

APPENDIX A:
BACKGROUND TO COMMUNITY VALUES AND ISSUES



Background to Community Values and Issues

The diverse physical environment, particularly its geographic features, the quality of the marine and inter-tidal environment, rock platforms and headlands, and the standard of adjoining bushland and estuarine areas is of significant value.

A.1 Flora

The Natural Area Survey (NAS) (Smith & Smith, 1997) identified ten vegetation communities within the Refuge. Six communities are of Priority 1 significance according to the NAS, meaning they consistently provide habitat for threatened fauna listed in the Threatened Species Conservation Act 1995. The remaining four communities are Priority 2 significance in the NAS, meaning they have a restricted distribution in the Warringah Local Government Area.

- Priority 1 Communities - Saltmarsh, Estuarine Reedland, Swamp Oak Forest, Swamp Mahogany Forest, Coastal Banksia - Eucalypt Scrub and Coastal Dune Swamp.
- Priority 2 Communities - Seagrass Beds, Estuarine Paperbark Scrub, Spinifex Grassland and Coastal Wattle Heath.

Thirty-nine plant species (associated with the sandy coastal lagoon environment) which occur in the Refuge are not present in either Garigal or Ku-ring-gai National Parks. The Sydney Freshwater Wetlands and Sydney Coastal Estuary Swamp Forest Complex have recently been listed under the Threatened Species Conservation Act. These threatened ecological communities are present within the Dee Why Lagoon Wildlife Refuge and require protection under the Act.

A.2 Fauna

Birds

The major wildlife value of the Refuge is its significance for migratory birds. According to the NPWS (1989) Dee Why Lagoon provides essential sheltering and feeding requirements for a range of migratory birds from the Northern Hemisphere. The value of the area as habitat for wildlife has been recognised through its dedication as a Wildlife Refuge in 1973.

Approximately 100 bird species have been recorded from the Refuge (SPCC, 1978). A number of the migratory wader species that utilise the Refuge are listed under one or both of 'Japan-Australia Migratory Birds Agreement 1974' (JAMBA) and 'China-Australia Migratory Birds Agreement 1986' (CAMBA). The Agreements require the respective governments to protect migratory birds and their environments. A number of species are also listed under the Threatened Species Conservation Act 1995 including those listed in table A1.



Table A1: Bird species recorded within the Refuge which are listed under the TSC Act, JAMBA or CAMBA.

Common name	Latin name	TSC Act	JAMBA	CAMBA
Little Tern	<i>Sterna albifrons</i>	Endangered	↔	↔
Caspian Tern	<i>Hydroprogne caspia</i>	-	↔	-
Crested Tern	<i>Sterna bergii</i>	-	↔	-
Sooty Oystercatcher	<i>Haematopus fuliginosus</i>	Vulnerable	-	-
Brolga	<i>Grus rubicunda</i>	Vulnerable	-	-
Australasian Bittern	<i>Botaurus poiciloptilus</i>	Vulnerable	-	-
Masked Owl	<i>Tyto novaehollandiae</i>	Vulnerable	-	-
Grey Plover	<i>Pluvialis squatarola</i>	-	↔	-
Eastern Golden Plover	<i>Pluvialis dominica</i>	-	↔	-
Ruddy Turnstone	<i>Arenaria interpres</i>	-	↔	↔
Eastern Curlew	<i>Numenius madagascariensis</i>	-	↔	↔
Common Whimbrel	<i>N. phaepus</i>	-	↔	↔
Bar-tailed Godwit	<i>Limosa lapponica</i>	-	↔	↔
Grey-tailed Tattler	<i>Tringa brevipes</i>	-	↔	↔
Sharp-tailed Sandpiper	<i>Calidris acuminata</i>	-	↔	↔
Red-necked Stint	<i>C. ruficolis</i>	-	↔	↔
Japanese Snipe	<i>Gallinago hardwickii</i>	-	↔	↔
White Egret	<i>Egretta alba</i>	-	↔	-
Cattle Egret	<i>Ardeola ibis</i>	-	↔	-
Reef Heron	<i>Egretta sacra</i>	-	-	↔
White-breasted Sea Eagle	<i>Haliaeetus leucogaster</i>	-	-	↔

P & J Smith Ecological Consultants are currently undertaking a study of migratory and resident birds of the Refuge as part of the Estuary Processes Study. The study will identify the birds present habitat values and relevant management techniques to ensure the bird population and diversity is conserved and enhanced. The study will be undertaken over a 12 month period to ensure seasonal variations to bird populations are taken into account.

Fish

Three surveys in the late 1970's and early 1980's recorded 53 species of fish in the lagoon. The number of permanent resident species was constant between 10 and 14, however the number of temporary species ranged from 12 in 1978 to 29 in a 1982 survey. The increase in 1982 may have been due to improved sampling techniques and the lagoon mouth being open to the sea for a lengthy period of time which may have resulted in increased recruitment from the ocean.

Two distinct fish habitats exist in the lagoon. The central lagoon area and entrance channel with a strong marine influence, greatest depth, a high percentage of sand in the sediment and some seagrass patches is one habitat. The southern section of the lagoon is



shallower, has more variable salinity, a higher clay content in the sediment and supports less seagrass and is regarded as another distinct habitat.

Fish species diversity and abundance is restricted by the small size of the lagoon, limited habitats and the harshness of the environment - lagoon opening events often result in extreme variation in water level and salinity and the lagoon bed drying out completely. Dredging the lagoon is likely to improve fish habitat but result in increased numbers of existing species rather than a marked increase in species diversity (Allen, 1985). Artificial opening of the lagoon to enhance fish or prawn stocks is regarded as an extremely difficult exercise on a lagoon specific or regional basis.

Invertebrates

The Lagoon's terrestrial and aquatic microfauna are mostly unknown and hence its conservation significance poorly understood.

The occurrence of benthic organisms was once regarded as similar to that of other coastal estuaries (SPCC, 1978). Prawn numbers depend largely on how long the lagoon remains closed. An early opening of the lagoon during the season (November to March) usually results in poor prawning as many mature prawns have moved out to sea.

Pets / Feral animals

Cats and foxes have been recorded in the Refuge, however their impact on native fauna populations, particularly birds, has not been quantified. Common Starlings and Black Rat are also found within the Refuge. Cats and foxes are capable of hunting and killing native fauna. The presence of feral animals and birds however can also impact upon native fauna through the competition for habitat and food.

The new Companion Animals Act 1998 allows Council to trap and impound cats found in bushland reserves. Baiting of feral animals, such as foxes, can now take place within 150m of residential property. Control and reduction of feral animals and pets within the Refuge is necessary in order to maintain a biodiversity of native species.

A.3 Conservation

The Dee Why Lagoon Wildlife Refuge is valued as a unique and special area with high conservation value due to the following:-

- The uncommon combination of existing habitats and landforms in an urban situation;
- The Refuge is home to large numbers of bird species, with the available bird habitat identified as having outstanding value and importance;
- The remaining vegetation habitats are rare remnants of vegetation types that were common before development; and
- The aquatic ecosystem itself has particular environmental significance. Dee Why Lagoon is home to an abundant population of marine invertebrates which reinforces the habitat value of the lagoon for water birds.

A.4 Catchment

Dee Why Lagoon Wildlife Refuge is located wholly within an urban context with the southern and western boundaries being bordered by urban development. The catchment of Dee Why Lagoon is defined by the Collaroy Plateau ridge to the north, Narraweena ridge



to the west, Dee Why ridge to the south and sand dunes to the east. The catchment has an area of approximately 5.1km².

Drainage of the northern and western parts of the catchment is along residual parts of a tributary (Dee Why Creek) flowing through a sub-catchment area referred to as Dee Why Valley. Parts of Dee Why Creek have been straightened to ensure more efficient drainage. In addition, there are a number of earthen drains which enter the lagoon on its northern edge and twelve drainage pits located on the eastern side of Pittwater Road. The southern parts of the catchment are drained by the Dee Why Main Drain (which exits into the lagoon at Hawkesbury Avenue), the Avon Road Drain, part of a creek to the east of the Avon Road drain and a drain in the south eastern corner of the lagoon.

From the catchment area the drains transport sediments, nutrients and pollutants which are consequently deposited in the Lagoon. Sedimentation and pollution of the lagoon are obvious signs of the impact of urbanisation. Nutrient input into the Lagoon is a less visible sign, but its effects would become apparent in the form of algal blooms. Water quality control devices such as detention basins and gross pollutant traps have been constructed to reduce the deposition of sediment, nutrients and rubbish in the Lagoon.

Coastal lagoon systems are dynamic geological environments, the evolution of which usually involves their gradual infilling to eventually result in freshwater swamps. Dee Why Lagoon's evolution has been dramatically accelerated through increased rates of sedimentation. The size of the waterbody of Dee Why Lagoon has been reduced as sediment deposited at drainage channel outlets has created delta formations which are in turn colonised by sedges and reeds.

The rate of sedimentation may be accelerated by a number of processes including channel bank erosion and urban development in the catchment. The accelerated process of sedimentation of Dee Why Lagoon was initially observed in 1977 when Gordon and Cooke (1977) noted that "from the sedimentological evidence and an examination of aerial photographs it is apparent that the lagoon is infilling with sediments". An Estuary Processes Study, Estuary Management Study and Estuary Management Plan is currently being undertaken which will provide a more accurate description and interpretation of current catchment processes.

A.5 Lagoon Waterbody

Various water quality measurements have been taken in the lagoon since 1978 and are best described in terms of physical, chemical and biological descriptors. The Dee Why Lagoon Data Compilation Study (MHL, 1997) contains a summary of previous surveys on aspects of these parameters, for example annual loads of litter and floatables, turbidity levels, dissolved oxygen, salinities, phosphorous and nitrogen, stormwater loads, faecal coliform levels, etc.

Opening of the lagoon can result from water overtopping the sand bar and scouring a channel, mechanical opening or by wave action scour from the ocean side. The difference in water level between the lagoon and the ocean can range between zero at high tide to as much as 3 metres during a combination of a low tide and a high lagoon water level. This difference in water levels is the driving force in the draining of the lagoon once open to the



sea. The barrier level at the lagoon mouth is also a contributing factor in lagoon openings - the average crest level of the barrier is 2.05m AHD.

Council has produced a Dee Why Lagoon Entrance Management Policy (1996) which sets out procedures and responsibilities for natural and authorised openings of the lagoon as well as strategies to prevent unauthorised openings of the lagoon. The aquatic flora and fauna of the Refuge have evolved in association with the lagoons natural breakout regime. The time for natural closure of the lagoon can vary from a few days to several weeks depending on wind, tide and weather conditions.

A.6 Landscape and Aesthetics

The Refuge has a high boundary to area ratio making it susceptible to edge effects such as weed invasion as well as offering increased opportunities for rubbish dumping and other forms of undesirable public access. Effective management of the boundary will be necessary to reduce the incidence and impacts of edge effects.

The open space of the water body and adjacent bushland contribute significantly to the visual amenity of the Dee Why area and for the northern beaches as a whole. Management of the Refuge should seek to retain this visual amenity and thereby maintain and promote a positive community perception of the natural values of the Refuge. In turn a positive community perception may assist in reducing the incidence of unsympathetic community behaviour such as rubbish dumping.

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APPENDIX B:

NSW SCIENTIFIC COMMITTEE FINAL DETERMINATIONS FOR

VEGETATION COMMUNITIES WITHIN DEE WHY LAGOON WILDLIFE

REFUGE



NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act, has made a Final Determination to list the Sydney Coastal Estuary Swamp Forest Complex in the Sydney Basin Bioregion as an ENDANGERED ECOLOGICAL COMMUNITY on Part 3 of Schedule 1 of the Act. The listing of Endangered Ecological Communities is provided for by Part 2 of the Act.

The Scientific Committee has found that:

The Sydney Coastal Estuary Swamp Forest Complex is the name given to the plant community characterised by the assemblage of species listed in paragraph 3 that is a mosaic of vegetation types occurring on waterlogged estuarine alluvial soils and strongly influenced by periodically poor drainage conditions. All sites are within the Sydney Basin Bioregion.

Sydney Coastal Estuary Swamp Forest Complex includes vegetation described as Coastal Swamp Forest Complex (Map unit 27a) in Benson & Howell (1994), and referred to in Adam & Stricker (1993) and Smith & Smith (1997). Sydney Coastal Estuary Swamp Forest Complex is part of the alluvial forest of Chafer (1997).

Sydney Coastal Estuary Swamp Forest Complex is characterised by the following assemblage of plant species

<i>Acacia longifolia</i>	<i>Baumea juncea</i>
<i>Blechnum camfieldii</i>	<i>Blechnum indicum</i>
<i>Calochlaena dubia</i>	<i>Carex appressa</i>
<i>Casuarina glauca</i>	<i>Darwinia procera</i>
<i>Dodonaea triquetra</i>	<i>Eucalyptus botryoides</i>
<i>Eucalyptus robusta</i>	<i>Gahnia clarkei</i>
<i>Gahnia sieberiana</i>	<i>Glochidion ferdinandi</i>
<i>Hydrocotyle peduncularis</i>	<i>Hypolepis muelleri</i>
<i>Imperata cylindrica</i>	<i>Isachne globosa</i>
<i>Livistona australis</i>	<i>Melaleuca biconvexa</i>
<i>Melaleuca ericifolia</i>	<i>Melaleuca linariifolia</i>
<i>Melaleuca styphelioides</i>	<i>Persicaria strigosa</i>
<i>Phragmites australis</i>	<i>Pteridium esculentum</i>
<i>Triglochin procera</i>	<i>Typha orientalis</i>
<i>Villarsia exaltata</i>	<i>Viola hederacea</i>

The total species list of the flora and fauna of the community is considerably larger than that given in 3 (above), with many species present in only one or two sites or in very small quantity. In any particular site not all of the assemblage listed above may be present. At any one time, propagules and seeds of some species may only be present in the soil seed bank with no above-ground individuals present. Invertebrate species may be restricted to sediments or canopy trees and shrubs for example. The species composition of the site will be influenced by the size of the site and by its recent disturbance history. The number of species and the above-ground composition of species will change with time since fire, and may also



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change in response to changes in fire frequency. The community includes animals and invertebrates many of which are poorly known.

Sydney Coastal Estuary Swamp Forest Complex is a mosaic ranging from forest to scrub to reedland and includes open-forest with *Eucalyptus robusta* and *Eucalyptus botryoides*, woodland with *Livistona australis*, scrub with *Melaleuca* species including *Melaleuca linariifolia*, *Melaleuca styphelioides* and *Melaleuca ericifolia*, herbland with waterferns and reedland with *Phragmites australis*. *Casuarina glauca* may occur as a component of this community [but pure *Casuarina glauca* forests are a separate community, as are mangroves and saltmarsh].

Sydney Coastal Estuary Swamp Forest Complex occurs on waterlogged estuarine alluvial soils strongly influenced by periodically poor drainage conditions such as soils of the Cockle Bay, Tacoma Swamp and Warriewood Soil Landscapes (Chapman & Murphy 1989, Murphy 1993). It may grade into Sydney Coastal Riverflat Forest which generally occurs on higher land or away from the estuary. It may grade into *Casuarina glauca*, *Juncus* saltmarsh and mangrove communities in areas subject to regular tidal inundation. It differs from Sydney Coastal Freshwater Swamp in having a more silty site and higher nutrients, and generally less open standing water.

Sydney Coastal Estuary Swamp Forest Complex is or has been known to occur in the local government areas of Lake Macquarie, Wyong, Gosford, Baulkham Hills, Pittwater, Warringah, Liverpool, Rockdale, Sutherland, Wollongong, Shellharbour and Kiama, but may occur elsewhere in the Sydney Basin Bioregion.

Sydney Coastal Estuary Swamp Forest Complex has been reported from Swansea, Porters Creek Wetland, Wyong River floodplains, Lisarow wetlands, Erina Creek, Bensville, Middle and Deep Creeks and Narrabeen Lagoon, Dee Why Lagoon, Voyager Point, Leo Smith Reserve Ramsgate, Kurnell, Bundeena and Mill Creek, Bellambi Lagoon, Fairy Creek, Wollingurry Swamps (Duck Creek), Dunmore Wetlands (Shellharbour) and Minnamurra Wetlands (Kiama) but may occur elsewhere.

Disturbed remnants are still considered to form part of the community described under this determination where the natural soil and associated seedbank is partially intact. At some sites changes to hydrology or drainage might be required to assist regeneration.

Sydney Coastal Estuary Swamp Forest Complex has been extensively cleared and filled for recreational purposes - playing fields, car parks and roads. Remnants are threatened with waste filling, clearing associated with urban development, urban runoff associated with proximity to urban and agricultural areas, weed invasion including *Ludwigia peruviana*, *Ipomoea cairica* and *Anredera cordifolia*, and by grazing and trampling, including by deer.

Small areas of the Sydney Coastal Estuary Swamp Forest Complex has been reported from Cockle Bay Nature Reserve, and Garigal and Royal National Parks.

Plant species of conservation significance reported for Sydney Coastal Estuary Swamp Forest Complex include *Melaleuca biconvexa* and *Darwinia procera*. As a winter flowering plant *Eucalyptus robusta* is particularly important to fauna. Animals of conservation significance



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include Australasian Bittern, *Botaurus poiciloptilus* and Large Footed Myotis, *Myotis adversus*.

In view of the small size of existing remnants, and the threat of further disturbance and degradation, the Scientific Committee is of the opinion that the Sydney Coastal Estuary Swamp Forest Complex in the Sydney Basin Bioregion is likely to become extinct in nature in New South Wales unless the circumstances and factors threatening its survival or evolutionary development cease to operate.

Dr Chris Dickman
Chairperson
Scientific Committee
Proposed Gazettal date: 22/12/00
Exhibition period: 22/12/00 – 26/01/01

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NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act, has made a Final Determination to list the Sydney Freshwater Wetlands in the Sydney Basin Bioregion as an ENDANGERED ECOLOGICAL COMMUNITY on Part 3 of Schedule 1 of the Act. The listing of Endangered Ecological Communities is provided for by Part 2 of the Act.

The Scientific Committee has found that:

1. Sydney Freshwater Wetlands is the name given to the plant community characterised by the assemblage of species listed in paragraph 2 that is restricted to freshwater swamps in swales and depressions on sand dunes and low nutrient sandplain sites in coastal areas. All sites are within the Sydney Basin Bioregion.
2. Sydney Freshwater Wetlands is characterised by the following assemblage of species.

<i>Banksia robur</i>	<i>Baumea articulata</i>
<i>Baumea juncea</i>	<i>Baumea rubiginosa</i>
<i>Callistemon citrinus</i>	<i>Casuarina glauca</i>
<i>Cladium procerum</i>	<i>Eleocharis sphacelata</i>
<i>Empodisma minus</i>	<i>Gahnia clarkei</i>
<i>Gahnia sieberiana</i>	<i>Gleichenia dicarpa</i>
<i>Goodenia paniculata</i>	<i>Hakea teretifolia</i>
<i>Hypolepis muelleri</i>	<i>Lepironia articulata</i>
<i>Leptocarpus tenax</i>	<i>Leptospermum juniperinum</i>
<i>Lomandra longifolia</i>	<i>Ludwigia peploides</i> subsp. <i>montevidensis</i>
<i>Melaleuca linariifolia</i>	<i>Melaleuca nodosa</i>
<i>Melaleuca quinquenervia</i>	<i>Melaleuca styphelioides</i>
<i>Persicaria decipiens</i>	<i>Persicaria strigosa</i>
<i>Philydrum lanuginosum</i>	<i>Phragmites australis</i>
<i>Pteridium esculentum</i>	<i>Restio tetraphyllus</i>
<i>Schoenus brevifolius</i>	<i>Triglochin procerum sensu lato</i>
<i>Typha orientalis</i>	<i>Villarsia exaltata</i>
<i>Viminaria juncea</i>	<i>Xanthorrhoea resinifera</i>

3. The total species flora and fauna list for the community is considerably larger than that given in 2 (above), with many species present in only one or two sites or in very small quantity. In any particular site not all of the assemblage listed in 2 may be present. Invertebrate species may be restricted to sediments for example. At any one time, propagules and seeds of some species may only be present in the soil seed bank with no above-ground individuals present. The species composition of the site will be influenced by the size of the site, recent rainfall or drought conditions and by its recent disturbance history. The community includes vertebrates and invertebrates, many of which are poorly known.



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4. Sydney Freshwater Wetlands are a mosaic community with considerable variation due to fluctuating water levels and seasonal conditions. Characteristic vegetation is sedges and aquatics particularly *Eleocharis sphacelata*, *Baumea juncea*, *Baumea rubiginosa*, *Baumea articulata*, *Gahnia sieberiana*, *Ludwigia peploides* subsp. *montevidensis* and *Persicaria* species. There may be considerable areas of open water particularly where drainage conditions have been altered. There may be patches of emergent trees such as *Melaleuca quinquenervia* and shrubs.
5. Sydney Freshwater Wetlands are restricted to freshwater swamps in swales and depressions on sand dunes and low nutrient sandplain sites in coastal areas. These areas are generally on the sands of the Warriewood and Tuggerah Soil Landscapes (Chapman & Murphy 1989). Coastal Swamp Forest eg. *Eucalyptus robusta* and swamp on alluvium with a saline influence is not covered by this Endangered Ecological Community Determination.
6. Sydney Freshwater Wetlands are or have been known to occur in the local government areas of Lake Macquarie, Wyong, Gosford, Pittwater, Warringah, Woollahra, Waverley, Botany, Rockdale, Randwick, Sutherland and Wollongong- but may occur elsewhere in the Sydney Basin Bioregion.
7. Sydney Freshwater Wetlands were formerly particularly extensive in the Sydney Eastern Suburbs and Kurnell area. Occurrences have been reported to include Jewells Swamp, Wallarah wetland, Budgewoi wetlands, Porters Creek wetland, Wyong Golf Course, Tuggerah Oxbow, Bateau Bay; Iluka Lagoon; Everglades Lagoon Umina, Deep Creek Warringah, Dee Why Lagoon, Lachlan Swamps, Centennial Park, Botany Swamps at Eastlakes, La Perouse, Kurnell, Potter Point, Bundeena and Marley Lagoons and Coomaditchy Lagoon, but the ecological community may also occur elsewhere.
8. Sydney Freshwater Wetlands include vegetation described in Benson & Howell (1994), Adam & Stricker (1993) and Chafer (1997).
9. Disturbed remnants are considered to form part of the community described under this determination where the natural soil and associated seedbank is partially intact. At some sites changes to hydrology or drainage may be required to assist regeneration.
10. Sydney Freshwater Wetlands has been extensively cleared and filled for recreational purposes - playing fields, car parks, roads eg Marton Park Kurnell. Remnants are threatened with illegal filling with commercial, industrial and residential waste, dumping and burning of stolen vehicles, sand extraction and clearing for urban development. Threats include urban runoff associated with proximity to urban and agricultural areas, weed invasion e.g. *Cortaderia selloana*, *Ludwigia peruviana*, *Salvinia molesta*, *Eichhornia crassipes*; off-road vehicles and trail bikes, and introduced deer affecting Marley and Jibbon Lagoons in Royal National Park by grazing and trampling.
11. Small areas of Sydney Freshwater Wetlands have been reported to occur in Wyrribalong, Royal and Botany Bay National Parks.



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12. Animal species of conservation significance which may occur in Sydney Freshwater Wetlands are Australasian Bittern, *Botaurus poiciloptilus*, Wallum Froglet, *Crinia tinnula*, Green and Golden Bell Frog, *Litoria aurea*, and Large Footed Myotis, *Myotis adversus*.
13. In view of the small size of existing remnants, and the threat of further clearing, disturbance and degradation, the Scientific Committee is of the opinion that the Sydney Freshwater Wetlands in the Sydney Basin Bioregion are likely to become extinct in nature in New South Wales unless the circumstances and factors threatening its survival or evolutionary development cease to operate and that listing as an endangered ecological community is warranted.

Dr Chris Dickman
Chairperson
Scientific Committee
Proposed Gazettal date: 22/12/00
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References

Adam, P & Stricker, J (1993) *Wetlands of the Sydney Region*. National Estates Grants Programme. Project no 55. Report by Nature Council of NSW.

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APPENDIX C:
LEGISLATIVE AND STATUTORY REQUIREMENTS



Legislative and Statutory Requirements

This Plan of Management consists of *both* Community Land and Crown Land. The Plan of Management must therefore satisfy the:

- Local Government Act, 1993;
- Local Government Amendment (Community Land Management) Act 1998; and the
- Crown Lands Act, 1989.

C.1 What are the requirements of Community Land Management?

Under legislative requirements of the Local Government Act 1993 and the Local Government Amendment (Community Land Management) Act 1998, Section 36 (a)–(n), Councils must prepare and adopt plans of management for all Community Land. A plan may apply to one or more areas of Community Land, providing all the Act's requirements are fulfilled.

The Act states that the plan must identify the following:

- The category of the land;
- The objectives and performance targets of the plan with respect to the land;
- The means by which Council proposes to achieve the plan's objectives and performance targets;
- The manner in which Council proposes to assess its performance with respect to the plan's objectives and performance targets.

As this is a Specific Area Plan of Management which applies to just one area of Community Land it must also:

- Include a description of the condition of the land, and of any buildings or other improvements on the land, as at the date of adoption of the plan of management;
- Include a description of the use of the land and any such buildings or improvements as at the date of adoption of the plan;
- Specify the purposes for which the land, and any such buildings or improvements, will be permitted to be used;
- Specify the purposes for which any further development of the land will be permitted, whether under lease or licence or otherwise; and
- Describe the scale and intensity of any such permitted use or development.

C.2 What are the principles of Crown Reserve Management?

Section 11 of the Crown Lands Act 1989 provides a set of principles for Crown Land management as follows:

- Environmental protection principles be observed in relation to the management and administration of Crown Land;
- The natural resources of Crown Land (including water, soil, flora, fauna and scenic quality) be conserved wherever possible;
- Public use and enjoyment of appropriate Crown Land be encouraged;
- Where appropriate, multiple use of Crown Land be encouraged;
- Where appropriate, Crown Land should be used and managed in such a way that both the land and its resources are sustained in perpetuity; and
- Crown Land be occupied, used, sold, leased, licensed or otherwise dealt with in the best interests of the State consistent with the above principles.



Furthermore, when preparing a plan of management for Crown Land, the trust manager must comply with the following requirements of the Crown Lands Act 1989:-

- Direction of the Minister or request by Trust for plan of management preparation;
- Drafts circulated for comment;
- Exhibition of draft plan; and
- Draft plan exhibition notices provided.

With the following outcomes:-

- The Minister shall consider timely comment;
- Ministerial adoption of the plan;
- Trust must follow the plan; and
- All operations must be in accordance with it.

C.3 What Dealings Can a Council Have in Community Land?

- Council has no power to sell, exchange or otherwise dispose of Community Land, except for the purpose of enabling that land to become, or to be added to, a Crown Reserve or land reserved or dedicated under the National Parks and Wildlife Act 1974;
- Council may grant a lease or licence on Community Land, but only in accordance with the Local Government Act 1993; and
- A Council may grant any other estate in Community Land to the extent permitted by the Local Government Act.

C.4 Leases or Licences on Community Land

Granting a Lease or Licence on Community Land

Leases and licences are a method of formalising the use of Community Land and facilities. Leases or licences can be held by groups such as sporting clubs and schools, by commercial organisations or individuals providing facilities and/or services for public use.

The Local Government Act 1993 allows Council to grant leases or licences over all or part of Community Land. The use of land under a lease or licence must be compatible with the Local Environment Plan or Council requirements and provide benefits and services or facilities for the users of the land. Terms and conditions of a lease should reflect the interests of Council and the public and ensure proper management and maintenance.

Conditions of Granting a Lease or Licence

The following conditions must be met when granting a lease or licence over Community Land:

- The lease or licence must not be granted for a period exceeding 21 years;
- A lease or licence for a period greater than five years may only be granted by tender, unless it is granted to a non-profit organisation; and
- The plan of management must expressly authorise a lease or licence.

In general, where a proposal is for greater than 5 years, Council must:

- Give public notice of the proposal;
- Exhibit notice of the proposal on the land to which the proposal relates;
- Give notice of the proposal to such persons who appear to own or occupy land adjoining the Community Land; and

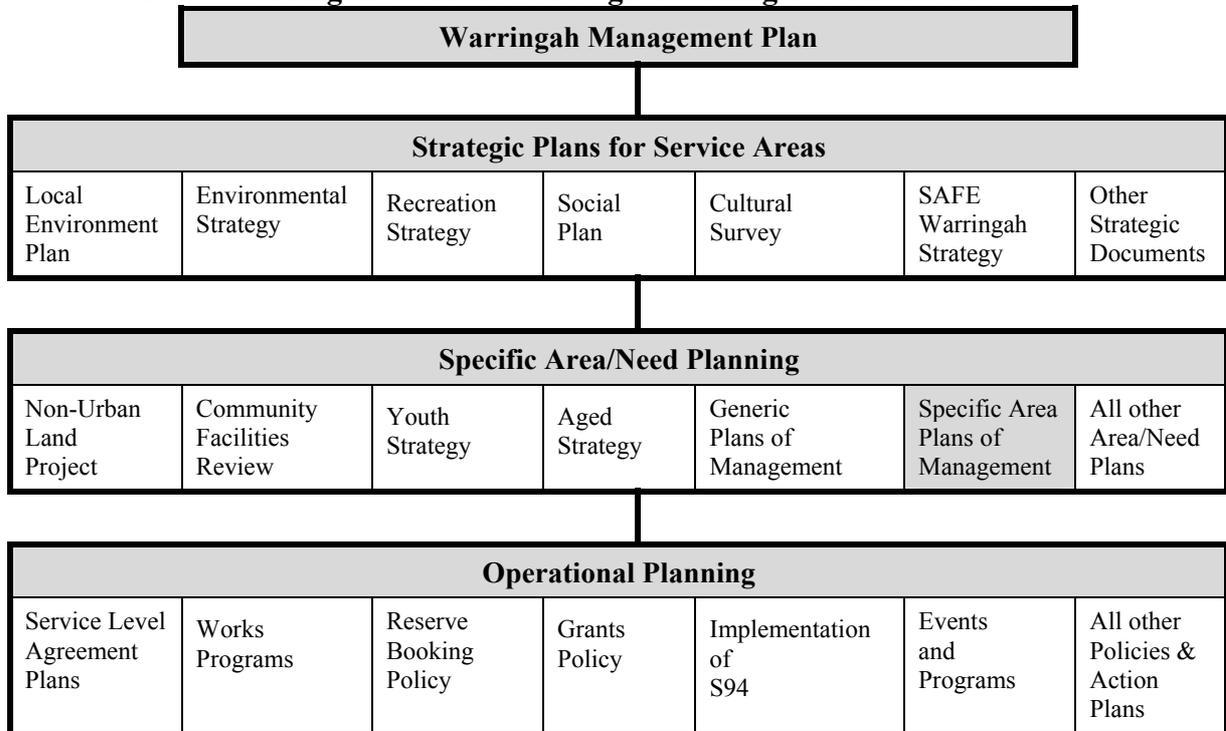


- Give notice of the proposal to any other person (owner or occupier of land in the vicinity of the Community Land), if in the opinion of the Council the subject to the proposal is likely to form the primary focus of the person's enjoyment of Community Land.

C.5 How does this Plan relate to other Strategic Documents?

In accordance with the requirements of the Local Government Act 1993, Warringah Council has adopted a co-ordinated approach to planning. This involves development of a number of linked strategic documents under the guidance of the warringah PLAN 2001–2004. This Plan of Management highlights Council's commitment to protecting Warringah's identity, high quality of life and enhancement of natural environmental, aesthetic, cultural, heritage and recreational values. Table C1, Warringah Council's Strategic Planning Documents, illustrates the framework for planning and this Plan's relationship to other strategic documents which share the same guiding principles.

Table C1: Warringah Council's Strategic Planning Documents Flow Chart



C.6 Strategic documents used in the preparation of this Plan

The following Council documents have been used to assist and guide the strategic outcomes of this Plan, ensuring consistency in values, principles and policies:

- Coastal Management Strategy 1985;
- Dee Why Beach/The Strand – Urban Design Study 1995;
- Interim Policy on the Management of the Commercial Use of Beaches, Reserves & Buildings/Facilities in Warringah 2002;
- Warringah Local Environment Plan 2000;
- Recreation Strategy for Warringah's Beaches and Coastal Open Space 1998;
- Recreation Strategy Plan 1999;



- State of the Environment Report 2000-2001;
- Northern Beaches Stormwater Management Plans 1999;
- Urban Bushland Management Plan 1990;
- Warringah Bicycle Plan 1998;
- Warringah Social Plan 2000; and
- Warringah PLAN 2001– 2004.

C.7 Other relevant Legislation and Policies

The Plan must also be developed in accordance with the provisions contained within relevant legislation and policy guidelines, including but not limited to the following:

- Australian Heritage Commission Act 1975;
- Catchment Management Act 1989;
- China-Australia Migratory Birds Agreement 1986 (CAMBA);
- Disability Discrimination Act 1992;
- Environmental Planning and Assessment Act 1979;
- Environmental Protection and Biodiversity Conservation Act 1999;
- Fisheries Management Act 1994;
- Japan-Australia Migratory Birds Agreement 1974 (JAMBA);
- Noxious Weeds Act 1993;
- Rare or Threatened Australian Plants 1996;
- Rural Fires Act 1997;
- SEPP No. 19 – Bushland in Urban Areas;
- State Rivers and Estuaries Policy 1993; and
- Threatened Species Conservation Act 1995.

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APPENDIX D:
PUBLIC MEETINGS AND WORKSHOPS



Public Meetings and Workshops

Following is a summary of community consultation carried out during the development of the Dee Why Lagoon Wildlife Refuge Plan of Management. Consultation has been carried out with the general public, Friends of Dee Why Lagoon, Dee Why Surf Life Saving Club, Council Officers and State Government Agencies.

Table D1: Community Consultation

Date	Method of Consultation
17 June 1995	Community meeting at Harbord Diggers Club – meeting raised local issues relevant to Dee Why Lagoon Catchment.
19 August 1995	Community workshop at Harbord Diggers Club – workshop identified ‘actions and strategies’ for the Dee Why Lagoon catchment area.
November 1998	Letterbox drop to 700 near neighbours of a comments sheet for the Dee Why Lagoon Wildlife Refuge. The comments sheet was also attached to the Friends of Dee Why Lagoon newsletter dated November 1998. Sixty six submissions were received.
7 November 1998	Article in the Manly Daily’s Mayors message column requesting community comments in relation to the future management of the Dee Why Lagoon Wildlife Refuge.
17 November 1998	Press release/article on page 7 of the Manly Daily.
1995 – 1999	A number of meetings were held with the Friends of Dee Why Lagoon and draft plans were presented to Council’s Dee Why/Curl Curl Lagoon Estuary Management Committee.
1 May 2000	Community workshop was held to discuss the Estuary Management Plan – key issues for the catchment and lagoon were identified, these were also useful for the Plan of Management.
18 May 2000	Presentation of draft Masterplan and discussion of key management actions at the Dee Why Lagoon and Curl Curl Lagoon Estuary Management Committee meeting.
28 August – 9 October 2000	Public exhibition and submission period for draft Plan of Management.
5 October 2000	Public hearing into the categorisation of Community Land, as required by the Local Government Amendment (Community Land Management) Act 1998.



APPENDIX E:

**THE PROPOSED ASSESSMENT SYSTEM FOR DETERMINING THE IMPACT
OF ONE OR A SERIES OF COMMERCIAL USE ACTIVITIES
(extract from the Interim Policy on the Management of the Commercial Use of
Beaches, Reserves & Buildings/Facilities in Warringah)**



Principles for assessment:

Applications will be assessed as low, medium or high impact according to the following criteria:

Criteria	Description
Risk	This includes risk to the participants and public within the area of the activity. Factors such as topography, condition of reserve/beach, degree of maintenance and pollution warnings will be considered.
Space Usage	For consideration is whether it is exclusive use, whole of the beach/reserve or part of beach/reserve.
Noise	What level and how wide spread.
Traffic	Level of disruption and parking needs.
Size	Number of participants.
Weather	Some beaches are less suitable for certain activities due to surf conditions and surf patterns. Reserves will be impacted by wet weather and fire hazards.
Amenities	Availability if amenities required for activity type.
Natural Environment	Level of sensitivity of site and overuse issues.
Present Usage	Number of events already approved.
Cumulative Impact	The frequency of an area's use will affect the impact. The more frequently an area is used, in general, the higher the risk of damage to the area.
Length of operation	The length of time over which an activity is to be conducted will influence the level of impact.



Each criteria is scored by the activity's level of impact as follows:

No Impact – 0

Low Impact – 1

Medium Impact – 2

High Impact – 3

Hence the **overall** level of impact for any proposed activity is scored as follows:

Low Impact Activity – 0 to 11

Medium Impact Activity – 12 to 22

High Impact Activity – 23 and above

To then assess multiple activities at one beach, reserve or facility, the activity is given a score of 1 for low, 2 for medium and 3 for high.

Each beach, reserve or facility is then assigned a total impact score for a given period and then a number of various combinations of activities can proceed as long as the total score is not exceeded. This can be for a number of time frames.

For example: A Beach in the summer season may be assigned a score of 4 for any defined period of time (such as a day or weekend). This means that 4 low impact, two medium impact or 1 low and 1 high impact activities could occur over a defined time (such as a day or weekend). A total score for, say the month, may then also be applied. The value of this approach is that it limits the cumulative impacts of commercial use on any given location. Each plan of management will use this model to develop a scoring system for the areas covered in that plan of management.

Please note that this is intended as a **guide only** and the practicality of the system will be reviewed with the review of the policy.



Following are examples of activities types and category outlines. Some examples may occur in more than one category as variations in the assessment criteria may result in the same type of activity having a different impact. For example, a small photo shoot is listed as low impact while a large film shoot is listed as high impact. The duration of an activity may also result in such variations.

Category	Criteria	Examples
Restricted Areas (low or no commercial use)	Areas that are highly sensitive or already overused.	Includes: Parts of Dee Why Wildlife Refuge, Dee Why Headland Intertidal Area, Long Reef Aquatic reserve. Other areas supporting high conservation bushland, threatened species and sensitive waterways as outlined in Section 1.5.2 of the policy.
Low Impact	Low risk to Council, participants and/or public Minimum space usage or is only passing through an area Low noise No traffic disruption Less than 10 participants Short duration	Rental of beach umbrellas/mats Walking tours Sightseeing tours Diving training Photo shoots Personal Trainers
Medium Impact	Some risk to Council, participants and/or public Exclusive use of part of beach/reserve 10-20 participants Impacted by weather/surf conditions May alienate some parking area	Surf craft rental Surf related course Water safety education Volleyball competitions Mountain Bike tours/courses Corporate sports (eg lunch time activities)
High Impact	20 plus participants Risk to Council & participants and/or public Exclusive use of large are or impact on whole of beach/reserve Traffic disruption Impact on existing events May induce a maintenance 'shut-down' period to allow repair (eg of turf)	Large operation surf craft hire or surf related course Large film shoots Triathlons Markets Festivals/Cultural events (eg rock concert) Surf Contest

