

Declaration of critical habitat for the Endangered population of Little Penguins at Manly



Photo N. Klomp

(pursuant to s.44 of the *Threatened Species Conservation Act 1995*)

September 2002

(updated June 2003 following amendment to the
Threatened Species Conservation Regulation 2002)

© NSW National Parks and Wildlife Service, 2002.

This work is copyright. However, material printed in this recommendation may be copied for personal use or published for educational purposes, provided that any extracts are fully acknowledged. Apart from any use as permitted under the *Copyright Act 1968*, no part may be reproduced without prior written permission from NPWS.

NSW National Parks and Wildlife Service
43 Bridge Street
(PO Box 1967)
Hurstville NSW 2220
Tel: 02 9585 6444
www.npws.nsw.gov.au

For further information contact
Threatened Species Unit, Central Directorate
NSW National Parks and Wildlife Service
PO Box 1967
Hurstville NSW 2220

Tel (02) 9585 6678

This document should be cited as:

NSW National Parks and Wildlife Service (2002) *Declaration of Critical Habitat for the Endangered Population of Little Penguins (*Eudyptula minor*) at Manly-* (Pursuant to s.40 and 43 of the *Threatened Species Conservation Act 1995*). NSW NPWS, Hurstville, NSW.

ISBN: 07313 69130

Forward

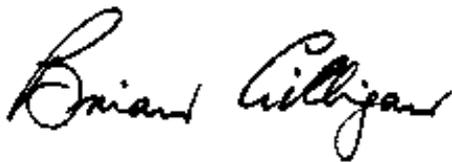
The conservation of threatened species, populations and ecological communities is crucial for the maintenance of this State's unique biodiversity. In NSW, the *Threatened Species Conservation (TSC) Act 1995* provides the framework to conserve and recover threatened species, populations and ecological communities.

The TSC Act includes provision for the identification and declaration by the Minister of habitat that is critical to the survival of endangered species, populations and ecological communities (that is, those species, populations and ecological communities listed in Schedule 1 of the Act as endangered). The TSC Act includes specific requirements concerning the habitat eligible to be declared to be critical habitat, the process for identification of critical habitat, and the matters to which the Minister must have regard when considering a recommendation for critical habitat. This report satisfies these provisions.

The Little Penguin (*Eudyptula minor*) colony at North Sydney Harbour is the only known breeding colony on mainland NSW. On 31 January 1997, the NSW Scientific Committee made a final determination to list this colony as an Endangered Population on Schedule 1 of the *Threatened Species Conservation (TSC) Act 1995*. In the 2001/02 breeding season there were only 75 breeding pairs of Little Penguins recorded.

This report describes our current understanding of the Little Penguin population, documents the critical significance of the areas around Manly Point and from Collins Beach to Cannae Point for the survival of the colony, and includes an assessment of the social and economic consequences of this declaration of critical habitat.

This critical habitat declaration will make a significant contribution to the conservation and recovery of the Little Penguin colony at Manly and its habitat.



Brian Gilligan
Director-General



Bob Debus
Minister for the Environment

TABLE OF CONTENTS

FORWARD	I
1 INTRODUCTION	1
2 LEGISLATIVE CONTEXT	1
2.1 THE PROCESS OF MAKING A DECLARATION	2
2.2 CONSULTATION PROCESS	2
3 SUBJECT AREA OF CRITICAL HABITAT DECLARATION	3
4 SOCIAL AND ECONOMIC CONSEQUENCES OF THE DECLARATION OF CRITICAL HABITAT	6
4.1 LEGISLATIVE AND ADMINISTRATIVE CONSEQUENCES OF DECLARING CRITICAL HABITAT	6
4.2 SOCIAL CONSEQUENCES	9
4.3 ECONOMIC CONSEQUENCES	9
5 VALUE OF DECLARATION TO THE CONSERVATION OF THE SPECIES	9
6 PREPARATION DETAILS	10
7 REFERENCES	11
APPENDIX 1: SUMMARY OF SPECIES ECOLOGY, DISTRIBUTION AND MANAGEMENT ISSUES	12
DESCRIPTION	12
DISTRIBUTION	12
HABITAT	12
ECOLOGY	12
THREATS	13
HABITAT LOSS	13
DISTURBANCE	13
PREDATION	14
APPENDIX 2: SUMMARY OF THE MAIN STATUTORY IMPLICATIONS OF CRITICAL HABITAT IDENTIFICATION AND DECLARATION	15
APPENDIX 3: PROPOSED SIGNAGE	17

1 Introduction

The Little Penguin (*Eudyptula minor*) colony at North Sydney Harbour is the only known breeding colony on mainland NSW. On 31 January 1997, the NSW Scientific Committee made a final determination to list this colony as an Endangered Population on Schedule 1 of the Threatened Species Conservation (TSC) Act 1995.

The penguins nest in rock falls and rocky shorelines on both reserved and unreserved land around Manly Point and in Sydney Harbour National Park. Threats to the population include predation by dogs, cats and foxes, loss of suitable breeding habitat and disturbance around nest sites. In the 2001/02 breeding season there were 75 breeding pairs of Little Penguins recorded.

A recovery plan has been prepared for this population and was approved in October 2000 (NPWS 2000). Action 15.3.3 of the Recovery Plan states that the NPWS will “*investigate the feasibility of declaring critical habitat for the population*”. During the development of the areas identified as critical habitat, several options were considered and discussed (Recommendation for the Identification of Little Penguin critical Habitat for the Endangered Population of Little Penguins at Manly, NPWS April 2002a). The public exhibition of these options and the subsequent consultation process raised a number of issues that have been considered in the final identification of critical habitat.

The recommendation for critical habitat has been prepared in accordance with Section 43 of the TSC Act and has been publicly notified and exhibited in accordance with Section 41 of the Act. This document should be read in conjunction with the Threatened Species Conservation Regulation 2002 and its regulatory impact statement (Hassall Pty Ltd 2002) A summary of the ecology and management issues relevant to Little Penguins at Manly is provided in Appendix 1 and the Recovery Plan (NPWS 2000).

The declaration of critical habitat provides for the ongoing recovery of the Little Penguin population and allows for targeted regulation of activities that continue to threaten its conservation.

2 Legislative Context

The declaration of critical habitat serves primarily as a guide for planning under Part 3 of the *Environmental Planning and Assessment Act 1979* (the EP&A Act) and as a trigger which ensures a rigorous assessment of all activities and development proposals (sensu the EP&A Act), and any other action that has the potential to damage critical habitat.

The implications of the declaration of an area as critical habitat under NSW legislation are summarised in Appendix 2 and specified in Section 4 of this report for those Public Authorities affected by this declaration.

It is important to note that the declaration of critical habitat does not necessarily prohibit activities in declared areas. The TSC Act, however, does authorise the making of regulations that may prohibit or regulate certain actions on declared critical habitat. The types of actions that are subject to regulations are identified in Section 3 of this report.

2.1 The process of making a declaration

This recommendation for the declaration of critical habitat has been prepared in accordance with Sections 42 and 43 of the TSC Act. This involved a public exhibition, consultation and submission period (Section 2.2) which raised issues to be considered in the finalisation of the critical habitat recommendation and associated regulations.

Sections 43-48 of the TSC Act describe the manner in which the recommendation is forwarded to the Minister for the Environment and the process by which the Minister considers the recommendation to declare the area as critical habitat.

2.2 Consultation process

In preparing this report the NPWS has undertaken a series of formal and informal consultations on behalf of the Director-General.

In 1998 a Little Penguin Recovery Team was established. The identification of critical habitat was discussed at Recovery Team Meetings 6, 7 and 8 on 23 October 2000, 11 July 2001 and 25 September 2001 respectively. The team consists of experts, government and agency representatives and a community representative from the Manly Environment Centre.

The NPWS wrote to the Scientific Committee on 16 September 2001 in accordance with s.39(1) of the TSC Act regarding the identification of critical habitat. A response was received on 3 December 2001 raising the following points which were considered in the preparation of this recommendation:

- Areas identified as critical habitat should consider resources used by the population within a catchment context, not just the area that the population occupies
- The importance of adjacent habitat to areas occupied by endangered populations

The NPWS prepared a recommendation for the identification of critical habitat, (including draft regulations and Regulatory Impact Statement), which was placed on public exhibition from 19 April to 14 June 2002, in accordance with Section 41 of the TSC Act.

As part of the consultation process, the NPWS held a number of public meetings including, a public workshop on 14 May 2002 (55 participants) and two meetings for affected property owners on 30 April 2002 (6 participants) and 22 May 2002 (12 participants). The NPWS has also consulted with the Metropolitan and Districts Professional Fisherman's Association, the Friends of Quarantine Station, the Waterways Authority Policy and Advisory Group and the Anglers Action Group.

A total of 105 submissions, including that of the Scientific Committee, were made in response to the public exhibition. Of the 105 parties sending submissions, 77 (73%) supported the recommendation for delineation of critical habitat to protect the Manly Little Penguin population. A total of 23 (22%) respondents opposed the recommendation. Five submissions (5%) took an overall neutral or non-committal stance. Further details can be found in the Little Penguin critical habitat Submission Report (NPWS 2002b).

3 Subject area of critical habitat declaration

Figure 1 shows the critical habitat for the endangered population of Little Penguins at Manly. The area has been identified based upon the biological requirements of the population and the potential impacts of known and/or suspected threats. This area has taken into account many comments raised throughout the public exhibition and consultation period. The Little Penguin critical habitat Submission Summery Report (NPWS 2002b) details the issues raised during the submission period and the NPWS response to these issues. The exhibited critical habitat recommendation (NPWS 2002a) also describes options considered in the process.

The declared critical habitat area includes known nesting burrows, possible foraging habitat (seagrass beds within Spring Cove) and identifies potential nesting areas (Dobroyd Head, Cannae Point, and parts of Little Manly Point). Critical habitat Area A starts from the eastern side of Little Manly Point and includes Collins, Store and Quarantine Beaches to the northern side of Cannae Point. Area B starts from the foreshore area at 11A Oyama Avenue, winds around Manly Point to 26 Addison Road. Potential habitat has been identified on Dobroyd Head, the southern side Cannae Point and the east and west sides of Little Manly Point.

Terrestrial areas of critical habitat include known and potential rocky foreshore nesting areas, typically situated in the first 50m from the water. In Area A, the terrestrial critical habitat boundary in Sydney Harbour National Park includes ridgetop habitat where penguins currently nest and areas of other potential 'ridgetop' nesting habitat. In Area B, the land side of the critical habitat boundary includes the area from the mean high watermark, up the rocky foreshore slope to the beginning of the 'ridgetop' in residential areas (ie the rocky foreshore upslope to the boundary of the backyard is included as critical habitat, but the backyard and residential area is not included, Figure 1).

The critical habitat includes aquatic areas (extending 50m out from the mean high water (MHW) mark) to facilitate un-restricted access for penguins to current and potential nesting areas. Parts of this zone include seagrass areas which are likely to be important foraging areas, especially during the rearing of chicks when Little Penguins are known to forage closer to nesting areas (Dan and Cullen 1989).

It is considered that the protection and maintenance of these areas in North Harbour, as identified above and in Figure 1 are essential to the population's survival and therefore constitutes critical habitat for this population. The threats outlined in Appendix 1 of this report continue to threaten the quality of the habitat features essential to the population and the declaration of these features as critical habitat should facilitate the continuing management and mitigation of these threats.

In accordance with Section 51 of the TSC Act 1995 the following regulations have been made to accompany this critical habitat declaration (Threatened Species Conservation Regulation 2002).

Area A regulations:

Regulations to prohibit activities

- No anchoring or mooring a vessel in such a way that it is within critical habitat Zone A (50m out from the MHW mark) during the Little Penguin breeding season (July 1 to 28 Feb.).

- No watercraft access (other than a non-motorised tender) in critical habitat Area A between sunset and sunrise during the Little Penguin breeding season (July 1 to 28 Feb.).
- No Companion Animals (except for Assistance animals) in critical habitat.
- No Fishing in critical habitat between sunset and sunrise during the Little Penguin breeding season (July 1 to 28 Feb.).
- No tampering with or damaging Little Penguin nest boxes, nesting burrows, moulting penguins or approaching within 5m of a Little Penguin on land.

Area B regulations

- No Companion Animals (except for Assistance animals) in critical habitat (residential backyards excluded).
- No Fishing in critical habitat between sunset and sunrise during the Little Penguin breeding season (July 1 to 28 Feb.).
- No tampering with or damaging Little Penguin nest boxes, nesting burrows, moulting penguins or approaching within 5m of a Little Penguin on land

There are no regulations that apply to potential habitat areas.

Signage to designate Critical Habitat

Signs have been placed at all access points around the declared critical habitat (Manly Point, Collins Beach, Store Beach, Quarantine Beach and Cannae Point) and foreshore access points (Oyama, Addison, Collins Beach)(Appendix 3a and b & c).

Buoy markers will be installed on the aquatic boundary during each breeding season (1 July to 28 Feb inclusive). These buoys will be removed outside of each breeding season.

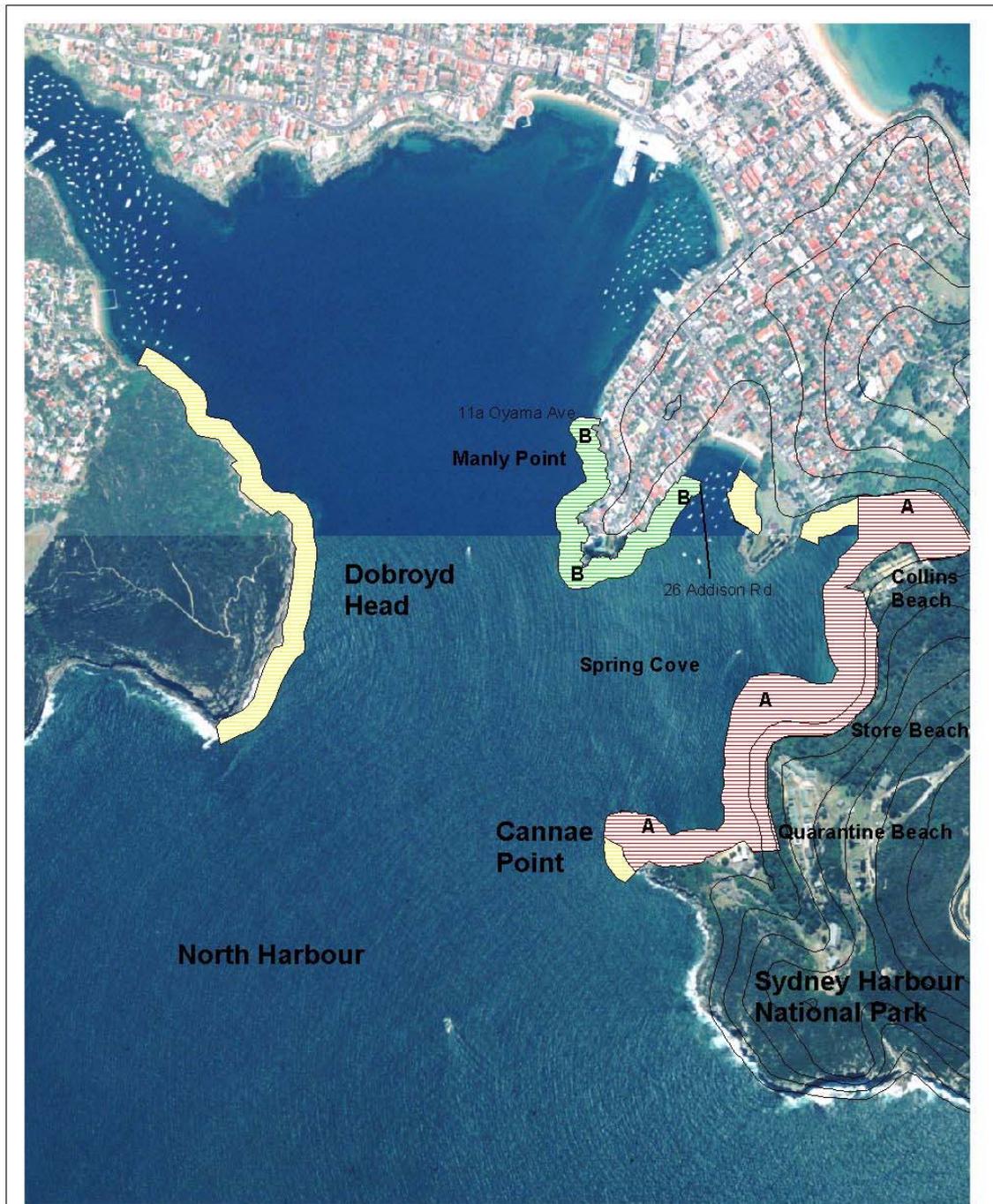


Figure 1 Little Penguin Critical Habitat Map

Critical Habitat Area A

Area A starts west of Collins Beach to the northern side of Cannae Point and includes Collins, Store and Quarantine Beaches. It includes an aquatic area out to 50m from the mean high watermark and a terrestrial area from the mean high watermark, up the rocky foreshore slope and includes ridge top habitat.

Critical Habitat Area B

Area B starts from the foreshore area at 11a Oyama Avenue, winds around Manly Point to 26 Addison Road. It includes an aquatic area out to 50m from the mean high watermark and a terrestrial area from the mean high watermark, up the rocky foreshore slope to the beginning of the ridge top. It does not include formed backyard areas.

Potential Habitat Areas

Dobroyd Head, Little Manly Point & Cannae Point



0 90 180 Metres

Copyright © NSW National Parks and Wildlife Service August 2002
 This map is not guaranteed to be free from error or omission.
 The NSW National Parks and Wildlife Service and its employees
 disclaim liability for any actions on the information in the
 map and any consequences of such actions or omissions.

23 August 2002
www.nsw.gov.au/npws/npws.html

4 Social and Economic Consequences of the Declaration of Critical Habitat

The TSC Act (Section 40(2)) specifies that the Director-General of National Parks and Wildlife must consider the likely social and economic consequences of making a recommendation for declaration of critical habitat by the Minister for the Environment.

In addition, Section 44(1)(a) specifies that the Minister must have regard to the likely social and economic consequences of a declaration of critical habitat and, further, the likely consequences for landholders of, or other persons having an interest in, or on lawful uses of, the land (s44(1)(b)). The Minister must also consider whether, consistent with the principles of ecologically sustainable development, the recommendation might be amended to avoid or lessen any adverse consequences of the making of a declaration of critical habitat.

The Director-General and the Minister must therefore be able to demonstrate that they have attempted to identify and consider all relevant economic and social consequences of the declaration of critical habitat. The first stage is to identify the issues, and secondly to consider the likely social and economic consequences of these issues. Finally, for those consequences determined to be significant and adverse, the Director-General must consider if there are ways to minimise these consequences.

To assist this process, all the legislative and administrative issues associated with the declaration of critical habitat have been identified within this document. For each issue the likely social and economic consequences have been identified as they relate to the declaration of critical habitat for the endangered population of Little Penguins.

4.1 Legislative and administrative consequences of declaring critical habitat

Local Environmental Plan, Regional Environmental Plan or State Environmental Planning Policy.

If land declared as critical habitat is land to which a Local Environmental Plan, Regional Environmental Plan or State Environmental Planning Policy applies, the plan must be amended by the relevant Council, and the Department of Urban Affairs and Planning in a manner that identifies the land that is declared as critical habitat.

Manly Council will be required to amend their Local Environmental Plan. PlanningNSW will be required to amend Sydney Regional Environmental Plan 23- Sydney and Middle Harbours and its Development Control Plans (22 & 23, and SEPP 56 (Sydney Harbour Foreshores and Tributaries).

Developments or activities requiring consent or approval under the Environmental Planning and Assessment Act 1979.

Developments or activities which require consent or approval under the EP&A Act which are proposed on land that is, or is part of, critical habitat, automatically require the preparation of a

species impact statement (SIS) and the concurrence of the Director-General of National Parks and Wildlife or in some cases, consultation with the Minister for the Environment.

It should be noted that the standard assessment processes under Part 4 & 5 of the EP&A Act (where an area is not declared as critical habitat) require a SIS and the concurrence of the D-G or the Minister of the Environment if a development or activity is likely to have a significant impact on an endangered species, population, or ecological community. It should also be noted that, according to s111(4) of the TSC Act, despite anything in the TSC Act or the EP&A Act (including critical habitat) the Director-General may, having regard to the circumstances of a particular case, dispense with the requirements for a SIS in the particular case if the Director-General is satisfied that the impact of the activity concerned will be trivial or negligible.

An economic consequence, which would be borne by the proponent of a proposed development or activity would be the cost and time associated with the preparation and processing of a SIS for any proposed development or activity on the site (where the impact is not trivial or negligible). This cost would vary depending on the nature of the particular development

Consent or determining authority

When a consent or determining authority is deciding whether a proposed development or activity is likely to have a significant effect on threatened species, populations or ecological communities or their habitats, it must consider whether critical habitat will be affected by the proposal. Manly Council, NSW Fisheries, the Waterways Authority and the NPWS are the consent and determining authorities for developments or activities proposed on the critical habitat.

Register of critical habitat

All consent authorities must have regard to the register of critical habitat kept by the Director-General when exercising their functions under the EP&A Act.

This register will be maintained by the NPWS Head Office and will include printed and electronic copies of critical habitat assessment reports, declarations, maps of critical habitat and other relevant material. A list of areas declared as critical habitat will be maintained on the NPWS internet website.

Section 91 Licence

A SIS must be submitted with the licence application for actions which require licensing under section 91 of the TSC Act, and which are proposed for land that is, or is part of, critical habitat. It should be noted that the standard assessment processes under section 91 of the TSC Act (where an area is not declared as critical habitat) require a SIS if an action is likely to have a significant impact on an endangered species, population, or ecological community. It should also be noted that, according to s111(4) of the TSC Act, despite anything in the TSC Act or the EP&A Act (including critical habitat) the Director-General may, having regard to the circumstances of a particular case, dispense with the requirements for a SIS in the particular case if the Director-General is satisfied that the impact of the activity concerned will be trivial or negligible.

The NPWS will undertake scientific research and management within the area identified as critical habitat, but these actions will only be undertaken if there is likely to be no adverse impacts on the critical habitat.

Public authorities

Public authorities must have regard to critical habitat if the land it owns or controls contains critical habitat. The public authority must also have regard to critical habitat when exercising its functions in relation to the land.

The relevant public authorities in relation to this declaration are the NPWS, Manly Council and the Waterways Authority.

Regulations

Regulations may be made to prohibit or regulate the carrying out of specified actions on specified critical habitat.

A regulation has been prepared to accompany this critical habitat declaration and a Regulatory Impact Statement (RIS) (Hassall Pty Ltd 2002) has also been prepared. The RIS provides a full analysis of the economic impacts of the declaration and proposed regulations to landowners and commercial private users of the area.

Restoration of critical habitat

Section 118E of the NPW Act specifies that the Court may order the offender to restore critical habitat or habitat of endangered species, populations or ecological communities. There is no additional economic consequence for any individual/s who are ordered to restore critical habitat, as restoration of habitat can currently be ordered where any individual/s damages the habitat of endangered species, populations, or ecological communities.

Damage to critical habitat

Section 118C (1) of the NPW Act states that “a person must not, by an act or an omission, do anything that causes damage to any critical habitat”. In respect to damaging critical habitat without a defence to a prosecution, the penalty is 2000 penalty units (\$220,000) or two years imprisonment or both. Section 118D (1) of the NPW Act states that “a person must not, by an act or an omission, do anything that causes damage to any habitat (other than a critical habitat) of a threatened species, population or ecological community if the person knows that the land concerned is habitat of that kind”. In respect to damaging habitat of a threatened species, population or ecological community without a defence to a prosecution, the penalty is 1000 penalty units (\$110,000) or one year imprisonment or both for damage to the habitat of a threatened species. The economic consequence of declaring critical habitat in this regard is to increase the penalty from 1000 penalty units (\$110,000) or one year imprisonment or both to 2000 penalty units (\$220,000) or two years imprisonment or both.

4.2 Social consequences

The main social impacts of this declaration will effect the local residential community and recreational users around Manly and North Harbour. The RIS (Hassall Pty Ltd 2002) contains further details on the social and economic impacts of the critical habitat declaration.

Negative social impacts may include public dissatisfaction with regulations which limit previously unregulated activities such as foreshore access, boat anchoring near penguin nesting sites and the exercising of domestic dogs (The public foreshore of critical habitat Area B is also an area nominated by Manly Council to be a Wildlife Protection Area excluding dogs and cats under the Companion Animals Act).

Public consultation with local user groups has shown a high level of reluctance by the groups to accept regulations or restrictions without strong scientific evidence of current impacts. There is a strong sense that the Spring Cove area is a “blue” park and any further restriction on uses in the area would not be favourably received.

4.3 Economic consequences

The main economic consequence for the NPWS is the resourcing of the implementation and enforcement of the critical habitat declaration and associated regulations. The enforcement of the regulations has been estimated to cost the NPWS up to \$50,000 per year in salaries and up to \$65,160 in capital costs. The installation of marker buoys in Spring Cove will cost approximately \$17,000. Ongoing maintenance of the buoys will cost \$5,000 per year, NPWS boat operation will cost \$28,160. Appropriate signage and education material will cost approximately \$15,000.

The RIS (Hassall Pty Ltd 2002) provides further detail on the economic implications to boating and fishing activities in Spring Cove and residential property values at Manly Point.

5 Value of declaration to the conservation of the species

The declaration of critical habitat for the endangered population of Little Penguins at Manly is considered to be justified for the following reasons:

1. The population is extremely small and is unlikely to survive in the long-term if threats continue,
2. The population occurs in a region which is under continual development and recreational pressure and adequate environmental assessment is essential for the population’s survival,
3. Threats such as disturbance around nest sites and predation by both companion animals and feral pests continue to impact on the population; and
4. Whilst the declaration of critical habitat for an endangered population does not afford direct additional protection or ensure appropriate ecological management, it does ensure that the possible effects of any development proposals are carefully considered, both for areas currently occupied and those areas of suitable habitat where the objective of the recovery plan proposes to increase the population through the establishment of nesting habitat in more secure areas like Sydney Harbour National Park.

While this report has been drafted to utilise, as much as possible, existing regulations (Current NSW Waterways Authority anchoring restriction in Spring Cove, proposed Manly Council Wildlife Protection Areas) additional regulations, as outlined in Section 3, will be needed to effectively implement this recommendation. It should be noted that the areas identified by the declaration and the associated regulations are likely to have social and economic impacts on users and economic impacts for agencies implementing and enforcing the regulations, as presented in Section 4 and the RIS (Hassall Pty Ltd 2002).

The declaration of critical habitat ensures the assessment of both on-site and off-site activities likely to have an adverse impact on the area critical to the survival of the population, whilst at the same time minimising unnecessary assessment.

6 Preparation Details

This report was prepared by Phil Glass and Robert Humphries, Threatened Species Unit, Central Directorate.

7 References

- Cunningham, M., Gibbs, P., Rogers, T., Spielman, D. and Walraven, E. (1993) *Ecology and Health of the Little Penguin *Eudyptula minor* near Sydney*. A report prepared for Sydney Water Corporation.
- Dann, P. and Cullen, J.M. (1989) The maximum swimming speed and theoretical foraging range of breeding Little Penguins *Eudyptula minor* on Phillip Island, Victoria. *Corella* **13**: 34-37.
- Hassall & Associates Pty Ltd (2002) Regulatory Impact Statement: Threatened Species Conservation Regulation 2002. A report prepared for the NSW Government & National Parks and Wildlife Service. Hassall & Associates, Phillip Street, Sydney NSW.
- Hobday, D. K. (1992) Abundance and distribution of Pilchard and Australian Anchovy as prey species for the Little Penguin *Eudyptula minor* at Phillip Island, Victoria. *Emu* **92** : 342-345.
- Klomp, N.I. and Wooller, R.D. (1988) The diet of the Little Penguins *Eudyptula minor* from Penguin Island, Western Australia. *Australian Journal of Marine and Freshwater Research* **39** (5): 633-639.
- Klomp, N.I. and Wooller, R.D. (1991) Patterns of arrival and departure by breeding Little Penguins at Penguin Island, Western Australia. *Emu***91**: (1): 32-35.
- Lindsey, T.R. (1986) *The Seabirds of Australia*. Angus and Robertson, North Ryde.
- Little Penguin Steering Committee (1996) *Management Plan - Little Penguins - North Sydney Harbour, Sydney*. Unpublished report.
- Margus, K (1985) Ecology of Fairy Penguins *Eudyptula minor* in South Eastern Australia. Unpublished report prepared for NSW NPWS.
- Marine Pollution Research Pty Ltd. (2000) Seagrass & Kelp Monitoring Spring Cove, North Harbour. 2000 Monitoring Results.
- NPWS (2000) Endangered Population of Little Penguins *Eudyptula minor* at Manly, Recovery Plan NSW NPWS, Hurstville, NSW.
- NPWS (2002a) Recommendation for the Identification of critical habitat for the Endangered Population of Little Penguins (*Eudyptula minor*) at Manly- A recommendation report prepared for public exhibition pursuant to Part 3 of the Threatened Species Conservation Act 1995. NSW NPWS, Hurstville, NSW.
- NPWS (2002b). Little Penguin critical habitat Submission Summary report. Unpublished report. NSW NPWS, Hurstville, NSW.
- NSW Scientific Committee (2000) Final determination to list the Population of Little Penguins of the Manly Point area, as an endangered population on Part 2 of Schedule 1 of the *Threatened Species Conservation Act* 1995.
- Reilly, P.N. and Cullen, J.M. (1982) The Little Penguin *Eudyptula minor* in Victoria III Dispersal of chicks and survival after banding. *Emu***82**: 137-142.
- Robertson, J.S. (1955) Stray Feathers: An unusual visitor to Moreton Bay. *Emu***55**: 72.
- Serventy D.L., Serventy V., Warham, J. (1971) *The handbook of Australian Seabirds*. AH and AW Reed, Sydney.
- Sparrow, R.D. and Wight, H.M. (1975). *Setting priorities for the Endangered Species Program*. Fortieth North American Wildlife Conference, pp. 143-56.

Stahel, C. and Gales, R. (1987) *Little Penguin – Fairy Penguins in Australia*. UNSW Press, Kensington.

Threatened Species Conservation Regulation 2002, *Threatened Species Conservation Act 1995*.

Appendix 1: Summary of Species Ecology, Distribution and Management Issues

Description

The Little Penguin is the smallest penguin species generally weighing 1000–1200 grams (Klomp and Wooller 1988), and stands about 30cm (Stahel and Gales 1987). The upper body is slate blue and white, the bill is black, the feet are pale with black soles, and the eye is silvery grey. The male is generally larger than the female, and juveniles are similar to adults, although smaller (Serventy *et al.* 1971; Margus 1985; Lindsey 1986).

Only one species of penguin is recognised under the genus *Eudyptula*. Previously two species, the Little Penguin (*Eudyptula minor*) and the Fairy Penguin (*Eudyptula undina*), were recognised (Stahel and Gales 1987) and both common names are still widely used. The conventional common name used in biological literature is the Little Penguin (*Eudyptula minor*).

Distribution

Little Penguins are only found in Australia and New Zealand. It is the only penguin species occurring on mainland Australia (Stahel and Gales 1987). The Little Penguin population at Manly is believed to have occupied the site since the 1950s. Historical evidence suggests that the number of penguins in North Sydney Harbour was once much greater, possibly in the hundreds. The historical decrease in the size of the Manly population is part of a wider decline of Little Penguins in the Sydney area attributed to loss of habitat, predation, disturbance and indirect impacts to food supplies (Cunnigham *et al.* 1993). This population is the only known mainland breeding colony in NSW and currently contains 75 breeding pairs (2001/02 breeding season).

Habitat

At Manly a range of nest types are utilised by Little Penguins including under rocks on the foreshore, rock falls under seaside houses and garages, and sites under stairs, in wood piles and under overhanging vegetation. Potential habitat for the population of Little Penguins at Manly occurs on the foreshores between Stuart Street and Cannae Point in North Harbour (NSW Scientific Committee 2000). More detailed information regarding habitat requirements can be found in the Recovery Plan for the Endangered Population of Little Penguins at Manly (NPWS 2000).

Ecology

Little Penguins at Manly generally breed from July through February each year, although this can vary between seasons. A pair may rear two consecutive clutches, known as double-brooding, which is more likely to occur when the first clutch commences early in the season. This behaviour seems to occur in no other species of penguin (Stahel and Gales 1987).

Adult penguins generally do not disperse far from their colonies and their daily foraging range is usually between 10–30km (Margus 1985; Cullen pers. comm.). Studies in Victoria (Dann and Cullen 1989) estimated a feeding range of 20 km for Little Penguins during the chick rearing period when adults were only away from the nest during daylight. Once young have hatched, however, the foraging range is greatly reduced.

Once fledged young birds are usually not seen at their natal colony for about a year, after which they return to moult (Reilly and Cullen 1982; Stahel and Gales 1987). They repeat this pattern year after year until they are ready to breed at about 3 - 4 years of age (Reilly and Cullen 1982; Margus 1985).

Some Little Penguins are found at their colonies all year but, outside of the main breeding season, relatively few birds come ashore (Margus 1985; Klomp and Wooller 1991). Studies by Reilly and Cullen (1982) found that adults in south-east Australia seemed to remain centred on their breeding colony throughout the year although they may leave for 2–3 months during the non-breeding season.

Threats

A major threat to the Manly population is the loss of suitable breeding habitat. Past development has greatly reduced available habitat in the area. Disturbance of Little Penguins and their habitat is also a major threat to the population. Predators such as dogs, cats, and foxes are known to take penguins from shallow burrows and as they move between the water and their nesting sites.

Habitat loss

The amount of suitable breeding habitat seems to be the main factor limiting the distribution of the Little Penguin population around North Sydney Harbour. Therefore all known or potential breeding habitat is considered critical to the survival of the population. The amount of suitable habitat available for use as breeding burrows seems to be a limiting factor in the area occupied by the Little Penguin Population.

Seagrass beds provide habitat for baitfish, prey species of the Little Penguin, and may be important resources for the Manly population. Current research by the NPWS on the diet and foraging ecology of the population indicates that the Manly penguins eat fish species such as sandy sprat (*Hyperlophus vittatus*), anchovies (*Engraulis australis*) and hardyhead (*Atherinomorus ogilbyi*) which utilise kelp and seagrass. The significant amount and quality of seagrass beds (*Posidonia*, *Zostera* & *Halophia*) around current nesting areas of this population (Marine Pollution Research 2000) are likely to be important habitat for prey species of Little Penguins. A recent study (Marine Pollution Research 2000) noted that, while most of the seagrass beds next to the rocky foreshores of Spring Cove are in good condition, the seagrass beds off-shore from Store and Quarantine Beaches were in poor condition as a result of watercraft anchoring in the area.

Disturbance

Disturbance around nesting areas is another threat to the population. Disturbance can affect penguins when they are in and around burrows, moving between burrows and the water, while waiting to come ashore, while foraging and while rafting with other penguins. Most of the foreshore along Manly Point is not easily accessible to the general public although residents have observed increasing uses of the area over recent years. Increases in noise and light from nearby buildings and waterway

activities have the potential to impact on penguin nesting activities. Lights shining onto nesting areas from boats or buildings may disorientate or even prevent birds from returning to shore.

North Harbour is used for a variety of recreational purposes including windsurfing, power boating, kayaking, yachting, scuba diving and swimming as well as commercial and recreational fishing. These uses have the potential to disturb penguins at nesting sites as well as during foraging and rafting activities. The continual high use from recreational watercraft in areas of North Harbour, specifically around Collins, Store and Quarantine Beaches, may also be limiting the expansion of the population into suitable habitat within Sydney Harbour National Park.

Commercial fishing has the potential to impact on the Little Penguins at Manly through a possible reduction in prey species available as food items and by disturbing penguins during nesting and rafting activities. When adult penguins are feeding young they utilise more food resources which are close to nesting sites (Dan and Cullen 1989; Cullen *et al.* 1996) so the potential loss of prey species to commercial fishing would be highest during the rearing of chicks. Studies on the abundance and distribution of pilchards and anchovies, the two main prey species of Little Penguins in Port Phillip Bay, indicate that when these species are low in abundance, the foraging range of Little Penguins increases and breeding success decreases (Hobday 1992). Other studies on Phillip Island found that most chicks appeared to die from starvation, most likely due to food shortages (Reilly and Cullen 1979).

Fishing activities near nesting areas occurring around sunset and sunrise, when penguins are moving between burrows and the water, may also impact penguins. This impact is worse during the breeding season as the adult bird is forced to stay in the water longer and may digest a large portion of food that would have been available for the chicks. This type of disturbance was observed by researchers at Lion Island and the Five Islands Nature Reserve, where penguins were delayed returning to their nests to feed their chicks as a result of fishing activities (haul netting & recreational fishing) in the area (L. Smith, pers. comm. SOSSA & G. Webb pers. comm.).

Predation

Predators such as dogs, cats, and foxes are known to take penguins from shallow burrows and as they move between the water and their nesting habitat. Domestic dog attacks seem to be predominantly responsible for the destruction of the Eagles Claw population at Eden (N. Klomp, pers. comm.). Little Penguins from the Manly population have been predated by domestic dogs and foxes and domestic cats have often been observed in the nesting areas below residential houses.

The loss of only one adult in a breeding pair can result in the death of the young (Stahel & Gales 1987; NPWS Eden 1994). The colony at North Sydney Harbour is extremely sensitive to predation due to its small size and location within an urban environment.

The recent predation events (12 penguins killed by a fox in May/June 2000 and 8 killed by a domestic dog in June 2001), which removed approximately 14% of the population, highlight the impact this can have on a small population. In the five years since the population was listed as endangered on the TSC Act 1995 there have been 69 penguin mortalities recorded in Sydney Harbour, an average of about known 14 deaths per year.

Appendix 2: Summary of the Main Statutory Implications of Critical Habitat Identification and Declaration

Statutory requirements regarding critical habitat include:

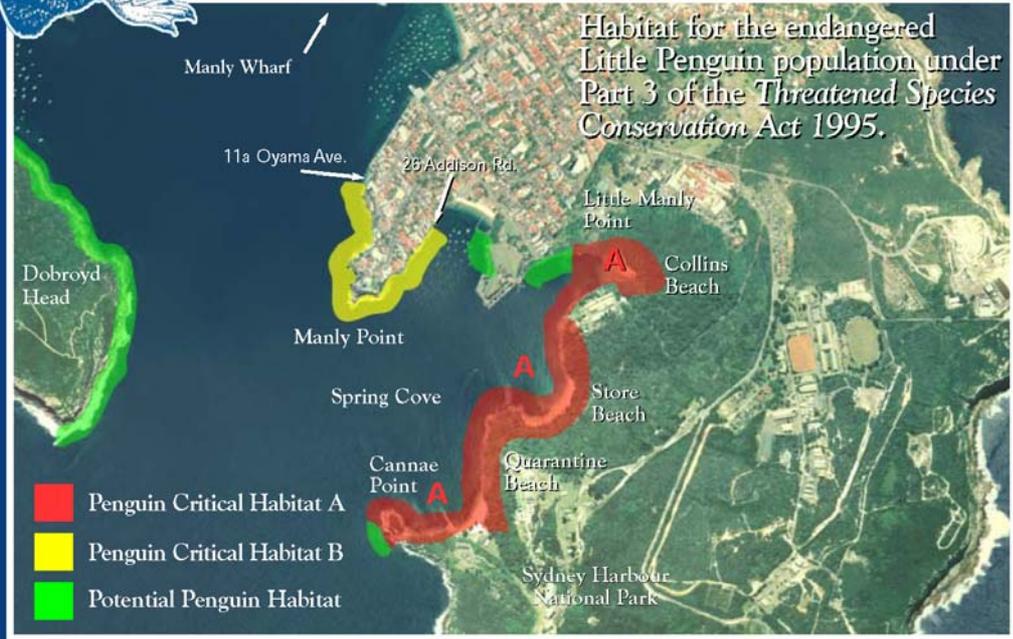
- Declared critical habitat must be mapped on the relevant Local Environmental Plan and Regional Environmental Plan (s.26 of the *Environmental Planning and Assessment Act 1979* as amended 1998);
- The Director-General of the Department of Urban Affairs and Planning must consult with the Director-General of National Parks and Wildlife before preparing a draft State Environmental Planning Policy, or an Environmental Study or a draft Regional Environmental Plan, if, in the opinion of the Director-General, critical habitat will or may be affected by the draft policy, environmental study or draft plan (s.34A(1) of the *Environmental Planning and Assessment Act 1979* - the EP&A Act).
- Councils must also consult with the Director-General of National Parks and Wildlife before preparing an Environmental Study, or a draft Local Environmental Plan, if, in the opinion of the council, critical habitat will or may be affected by the Environmental Study or draft plan (s.34A(2) of the EP&A Act).
- If land declared as critical habitat is land to which a Local Environmental Plan, Regional Environmental Plan or State Environmental Planning Policy applies, the Plan must be amended by the relevant Council, and the Department of Urban Affairs and Planning in a manner that identifies the land that is declared as critical habitat.
- The maintenance of a register of all declarations (s.55(1) of the TSC Act);
- A planning authority (eg. local council) must have regard to the register of critical habitat when exercising any of its functions under the EP&A Act (s.5B(1) of the EP&A Act).
- A person must not, by an act or an omission, do anything that causes damage to any critical habitat (s.118C of the *National Parks and Wildlife Act 1974* (NP&W Act)). However, it is a defence to a prosecution for an offence against this section of the NPW Act if the accused proves that the act constituting the offence was:
 - (a) authorised to be done, and was done in accordance with, a licence granted under the NPW Act or a licence or certificate granted under Part 6 of the TSC Act, or
 - (b) essential for the carrying out of development in accordance with a development consent within the meaning of the EP&A Act, or
 - (c) essential for the carrying out of an activity, whether by a determining authority or pursuant to an approval of a determining authority within the meaning of Part 5 of the EP&A Act if the determining authority has complied with the Part, or
 - (d) authorised to be done by or under the *Rural Fires Act 1997* or the *State Emergency and Rescue Management Act 1989* and was reasonably necessary in order to avoid a threat to life or property.
 - (e) carried out under an approved Property Management Plan or as a routine agricultural activity.
- While it is a defence against prosecution under s. 118D (1) of the NP&W Act that a defendant did not know they were affecting habitat of a threatened species, population or ecological community, this is not a defence if critical habitat of an endangered species, population or ecological community is affected (NP&W Act, s. 118C (1)).
- A development proposed on land which is critical habitat may not be considered an exempt development (s.76 of the EP&A Act). This means that all developments occurring on land that is critical habitat either require a s. 91 licence under the TSC Act or must go through the development consent process under the EP&A Act.
- A development may not be considered a complying development if it occurs on land that is critical habitat (s.76A(5) of the EP&A Act). This means that developments proposed on land that is critical habitat may not be approved by an accredited certifier, but must be approved by the consent authority.
- A determining authority must not carry out an activity, or grant an approval in relation to an activity that is in respect of land that is, or is a part of, critical habitat unless a Species Impact Statement (SIS), or an Environmental Impact Statement that includes a SIS, has been prepared in accordance with the TSC Act (s.78A(8) of the EP&A Act). Section 112C of the EP&A Act ensures that in such circumstances a determining authority (with the exception of where the authority is a Minister) will not carry out, or grant an approval to carry out, an activity without the concurrence of the Director-General of National Parks and Wildlife. Where a Minister is the determining authority he or she must only consult with the Minister administering the TSC Act.
- When conducting an assessment under part 5A of the EP&A Act, consent authorities are required to consider whether the activity or development will affect critical habitat. This means that activities and developments, which are not carried out on land that is critical habitat, may trigger a SIS if they are likely to have an indirect impact.

- Any action which does not require consent or approval under the EP&A Act but which damages critical habitat can only be legally undertaken under the authority of a licence granted under the NPW Act or a licence or certificate granted under Part 6 of the TSC Act the licence. It should be noted that if the action proposed to be taken under the authority of the licence is on land that is critical habitat, the application must be accompanied by a SIS.
- However, according to s. 111(4) of the TSC Act; despite anything in the TSC Act or the EP&A Act (including critical habitat), the Director-General may, having regard to the circumstances of a particular case, dispense with the requirement for a SIS in the particular case if the Director-General is satisfied that the impact of the activity concerned will be trivial or negligible.
- The *Native Vegetation Conservation Act 1997* (NVC Act) does not operate on land which is declared critical habitat (s.9(k)). However, the initiator of a Regional Vegetation Management Plan must consult with the Director-General of National Parks and Wildlife regarding critical habitat before preparing the plan (s.26(1) NVC Act).



Little Penguin Critical Habitat

Habitat for the endangered Little Penguin population under Part 3 of the *Threatened Species Conservation Act 1995*.



- Penguin Critical Habitat A
- Penguin Critical Habitat B
- Potential Penguin Habitat

Critical habitat Area A

Area A (red shading on map above) starts west of Collins Beach to the northern side of Cannae Point and includes Collins, Store and Quarantine Beaches. It includes an aquatic area that extends 50m out to sea from the mean high watermark and a terrestrial area from the mean high watermark, up the rocky foreshore slope to the ridge top.

Area A regulations

- No Companion Animals (except for Assistance Animals) in Critical Habitat.
- No Fishing in Critical Habitat between sunset and sunrise during the Little Penguin breeding season (July 1 to 28 February).
- No tampering with or damaging Little Penguin nest boxes or nesting burrows, moulting penguins or approaching within 5m of a Little Penguin on land.
- No anchoring or mooring a vessel in Critical Habitat area A during the Little Penguin breeding season (1 July to 28 Feb).
- No anchoring or mooring a vessel outside the Critical Habitat area A during the Little Penguin breeding season in such a way that the anchored or moored vessel enters Critical Habitat area A.
- It is prohibited to cause a vessel, other than a non-motorised tender vessel, to enter or remain in Critical Habitat area A between sunset and sunrise during the Little Penguin breeding season.

An authorised officer may direct a person to either cease a particular activity and/or leave the Critical Habitat area if they are considered to be disturbing a penguin's breeding or moulting activity.



No HANDLING



No ANCHORING



No COMPANION ANIMALS



No FISHING

Maximum Penalty \$5,500



NSW NATIONAL PARKS AND WILDLIFE SERVICE



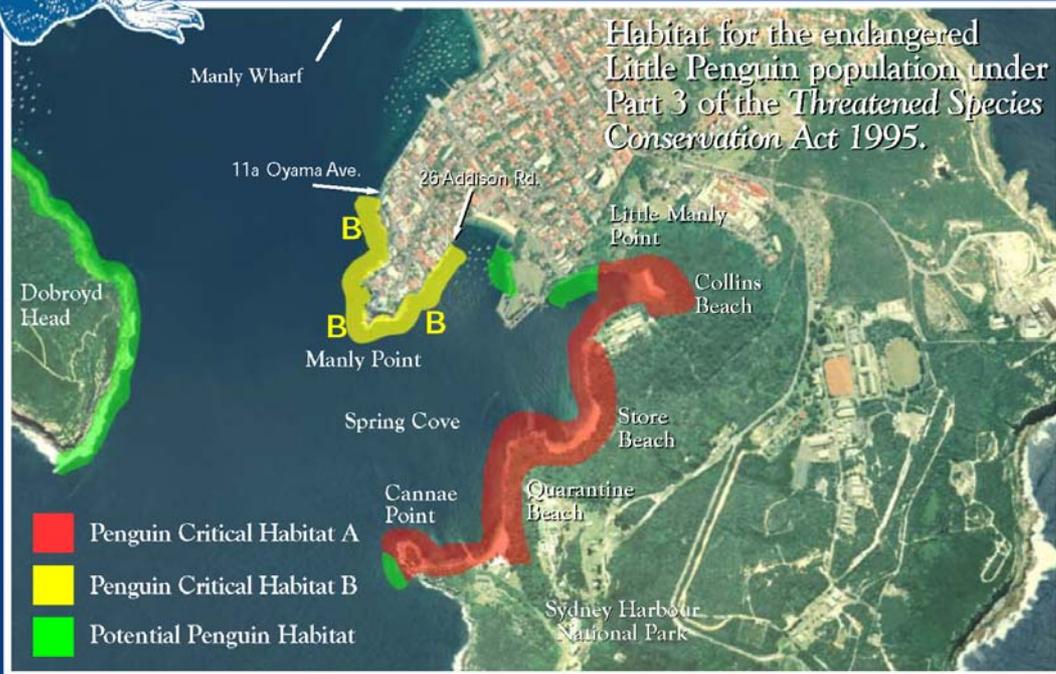
For more information contact the National Parks and Wildlife Service on 9977 6732 or www.nationalparks.nsw.gov.au







Little Penguin Critical Habitat



No HANDLING



NSW NATIONAL PARKS AND WILDLIFE SERVICE

Critical habitat Area B

Area B starts at 11A Oyama Avenue and extends around Manly Point to 26 Addison Road. It includes an aquatic area that extends 50m out to sea from the mean high water mark and a terrestrial area from the mean high water mark, up the rocky foreshore slope to the start of the ridge top. It does not include the formed backyard of residential houses and units.

Area B regulations

- No Companion Animals (except for Assistance Animals) in Critical Habitat.
 - No Fishing in Critical Habitat between sunset and sunrise during the Little Penguin breeding season (July 1 to 28 February).
 - No tampering with or damaging Little Penguin nest boxes or nesting burrows, moulting penguins or approaching within 5m of a Little Penguin on land.
- An authorised officer may direct a person to either cease a particular activity and/ or leave the Critical Habitat area if they are considered to be disturbing a penguin's breeding or moulting activity.

Maximum Penalty \$5,500

For more information contact the National Parks and Wildlife Service on 9977 6732 or www.nationalparks.nsw.gov.au



No FISHING



No COMPANION ANIMALS

