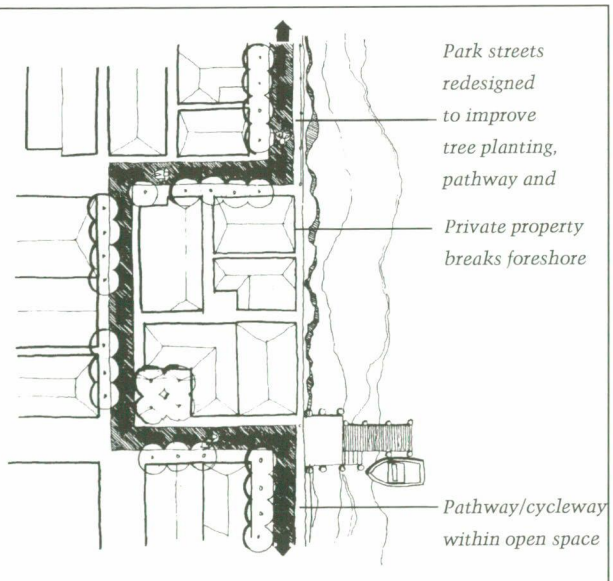
Example of land-based development.

5.2 FORESHORE ACCESS

The Harbour, Parramatta River and their tributaries, are for everyone's enjoyment and public access to the foreshores is fundamentally important. Foreshore access is to be encouraged and wherever possible, public access to and along the foreshore including the inter-tidal zone should be secured or improved.

Most desirable are foreshore links joining public open spaces or access points. They can be obtained by right of way or dedicated or acquired strips of land and may link with tracks across beaches and rock platforms. Where foreshore access cannot be achieved, a linkage through adjacent streets is usually possible.

FIGURE 14. FORESHORE ACCESS



Source: Parramatta River Foreshores Manual

Boardwalks are generally not recommended. They may, however, be an acceptable means of providing access along the foreshore in the following situations:

- where other means of access is not possible;
- where the privacy of existing residential or other foreshore uses would not be unduly disturbed;
- where the amenity or environmental quality of the subject foreshore or nearshore areas would not be adversely affected; and
- where binding arrangements for the leasing, maintenance and ultimate renewal of the structure are agreed with the NSW Maritime Authority.

Generally, preference will be given to land-based means of providing foreshore access rather than public boardwalks.

The maps accompanying this DCP indicate existing and potential pedestrian and bicycle access around the foreshore. When designing and assessing a development, consideration should be given to providing these access routes.

5.3 SITING OF BUILDINGS AND STRUCTURES

Most councils around the foreshores have set foreshore building lines governing the setback of structures from the waterway. In addition to these foreshore building lines, the following criteria should be observed when siting buildings and structures:

- where there is existing native vegetation, buildings should be set back from this vegetation to avoid disturbing it;
- buildings should address the waterway;
- buildings should not obstruct views and vistas from public places to the waterway;
- buildings should not obstruct views of landmarks and features identified on the maps accompanying this DCP; and
- where there are cliffs or steep slopes, buildings should be sited on the top of the cliff or rise rather than on the flat land at the foreshore.

Where a council has not set a foreshore building line, buildings should be sited having regard to:

- the above criteria;
- minimising loss of views; and
- the siting of the buildings on adjoining properties.

5.4 BUILT FORM

Buildings and other structures should generally be of a sympathetic design to their surroundings; well designed contrasts will be considered where they enhance the scene. Many councils have development controls governing built form and the heights of buildings. The following guidelines are designed to reinforce the local requirements:

- where buildings would be of a contrasting scale or design to existing buildings, care will be needed to ensure that this contrast would enhance the setting;
- where undeveloped ridgelines occur, buildings should not break these unless they have a backdrop of trees;
- while no shapes are intrinsically unacceptable, rectangular boxy shapes with flat or skillion roofs usually do not harmonise with their surroundings. It is preferable to break up facades and roof lines into smaller elements and to use pitched roofs;
- walls and fences should be kept low enough to allow views of private gardens from the waterway;
- bright lighting and especially floodlighting which reflects on the water, can cause problems with night navigation and should be avoided. External lights should be directed downward, away from the water. Australian Standards AS/NZ1158.3: 1999 Pedestrian Area (Category P) Lighting and AS4282: 1997 Control of the Obtrusive Effects of Outdoor Lighting should be observed;
- use of reflective materials is minimised and the relevant provisions of the Building Code of Australia are satisfied;
- colours should be sympathetic with their surrounds and consistent with the colour criteria, where specified, for particular landscape character types in Part 3 of this DCP;
- the cumulative visual impact of a number of built elements on a single lot should be mitigated through bands of vegetation and by articulating walls and using smaller elements; and
- the cumulative impact of development along the foreshore is considered having regard to preserving views of special natural features, landmarks or heritage items.

5.5 SIGNAGE

Signs can be obstrusive but they are often necessary and, if done imaginatively, can enliven a scene. A consistent series of signs, using a unified graphic style and construction and siting principles, should be used in particular areas to indicate all the public open spaces along the waterway.

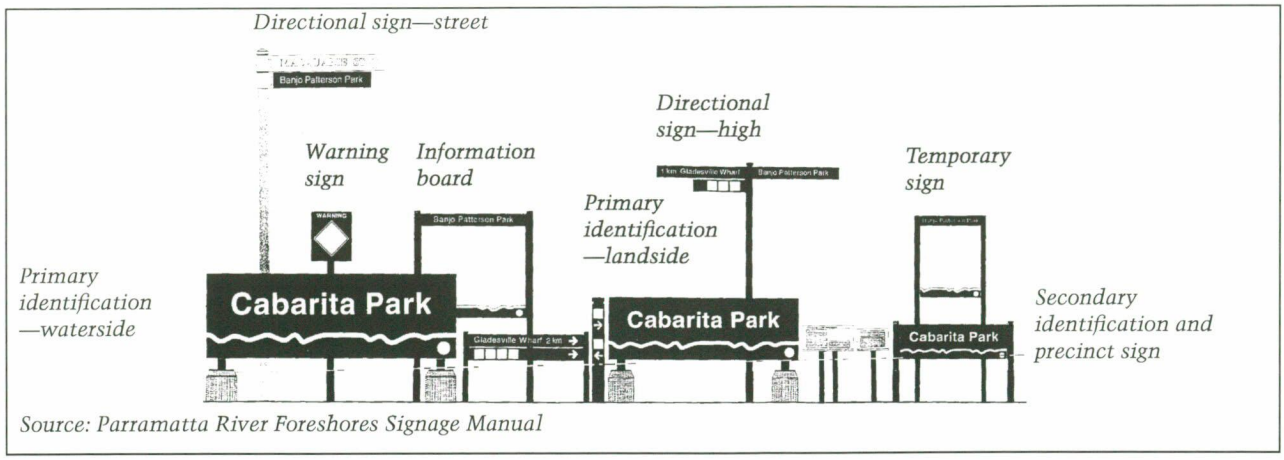
The Department has prepared the *Parramatta River Foreshore Signage Manual (3rd Edition)* which contains detailed design guidelines for signage on public open space along the Parramatta River. The requirements of the Manual should be followed for publicly owned land along the Parramatta River.

See also State Environmental Planning Policy No. 64—Advertising and Signage (SEPP 64).

In addition, councils have signage policies applying to each local government area. The following criteria are designed to reinforce the local requirements and provide guidelines in the absence of any other signage policy. Signs on privately owned land should meet the following requirements:

- they should be of minimal dimensions and consistent with the commercial or community identity of the premises;

FIGURE 15. SIGNAGE SYSTEM—PARRAMATTA RIVER



Source: Parramatta River Foreshores Signage Manual

- they should not be brightly illuminated to avoid becoming navigational hazards. Lighting of signs should be directed downward away from the water;
- they should preferably be placed on the facades of buildings, rather than on roofs or free standing; and
- signs that intrude on the skyline should be avoided.

5.6 PLANTING

Vegetation in the form of bushland, remnant native species and cultural planting has important ecological and landscape values that require protection and enhancement. The following criteria should be addressed when providing landscaping for developments:

- appropriate species from those found in the surrounding landscape should be incorporated;
- endemic native species should be used in areas where native vegetation is present or has the potential to be regenerated;
- exotic species that have the potential to spread into surrounding bushland should be avoided;
- existing mature trees should be retained where possible and incorporated into the design of new developments;
- vegetation along ridgelines and on hillsides should be retained and supplemented with additional planting to provide a backdrop to the waterway; and
- a landscape plan is to be submitted with any land-based development proposal showing existing and proposed changes in contours, surface and sub-surface drainage, existing trees to be retained and removed, measures to protect vegetation during construction, and proposed planting including species and common names.

5.7 MARITIME ACTIVITIES

Maritime and boating industries are important uses of waterfront land. They tend to be focal points for waterway activity.

This plan aims to:

- encourage the retention of existing maritime and boat repair facilities; and
- ensure that these activities make a positive contribution to the landscape when viewed from the waterway.

When assessing alterations or additions to the facilities the following criteria must be addressed:

- large blank expanses of undifferentiated cladding should be avoided. This can be achieved by incorporating vents, louvres, windows and hoods into facades;
- except in areas where the industry is surrounded by bushland, lighter colours sympathetic to the marine setting should be used for window frames, door surrounds, bargeboards and gutters. Roofs should be midtone grey or grey-greens in a hipped or gabled form;
- in the absence of controls set by council, the maximum wall height for buildings other than workshops should be 8 metres;
- to minimise scale and bulk, grouped smaller elements which articulate their function rather than a single large shed, should be used;
- noise mitigation measures should be used to reduce disturbances to any adjacent noise sensitive uses; and
- the majority of the building should be used for maritime or boat repair purposes.

Any proposals to discontinue a maritime or boating industry and replace it with another use should be accompanied by a statement that:

- provides reasons for discontinuing the maritime or boating industry; and
- demonstrates that there are sufficient suitable sites available elsewhere to meet the demands of the maritime and boating industry.

5.8 WATERFRONT INDUSTRY

It is important that waterfront industry minimises its impact on the waterways. In this regard, the following performance criteria must be met:

- in areas where public access is to be extended, buildings should be set back from the foreshore boundary a minimum of 12 metres to allow public foreshore access of 6 metres and private open space of 6 metres. Open space should be of a suitable dimension and grade to enable efficient use of these areas with minimal disturbance to the foreshore;
- in the absence of controls set by council, the maximum height of warehouses or storage buildings should be 10 metres and the maximum height of other buildings should be 8 metres;
- exterior colours should be compatible with the overall landscape character type in which the industry is proposed. In general, buildings and structures should be constructed of materials with non-reflective surfaces. Where sited close to native vegetation, olive and mangrove greens and midtone greys are preferred. Dark browns, intense russets, ochres and light tones should be avoided; and
- car parking should not be visible from the waterway. Car parks should be located away from the waterfront and setback a minimum of 3 metres from any foreshore access to allow mass plantings to screen car parking.

5.9 COMMUNITY BOATING AND WATER-BASED RECREATION FACILITIES

These facilities should aim to:

- improve community access to the water as a recreational resource;
- maintain views of the waterway from adjacent areas; and
- minimise impact on adjacent areas.

In siting and designing these developments the following criteria should be met:

- the size of the development should be kept to a minimum consistent with its function. To minimise scale and bulk, grouped smaller elements which articulate their function rather than a single large shed, are preferred;
- large blank expanses of undifferentiated cladding should be avoided. This can be achieved by incorporating vents, louvres, windows and hoods into facades;

FIGURE 16. SETBACKS

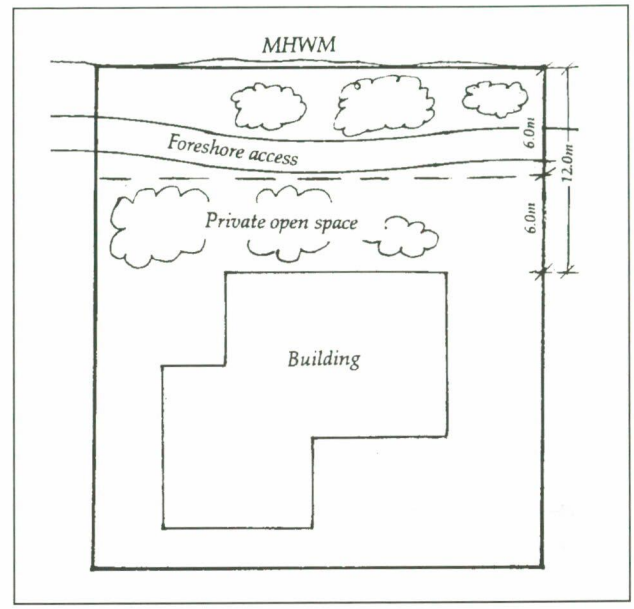
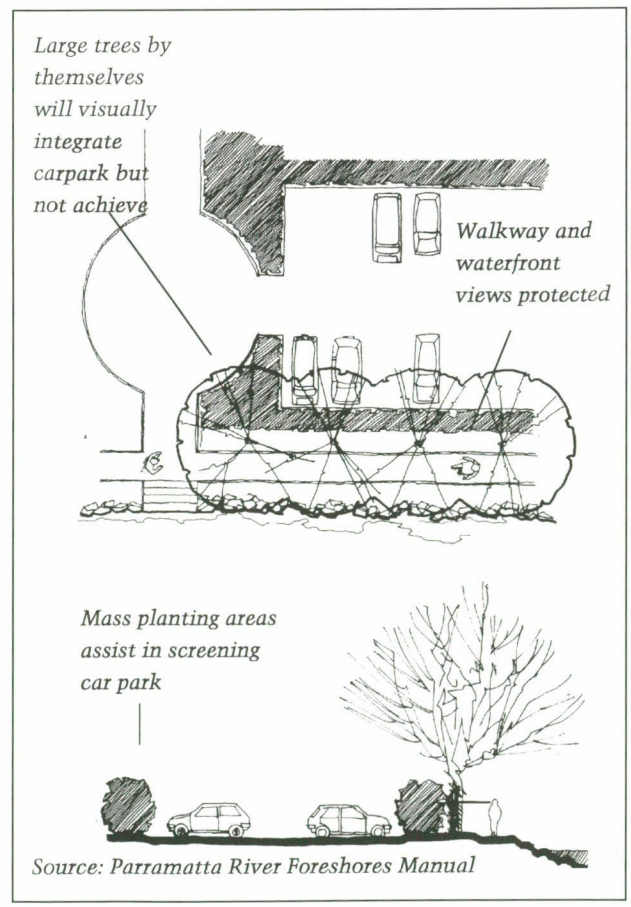


FIGURE 17. CAR PARK SCREENING



Source: Parramatta River Foreshores Manual

- exterior colours should be compatible with the overall landscape character type in which the building is proposed. In general, buildings and structures should be constructed of materials with non-reflective surfaces. Where sited close to native vegetation, olive and mangrove greens and midtone greys are preferred. In other areas, consideration should be given to lighter colours sympathetic to the marine environment. Roofs should be midtone greys or grey-greens; and
- the incorporation of outdoor cafes along the waterfront, where permitted by council environmental planning instruments, should be considered to encourage public use of community boating and water-based recreation facilities.

5.10 MULTI-UNIT RESIDENTIAL DEVELOPMENTS

Multi-unit residential developments should be sited and designed to:

- consider the site in the context of the river and the Harbour; and
- provide public access along the foreshore where appropriate and feasible.

Note: State Environmental Planning Policy No. 65--Design Quality of Residential Flat Development (SEPP 65) should also be referred to.

To meet these objectives the following criteria, in addition to controls contained in council environmental planning instruments, should be met:

- in areas where public access is to be extended, buildings should be set back from the foreshore boundary a minimum of 12 metres to allow public foreshore access of 6 metres and private open space of 6 metres. Open space should be of a suitable dimension and grade to enable efficient use of these areas with minimal disturbance to the foreshore;
- detailing and planting of the public access is to appear as the public domain and be distinct from the private areas of the development;
- floor levels of ground floor units should be 1 metre above the adjoining public access to minimise loss of privacy;
- car parking should be located away from the waterfront and setback a minimum of 3 metres from the public access to allow adequate screening;
- car parking should not be visible from the waterway. No roof top parking is allowed and parking beneath buildings should be screened by vegetation or integrated into the building form as a base to the building; and
- developments proposed near existing maritime or boating industries, must recognise that these industries are legitimate uses of waterfront land. Accordingly, new developments that may be sensitive to noise, odours, light or other effects associated with industries, should be sited and designed to minimise disturbance to their future occupants. *See* Figures 16 and 17.

5.11 REDEVELOPMENT SITES

Redevelopment of waterfront sites could provide a great opportunity to improve access and enjoyment of the waterfront.

Redevelopment proposals should:

- ensure continuous and inviting public access to the foreshore;
- allow for a mix of uses to further improve the public utility and amenity of the waterfront;
- provide public jetties and wharves for access to vessels where there is a demonstrated demand;
- identify suitable areas that can be conserved and made available to the public;
- provide public road access to the foreshore park where a park is being provided; and
- be designed considering the site in the broader context of the River and the Harbour. Redevelopment sites have the potential to provide a gateway and become a waterside destination for the hinterland.

A masterplan (or DCP) may be required for key sites or sites of strategic significance under SREP (Sydney Harbour Catchment) 2005.

Developments proposed near existing maritime or boating industries must recognise these industries as legitimate uses of waterfront land. Accordingly, new developments that may be sensitive to noise, odours, light or other effects associated with these industries should be sited and designed to minimise disturbance to their future occupants.

5.12 BOAT SHEDS

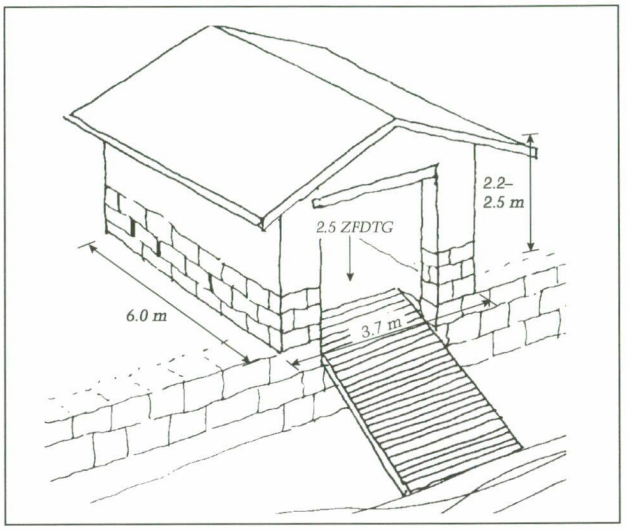
This section applies to boatsheds above MHWM and used for private purposes. The objectives are to:

- minimise visual impact from the waterway; and
- ensure development is compatible with the surrounding landscape and built form.

The following requirements apply:

- boat sheds should be one storey;
- minimum headroom for a boat shed is 2.2 metres and a maximum of 2.5 metres;
- the boat shed floor shall be 2.5 metres above ZFDTG (1.575AHD);
- the maximum plan dimensions are 6 metres x 3.7 metres;
- roof pitch should not exceed 35 degrees and should be gabled. Other roof styles will be considered having regard to the context and design of surrounding buildings;
- the exterior colours should be compatible with the immediate surrounds and the landscape character in which the boat shed is proposed; and
- the boat shed is to be used in accordance with the definition in Appendix A. Boat sheds are not to be used for any other purpose unless approved by the consent authority.

FIGURE 18. BOAT SHED



5.13 SWIMMING POOLS

This section applies to swimming pools between MHWM and the foreshore building line. In instances where there is no foreshore building line, it applies to the land between MHWM and the seaward face of the dwelling. To minimise the visual impact of swimming pools when viewed from the waterway the following requirements apply:

- swimming pools and surrounding areas shall not be cantilevered over the waterway;
- construction of swimming pools should avoid reshaping of the terrain and removal of native vegetation or significant cultural trees;
- swimming pools should be sited away from native vegetation to avoid chemical splash; and
- where a swimming pool protrudes beyond natural ground level, mitigation measures to minimise the visual impact are to be implemented. These include:
  - landscaping to screen the exposed sides of the pool, and
  - colour and texture of the materials comprising the exposed sides are to match natural elements such as tree trunks and stone or where there is a seawall, any exposed sides of the pool should match the seawall.

5.14 INCLINATORS, STAIRS AND DRIVEWAYS

Where inclinators, stairs or driveways are required to provide access, the objectives are to:

- minimise the visual intrusion; and
- minimise disturbance to topography and vegetation.

To meet these objectives the following criteria, in addition to controls included in council environmental planning instruments, should be met:

- inclinators and driveways should be sited as close as possible to natural ground level;
- stairs should be a maximum of 1.2 metres wide;
- stairs should be constructed in timber, masonry or stone. Galvanised stairs will only be permitted where they are painted in colours that blend with their setting;
- inclinators, stairs and driveways should be sited to maintain privacy of adjacent dwellings;
- inclinators, stairs and driveways should not obscure or break a view line of a rock or cliff face;
- the implementation of soil erosion measures; and
- encourage shared use of access facilities in environmentally or visually sensitive locations.

Appendices

APPENDIX A. DEFINITIONS

Advisory Committee means the Foreshores and Waterways Planning and Development Advisory Committee constituted by clause 28.

boat launching ramp means a structure designed primarily for the launching of trailer-borne recreational vessels, and includes associated car parking facilities.

boat lift means a device used for lifting or steering a vessel out of water but does not include such a device if it forms part of a boating industry facility or a commercial marina.

boat repair facility means any building, structure or facility used primarily for the construction, maintenance, repair, sale or hire of boats, whether or not including the storage of boats or other vessels, but does not include a commercial marina.

boat shed means a building or other structure, associated with a private residence, that used for the storage and routine maintenance of one or more boats, and includes any skid used in connection with any such building or other structure.

charter and tourism boating facility means any structure used for charter boating or tourism boating purposes, being a structure that is open only to users or operators of the structure, and having a direct structural connection between the foreshore and the waterway, but does not include a private marina or commercial marina.

commercial marina means a permanent boat storage facility (whether located wholly on land, wholly on the waterway or partly on land and partly on the waterway) together with any associated facilities, including:

(a) any facility for the construction, repair, maintenance, storage, sale or hire of boats, and

(b) any facility for providing fuelling, sewage pump-out or other services for boats, and

(c) any facility for launching or landing boats, such as slipways or hoists, and

(d) any associated car parking, commercial, tourist or recreational or club facility that is ancillary to a boat storage facility, and

(e) any associated single mooring,

but does not include a boat repair facility or a private marina.

commercial port facility means any structure used in connection with the carrying of goods or persons by water from one port to another for business or commercial purposes, being a structure having a direct structural connection between the foreshore and the waterway.

development has the same meaning as in section 4(1) of the *Environmental Planning and Assessment Act 1979*, and includes the clearing of land, earthworks, the placement of mooring piles and dredging.

division of the waterway means a line, as defined by the Waterways Authority, which equitably delineates the waterway fronting respective properties.

dredging means the removal of material from the sea or harbour bed or the bed of a river, being an activity for the purpose of constructing a new or deeper navigational area or channel or re-opening a discontinued navigational area or channel, but does not include intertidal dredging or maintenance dredging.

foreshore (backdrop) means the section of land extending from the property boundary most distant from the waterway of the first line of properties to the ridge line or hill top as viewed from the waterway.

foreshore (immediate) means the section of land extending from low water mark to the property boundary most distant from the waterway of the first line of properties as viewed from the waterway.

foreshore building line means a line fixed by or in pursuance of an environmental planning instrument to indicate an area adjacent to the shoreline in which the erection of buildings is prohibited or restricted.

houseboat means a vessel or structure that floats on, or is fixed in, the waterway and that is used for the purpose of providing permanent residential accommodation.

intertidal dredging means the removal of material from the sea or harbour bed in the intertidal zone, but does not include dredging or maintenance dredging.

intertidal zone means the area between the zero tide (that is, where the tide measures zero on the Fort Denison Tide Gauge, or -0.925 metres Australian Height Datum) and the highest astronomical tide (that is, where the tide measures 2.1 metres above zero on the Fort Denison Tide Gauge, or 1.175 metres Australian Height Datum).

jetty means a horizontal decked walkway on piered or piled foundation, providing access from the shore to waterway.

land-based development means any development carried out wholly above mean high water mark and development for any of the following purposes:

(a) boat sheds;
(b) reclamation works;
(c) sea walls;
(d) swimming pools;
(e) waterfront access stairs;

but does not include land/water interface development or water-based development.

landing facility means a structure for landing or embarking passengers and goods giving access to the land ashore.

land/water interface development means development for any of the following purposes:

(a) boat launching ramps;
(b) boat repair facilities;
(c) commercial marinas;
(d) water-based restaurants and entertainment facilities;
(e) water recreational facilities;
(f) when carried out wholly or partly in the waterway:
    (i) dwellings of any type (including serviced apartments),
    (ii) commercial premises,
    (iii) tourist facilities,
    (iv) shops and retailing,
    (v) restaurants,
    (vi) recreational or club facilities (whether used for activities based on land or on water),
    (vii) car-parking,

and includes land-based development and water-based development when carried out as part of development for a purpose referred to above.

maintenance dredging means removal of material from the sea or harbour bed or the bed of a river where the activity is for the purpose of maintaining the previously established harbour or river depth.

maritime activities mean small maritime based industries or commercial activities such as boat repairs, marinas and yacht clubs.

mean high water mark means the position where the plane of the mean high water level of all ordinary local high tides intersects the foreshore, which is taken for the purposes of this plan to be 1.48 metres above zero on the Fort Denison Tide Gauge, or 0.555 metres Australian Height Datum.

multi-unit residential development means a building containing two or more dwellings.

natural shoreline is the sandy, muddy sand, rocky or naturally vegetated area, or a combination of these which is located in the area of the shoreline and contains a minimal number of built structures such as jetties and stairways.

pontoon means a floating structure used for access to the water or a vessel.

private landing facility means a structure (such as a wharf, jetty, or pontoon) that is used to enable a vessel to embark or disembark passengers, or to load or unload goods, being a structure that is not generally available for public use, but does not include private landing steps.

private landing steps means steps used for launching and retrieving vessels, being steps that are not generally available for public use.

private marina means an apparatus or structure located on or in the waterway and used for restraining two or more vessels, but does not include a commercial marina or mooring pen.

public boardwalk means a decked structure, supported by piers or piles, providing public pedestrian access extending over or beyond the intertidal zone, but does not include a structure that is intended merely to provide direct access to a vessel.

public water recreational facility means a pier, wharf, boat shed or other waterfront structure that is primarily used for public recreation.

reclamation work means any work that involves:

(a) the filling or draining of submerged land for the purpose of reclaiming the land, or

(b) the filling of submerged land for the purpose of supporting a building or structure (such as a bridge) being erected over the land.

recreational or club facility means a building or place used exclusively for sporting or leisure activities, whether operated for the purpose of gain or not.

redevelopment site means a vacant or decommissioned site on the waterfront which is suitable for development.

sea wall means a structure placed partially or wholly along the land/water interface to protect the land from the sea or to stop accelerated erosion of the shoreline, but does not include a breakwater.

shoreline means the intertidal zone and the land immediately adjoining it.

single mooring means an apparatus or structure located on or in the waterway and designed, constructed or used for restraining one vessel only, but does not include a mooring pen.

skid means an inclined ramp used for the manual launching of small craft, but does not include a slipway.

slipway means a structure, usually in the form of two supported parallel rails on which a wheeled cradle is run, to draw a vessel out of the water for maintenance and repair, other than a structure that forms part of a boat repair facility or a commercial marina.

stub jetty means a short jetty designed as support for a ramp and pontoon.

swimming enclosure means a net or other structure placed in the waterway for the purpose of providing a protected swimming area, but does not include a public water recreational facility.

swimming pool has the same meaning as it has in the *Swimming Pools Act 1992*.

the Act means the *Environmental Planning and Assessment Act 1979*.

the Map means the map marked Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 – Foreshores and Waterways Area Map deposited in the Head Office of the department and copies of which are deposited at the office of each consent authority.

water-based development means any development carried out wholly below the mean high water mark, and development for any of the following purposes:

(a) advertisements;
(b) advertising structures;
(c) aids to navigation;
(d) aviation facilities;
(e) boat lifts;
(f) charter and tourism boating facilities;
(g) commercial port facilities;
(h) dredging;
(i) flora and fauna enclosures;
(j) houseboats;
(k) mooring pens;
(l) private landing facilities;
(m) private landing steps;
(n) private marinas;
(o) public boardwalks;
(p) public water transport facilities;
(q) single moorings;
(r) skids;
(s) slipways;
(t) swimming enclosures;

but does not include land/water interface development.

water-based restaurant and entertainment facility means a vessel or structure that floats on, or is fixed in, the waterway, that is used as a club or restaurant or for entertainment (on a commercial basis) and that has a direct structural connection between the foreshore and the waterway.

waterway means such part of the Foreshores and Waterways Area as is within Zone No. W1, W2, W3, W4, W5, W6, W7, W8 or 8(a) under Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005.

ZFDTG means zero of Fort Denison tide gauge.

APPENDIX B. SYDNEY REGIONAL ENVIRONMENTAL PLAN (SYDNEY HARBOUR CATCHMENT) 2005–ASSESSMENT CRITERIA

Assessment Criteria under SREP (Sydney Harbour Catchment) 2005–Matters for Consideration	Relevant Clause in SREP	Relevant Part in this DCP
Biodiversity, ecology and environment protection		
development should have a neutral or beneficial effect on the quality of water entering the waterways,	21 (a)	Part 2, particularly Tables 1–6.
development should protect and enhance terrestrial and aquatic species, populations and ecological communities and, in particular, should avoid physical damage and shading of aquatic vegetation (such as seagrass, saltmarsh and algal and mangrove communities),	21 (b)	Part 2, particularly Tables 1–6.
development should promote ecological connectivity between neighbouring areas of aquatic vegetation (such as seagrass, saltmarsh and algal and mangrove communities),	21 (c)	Part 2, particularly Tables 1–6.
development should avoid indirect impacts on aquatic vegetation (such as changes to flow, current and wave action and changes to water quality) as a result of increased access,	21 (d)	Part 2, particularly Tables 1–6.
development should protect and reinstate natural intertidal foreshore areas, natural landforms and native vegetation,	21 (e)	Part 2, particularly Tables 1–6.
development should retain, rehabilitate and restore riparian land,	21 (f)	Part 2, particularly Tables 1–6.
development on land adjoining wetlands should maintain and enhance the ecological integrity of the wetlands and, where possible, should provide a vegetative buffer to protect the wetlands,	21 (g)	Part 2, particularly Tables 1–6.
the cumulative environmental impact of development,	21 (h)	Part 2, particularly Tables 1–6.
whether sediments in the waterway adjacent to the development are contaminated, and what means will minimise their disturbance.	21 (i)	Part 2, particularly Tables 1–6.

APPENDIX B *(Continued)*

Assessment Criteria under SREP (Sydney Harbour Catchment) 2005 – Matters for Consideration	Relevant Clause in SREP	Relevant Part in this DCP
Public access to and use of foreshores and waterways		
development should maintain and improve public access to and along the foreshore, without adversely impacting on watercourses, wetlands, riparian lands or remnant vegetation,	22 (a)	Part 4 (Section 4.3) and Part 5 (Section 5.2).
development should maintain and improve public access to and from the waterways for recreational purposes (such as swimming, fishing and boating), without adversely impacting on watercourses, wetlands, riparian lands or remnant vegetation,	22 (b)	Part 4 (Section 4.3) and Part 5 (Section 5.2).
if foreshore land made available for public access is not in public ownership, development should provide appropriate tenure and management mechanisms to safeguard public access to, and public use of, that land,	22 (c)	Not specifically covered by the DCP.
the undesirability of boardwalks as a means of access across or along land below the mean high water mark if adequate alternative public access can otherwise be provided,	22 (d)	Part 4 (Section 4.3) and Part 5 (Section 5.2).
the need to minimise disturbance of contaminated sediments.	22 (e)	Not specifically covered by the DCP.
Maintenance of a working harbour		
foreshore sites should be retained so as to preserve the character and functions of a working harbour, in relation to both current and future demand,	23 (a)	Part 5, Sections 5.7 to 5.9.
consideration should be given to integrating facilities for maritime activities in any development,	23 (b)	Part 5, Sections 5.7 to 5.9.
in the case of development on land that adjoins land used for industrial and commercial maritime purposes, development should be compatible with the use of the adjoining land for those purposes,	23 (c)	Part 5, Sections 5.7 to 5.9.

APPENDIX B *(Continued)*

Assessment Criteria under SREP (Sydney Harbour Catchment) 2005 – Matters for Consideration	Relevant Clause in SREP	Relevant Part in this DCP
in the case of development for industrial and commercial maritime purposes, development should provide and maintain public access to and along the foreshore where such access does not interfere with the use of the land for those purposes.	23 (d)	Part 5, Sections 5.7 to 5.9.
Interrelationship of waterway and foreshore uses		
development should promote equitable use of the waterway, including use by passive recreation craft,	24 (a)	Various landscape character types (1–16) in Part 3. Part 4.
development on foreshore land should minimise any adverse impact on the use of the waterway, including the use of the waterway for commercial and recreational uses,	24 (b)	Various landscape character types (1–16) in Part 3. Part 4.
development on foreshore land should minimise excessive congestion of traffic in the waterways or along the foreshore,	24 (c)	Various landscape character types (1–16) in Part 3. Part 4
water-dependent land uses should have priority over other uses,	24 (d)	Various landscape character types (1–16) in Part 3. Part 4
development should avoid conflict between the various uses in the waterways and along the foreshores.	24 (e)	Various landscape character types (1–16) in Part 3. Part 4
Foreshore and waterways scenic quality		
the scale, form, design and siting of any building should be based on an analysis of: (i) the land on which it is to be erected, and (ii) the adjoining land, and (iii) the likely future character of the locality,	25 (a)	Various landscape character types (1–16) in Part 3. Part 4 (sections 4.4 and 4.5). Part 5 (sections 5.3 and 5.4).

APPENDIX B *(Continued)*

Assessment Criteria under SREP (Sydney Harbour Catchment) 2005 – Matters for Consideration	Relevant Clause in SREP	Relevant Part in this DCP
development should maintain, protect and enhance the unique visual qualities of Sydney Harbour and its islands, foreshores and tributaries,	25 (b)	Various landscape character types (1–16) in Part 3. Part 4 (sections 4.4 and 4.5). Part 5 (sections 5.3 and 5.4).
the cumulative impact of water-based development should not detract from the character of the waterways and adjoining foreshores.	25 (c)	Various landscape character types (1–16) in Part 3. Part 4 (sections 4.4 and 4.5). Part 5 (sections 5.3 and 5.4).
Maintenance, protection and enhancement of views		
development should maintain, protect and enhance views (including night views) to and from Sydney Harbour,	26 (a)	Various landscape character types (1-16) in Part 3. Parts 4 & 5
development should minimise any adverse impacts on views and vistas to and from public places, landmarks and heritage items,	26 (b)	Various landscape character types (1-16) in Part 3. Parts 4 & 5
the cumulative impact of development on views should be minimised.	26 (c)	Various landscape character types (1-16) in Part 3. Parts 4 & 5
Boat storage facilities		
development should increase the number of public boat storage facilities and encourage the use of such facilities,	27 (a)	Part 4.
development should avoid the proliferation of boatsheds and other related buildings and structures below the mean high water mark,	27 (b)	Part 4.
development should provide for the shared use of private boat storage facilities,	27 (c)	Part 4.

APPENDIX B *(Continued)*

Assessment Criteria under SREP (Sydney Harbour Catchment) 2005 – Matters for Consideration	Relevant Clause in SREP	Relevant Part in this DCP
development should avoid the proliferation of private boat storage facilities in and over the waterways by ensuring that all such facilities satisfy a demonstrated demand,	27 (d)	Part 4.
boat storage facilities should be as visually unobtrusive as possible,	27 (e)	Part 4./Appendix D
in the case of permanent boat storage, the safety and utility of the development should not be adversely affected by the wave environment, and the development should avoid adverse impacts on safe navigation and single moorings.	27 (f)	Part 4.
Acid Sulfate Soils		
Adequacy of an acid sulfate soils management plan prepared for the proposed development in accordance with the Acid Sulfate Soils Assessment Guidelines. Likelihood of discharge of acid water. Comments received from the Department on the development proposal and on the related acid sulfate soils management plan.	36 (4)	Not addressed by the DCP. See relevant LEPs; SREP (Sydney Harbour Catchment) 2005; and the *Acid Sulfate Soils Assessment Guidelines* prepared by the Department of Planning.
Heritage		
Consideration of a Heritage Impact Statement which addresses: • heritage significance of the item; • impact of the proposed development; • conservation measures proposed; • whether any archaeological or potential archaeological site would be adversely affected; and • extent any heritage subdivision may be altered.	55 (5)	Not specifically covered by the DCP. See relevant LEPs; SREP (Sydney Harbour Catchment) 2005; and relevant information prepared by the NSW Heritage Office.
Consideration of a Conservation Management Plan	55 (6)	

APPENDIX B *(Continued)*

Assessment Criteria under SREP (Sydney Harbour Catchment) 2005 – Matters for Consideration	Relevant Clause in SREP	Relevant Part in this DCP
Aboriginal heritage and archaeology		
Consideration of an Aboriginal heritage assessment prepared in accordance with the relevant guidelines as prepared by the National Parks and Wildlife Service.	57	Not specifically covered by the DCP. See relevant LEPs; SREP (Sydney Harbour Catchment) 2005; and relevant information prepared by the NSW Heritage Office.
Non-aboriginal archaeology		
Consideration of a heritage impact statement explaining how the proposal will affect the conservation of an archaeological site or relic.	58	Not specifically covered by the DCP. See relevant LEPs; SREP (Sydney Harbour Catchment) 2005; and relevant information prepared by the NSW Heritage Office.
Wetlands protection		
the development should have a neutral or beneficial effect on the quality of water entering the waterways,	63 (2) (a)	Part 2, including Tables 5 and 6.
the environmental effects of the development, including effects on: (i) the growth of native plant communities, (ii) the survival of native wildlife populations, (iii) the provision and quality of habitats for both indigenous and migratory species, (iv) the surface and groundwater characteristics of the site on which the development is proposed to be carried out and of the surrounding areas, including salinity and water quality and whether the wetland ecosystems are groundwater dependent,	63 (2) (b)	Part 2, including Tables 5 and 6.
whether adequate safeguards and rehabilitation measures have been, or will be, made to protect the environment,	63 (2) (c)	Part 2, including Tables 5 and 6.

APPENDIX B *(Continued)*

Assessment Criteria under SREP (Sydney Harbour Catchment) 2005 – Matters for Consideration	Relevant Clause in SREP	Relevant Part in this DCP
whether carrying out the development would be consistent with the principles set out in *The NSW Wetlands Management Policy* (as published in March 1996 by the then Department of Land and Water Conservation),	63 (2) (d)	Part 2, including Tables 5 and 6.
whether the development adequately preserves and enhances local native vegetation,	63 (2) (e)	Part 2, including Tables 5 and 6.
whether the development application adequately demonstrates: (i) how the direct and indirect impacts of the development will preserve and enhance wetlands, and (ii) how the development will preserve and enhance the continuity and integrity of the wetlands, and (iii) how soil erosion and siltation will be minimised both while the development is being carried out and after it is completed, and (iv) how appropriate on-site measures are to be implemented to ensure that the intertidal zone is kept free from pollutants arising from the development, and (v) that the nutrient levels in the wetlands do not increase as a consequence of the development, and (vi) that stands of vegetation (both terrestrial and aquatic) are protected or rehabilitated, and (vii) that the development minimises physical damage to aquatic ecological communities, and (viii) that the development does not cause physical damage to aquatic ecological communities,	63 (2) (f)	Part 2, including Tables 5 and 6.
whether conditions should be imposed on the carrying out of the development requiring the carrying out of works to preserve or enhance the value of any surrounding wetlands.	63 (2) (g)	Part 2, including Tables 5 and 6.

APPENDIX C. DEVELOPMENT CONTROL PLAN CHECKLIST

STEP 1: Ecological Assessment

1. Explain how the proposal satisfies the general aims set out in Section 2.2 of the DCP.
2. What terrestrial ecological communities are on the site and on land adjoining the site?
3. What aquatic ecological communities are on the site and on areas adjoining the site?
4. What is the conservation status of the identified communities? (Refer to Table 1.)
5. Explain how the proposal satisfies the performance criteria given the conservation status of the applicable ecological communities. (Refer to Tables 2–6.)

STEP 2: Landscape Assessment

1. Explain how the proposal satisfies the general aims set out in Section 3.2 of the DCP.
2. What landscape character type(s) apply to the site?
3. Explain how the proposal satisfies the performance criteria for the applicable landscape character type.

STEP 3: Design Guidlines

If the development is water-based or located at the land/water interface refer to Part 4 of the DCP. If the development is land-based refer to Part 5 of the DCP.

1. Explain how the proposal satisfies the general design requirements. (See introduction to Parts 4 and 5.)
2. Should the development provide foreshore access? (See maps accompanying the DCP, the Parramatta River Foreshores Manual and Councils' plans.)
3. Does the development satisfy the siting criteria set out in Sections 4.4 or 5.3 of the DCP and any council building lines and setbacks?
4. Is the development in accordance with the built form requirements set out in Sections 4.5 or 5.4 of the DCP?
5. Does the development meet the signage requirements set out in Sections 4.6 or 5.5 of the DCP?
6. If the proposal is for a land-based development, does it address the performance criteria set out in Section 5.6 of the DCP for planting?
7. Does the proposal meet the requirements for the particular type of development? (e.g. boat shed, marina, maritime activities.)

APPENDIX D. HOW TO UNDERTAKE A VISUAL IMPACT ASSESSMENT FOR MARINAS

This appendix should be read in conjunction with the objectives and guidelines set out in Section 4.7 Marinas (Commercial and Private) of this DCP and applies to both private and commercial marinas.

Its purpose is to assist proponents in evaluating the potential impacts of boat storage facilities (particularly marinas) in various scenarios and minimise these impacts when designing a marina and preparing a development application.

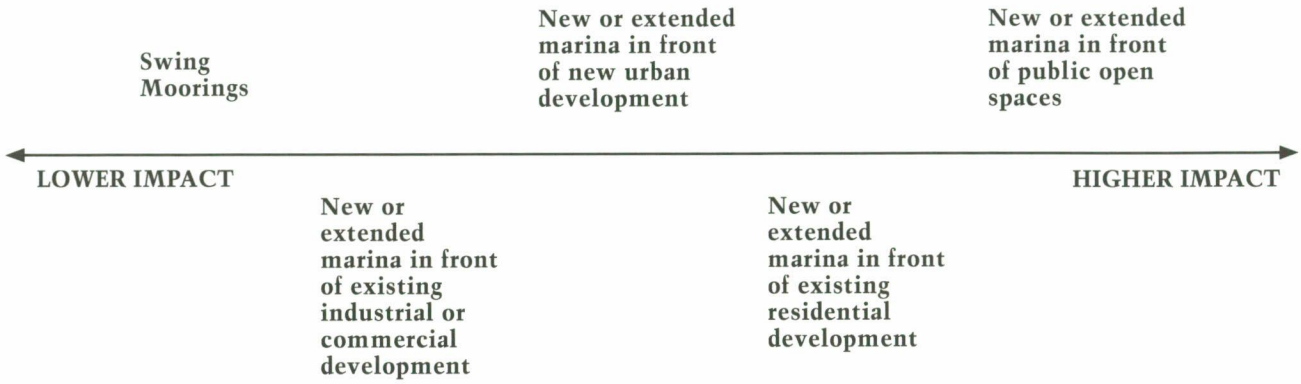
D1.1KNOWN CHARACTERISTICS OF VARIOUS TYPES OF BOAT STORAGE FACILITIES

A study (*Visual Assessment of Marinas and Multiple Moorings*) was undertaken by URS consulting engineers in 2003 for the department and the then Waterways Authority to determine the characteristics of boat storage facilities and an appropriate methodology for undertaking a visual assessment of marinas. The key findings of the URS study of 60 existing boat storage facilities within Sydney Harbour and its tributaries was as follows:

- The visual character of boats stored on swing moorings can differ from an equivalent number of boats stored in a marina, because boats on swing moorings are more dispersed, allowing visibility between and around vessels. On the other hand vessels stored in marinas can appear as a single visual element forming a visual extension of the adjoining land-based development.
- Marinas which contain a higher proportion of powerboats than swing mooring facilities can create greater visual bulk than yachts of similar length because the greater height to length ratio of powerboat hull and cabin compared to yachts.
- Marinas have a greater potential to block harbour views from adjoining foreshore public open space when compared to the equivalent number of boats stored on swing moorings.
- Marinas located in narrow bays and inlets have a higher potential to block views from open space and residences located at the head of the bay or inlet.
- The potential visual impact of marinas is significantly less when viewed from adjoining waterway or opposite shoreline, if the facilities are viewed against a background of large scale commercial, industrial or residential development or slopes and ridges with high elevation.
- The potential visual impact of marinas is significantly higher if viewed against un-vegetated flat low-lying land because a substantial portion of the moored boats will be viewed against the skyline.
- The potential visual impact on adjoining public open spaces and residential areas resulting from moored or berthed boats is strongly influenced by the relative size of the boat and distance from the viewer. For example a large power boat moored close to the shoreline will have a significantly higher visual impact than if it was moored on the waterway side of the marina.
- The degree of visual contrast between marina facilities, buildings and their background is the primary factor influencing the level of visual impact. The potential visual impact of such buildings is significantly reduced if the level of contrast in colour, texture, line and form between the building and background is minimised.
- The potential visual impact of marinas is reduced by the retention of view corridors from foreshore public open space to open water and from waterways back to sections of shoreline.
- The potential visual impact of marinas on adjoining residential development is strongly influenced by the degree of landform elevation with significantly less visual impact on elevated residences that have views over the top of marinas compared to residences located at elevations similar to the foreshore that have views blocked by boats and marina structures.
- Atmospheric factors such as rain, mist, fog and shadow all tend to reduce the visibility of stored boats.

The typical level of potential visual impact resulting from marinas and associated with various adjoining land uses is illustrated in Figure 1. While this figure provides a general indication of likely potential visual impact it should be noted that it is indicative only and the actual visual impact will depend on the particular combination of factors associated with each individual situation.

FIGURE D1. INDICATIVE POTENTIAL VISUAL IMPACT OF VARIOUS DEVELOPMENT SCENARIOS



While the overall potential visual impact of a proposed development will result from a complex combination of factors that are unique to each situation, Figure D2 provides an indication of the likely relative contribution that the various factors can be expected to make.

D1.2 WHAT IS A VISUAL IMPACT ASSESSMENT?

A visual impact assessment is an analysis of the potential detrimental or negative impacts a building or structure or use of building or structure may have on views from the public or private domain and to the foreshore from the waterway. The overall objective is to identify the potential level of visual impact as well as measures to mitigate those potential impacts.

A visual impact assessment should quantify as much as possible those aspects of marinas that can be measured. This includes:

- the scale and type of the facility and boats that will use it;
- adjoining land uses;
- visibility of the facility; and
- approximate number of potential viewers.

The visual impact assessment should be based on a consideration of the size and extent of the proposed building or structure in the context of the environment or locality the proposal is located, as well as the existing public or private views enjoyed to and from the waterway.

The visual impact assessment shall evaluate the potential visual impact of the total proposal including any land-based components (eg dingy storage associated with swing moorings, marina buildings, club houses etc.).

The visual impact assessment of changes to or expansion of any existing marina and consolidation of swing moorings into a marina shall evaluate the cumulative visual impact of the total development and compare it to the existing visual impact.

The visual impact assessment is to be carried out taking account of the performance criteria for the Landscape Character Type(s) in this DCP that seek to maintain or enhance the visual harmony of the area of Harbour in which it is located.

D1.3 WHEN IS A VISUAL IMPACT ASSESSMENT REQUIRED?

A visual impact assessment shall be carried out for the following development proposals and be submitted to the consent authority as part of the application:

- new private marinas associated with any new or existing waterfront residential development;
- new marinas associated with maritime industrial or commercial development;
- consolidation of swing moorings into marina berths;
- changes to or expansion of an existing marina; and
- development of a new swing mooring area or expansion of an existing swing mooring area.

Note: Clause 5 of SREP (Sydney Harbour Catchment) 2005 and Figure 1 of this DCP identifies the relevant consent authority for various development types.

FIGURE D2. INDICATIVE CONTRIBUTION TO POTENTIAL VISUAL IMPACT

Factor	Low Impact	Medium Impact	High Impact
Location of viewer	Elevated position (ridge top) with clear view over marina.	Slightly elevated (lower slopes) with partial view over marina.	Adjoining shorelines or waterway with view blocked by marina and boats.
Distance of view	Land areas or waterway. (> 1000 m)	Land areas or water. (100–1,000 m)	Adjoining shoreline or waterway (< 100 m)
Period of view	Glimpse (eg moving car, bus or bike).	Few minutes up to half day (eg walking along foreshore, recreation in adjoining open space, boating on adjoining waterway).	Majority of day (e.g. adjoining residence or workplace).
Scale or relative size	Powerboat or yacht. (< 10 m long)	Powerboat or yacht (10–30 m long)	Powerboat or yacht. (30–50 m long)
Spatial relationships	Swing moorings adjoining relatively straight shoreline.	Marina adjoining relatively straight shoreline or swing moorings in narrow enclosed bay.	Marina in narrow enclosed bay.
Motion of objects	Motionless flags, wind generators and other objects.	Gently fluttering flags and slowly moving wind generators and other objects.	Flags fully extended and regularly changing direction, wind generators at full speed etc.

D1.4 HOW TO UNDERTAKE A VISUAL IMPACT ASSESSMENT

Collecting Relevant Information

- Is the proposal permissible within the relevant Waterways zone under SREP (Sydney Harbour Catchment) 2005? Determine the location of the proposed development site on the maps presented in SREP (Sydney Harbour Catchment) 2005 as well as those in the DCP.
- Review the information provided in Section 3 'Landscape Assessment' of this DCP to determine compatibility of the proposed development with the Performance Criteria listed in this DCP.
- Identify particular issues that need to be addressed in response to the Performance Criteria as well as the objectives and guidelines in Section 4.7 Marinas (Commercial and Private) of this DCP.
- Obtain recent aerial photos of the proposed development site and surrounding areas of land and water to determine current land uses and locations from which the proposed development may potentially be visible.
  Aerial photos may be obtained from the department's Iplan web page at www.iplan.nsw.gov.au or http://iplan.australis.net.au/landview

Carrying Out a View Analysis

Carry out the visual analysis by:

- taking a 360° panoramic photo from the site boundary of the proposed development;
- identifying the potential visual catchment (areas from which the development would be visible) and plot on an aerial photo image with contours overlaid;
- identifying locations on the surrounding landscape and water areas from which the proposed development may be visible (ie the view situations in the following matrix);
- defining the different categories of view situations which may include:
  - adjoining waterways;
  - adjoining waterfront residences;
  - residences on adjoining elevated slopes and ridges;

  - foreshore public open spaces with relatively high levels of accessibility and usage, such as sports fields and picnic areas;
  - foreshore public open spaces with relatively low levels of accessibility and usage, such as bushland; and
  - public roads or bridges;
- carrying out a detailed site inspection and taking a series of photographs from locations that are representative of various categories of view situations eg. <100m >100m;
- plotting the representative view situations on a map; and
- preparing a matrix that characterises the full range of viewer situations including context of view, approximate number of viewers, approximate period of view, distance of view, location of viewer in the landscape etc using Tables D1 and D2 to assist in determining the potential visual impact, ie high, medium or low for each view situation and an overall potential visual impact (*see* Figure D3). See also example at Figure D4.

Refining your Proposal Prior to Lodgement

If the proposal generates a high level of impact for any view situation, steps should be undertaken to address these impacts prior to lodgement with the consent authority. Refinement may be undertaken by identifying measures to mitigate potential negative impacts, which may include:

- amending the proposed layout to maintain important views that have been identified in the site analysis process;
- modifying the form and visual mass of proposed structures;
- placing limits on the number and/or size of boats that may use the facility;
- selecting colours for buildings and structures that minimise the degree of visual contrast with adjoining development or landscape;
- selecting materials with texture and reflectivity that minimise the degree of visual contrast with adjoining development or landscape; or
- using tree and shrub planting development as well as other landscape treatments to screen undesirable views.

D1.5 LODGING A VISUAL IMPACT ASSESSMENT WITH A DEVELOPMENT APPLICATION

Your development application should include a detailed description of the proposed development and should also include:

- a location plan;
- a land ownership and lease boundary plan;
- a plan showing adjoining land uses and topography;
- a layout showing any existing facilities including moorings, jetty structures, boat slips, foreshore buildings, sea wall, boardwalk and other built elements;
- a layout of proposed development including any existing facilities to be retained and the largest permissible vessels in each berth;
- cross sections and elevations of any proposed structures, pontoons, buildings or boat slips;
- visual simulations of the proposal with the largest permissible vessel in each proposed berth as viewed from the water in the adjoining section of main channel as well as significant land-based view situations;
- a schedule of proposed boat numbers, types and sizes; and
- a schedule of proposed materials and colours for buildings, pontoons, jetties and other structures.

A view analysis matrix should also be lodged as part of the application and be supported by a report titled a Visual Impact Assessment. The Visual Impact Assessment should:

- summarise the visibility of the proposal and identifies those viewers most likely to be affected based on the results of the analysis;
- assess the magnitude of the proposed change to the existing visual character of the area by defining the level of contrast between the proposed development and the existing visual elements, using visual characteristics of form, line, colour and texture;
- assess the level of visual harmony between the proposed development and the Landscape Character Type(s) of adjoining areas by reference to the DCP and the part titled Carrying out a view analysis in this Appendix; and
- document the visual assessment process and include copies of the Visual Impact Assessment in the relevant environmental assessment document, which may be a Statement of Environmental Effects or an Environmental Impact Statement depending on the nature of the requirements of the relevant legislation.

FIGURE D3. VIEW ANALYSIS MATRIX

To be prepared with reference to Figures D1 and D2

View Situation	Degree of Impact (High = 3 / Medium = 2 / Low = 1)				
	View 1	View 2	View 3	View 4	View 5
Factor					
Location of viewer					
Distance of view					
Approx. period of view					
Scale or relative size (Boat numbers and mix of vessel types)					
Boat storage type/Spatial relationship (ie private or commercial marina or swing moorings and its setting)					
Overall potential visual impact (average score)					

FIGURE D4. EXAMPLE OF A COMPLETED VIEW ANALYSIS MATRIX

	Degree of Impact (High = 3 / Medium = 2 / Low = 1)				
View Situation	**View 1** Adjoining public park above site	**View 2** Adjoining residence above site	**View 3** Waterway <100m	**View 4** Waterway >100m	**View 5** Street above site
Factor					
Location of viewer	2	2	2	1	2
Distance of view	3	3	3	2	3
Approx. period of view	2	3	1	1	2
Scale or relative size (Boat numbers and mix of vessel types)	2	2	2	2	2
Boat storage type/Spatial relationship (ie private or commercial marina or swing moorings and its setting)	2	2	2	2	2
Overall potential visual impact (average score)	2.2	2.4	2	1.6	2.2

This example would be the result for a small marina (either commercial or private) located in a narrow bay with a slight topography. Adjoining are residences and a park and local street. The marina accommodates both powerboats and yachts between 10–30 metres and sits hard against a straight shoreline.

The Matrix indicates the marina design should address the visual impacts on the adjoining residence and to a lesser degree the views from the public domain (park and street).

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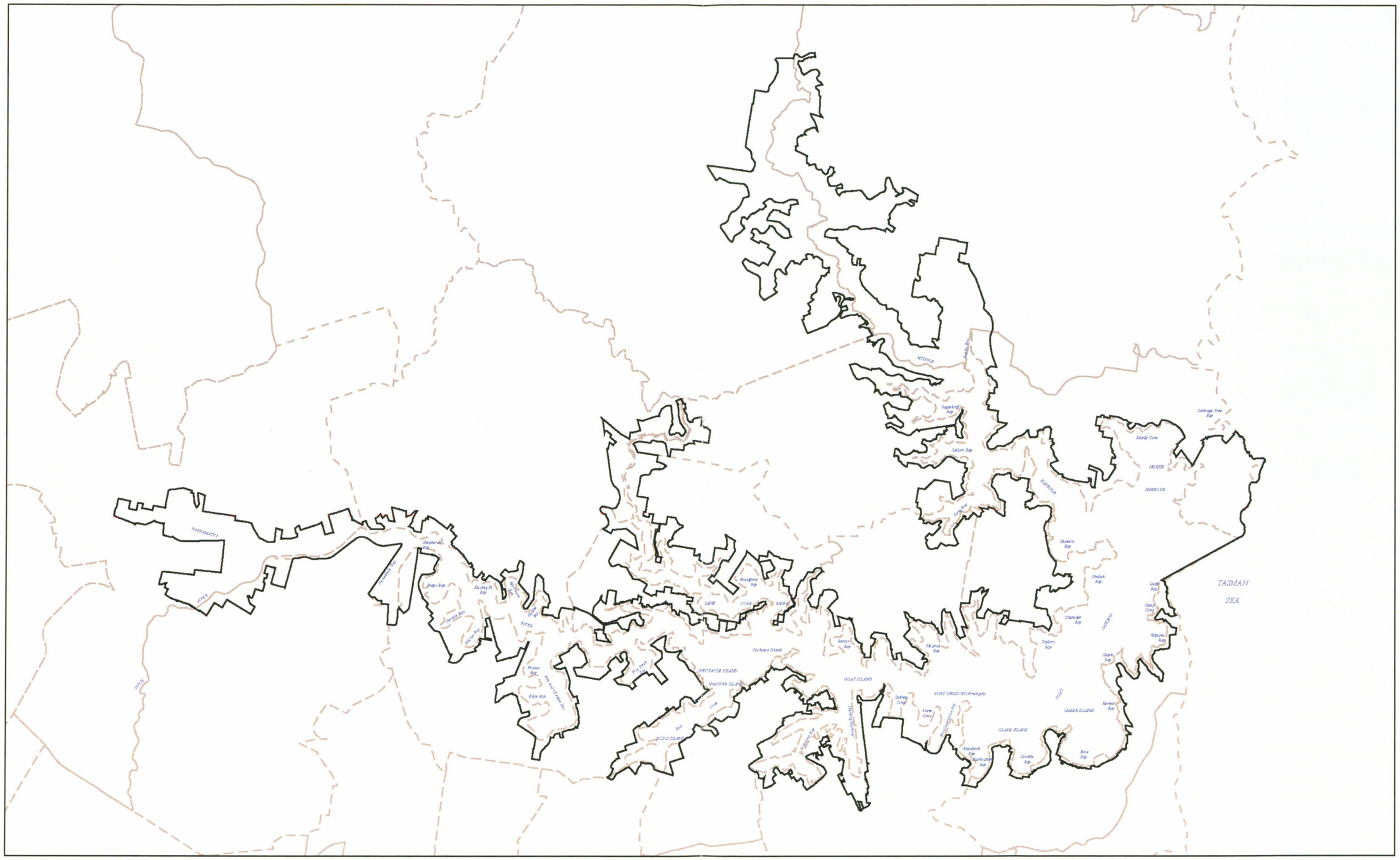
Maps



Legend

- Foreshores and Waterways Area Boundary
- Local Government Area

N

0 380 760 1,520 2,280 3,040
Metres

ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

SYDNEY REGIONAL ENVIRONMENTAL PLAN (SYDNEY HARBOUR CATCHMENT) 2005 FORESHORES AND WATERWAYS AREA MAP

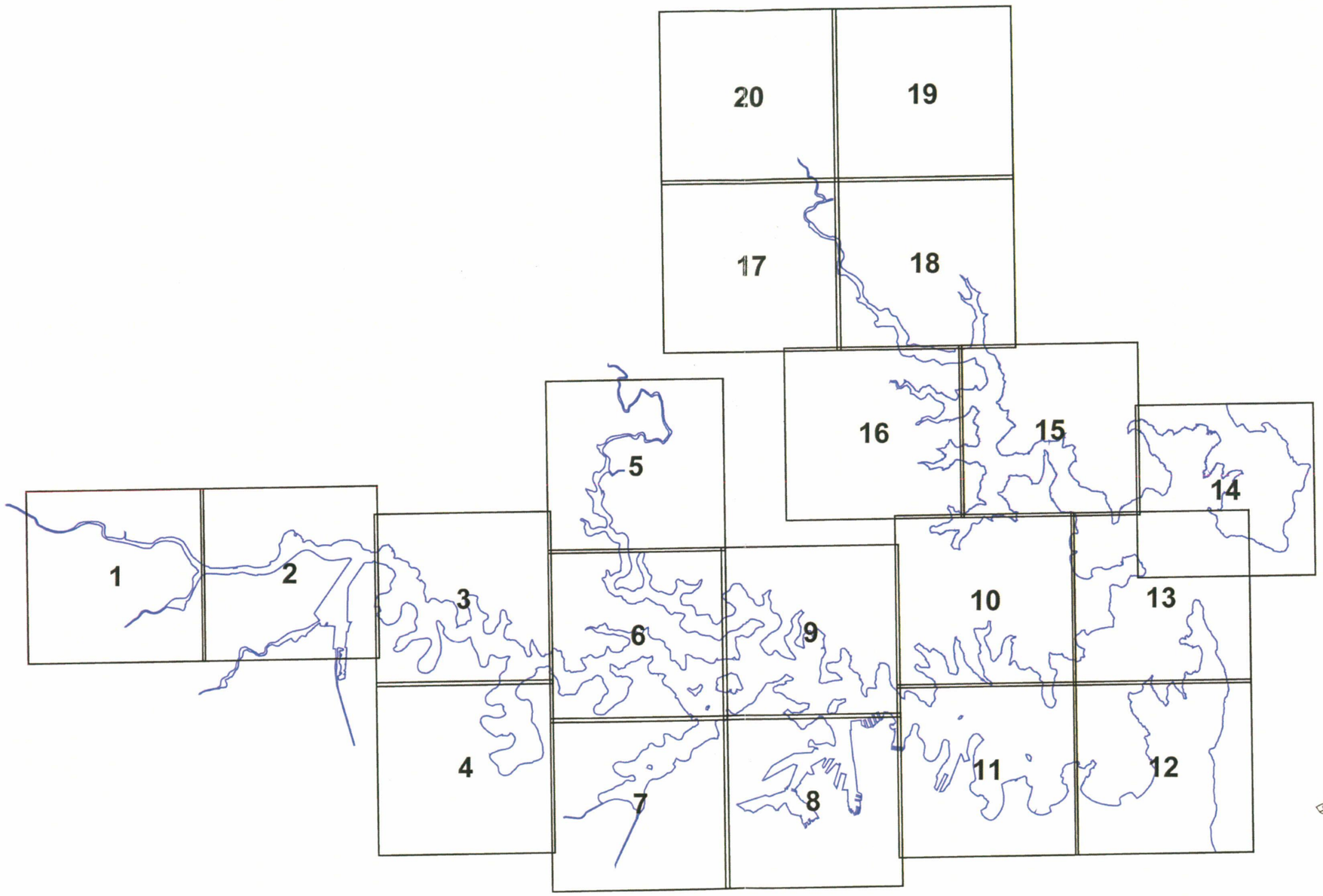
NSW GOVERNMENT
Department of Planning

Drawn by :	N. Chand
G.I.S. Dwg. No.	0402
Department file No.	.....
Planning Officer:	U. Williamson
Manager G.I.S.	.....
County:	Cumberland
Parish:	Various
L.G.A.	Various
Date:	27:06:2005
Locality:	Various
Catalogue.	.....

Boundary Map

Sydney Harbour - Foreshores and Waterways Area Development Control Plan: Ecological Communities and Landscape Characters

Index Map



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Department of Planning

N

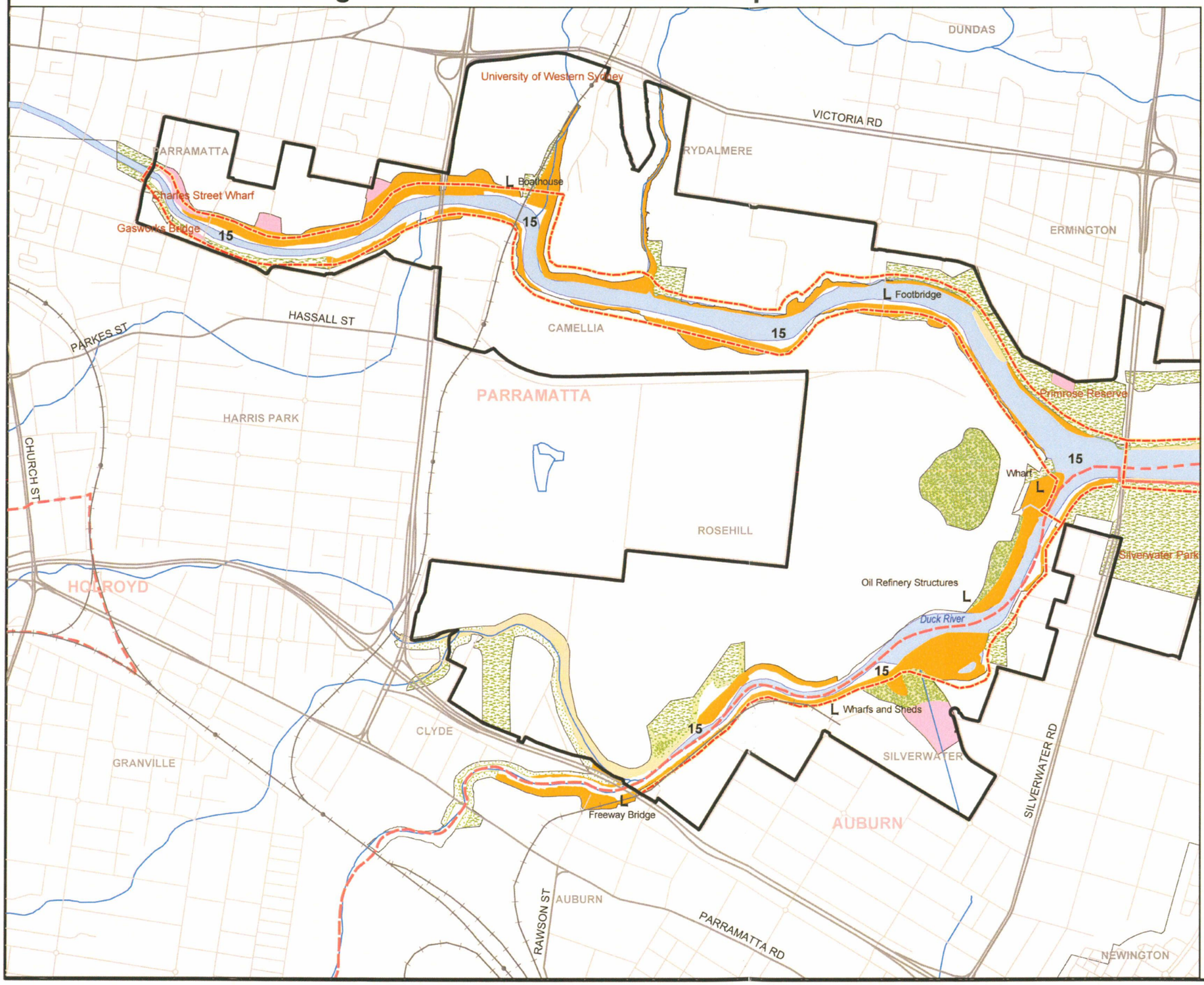
3 1.5 0 3
Kilometres

Produced by DIPNR, February 2005
PID Spatial Dwg. No. 0428 Index

Index Map

Sydney Harbour - Foreshores and Waterways Area Development Control Plan: Ecological Communities and Landscape Characters

Map 1



Legend

- Foreshores & Waterways Area boundary

Terrestrial Ecological Communities

- Closed Forest/Gully
- Open Forest (Type A)
- Open Forest (Type B)
- Woodland
- Heathland
- Saltmarsh
- Grassland
- Urban Development with Scattered Trees

Aquatic Ecological Communities

- Rocky Platform
- Mixed Rocky Intertidal and Sand
- Mixed Rocky Intertidal and Rock Platform
- Sandy Beaches
- Mudflats
- Mudflats and Mangroves
- Mixed Rock Intertidal and Mudflats
- Seagrass Beds
- Area not mapped: Site Specific Investigations required

- 15 Landscape Character Type
- Railway Stations
- Railways
- Street Centreline
- L Landmark
- Highways and Main Roads
- Local Government Boundaries
- Existing & Future Pedestrian Access: Indicative Locations
- Water
- Rivers and Creeks

N

Scale 1:15000

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Kilometres

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Department of Planning

NSW MARITIME AUTHORITY

DISCLAIMER: The maps are indicative of ecological communities and landscape characters. Site specific investigations should be undertaken to confirm actual site conditions.

PID Spatial Dwg. No. 0428

Map 1

Sydney Harbour - Foreshores and Waterways Area Development Control Plan: Ecological Communities and Landscape Characters

Map 2

DUNDAS
RYDALMERE
SILVERWATER RD
VICTORIA RD
ERMINGTON
PARRAMATTA
MELROSE PARK
WEST RYDE
RYDE
MEADOWBANK
VICTORIA RD
RYDE
SILVERWATER RD
Parramatta River
Meadowbank/Rhodes Railway Bridge
Transmission Tower
Silverwater Bridge
Wharf
ROSEHILL
Naval Wharf and Cranes
Silverwater Park
Indigenous Forest
SILVERWATER
AUBURN
HOMEBUSH BAY
Homebush Bay
RHODES
Brays Bay
Paint Manufacturing Structures
CANADA BAY
Radio Mast
NEWINGTON
Haslams Creek
Radio Mast
Concord Hospital
CONCORD WEST
HOMEBUSH BAY DR
CONCORD RD

Legend

- Foreshores & Waterways Area boundary

Terrestrial Ecological Communities

- Closed Forest/Gully
- Open Forest (Type A)
- Open Forest (Type B)
- Woodland
- Heathland
- Saltmarsh
- Grassland
- Urban Development with Scattered Trees

Aquatic Ecological Communities

- Rocky Platform
- Mixed Rocky Intertidal and Sand
- Mixed Rocky Intertidal and Rock Platform
- Sandy Beaches
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- Rivers and Creeks

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PID Spatial Dwg. No. 0428

Map 2

Sydney Harbour - Foreshores and Waterways Area Development Control Plan: Ecological Communities and Landscape Characters

Map 3

WEST RYDE
MEADOWBANK
BLAXLAND RD
VICTORIA RD
CHURCH ST
RYDE
RYDE
RYDE RD
RYDE RD
PITTWATER RD
HUNTERS HILL
PUTNEY
GLADESVILLE
RHODES
TENNYSON POINT
HUNTERS HILL
UNINCORPORATED
CABARITA
MORTLAKE
CONCORD WEST
CONCORD
BREAKFAST POINT
ABBOTSFORD
CONCORD RD
Meadowbank/Rhodes Railway Bridge
Ryde Road Bridge
Uhrs Pt.
Morrison Bay Park
Sandstone Cliffs and Port Jackson Figs
Boatyard
Kissing Pt. Bay
Brays Bay
Putney Park
Morrisons Bay
Glades Bay
Boatsheds
Concord Hospital
Yaralla Bay
Yaralla House
Majors Bay
Industrial Structures
Club House
Bedlam Bay

Legend

- Foreshores & Waterways Area boundary

Terrestrial Ecological Communities

- Closed Forest/Gully
- Open Forest (Type A)
- Open Forest (Type B)
- Woodland
- Heathland
- Saltmarsh
- Grassland
- Urban Development with Scattered Trees

Aquatic Ecological Communities

- Rocky Platform
- Mixed Rocky Intertidal and Sand
- Mixed Rocky Intertidal and Rock Platform
- Sandy Beaches
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- Mudflats and Mangroves
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- Railways
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- L Landmark
- Highways and Main Roads
- Local Government Boundaries
- Existing & Future Pedestrian Access: Indicative Locations
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- Rivers and Creeks

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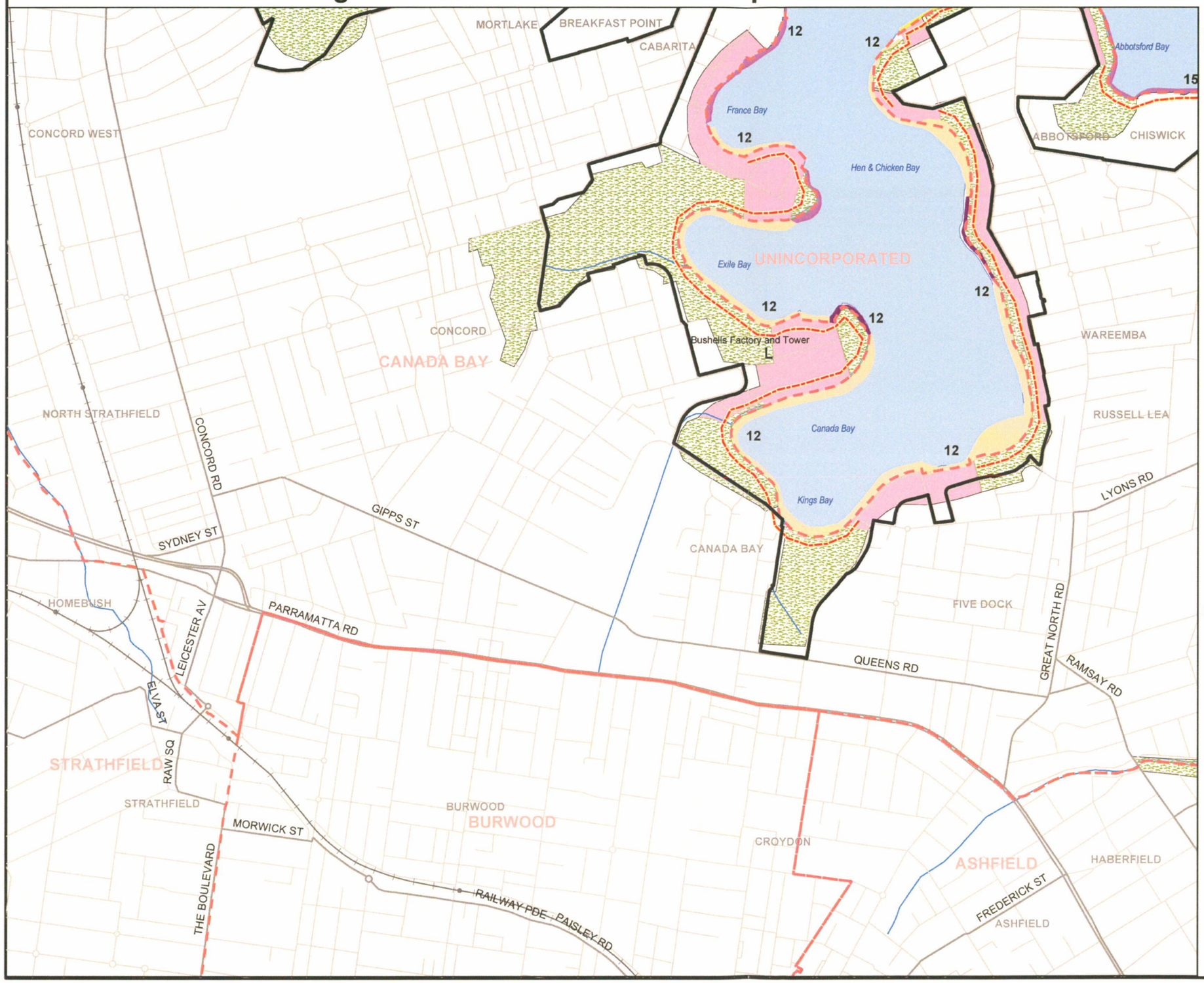
Map 3

Sydney Harbour - Foreshores and Waterways Area Development Control Plan: Ecological Communities and Landscape Characters

Map 4



Legend

- Foreshores & Waterways Area boundary

Terrestrial Ecological Communities

- Closed Forest/Gully
- Open Forest (Type A)
- Open Forest (Type B)
- Woodland
- Heathland
- Saltmarsh
- Grassland
- Urban Development with Scattered Trees

Aquatic Ecological Communities

- Rocky Platform
- Mixed Rocky Intertidal and Sand
- Mixed Rocky Intertidal and Rock Platform
- Sandy Beaches
- Mudflats
- Mudflats and Mangroves
- Mixed Rock Intertidal and Mudflats
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- Railways
- Street Centreline
- L Landmark
- Highways and Main Roads
- Local Government Boundaries
- Existing & Future Pedestrian Access: Indicative Locations
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- Rivers and Creeks

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Kilometres

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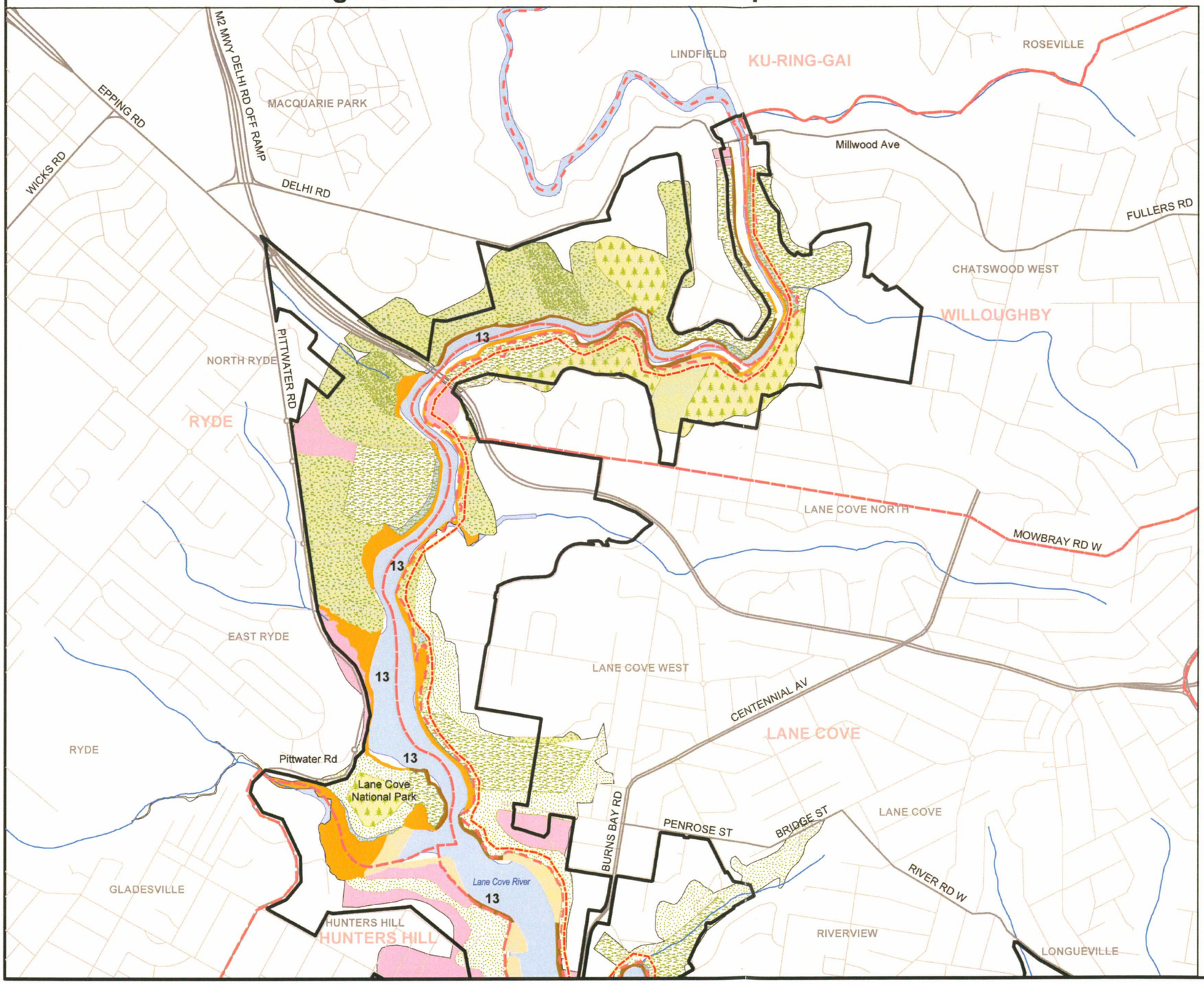
Map 4

Sydney Harbour - Foreshores and Waterways Area Development Control Plan: Ecological Communities and Landscape Characters

Map 5



Legend

- Foreshores & Waterways Area boundary

Terrestrial Ecological Communities

- Closed Forest/Gully
- Open Forest (Type A)
- Open Forest (Type B)
- Woodland
- Heathland
- Saltmarsh
- Grassland
- Urban Development with Scattered Trees

Aquatic Ecological Communities

- Rocky Platform
- Mixed Rocky Intertidal and Sand
- Mixed Rocky Intertidal and Rock Platform
- Sandy Beaches
- Mudflats
- Mudflats and Mangroves
- Mixed Rock Intertidal and Mudflats
- Seagrass Beds
- Area not mapped: Site Specific Investigations required

- 15 Landscape Character Type
- Railway Stations
- Railways
- Street Centreline
- L Landmark
- Highways and Main Roads
- Local Government Boundaries
- Existing & Future Pedestrian Access: Indicative Locations
- Water
- Rivers and Creeks

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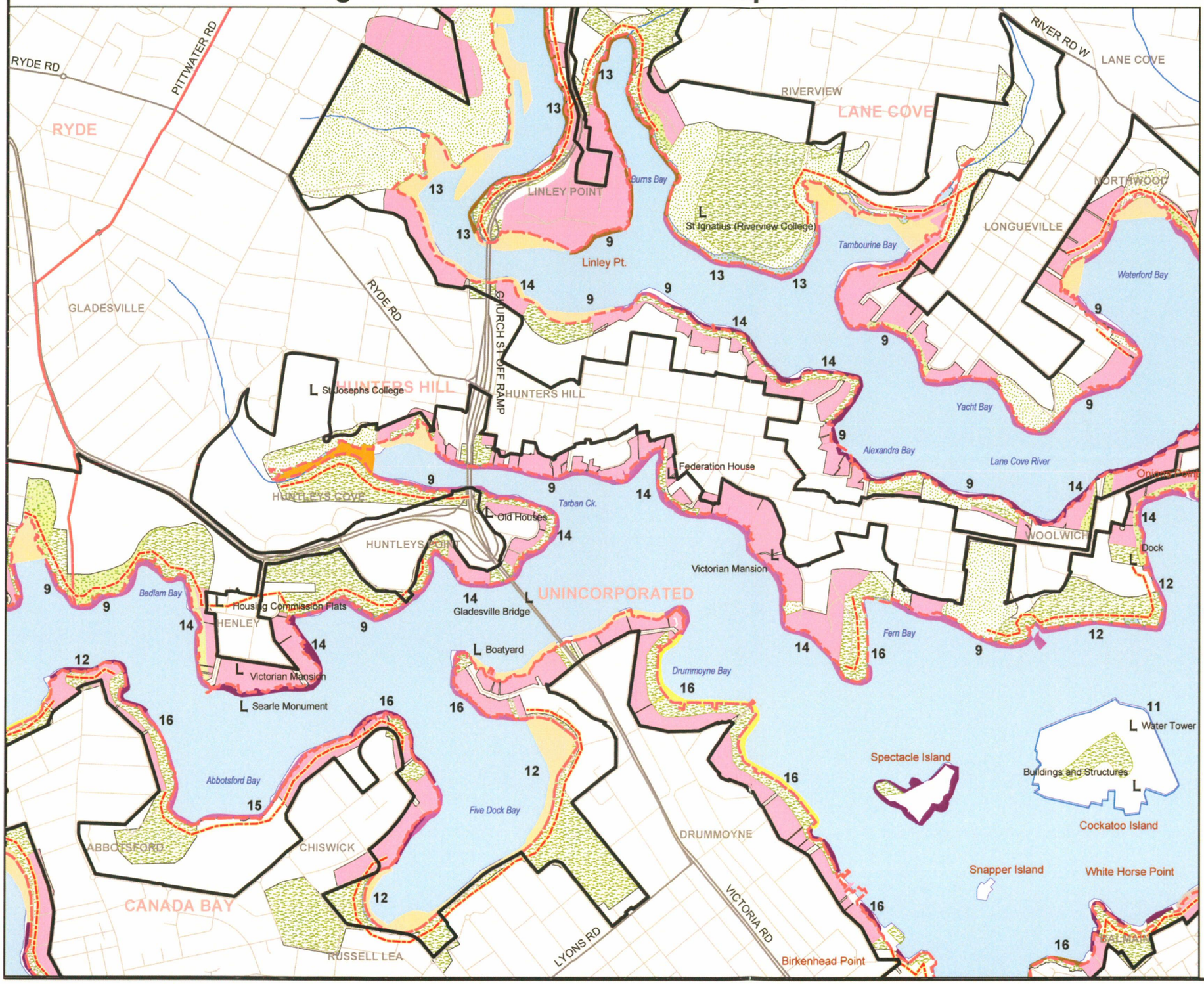
Map 5

Sydney Harbour - Foreshores and Waterways Area Development Control Plan: Ecological Communities and Landscape Characters

Map 6



Legend

- Foreshores & Waterways Area boundary

Terrestrial Ecological Communities

- Closed Forest/Gully
- Open Forest (Type A)
- Open Forest (Type B)
- Woodland
- Heathland
- Saltmarsh
- Grassland
- Urban Development with Scattered Trees

Aquatic Ecological Communities

- Rocky Platform
- Mixed Rocky Intertidal and Sand
- Mixed Rocky Intertidal and Rock Platform
- Sandy Beaches
- Mudflats
- Mudflats and Mangroves
- Mixed Rock Intertidal and Mudflats
- Seagrass Beds
- Area not mapped: Site Specific Investigations required

15 Landscape Character Type

- Railway Stations
- Railways
- Street Centreline
- L Landmark
- Highways and Main Roads
- Local Government Boundaries
- Existing & Future Pedestrian Access: Indicative Locations
- Water
- Rivers and Creeks

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Kilometres

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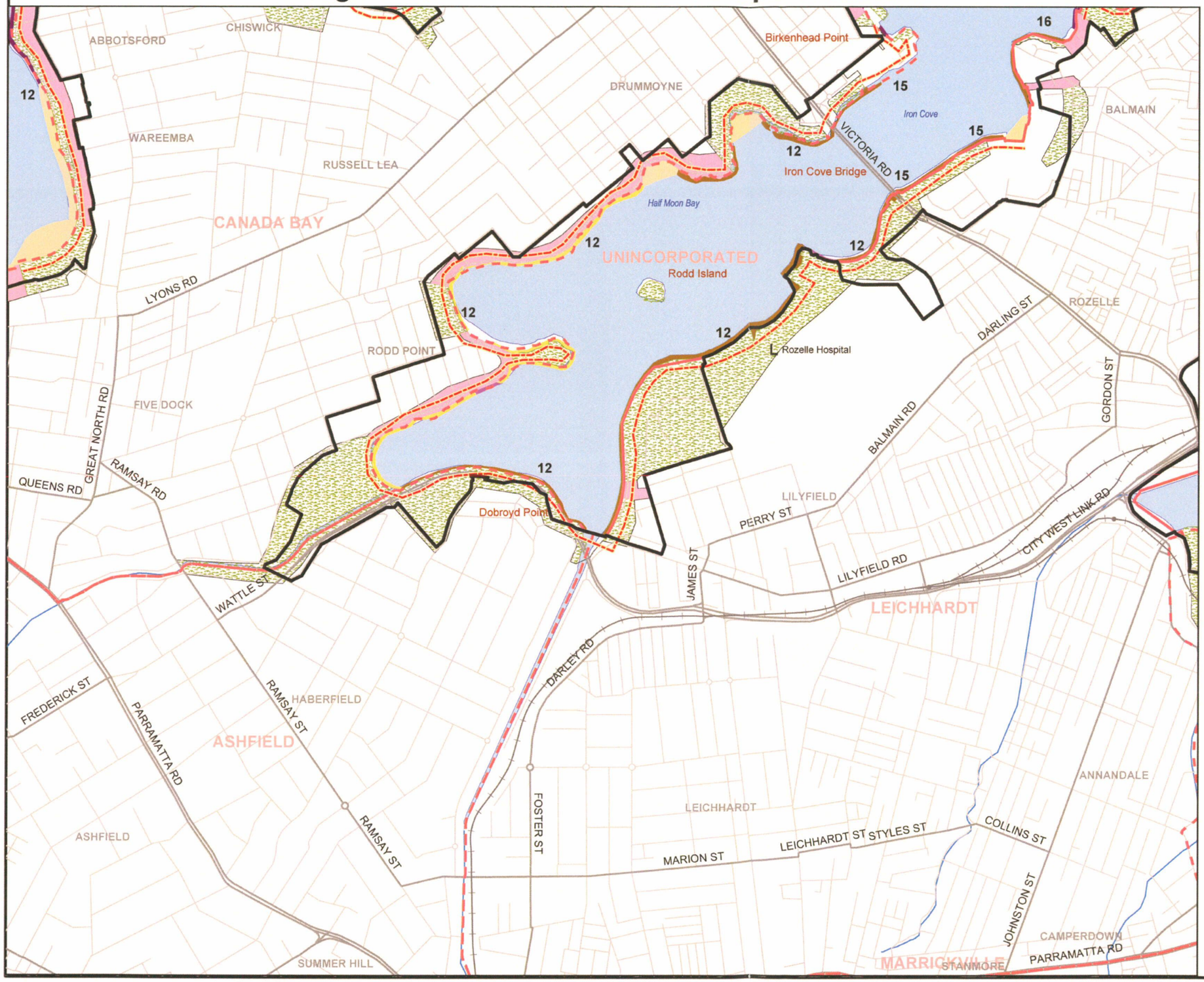
Map 6

Sydney Harbour - Foreshores and Waterways Area Development Control Plan: Ecological Communities and Landscape Characters

Map 7



Legend

- Foreshores & Waterways Area boundary

Terrestrial Ecological Communities

- Closed Forest/Gully
- Open Forest (Type A)
- Open Forest (Type B)
- Woodland
- Heathland
- Saltmarsh
- Grassland
- Urban Development with Scattered Trees

Aquatic Ecological Communities

- Rocky Platform
- Mixed Rocky Intertidal and Sand
- Mixed Rocky Intertidal and Rock Platform
- Sandy Beaches
- Mudflats
- Mudflats and Mangroves
- Mixed Rock Intertidal and Mudflats
- Seagrass Beds
- Area not mapped: Site Specific Investigations required
- WATER

- 15 Landscape Character Type
- Railway Stations
- Railways
- Street Centreline
- L Landmark
- Highways and Main Roads
- Local Government Boundaries
- Existing & Future Pedestrian Access: Indicative Locations
- Water
- Rivers and Creeks

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Kilometres

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PID Spatial Dwg. No. 0428

Map 7

Sydney Harbour - Foreshores and Waterways Area Development Control Plan: Ecological Communities and Landscape Characters

Map 8

BIRCHGROVE
Mort Bay
Walsh Bay
Victorian Mansion
Tug Berths
Post Office
St Augustines
BALMAIN EAST
DAWES POINT
BRADFIELD HWY
BALMAIN
MILLERS POINT
THE ROCKS
Circular Quay
CAHILL EXP
LEICHHARDT
White Bay
Darling Harbour
BRIDGE ST
PHILLIP ST
CLARENCE ST
GEORGE ST
DARLING ST
ROZELLE
GORDON ST
KING ST
YORK ST
PYRMONT
SYDNEY
MARKET ST
Rozelle Bay
Blackwattle Bay
LILYFIELD RD
CITY WEST LINK RD
LILYFIELD
PARK ST
COLLEGE ST
RILEY ST
BATHURST ST
HARRIS ST
ELIZABETH ST
FIG ST
WENTWORTH PARK RD
PIER ST
DARLINGHURST
OXFORD ST
GLEBE
SYDNEY ULTIMO
MINOGUE CR
ANNANDALE
LEICHHARDT
FOREST LODGE
BRIDGE RD
WATTLE ST
HAYMARKET
EDDY AV
ALBION ST
SURRY HILLS
FOVEAUX ST
COLLINS ST
JOHNSTON ST
MARRICKVILLE
PARRAMATTA RD
CAMPERDOWN
CITY RD
ABERCROMBIE ST
CHIPPENDALE

Legend

- Foreshores & Waterways Area boundary

Terrestrial Ecological Communities

- Closed Forest/Gully
- Open Forest (Type A)
- Open Forest (Type B)
- Woodland
- Heathland
- Saltmarsh
- Grassland
- Urban Development with Scattered Trees

Aquatic Ecological Communities

- Rocky Platform
- Mixed Rocky Intertidal and Sand
- Mixed Rocky Intertidal and Rock Platform
- Sandy Beaches
- Mudflats
- Mudflats and Mangroves
- Mixed Rock Intertidal and Mudflats
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15 Landscape Character Type
Railway Stations
Railways
Street Centreline
L Landmark
Highways and Main Roads
Existing & Future Pedestrian Access: Indicative Locations
Water
Rivers and Creeks
Local Government Boundaries

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Scale 1:15000

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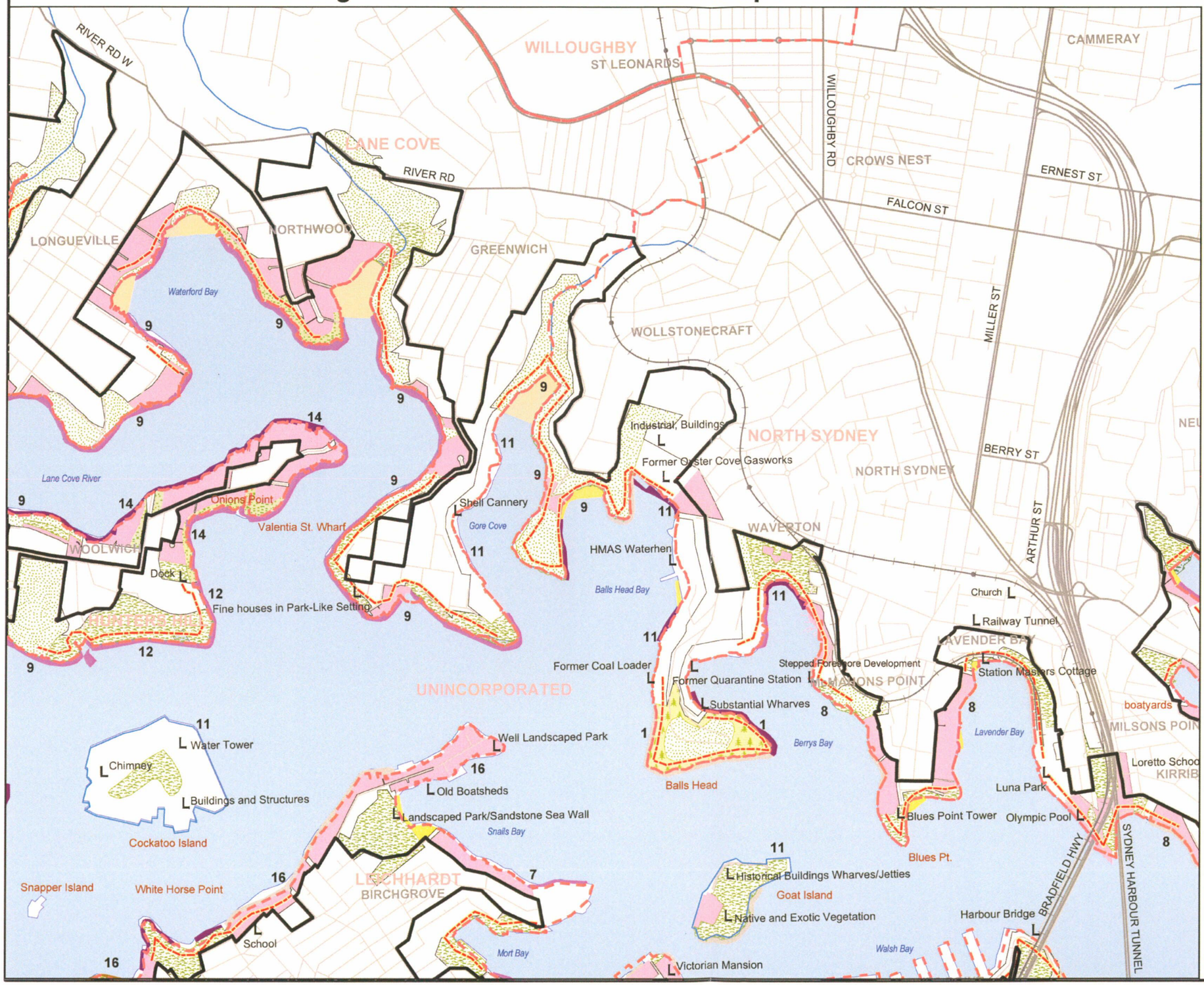
PID Spatial Dwg. No. 0428

Map 8

Sydney Harbour - Foreshores and Waterways Area Development Control Plan: Ecological Communities and Landscape Characters

Map 9



Legend

- Foreshores & Waterways Area boundary

Terrestrial Ecological Communities

- Closed Forest/Gully
- Open Forest (Type A)
- Open Forest (Type B)
- Woodland
- Heathland
- Saltmarsh
- Grassland
- Urban Development with Scattered Trees

Aquatic Ecological Communities

- Rocky Platform
- Mixed Rocky Intertidal and Sand
- Mixed Rocky Intertidal and Rock Platform
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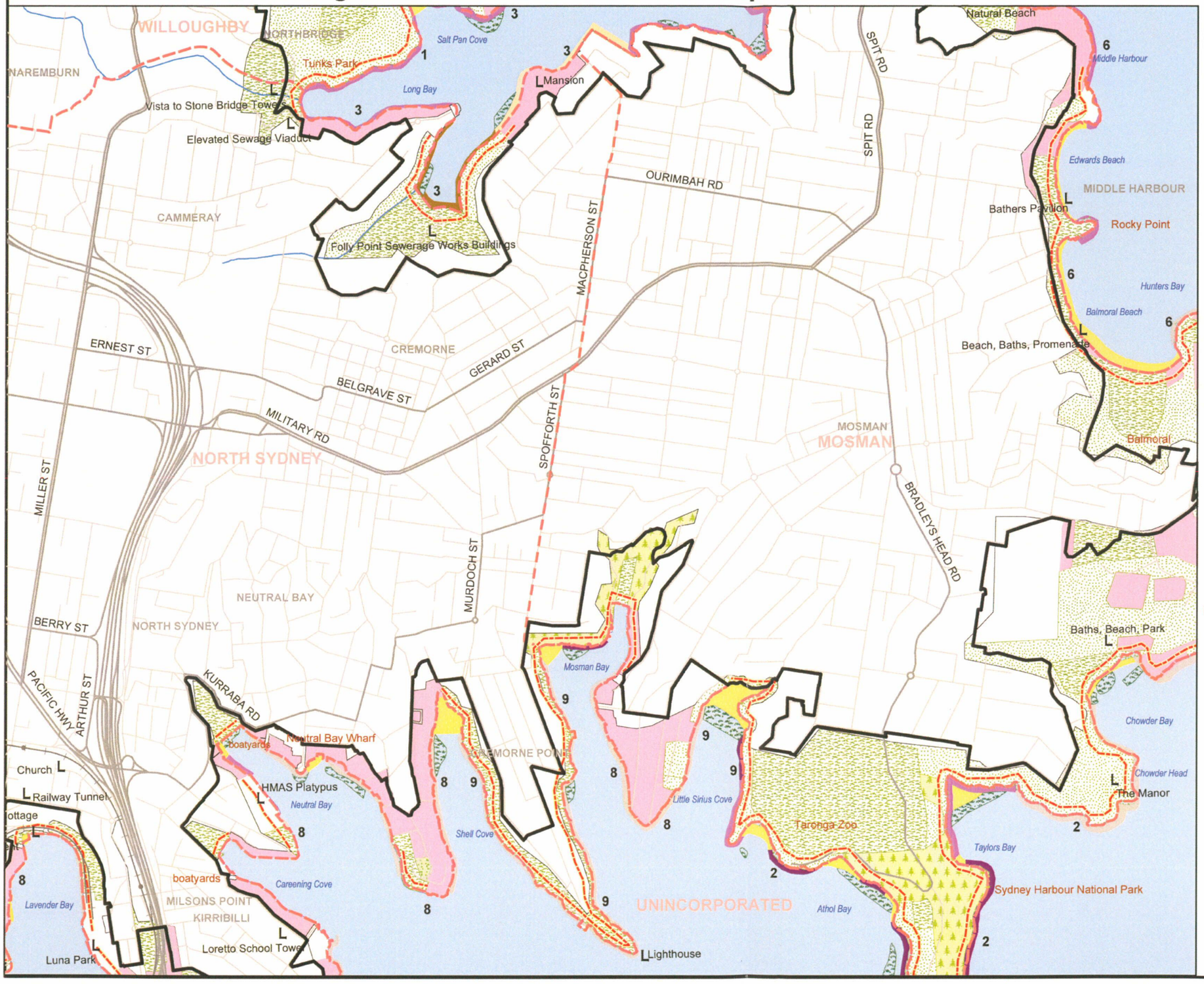
Map 9

Sydney Harbour - Foreshores and Waterways Area Development Control Plan: Ecological Communities and Landscape Characters

Map 10



Legend

- Foreshores & Waterways Area boundary

Terrestrial Ecological Communities

- Closed Forest/Gully
- Open Forest (Type A)
- Open Forest (Type B)
- Woodland
- Heathland
- Saltmarsh
- Grassland
- Urban Development with Scattered Trees

Aquatic Ecological Communities

- Rocky Platform
- Mixed Rocky Intertidal and Sand
- Mixed Rocky Intertidal and Rock Platform
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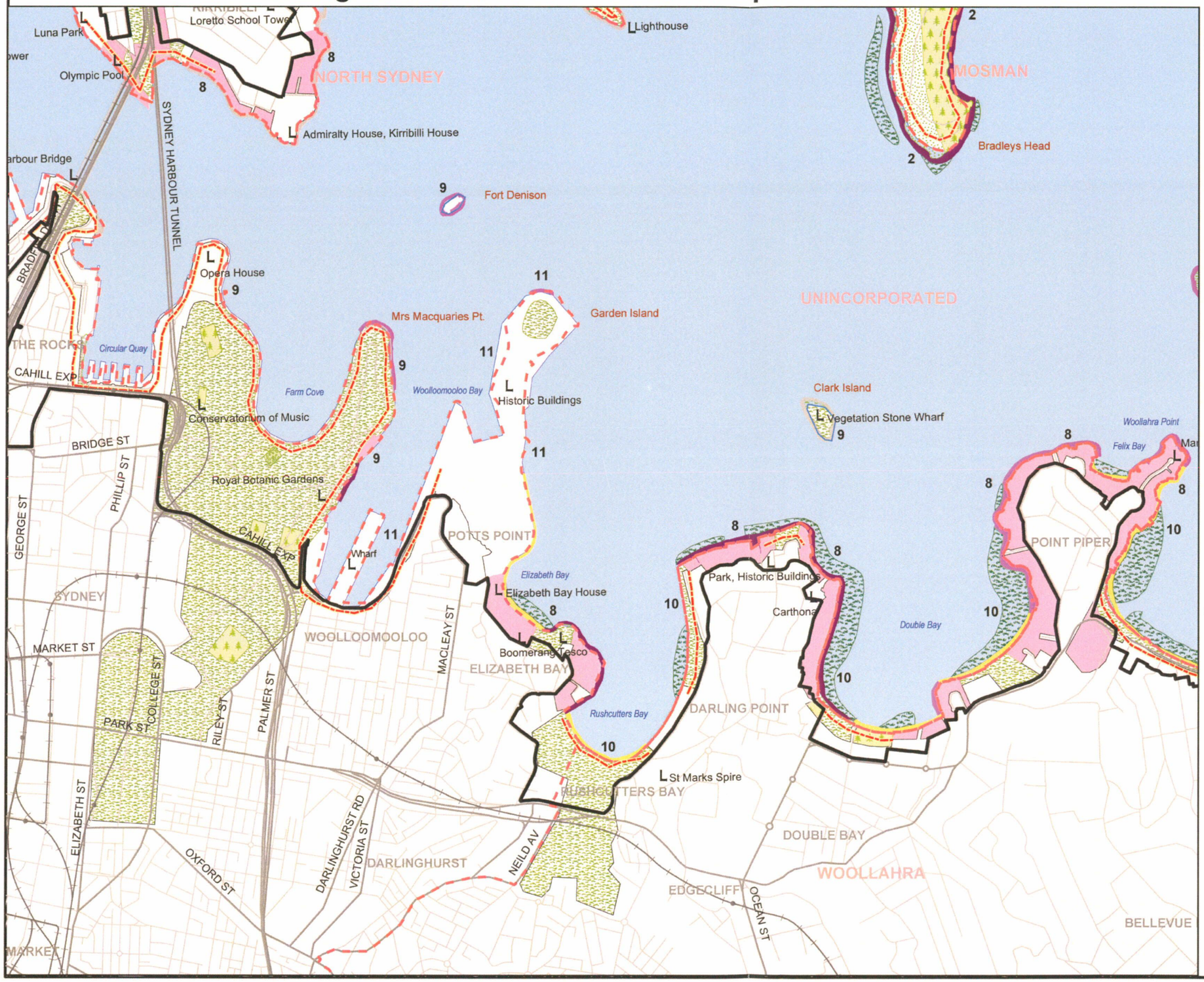
Map 10

Sydney Harbour - Foreshores and Waterways Area Development Control Plan: Ecological Communities and Landscape Characters

Map 11



Legend

- Foreshores & Waterways Area boundary

Terrestrial Ecological Communities

- Closed Forest/Gully
- Open Forest (Type A)
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- Heathland
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- Grassland
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Aquatic Ecological Communities

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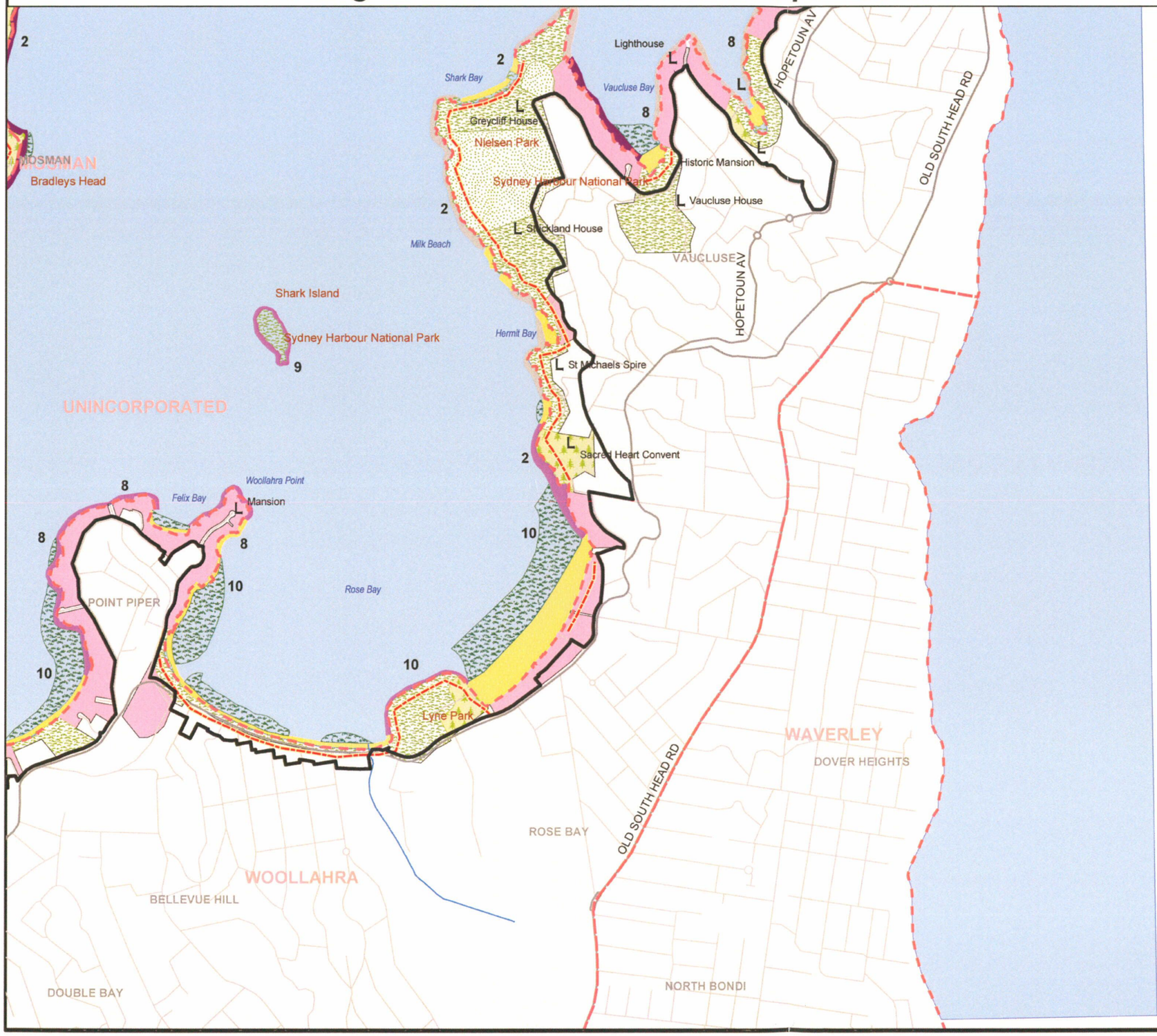
Map 11

Sydney Harbour - Foreshores and Waterways Area Development Control Plan: Ecological Communities and Landscape Characters

Map 12



Legend

- Foreshores & Waterways Area boundary

Terrestrial Ecological Communities

- Closed Forest/Gully
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Aquatic Ecological Communities

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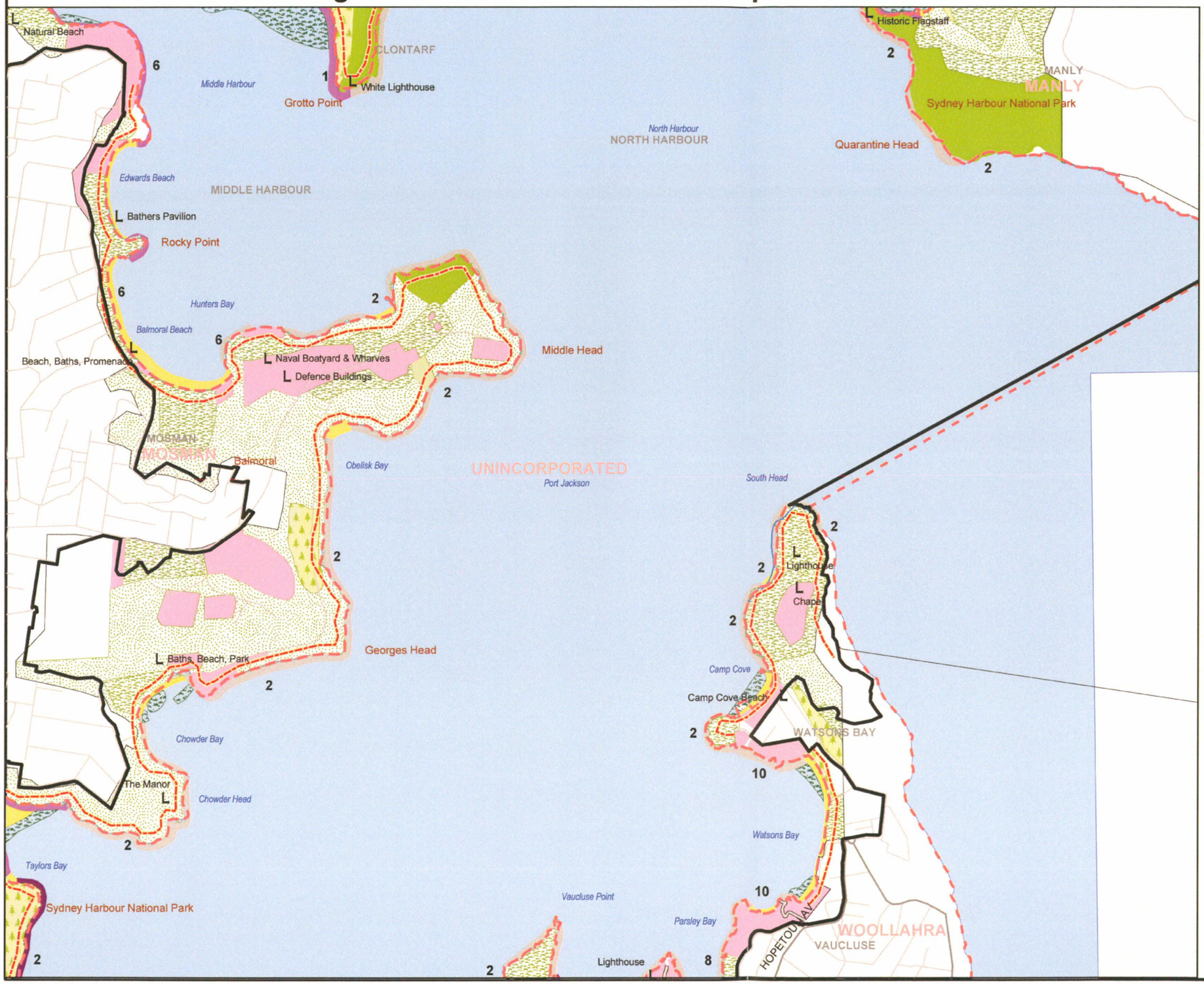
Map 12

Sydney Harbour - Foreshores and Waterways Area Development Control Plan: Ecological Communities and Landscape Characters

Map 13



Legend

- Foreshores & Waterways Area boundary

Terrestrial Ecological Communities

- Closed Forest/Gully
- Open Forest (Type A)
- Open Forest (Type B)
- Woodland
- Heathland
- Saltmarsh
- Grassland
- Urban Development with Scattered Trees

Aquatic Ecological Communities

- Rocky Platform
- Mixed Rocky Intertidal and Sand
- Mixed Rocky Intertidal and Rock Platform
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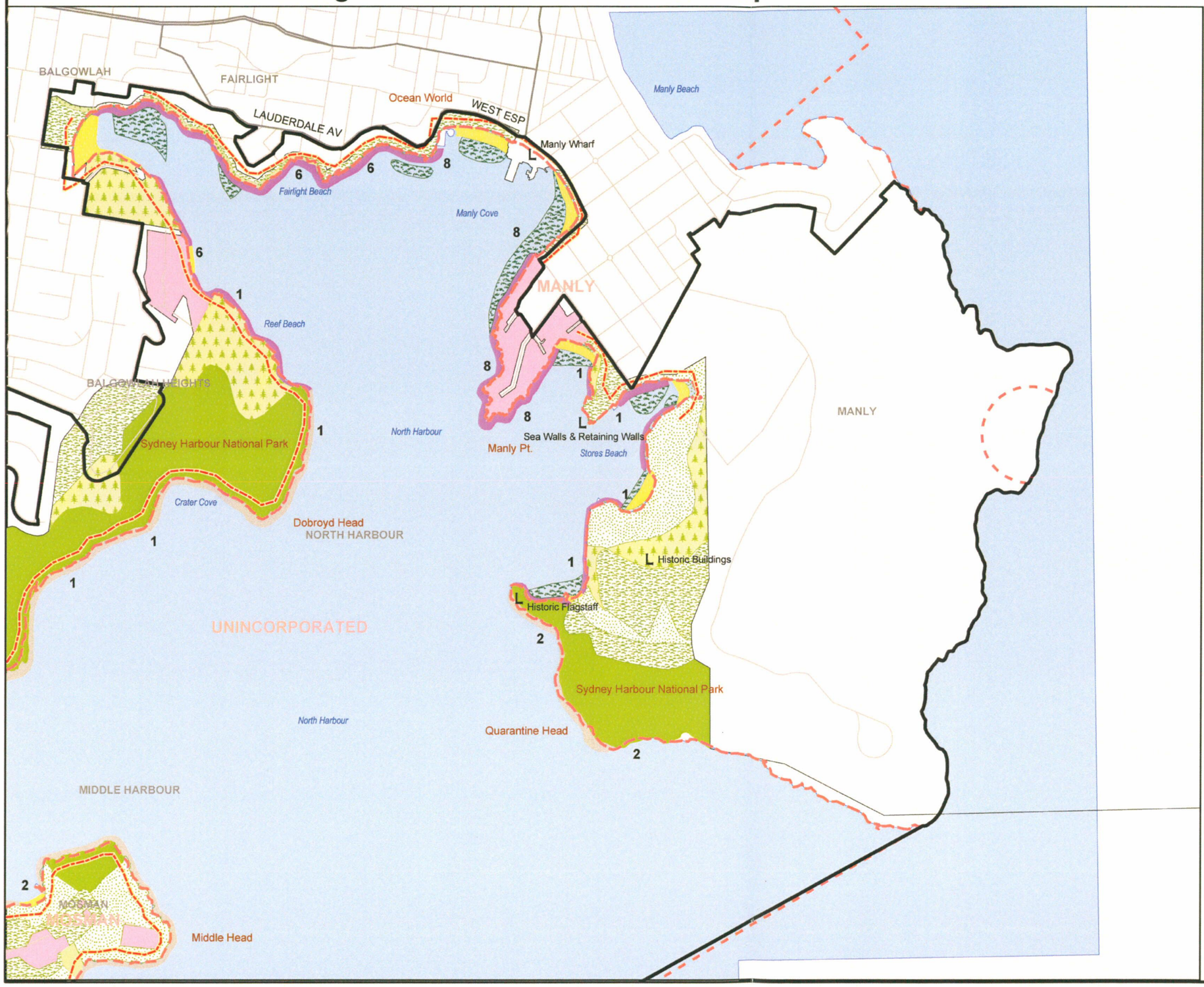
Map 13

Sydney Harbour - Foreshores and Waterways Area Development Control Plan: Ecological Communities and Landscape Characters

Map 14



Legend

- Foreshores & Waterways Area boundary

Terrestrial Ecological Communities

- Closed Forest/Gully
- Open Forest (Type A)
- Open Forest (Type B)
- Woodland
- Heathland
- Saltmarsh
- Grassland
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Aquatic Ecological Communities

- Rocky Platform
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- Mixed Rocky Intertidal and Rock Platform
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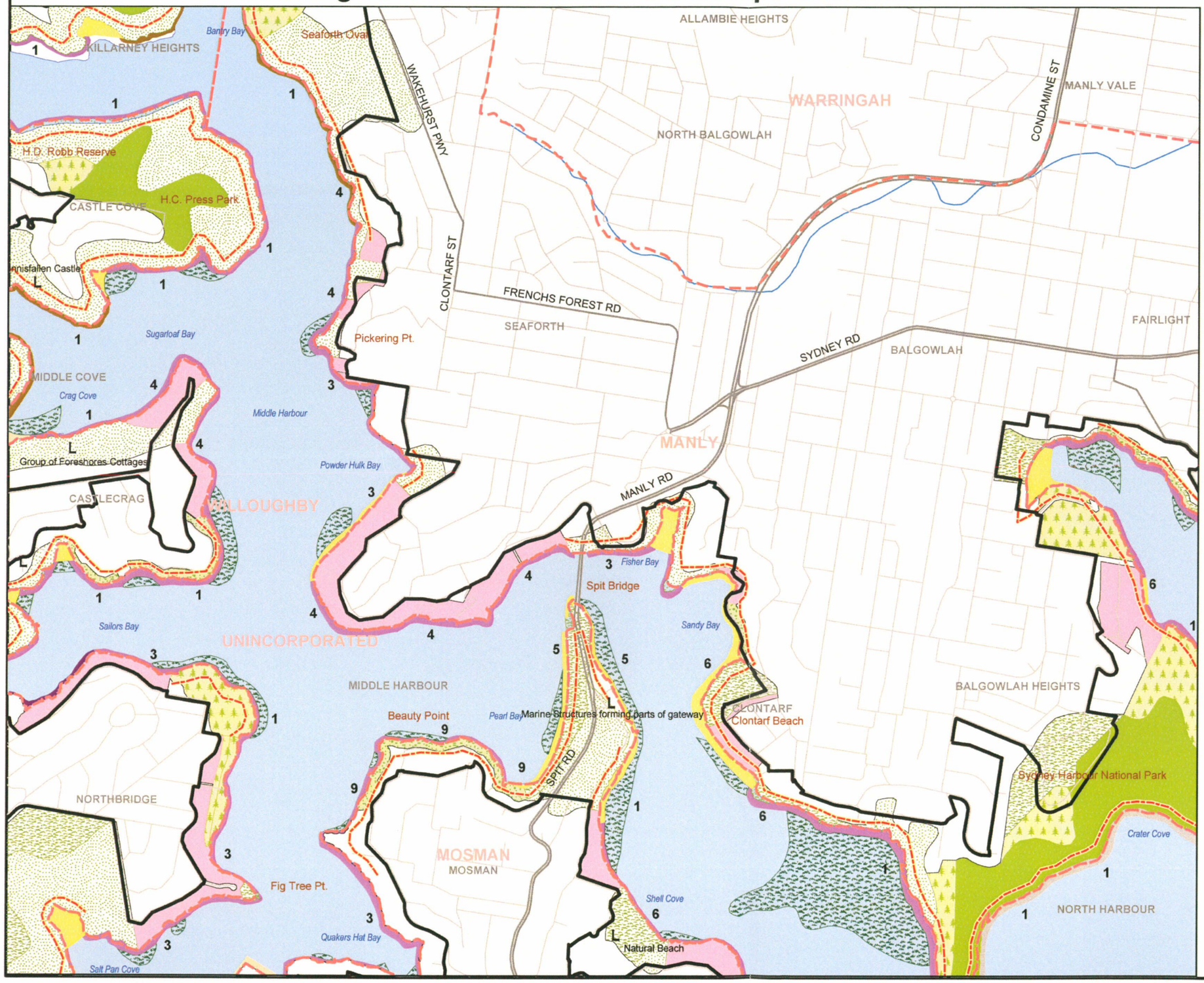
Map 14

Sydney Harbour - Foreshores and Waterways Area Development Control Plan: Ecological Communities and Landscape Characters

Map 15



Legend

- Foreshores & Waterways Area boundary

Terrestrial Ecological Communities

- Closed Forest/Gully
- Open Forest (Type A)
- Open Forest (Type B)
- Woodland
- Heathland
- Saltmarsh
- Grassland
- Urban Development with Scattered Trees

Aquatic Ecological Communities

- Rocky Platform
- Mixed Rocky Intertidal and Sand
- Mixed Rocky Intertidal and Rock Platform
- Sandy Beaches
- Mudflats
- Mudflats and Mangroves
- Mixed Rock Intertidal and Mudflats
- Seagrass Beds
- Area not mapped: Site Specific Investigations required

- 15 Landscape Character Type
- Railway Stations
- Railways
- Street Centreline
- L Landmark
- Highways and Main Roads
- Local Government Boundaries
- Existing & Future Pedestrian Access: Indicative Locations
- Water
- Rivers and Creeks

N

Scale 1:15000

0.5 0.25 0 0.5

Kilometres

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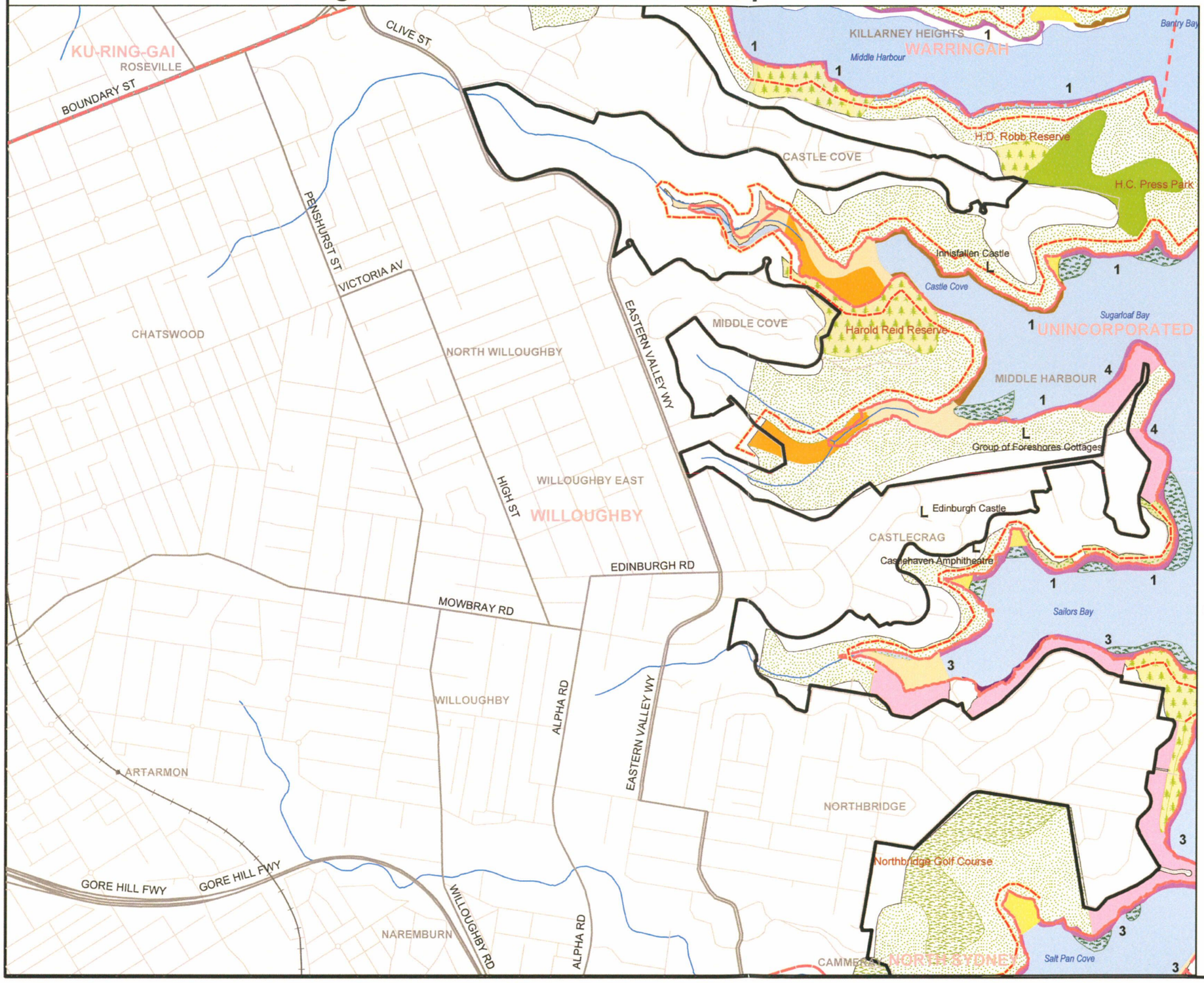
Map 15

Sydney Harbour - Foreshores and Waterways Area Development Control Plan: Ecological Communities and Landscape Characters

Map 16



Legend

- Foreshores & Waterways Area boundary

Terrestrial Ecological Communities

- Closed Forest/Gully
- Open Forest (Type A)
- Open Forest (Type B)
- Woodland
- Heathland
- Saltmarsh
- Grassland
- Urban Development with Scattered Trees

Aquatic Ecological Communities

- Rocky Platform
- Mixed Rocky Intertidal and Sand
- Mixed Rocky Intertidal and Rock Platform
- Sandy Beaches
- Mudflats
- Mudflats and Mangroves
- Mixed Rock Intertidal and Mudflats
- Seagrass Beds
- Area not mapped: Site Specific Investigations required

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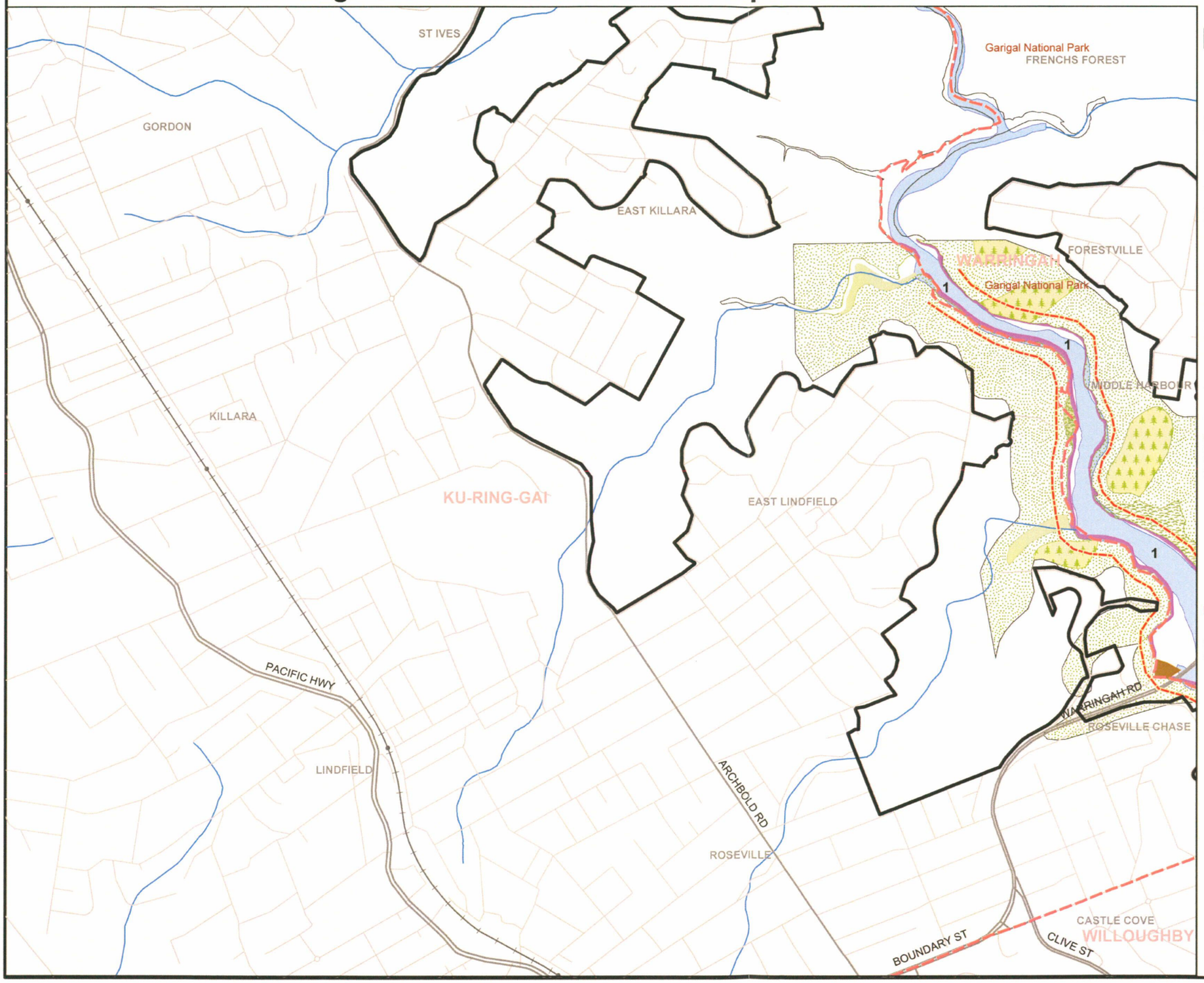
Map 16

Sydney Harbour - Foreshores and Waterways Area Development Control Plan: Ecological Communities and Landscape Characters

Map 17



Legend

- Foreshores & Waterways Area boundary

Terrestrial Ecological Communities

- Closed Forest/Gully
- Open Forest (Type A)
- Open Forest (Type B)
- Woodland
- Heathland
- Saltmarsh
- Grassland
- Urban Development with Scattered Trees

Aquatic Ecological Communities

- Rocky Platform
- Mixed Rocky Intertidal and Sand
- Mixed Rocky Intertidal and Rock Platform
- Sandy Beaches
- Mudflats
- Mudflats and Mangroves
- Mixed Rock Intertidal and Mudflats
- Seagrass Beds
- Area not mapped: Site Specific Investigations required

15 Landscape Character Type

- Railway Stations
- Railways
- Street Centreline

L Landmark

- Highways and Main Roads
- Local Government Boundaries
- Existing & Future Pedestrian Access: Indicative Locations
- Water
- Rivers and Creeks

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Map 17

Sydney Harbour - Foreshores and Waterways Area Development Control Plan: Ecological Communities and Landscape Characters

Map 18

DAVIDSON
Garigal National Park
FRENCHS FOREST
FOREST WY
WAKEHURST PWY
FORESTVILLE
Garigal National Park
WARRINGAH
EAST LINDFIELD
WARRINGAH RD
ALLAMBIE HEIGHTS
WAKEHURST PWY
Garigal National Park
KILLARNEY HEIGHTS
KU-RING-GAI
ROSEVILLE CHASE
MIDDLE HARBOUR
L
Historic Wharves & Buildings
Garigal National Park
ROSEVILLE
Garigal National Park
SEAFORTH
MANLY
CASTLE COVE
WILLOUGHBY
Seaforth Oval
NORTH BALGOWLAH
Bantry Bay

1

Legend

- Foreshores & Waterways Area boundary

Terrestrial Ecological Communities

- Closed Forest/Gully
- Open Forest (Type A)
- Open Forest (Type B)
- Woodland
- Heathland
- Saltmarsh
- Grassland
- Urban Development with Scattered Trees

Aquatic Ecological Communities

- Rocky Platform
- Mixed Rocky Intertidal and Sand
- Mixed Rocky Intertidal and Rock Platform
- Sandy Beaches
- Mudflats
- Mudflats and Mangroves
- Mixed Rock Intertidal and Mudflats
- Seagrass Beds
- Area not mapped: Site Specific Investigations required

- 15 Landscape Character Type
- Railway Stations
- Railways
- Street Centreline
- L Landmark
- Highways and Main Roads
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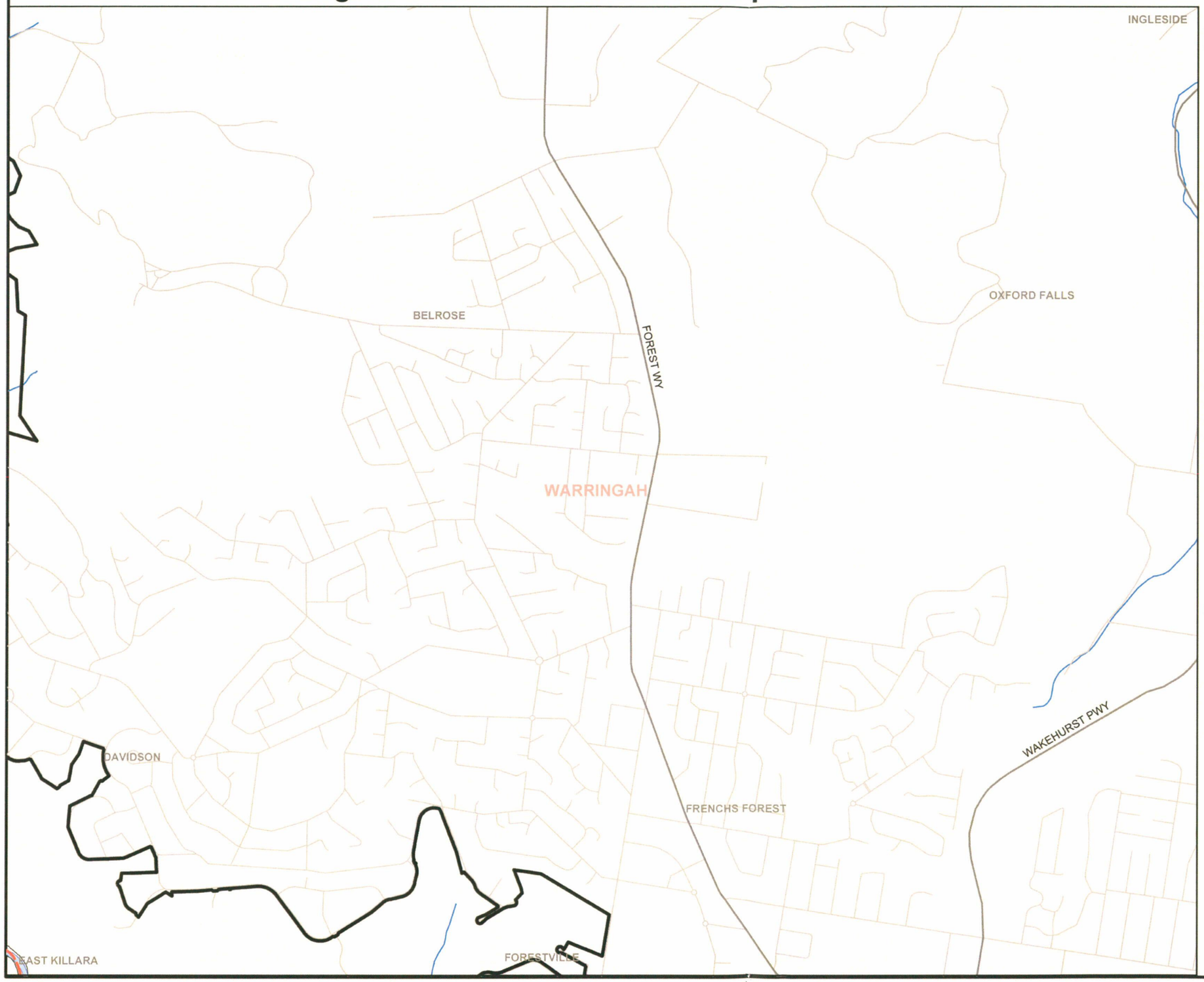
Map 18

Sydney Harbour - Foreshores and Waterways Area Development Control Plan: Ecological Communities and Landscape Characters

Map 19



Legend

- Foreshores & Waterways Area boundary

Terrestrial Ecological Communities

- Closed Forest/Gully
- Open Forest (Type A)
- Open Forest (Type B)
- Woodland
- Heathland
- Saltmarsh
- Grassland
- Urban Development with Scattered Trees

Aquatic Ecological Communities

- Rocky Platform
- Mixed Rocky Intertidal and Sand
- Mixed Rocky Intertidal and Rock Platform
- Sandy Beaches
- Mudflats
- Mudflats and Mangroves
- Mixed Rock Intertidal and Mudflats
- Seagrass Beds
- Area not mapped: Site Specific Investigations required

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- Railway Stations
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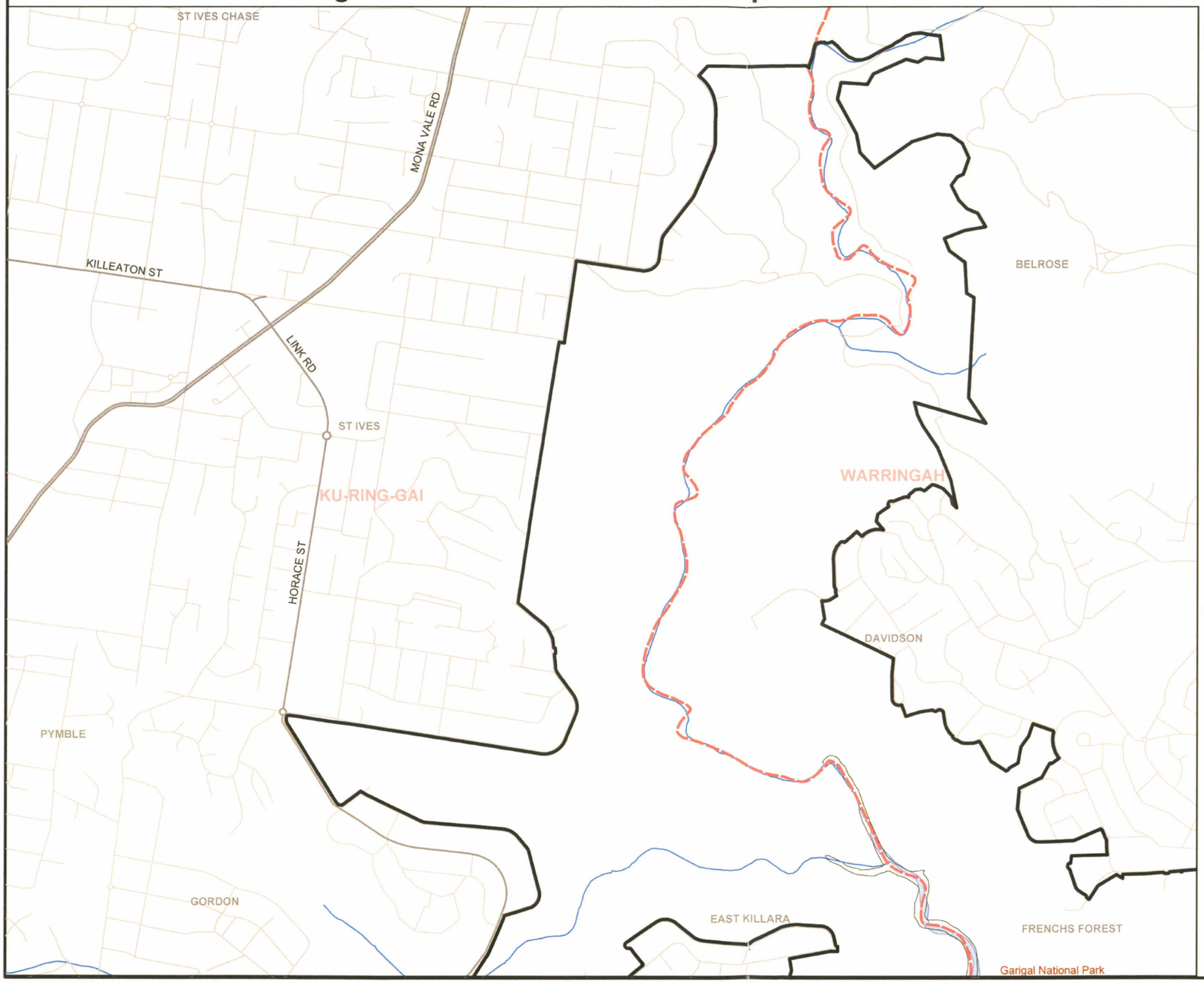
Map 19

Sydney Harbour - Foreshores and Waterways Area Development Control Plan: Ecological Communities and Landscape Characters

Map 20



Legend

- Foreshores & Waterways Area boundary

Terrestrial Ecological Communities

- Closed Forest/Gully
- Open Forest (Type A)
- Open Forest (Type B)
- Woodland
- Heathland
- Saltmarsh
- Grassland
- Urban Development with Scattered Trees

Aquatic Ecological Communities

- Rocky Platform
- Mixed Rocky Intertidal and Sand
- Mixed Rocky Intertidal and Rock Platform
- Sandy Beaches
- Mudflats
- Mudflats and Mangroves
- Mixed Rock Intertidal and Mudflats
- Seagrass Beds
- Area not mapped: Site Specific Investigations required

- 15 Landscape Character Type
- Railway Stations
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Map 20