

MINUTES

NARRABEEN LAGOON STATE PARK ADVISORY COMMITTEE

HELD ON WEDNESDAY, 10 JUNE 2015

**TODD DICKINSON
GROUP MANAGER NATURAL ENVIRONMENT**

Voting Members

Warringah Council – Chair

Warringah Council GM representative

Recreational Representative

Community Representative

Metropolitan Local Aboriginal Land Council

Office of Environment and Heritage – National Parks

NSW Trade & Investment (Crown Lands)

NSW Department of Primary Industries (Fisheries)

Mayor Michael Regan

Mr Todd Dickinson

Ms Julie Whitfield

Mr Alan Jones

Mr Allen Madden

Mr Peter Hay

Mr David Clarke

Mr Marcel Green

Officers

Coast & Waterways Manager

Senior Environment Officer – Lagoons

Administration Coordinator

Mr Adrian Turnbull

Ms Jodie Crawford

Ms Denise Regan

Minutes of the Meeting of the Narrabeen Lagoon State Park Advisory Committee held on Wednesday, 10 June, 2015 in the Guringai Room, Civic Centre, Dee Why, commencing at 4:00 pm.

ACKNOWLEDGEMENT OF COUNTRY

1. ATTENDANCE

- 1.1. Present: Michael Regan (Chair), Todd Dickinson, Julie Whitfield, Alan Jones, David Clarke, Adrian Turnbull, Denise Regan, Jodie Crawford
- 1.2. Apologies: Marcel Green, Peter Hay

2. CONFIRMATION OF MINUTES

- 2.1. The minutes of the meeting held on 28 January, 2015 were confirmed as correct by Alan Jones and Julie Whitfield.

3. MATTERS ARISING FROM PREVIOUS MINUTES

3.1 Terms of Reference

The modifications were noted.

RECOMMENDATION: That the changes be noted.

***Moved:** Michael Regan / **Seconded:** Alan Jones*

3.2 Funding

The committee were directed to Attachment 1 - Narrabeen Lagoon State Park - Asset Roles and Responsibilities that had been circulated with the agenda. This spreadsheet describes the service Council currently delivers within the State Park, and discussion was held regarding whether the Committee should seek to maintain the status quo, or to increase the levels of service but at what cost. The Committee agreed that the Asset Roles and Responsibilities spreadsheet was accurate, but that the list needed some sense of scale of expenditure.

Council's CFO has advised the Trust could be accounted as a separate entity, which would assist in planning future projects and income.

Mr Clarke provided an explanation of what Crown Lands sought from a Trust, noting that Council should define the current cost per annum of managing the reserves in order for Crown Lands to determine the additional funding required to achieve improvements to service levels in the State Park. Crown Lands seek a baseline of current Council expenditure for the number of hectares the State Park covers.

Expenditure figures from last meeting were reviewed, and the potential costs for additional items were noted. Mr Clarke requested that staff consider adding additional information to existing expenditure spreadsheet, including 5 year plan projections, and bring it back to the next meeting for discussion. It was recommended that opportunities for revenue raising and the current complement of licences and leases with this Park also be included.

ACTION:

- Expand expenditure table to reflect additions as requested **Warringah Council**
- Investigate revenue options and report back to next meeting **Warringah Council**
- David Clarke to give Council information on licence and lease holders. **Crown Lands**

RECOMMENDATION: That the information be received and noted.

***Moved:** Michael Regan / **Seconded:** Julie Whitfield*

3.3 Plan of Management (PoM)

Presentation by Warringah Council

The Committee were directed to Attachment 2 - Narrabeen Lagoon Plan of Management action audit. It was noted that Council were progressing the actions of the Plan of Management and the Committee were happy with this report.

ACTION: Staff to bring the action audit back to this Committee annually but should flag any issues as they come up. **Warringah Council**

RECOMMENDATION: That the information be received and noted.

***Moved:** Michael Regan / **Seconded:** Julie Whitfield*

3.4 Waterway Use

Presentation by Warringah Council

Option approved by Council was to install navigational markers in lieu of dredging. Mr Turnbull gave an overview of the planned marker buoy installation around the shallow seagrass area and navigation channel, including what colours would be used and what they mean. He advised that these should be installed by the end of financial year, and that maps and brochures will be provided to user groups explaining the meaning of the navigational markers and their significance. To inform the general community of this initiative signs will be placed on boat ramps and articles will be put in Manly Daily.

It should also be noted that grant applications have been unsuccessful, and that Council will fund the installation costs.

The Committee congratulated staff on this initiative.

RECOMMENDATION: That the information be received and noted.

***Moved:** Michael Regan / **Seconded:** Julie Whitfield*

3.5 State Park Boundaries

Presentation by Warringah Council

The Narrabeen Lagoon State Park - Land parcel consideration matrix was reviewed.

Mr Clarke requested changing the weightings of ownership / management, and suggested when grading land owners Warringah Council and Crown Lands be graded a 10, and where land is owned by other government agencies or other entities staff needed to look at 6 or 8 rating depending on who that may be.

The Committee endorsed the matrix subject to consideration of amending the weightings based on land ownership. It was agreed that staff would adjust the weightings as discussed, and run the matrix for public land parcels surrounding the lagoon. The draft matrix has been amended as discussed and the worked examples are included as Attachment 3.

Result from the full land parcel review will be "clustered" into similar parcel groups, and circulated to the Committee.

ACTION:

- Provide updated map of the State Park **Crown Lands**
- Review weightings on ownership and provide update **Warringah Council**

RECOMMENDATION: That the information be received and noted.

Moved: Julie Whitfield / **Seconded:** David Clarke

3.6 Alleged Unauthorised Developments

Presentation by Warringah Council

Development around the edge of the Lagoon was reviewed. It was noted that a number of land owners had extended their property onto Crown Land fringing Narrabeen Lagoon, as well as the existence of a number of discrete parcels of Crown Land that are effectively treated as private property. The question was raised as to what action could be taken and a number of options were discussed.

It was agreed that the Committee would like public access around the lagoon but recognise the difficulties in obtaining this. The Committee sought advice on where to from here and it was suggested that public access should be the first priority, but if this was not possible then Crown Lands should consider mechanisms to authorise the use of the land in question.

ACTION:

- David Clarke to investigate licences for the jetties built into Narrabeen Lagoon, and also reasons for the anomalies of land use. **Crown Lands**
- Council staff to further investigate the land parcels.....**Warringah Council**

RECOMMENDATION: That this matter be deferred until further advice received.

Moved: Julie Whitfield / **Seconded:** Alan Jones

3.7 Leases and Licences

It was noted that discussions between Crown Lands and Council had taken place prior to this Committee meeting. The Committee was advised that under the upcoming amendments to Crown Lands Act, Council will be able to manage Licences and Leases, and that more information will be available over the coming months.

RECOMMENDATION: That this information be noted.

Moved: Michael Regan / **Seconded:** Alan Jones

4. GENERAL BUSINESS

5. NEXT MEETING

To be determined

There being no further business the meeting ended at 5:30 pm

ATTACHMENT 1 – NARRABEEN LAGOON STATE PARK – ASSET ROLES & RESPONSIBILITIES



WARRINGHAM

NL State Park Asset Maintenance Responsibilities

Asset Type	Sub-Category Description of Asset	Responsibility		
		Activity	Maintenance	Cleaning
Parks	1 Sporting Clubhouses, Amenities & Storage Sheds within parks	✓	✓	✓
	2 All trees on park sites (Exc. Threatened Species)	✓	✓	✓
	3 Under-storey and gardens within parks	✓	✓	✓
	4 Street Trees	✓	✓	✓
	5 All natural vegetation (not currently mapped as native vegetation) within parks	✓	✓	✓
	6 All native vegetation (mapped as "natural area" asset polygon) within parks as well as any	✓	✓	✓
	7 General carparks servicing a building or structures (eg Play equipment, dog free leash areas)	✓	✓	✓
	8 Directional / Information signage within Parks	✓	✓	✓
	9 All other general footpaths within parks including footpath to playground (sealed only)	✓	✓	✓
	10 Grass road verges adjacent to Parks	✓	✓	✓
	11 BBQ'S within Parks	✓	✓	✓
	12 Local drainage Infrastructure that originates in playing fields and/or within parks (under 375mm	✓	✓	✓
	13 Public Right of Way (Pathways)	✓	✓	✓
	14 Public Right of Way (Vegetation)	✓	✓	✓
	15 Car Park Lighting	✓	✓	✓
	16 Bins - General waste bins	✓	✓	✓
	17 Park entry, identification and directional signage	✓	✓	✓
	18 Regulatory signage for park, playground etc	✓	✓	✓
	19 Regulatory carpark signage & Pay /Display Machines	✓	✓	✓
	20 Signage in Alcohol Prohibited Areas (APAs). APAs are located in public parks, reserves and	✓	✓	✓
	21 Playing Fields - Turf	✓	✓	✓
	22 Main Switch Boards - Servicing Community Centres	✓	✓	✓
	23 Main Switch Boards - Servicing Sporting Facilities	✓	✓	✓
	24 Bollards within Parks	✓	✓	✓
	25 Significant Recreation Trail through Natural Areas, significant built trails	✓	✓	✓
	26 Fencing - Park boundaries (including on car park perimeter)	✓	✓	✓
	27 Multiuse trail serving natural areas NEU	✓	✓	✓
	28 Car Parks - Pedestrian Lighting - Council supply - Reserve	✓	✓	✓
	29 Pedestrian Bridges in Parks (other structures)	✓	✓	✓
Roads	1 Pavement and Sub grade	✓	✓	✓
	2 Footpath	✓	✓	✓
	3 Kerb and Gutter	✓	✓	✓
	4 Nature Strip / Grass Verge	✓	✓	✓
	5 Vegetation Management	✓	✓	✓
	6 Vegetation in Road Shoulder	✓	✓	✓
	7 Stormwater drainage damage to infrastructure	✓	✓	✓
	8 Stormwater Blockage	✓	✓	✓
	9 Regulatory Signs and Lines	✓	✓	✓
	10 Lighting (Council Owned)	✓	✓	✓
	11 Shared Path or Bike Path / Road Reserve	✓	✓	✓
	12 Bridge in a Park or Reserve	✓	✓	✓
	13 Retaining Walls on Road Reserves	✓	✓	✓
	14 Retaining Walls - in Reserves	✓	✓	✓
	15 Shared Path New (Bike/Ped)- in a Reserve	✓	✓	✓
	16 Stairways to Reserves (eg Timber)	✓	✓	✓
	17 Fencing (Armco, guard, handrail) in road reserve	✓	✓	✓
	18 Car Parks - Pavement, Sub grade, and Renewal	✓	✓	✓
	19 Car Parks - Line making and Parking Signs	✓	✓	✓
	20 Car Parks - Lighting (Council Owned)	✓	✓	✓
	21 Car Parks - Pedestrian Lighting - Council Supply - Reserve	✓	✓	✓
	22 Regulatory Signage - Alcohol Free Zones (as per Council report 26/6/12), Alcohol Free Zones	✓	✓	✓
Stormwater	1 Clean and maintain GPT's to schedule which includes 100 sites and a range of frequencies from	✓	✓	✓
	2 Inspect known drainage pits likely to block and cause flooding on a regular basis	✓	✓	✓
	3 Fencing around drainage assets (GPT's, headwalls, pits)	✓	✓	✓
	4 Stormwater pipes / Culverts (excluding - subsoil or roof water drainage and local drainage	✓	✓	✓
	5 Open Stormwater Channels	✓	✓	✓
	6 Flood/Stormwater Detention Basins	✓	✓	✓
	7 Stormwater Pits (excluding local surface drainage pits installed by parks)	✓	✓	✓
	8 Water Quality Devices	✓	✓	✓
	9 Headwalls	✓	✓	✓
Buildings	1 Under-storey and gardens (Landscaping)	✓	✓	✓
	2 Leased/licensed buildings eg sporting clubhouses / amenities	✓	✓	✓
	3 Public Toilet on reserve	✓	✓	✓
	4 Footpath leading to Building Entry	✓	✓	✓
	5 Paving / hard surfaces around Buildings	✓	✓	✓
	6 Landscaping surrounding Buildings	✓	✓	✓
	7 Car Parks - Pedestrian Lighting - Council supply - Reserve	✓	✓	✓
	8 Car Parks -Pedestrian Lighting - Council supply - Facility	✓	✓	✓

Asset Type	Sub-Category Description of Asset		Responsibility	
	Activity	Maintenance	Cleaning	
	✓	✓	✓	✓
	Bollards fences surrounding Building			
Natural Areas	1	Fencing for the protection of natural areas	✓	✓
	2	Unauthorised bush tracks for basic access	✓	✓
	3	Paths/bike tracks/recreation facilities purpose built for recreation access on that site	✓	✓
	4	Tracks/trails built as part of a track/trail network	✓	✓
	5	Native vegetation (mapped as "natural area" asset polygon), threatened species, EECs	✓	✓
	6	Showers/taps/water refill/toilets	✓	✓
	7	Cleansing of litter etc from reserves	✓	✓
	8	Management of dunes for coastal protection	✓	✓
	9	Seating/picnic tables/platforms for recreational/experiential	✓	✓
	10	Rock shelves/platforms etc	✓	✓
	11	Aboriginal heritage items in natural areas	✓	✓
	12	Seawalls for protection of Council/Crown assets	✓	✓
	13	Replenishment/nourishment/scraping to restore eroded beaches	✓	✓
	14	Beach access points ensuring safety, barricades, repairs	✓	✓
	15	Cleansing seaweed, dead fauna	✓	✓
	16	Creek banks Geotechnical stability of creek banks	✓	✓
	17	Creeks, Lagoons & Wetlands Cleansing of litter and debris within reach	✓	✓
	18	Cleansing of litter and debris out of reach	✓	✓
	19	Recreational assets (creation/maintenance)	✓	✓
	20	Lagoon entrances Emergency openings	✓	✓
	21	Multituse Trail/significant trails built by NEU (exception of Narrabeen Trail - maintained by PRF)	✓	✓
	22	Fencing (headwalls, other drainage structures, natural area)	✓	✓

Extension of State Park Management Actions

Action	Example
Signage	Placemarking
	Interpretive/Education
Promotions	Events
	Marketing materials
	Advertising/Media
Leases/Licences	Consideration/application
	Administration
Grants	Application/Administration/Reporting
Compliance	Encroachments
	Activities
Management of additional parcels	Weed removal
	Bush regeneration
	Invasive species control
	Fencing
	Signage
	Hazards - eg. Bushfire
	Potential contamination
Capital investment	Compliance
	Boat ramps
	Pontoons
	Lagoon bed modification
	Buildings/structures
	Retaining (sea)walls
	Car parking
	Trails
	Facilities

ATTACHMENT 2 – NARRABEEN LAGOON PLAN OF MANAGEMENT ACTION AUDIT

1.1 Management Action Plan

Table 1 Management Strategy for Narrabeen Lagoon

Value ¹	Strategy ²	Item ID	Action ³	Performance Target ⁴	Priority	Performance Measure ⁵	Progress	Comment
Objective: To establish water quality outcomes suitable for protection of the natural environment and for public recreation;								
Natural Environment (Aquatic Habitat)	Water quality management	EP1	Investigate current litter management to determine effectiveness. Investigate public education/enforcement campaigns to reduce littering. Work with adjacent landowners and Council to maintain or improve litter management systems and procedures wherever possible.	To reduce litter entering the lagoon.	High	Reduction of litter reaching the lagoon, (Potential for measurement by GPT clean out rates).	Ongoing	Weekly litter picks at Jamieson Park, Berry Reserve, Middle Creek and Wheeler Park. Regular whole walkway inspections. Reactive clean-ups after reports of litter or dumping. Recycling and Garbage bins emptied daily. Education signage on bins.
		EP2	Where necessary, investigate causes and ecological impacts of poor water quality. Work with adjacent land owners, Reserve Trusts, OEH, Sydney Water and Pittwater Council to minimise poor quality runoff discharging into the lagoon.	Maintain or improve water quality entering the lagoon by addressing issues of concern as identified especially with consideration of aquatic ecosystems.	High	Lagoon water quality is maintained or improved (e.g. Beachwatch data).	Ongoing	Maintaining relationships with OEH, Sydney Water etc. Lagoon water quality monitoring being implemented including wet weather data. Warringah Compliance program e.g. erosion and sediment controls.
		EP3	Work with catchment managers to investigate level and cause of sedimentation in the lagoon and tributaries, address identified issues with landholders and residents within the catchment. Implement Northern Beaches Stormwater Management Plan as appropriate.	Prevent increased rates of sedimentation above natural levels.	Medium	Assess and report any known changes in quality and rate of sedimentation.	Ongoing	Stormwater Asset Management Plan (SWAMP) nearing completion. Audit being undertaken of GPT's. Warringah Compliance program e.g. erosion and sediment controls. Lagoon and Creek water quality monitoring being implemented. Benefit maps are being undertaken to identify sources and hotspots within the catchment.
Objective: To maintain and enhance the Natural Environment								
Natural Environment (Aquatic Habitat)	Protection of aquatic habitat and fauna	EP4	Ensure satisfactory environmental assessments are undertaken for works and activities proposed within the bed of the lagoon. Such activities will only proceed if the negative impact on the environment is minimal or avoided and/or appropriate mitigation and offset measures are implemented.	Prevent negative impacts to the aquatic habitat resulting from works and activities.	Ongoing	Satisfactory environmental assessments are completed as required for works and activities within the bed of the lagoon. Mitigation and offset measures are implemented as appropriate.	Ongoing	Example - Review of Environmental Factors and appropriate permits undertaken for Boat Shed at Sports Academy, investigation into recreational dredging reported to Council, investigation of Marker Buoys around key seagrass beds
	Understanding of Key Aquatic Habitat	EP5	Monitor and gather relevant information as it becomes available on the condition of key aquatic habitat to understand the status and condition of the lagoon as key fish habitat.	Maintain and enhance aquatic habitat including key fish habitat such as	Ongoing	Information is gathered from any monitoring or data collection and reported in Annual	Ongoing	Seagrass mapped on Council geographical information system (GIS), SCMA Native Vegetation is mapped on Council's GIS (includes saltmarsh, fringing reed land and mangroves). Lagoon water quality monitoring, bathymetry, investigation of

¹ Value: Identified as an important aspect of Narrabeen Lagoon, by the community, Council, DPI or SMEC.

² Strategy: A plan to preserve one of the values identified for Narrabeen Lagoon.

³ Objective: The purpose of goal of the management of Narrabeen Lagoon.

⁴ Performance Target: The ideal outcome of the action.

⁵ Performance Measure: How the action will be measured against a performance target.

Value ¹	Strategy ²	Item ID	Action ³	Performance Target ⁴	Priority	Performance Measure ⁵	Progress	Comment
			Provide information to Council for use in determining DAs and other proposed activities.	seagrass and saltmarsh within the lagoon.		Report.		Marker Buoys around key seagrass beds
	Protection of sea grass beds and saltmarsh EEC	EP6	In consultation with relevant agencies, investigate current methods and best practice for the long term sustainability of seagrass beds and coastal saltmarsh. Operational sub plan to include saltmarsh and sea grass protection.	Reduction in the loss, or preferably an increase of estuarine vegetation of Narrabeen Lagoon, especially seagrass beds and saltmarsh, outside of natural variation.	Ongoing	Assessment of extent, quality and biodiversity within sea grass beds and coastal saltmarsh.	Ongoing	Recreation dredging investigations for Stage 2 feasibility looked at seagrass and saltmarsh extents (Cardno Seagrass survey and SCMA Native Vegetation are layers on SEA) and the financial implication of removing. Study looked at species and recolonisation rates and opportunities, investigation of Marker Buoys around key seagrass beds
	Maintain or improve depth of water in the lagoon for its environmental values	EP7	Where appropriate, change the water depth (e.g. by infilling or other method) in some areas of the lagoon's central or western sections to improve its environmental and habitat values.	Water depth appropriate for improved habitat value.	High	Assessment of biodiversity within affected areas.	Council resolution not to proceed with recreational dredging at this stage	Dredging has been investigated and council has voted to install marker buoys initially to aid in navigation.
Objective: To promote and enhance unique environmental and amenity values of the lagoon								
Natural Environment (Aquatic Habitat and Terrestrial Habitat)	Lagoon as educational resource	EP8	Promote use of lagoon for educational purposes. Support community groups (especially schools) and other stakeholders in studying and learning about the lagoons environment. Link to existing programs with educational facilities.	Use of lagoon by groups for educational promotions and training including TAFE and research by universities and other interest groups. Programs established with educational facilities.	Medium	Improved understanding and appreciation of the environmental, social and recreational values of the lagoon.	Ongoing	Partnerships developed with universities for water quality monitoring. Benefit mapping of the Narrabeen Lagoon Catchment is being undertaken by OEH to identify hot spots and priority areas for management. Maps for education purposes will be produced as part of this project. Education of lagoon environment promoted through events such as Brookvale Show, Hilltop to Headland, Warringah Environmental Events and school visits.
	Community involvement	EP9	In conjunction with appropriate stakeholders, promote and manage effective improvements in protecting the environment of the lagoon and the catchment by all residents, volunteers and other interested groups. Development and distribution of appropriate media, including liaising with community groups.	Stakeholders and the community are active participants in protecting the environment of the lagoon.	Medium	Improved understanding and appreciation of the environmental, social and recreational values of the lagoon. Report progress in Annual Report.	Ongoing	Bushcare groups are active in the catchment. Council supports and liaises with various committees, sports groups, community groups, and environmental groups. Annual Lagoon Health Report card is distributed at events and is available on Council's we site. Benefit mapping of the Narrabeen Lagoon Catchment is being undertaken by OEH to identify hot spots and priority areas for management. Maps for education purposes will be produced as part of this project.
Heritage	Protect and enhance heritage values	EP10	Manage heritage items in accordance with heritage listing under relevant legislation and policies.	Heritage items are maintained and preserved.	Ongoing	Preservation (no impact) of heritage items in the vicinity of the study area as a result of activities on the lagoon.	Ongoing	Strategic Land Use Planning and Aboriginal Officer assess heritage items as appropriate. Culturally significant sites are noted on Narrabeen Trail brochures and maps
Objective: Coastal Environmental Protection								
Natural Environment (Terrestrial Habitat)	Protection of terrestrial vegetation within the Plan area	EP11	Investigate condition and confirm classification of terrestrial vegetation within the Plan area (including island and foreshore vegetation) including endangered ecological communities (Saltmarsh and Swamp Oak	Classification and condition of EEC's within the Plan area are confirmed. Identified areas of	Medium	Areas and condition of EEC are assessed and recorded.	Complete Ongoing	Vegetation Survey undertaken in 2010, Warringah Biodiversity Conservation Study, SMCMA vegetation and classification including aquatic and terrestrial vegetation types.

Value ¹	Strategy ²	Item ID	Action ³	Performance Target ⁴	Priority	Performance Measure ⁵	Progress	Comment
			Floodplain Forest). If appropriate undertake regeneration. Work with Councils, Friends of the Bush and other groups for rehabilitation works required.	EEC are maintained and improved.				Bushcare groups and Council contractors are active in the catchment.
Natural Environment (Aquatic and Terrestrial Habitat)	Protection of study area from over development subsequently reducing impacts to the lagoon	EP12	Promote appropriate development and planning controls through liaison with adjacent land managers that ensures impacts on the environmental values of the lagoon are avoided or minimised.	Impacts to the natural environment of Narrabeen Lagoon from development are avoided or minimised through local development and planning controls.	Ongoing	Approved development in the catchment does not impact on the reserved purpose of Narrabeen Lagoon (public recreation and coastal environmental protection).	Ongoing	Warringah has a new LEP and DCP as of 2011. Warringah has a Protection of Waterways and Riparian Land Policy (2010) and DCP (2011) that delineates setbacks for development. The draft Water Management Policy addresses water quality for all new development. Deferred Land issue (Oxford Falls Valley & Belrose) is being addressed by Strategic Planning.
Objective: Sustainable, diverse and appropriate use of the area for recreation								
Recreation	Sustainable public recreation	PR1	Work with Warringah Council and relevant stakeholders to facilitate holistic approach to management of public recreation on the lagoon to allow use and enjoyment of the lagoon while avoiding/minimising environmental impacts. Specific management model for Narrabeen Lagoon to be developed as part of Warringah Council Recreation Strategy 2009 (Action 20).	Sustainable public recreation on the lagoon.	High	Implementation of this model by Warringah Council by the end of 2013. Reserve Trust Manager to document progress in annual report.	Ongoing	On-Water Recreation Usage surveys have been undertaken. Dredging has been investigated and Council has resolved to initially install marker buoys to aid in navigation.
		PR2	Work with NSW Maritime to enforce restrictions on boating where safety and/or environmental issues need to be managed including increased surveillance and enforcement (if agreed upon all parties). Regular liaison between Reserve Trust Manager, NSW Maritime, DPI and Pittwater Council.	Safety and/or environmental issues relating to boating are avoided or minimised.	High	Reduction in number of incidents reported in the NSW Maritime annual report.	Not commenced	Specific management model for Narrabeen Lagoon as part of Warringah Council Recreation Strategy 2009 not commenced.
		PR3	Investigate use of watercraft during peak periods and determine appropriate measures to adequately manage use of water craft.	Appropriate use of watercraft within the lagoon.	Medium	Appropriate rules in place for watercraft management, and adherence to these rules.	Ongoing	This is a joint Council and RMS (Maritime) responsibility. Council has undertaken On-Water Recreation Usage surveys (2013). Licencing for businesses and clubs is centralised with Parks Reserves and Foreshores. 8 knot buoys are in place. Congestion is experienced at Jamieson Park on weekends. Parking is considered a limiting factor.
	Water quality appropriate for swimming	PR4	Utilise existing water quality data from Beachwatch and Sydney Water and investigate adequacy of knowledge of current water quality within the lagoon. Obtain appropriate level of data on water quality for swimming.	Water quality in the lagoon appropriate for swimming.	High	Facilitate public access to water quality data.	Ongoing	Council publishes the Lagoon Ecological Health Report Card which is available on Council's website and distributed at environmental events. There are links to, and promotion of, Beachwatch website for recreational water quality. Beachwatch are continuing to monitor Birdwood Park, and have started monitoring at Bilarong reserve. Council water quality monitoring program in the lagoon and catchment show higher bacteria levels in the upper catchments, suggesting they may be diluted in the lagoon. Signs have been installed at reserves to ask the public to consider variable water quality after rain.
	Maintain or improve depth of water in the lagoon for	PR5	Where appropriate, change the water depth (e.g. by dredging or other method) in some areas of the lagoon's central or western sections to	Water depth is appropriate for recreation without	High	Bed of lagoon is at an appropriate level for sustainable recreational	Council resolution not to proceed with	Community consultation and feasibility study were undertaken to determine level of community support and potential environmental impacts. Four dredge scenarios were provided to Council to

Value ¹	Strategy ²	Item ID	Action ³	Performance Target ⁴	Priority	Performance Measure ⁵	Progress	Comment
	recreational access without compromising its environmental values		improve recreational access without significantly affecting its environmental values.	significantly affecting the environmental values of the lagoon.		access and environmental values are not compromised.	recreational dredging as no environmental or habitat benefit	consider in 2014. Council resolved to first implement the 'non-dredge option' which included installing marker buoys in the lagoon to aid in navigation.
	Appropriate and well maintained facilities to support recreation and maintain and improve safety for users	PR6	Maintain and upgrade appropriate facilities such as car parks, boat ramps and wash down areas. Work with adjacent land holders in undertaking these works.	Appropriate and accessible facilities are provided to maintain sustainable recreation on the lagoon.	Ongoing	Appropriate facilities are provided. Document maintenance of and provision of new facilities.	Ongoing	Natural Environment, Roads Traffic and Waste, Buildings Property and Spatial Information, and Parks Reserves and Foreshores maintain and improve facilities on an ongoing basis. Customer requests are attended to where funding and priorities allow. Construction of the Narrabeen Lagoon Trail is complete.
	Protection of amenity	PR 7	Include protection of amenity and peace of area as important consideration during implementation of all other management strategies. Specific management model for Narrabeen Lagoon (see PR1) to consider impacts of recreation on amenity and peace of area.	Maintain or improve amenity and peace of the area for all users.	Ongoing	Implementation of the management model by Warringah Council by the end of 2013. The amenity and peace of the area are maintained and not impacted.	Ongoing	On-Water Recreation Usage surveys have been undertaken showing amenity use of the lagoon. When considering licence applications amenity and peace of the area is considered. Eg water parks and floating restaurants have not been granted. Specific management model for Narrabeen Lagoon as part of Warringah Council Recreation Strategy 2009 not commenced.
	Public education	PR 8	Work with stakeholders to educate the community on the sustainable use of the lagoon (e.g. fishing size limits and appropriate disposal of litter). Resources are made available to the community, relating to the sustainable use of the lagoon. DPI to enforce license permits and fish catch size limits). Increased presence and enforcement by DPI as appropriate.	Sustainable use of the lagoon by the community.	Ongoing	Improved community perceptions of the lagoon, and improved environmental indicators.	Ongoing	Interpretive signs as part of the Narrabeen Lagoon Trail circumnavigate the lagoon Education of lagoon environment promoted through events such as Brookvale Show, Hilltop to Headland and school visits. Council publishes the Lagoon Ecological Health Report Card which is available on Council's website and distributed at environmental events. Benefit mapping of the Narrabeen Lagoon Catchment is being undertaken by OEH to identify hot spots and priority areas for management. Maps for education purposes will be produced as part of this project. Weekly litter picks at Jamieson Park, Berry Reserve, Middle Creek and Wheeler Park. Regular whole walkway inspections. Reactive clean-ups after reports of litter or dumping. Recycling and Garbage bins emptied daily. Education signage on bins. Staff are in regular contact with the DPI – Fisheries Officer.
Objective: To manage potential impacts of flooding on commercial and residential properties as identified in an adopted Flood Risk Management Plan								
Flood Mitigation	Flood mitigation for protection of homes and businesses in surrounding areas	PR9	Use data and recommendations from adopted Floodplain Risk Management Plans for Narrabeen Lagoon to manage flood risk. Review actions of this Plan upon reviews of the Narrabeen Lagoon Flood Study, Flood Risk Management Strategy and Flood Risk Management Plan. Update where appropriate in response to findings of the study.	Flood risk managed appropriately.	High	Implementation of adopted Floodplain Risk Management Plans for Narrabeen Lagoon and report on flood information in annual reports.	Ongoing	Narrabeen Lagoon Flood Study updated in 2013. Floodplain Risk Management Study and Plan are underway.
		PR10	Assess entrance management regimes in conjunction with Warringah and Pittwater Councils and the community to ensure the most efficient and effective management of this area is maintained. Undertake review of effectiveness and impacts of entrance	Appropriate entrance management regimes are implemented.	Ongoing	Appropriate review of entrance management procedures is undertaken and the most efficient and effective management of this area is implemented.	Ongoing	This is being undertaken through the Floodplain Risk Management Study and Plan.

Value ¹	Strategy ²	Item ID	Action ³	Performance Target ⁴	Priority	Performance Measure ⁵	Progress	Comment
			management procedures is undertaken, in consultation with Warringah and Pittwater Councils and the community.			Report on the activities, assessments and reviews undertaken.		
		PR11	Management of flood risk to commercial operations and private property including provision of flood risk information to prospective commercial operators and the public and set plans in place.	Appropriate management of flood risk to commercial operations and private property.	Ongoing	Production of and reporting on of flood awareness and planning material.	Ongoing	Community consultation and education completed as part of the Narrabeen Lagoon Flood Study 2013. Further consultation will be undertaken for the development of the Floodplain Risk Management Study and Plan.
Objective: Effective administration for implementing strategies								
All	Annual reporting	Admin 1	Annual report prepared for Narrabeen Lagoon and submitted to DPI. Report to be publicly available on Warringah Council website.	Prepare and make public a Trust report for Narrabeen Lagoon on an annual basis.	Ongoing	Annual report meets statutory requirements and provides information to DPI, stakeholders and the community	Underway	Production of annual Lagoon Health Report card, updating of PoM action table, produce the annual Crown Return report
	Appropriately gazetted purpose	Admin 2	All areas of the lagoon to include 'Coastal Environmental Protection' as a reserve purpose under the <i>CL Act</i> .	Purpose of Narrabeen Lagoon reflects current value of Crown Reserve land by stakeholders.	High	Public purpose of dedications amended to include 'Coastal Environmental Protection'.	Complete	Narrabeen Lagoon State Park was gazetted in 2014
	Integrated management of local Crown reserves	Admin 3	Investigate the merits of the amalgamation of Narrabeen Lagoon and one or more areas or surrounding Crown land reserves into a State Park.	Optimal management of Narrabeen Lagoon and other Crown lands in the catchment.	Medium	Investigation into the merits of State Park is undertaken. Annual report to include a section on the status of this investigation.	Ongoing	Narrabeen Lagoon State Park gazetted in 2014, investigation of additional parcels for inclusion ongoing
	Approval of leases and licenses by Reserve Trust Manager	Admin 4	Investigate if it would be beneficial for the management of Narrabeen Lagoon for the Reserve Trust Manager to be authorised to grant leases and licenses by the Minister administering the <i>CL Act</i> .	Determination and documentation of costs and benefits for Reserve Trust Manager in being able to determine leases/licenses.	Low	Investigation into the management of leases/licences is undertaken. Annual report to include information on this investigation.	Not yet started – awaiting results of the Crown Lands Management Review	Warringah Council is the Reserve Trust Manager of Narrabeen Lagoon State Park. The <i>Crown Lands Act 1989</i> enables Crown reserve trusts, with Ministers consent, to enter into leases and licences with third parties to use all or part of a reserve on an ongoing basis. Temporary licences allow the trust to permit short-term (up to one year) and generally low impact activities on the reserve without the Minister's consent, provided they fall within one of the permitted purposes under <i>clause 31 of the Crown Lands Regulation 2006</i> .
	Sustainable Financial Management of Reserve Trust	Admin 5	Develop a financial management model for implementation by the Reserve Trust Manager.	Narrabeen Lagoon is effectively managed by income generated on and by the lagoon and from external sources (including grants).	High	A financial management model is developed and finances are audited under standard Council financial accounting procedures.	Ongoing	Committee formed in 2014, with focus on financial viability of the State Park
	Rationalise reserve boundaries for Narrabeen Lagoon Reserve Trust Management Lands	Admin 6	Investigate undertaking redefinition surveys with respect to boundaries.	Relevant land reserves are rationalised and final title plans are revised and re-registered with the LPI.	High	Lodgement and registration of amended title plans with the LPI.	Ongoing	Liaison with Crown Lands required.

ATTACHMENT 3 – PROPOSED NARRABEEN LAGOON NAVIGATION MARKERS



Warragah Shire Council
Navigation Aids Design for
Narrabeen Lagoon

Job Number 21-34435
Revision A
Date 25 May 2015

WARRAGAH
COUNCIL



LEGEND
 Proposed Buoy Location
 Bed Level reported in meters AHD based on bathymetric survey completed February 2016
 Bed Level reported in meters AHD based on bathymetric survey completed November 2012
 Existing Seagrass Bed



Paper Size A3
 0 37.5 75 150 225 300
 Meters
 Map Projection: Transverse Mercator
 Datum: GDA 1984 MGA Zone 56
 Vertical Datum: AHD

Figure 1

Proposed Configuration of Buoys

**ATTACHMENT 4 – NARRABEEN LAGOON STATE PARK – LAND PARCEL CONSIDERATION
MATRIX**

Narrabeen Lagoon State Park - Land Parcel Consideration Matrix



**Lot 7361 DP
1164008**

Score 66

Criteria	Categories	Weighting	Score
Warringah Biodiversity Consevation Study	Very High	10	10
	High	8	
	Moderate	6	
	Local	4	
Ownership / Management	Dept of Lands / Warringah Council	10	10
	Dept of Lands / Cromer Golf Club	10	
	Dept of Lands / Pittwater Council	10	
	Dept of Lands / MLALC claim	10	
	Dept of Environment & Planning / Warringah Council	8	
	Warringah Council	10	
	Pittwater Council	6	
	Metropolitan Local Aboriginal Land Council	6	
	Minister Administering The Sporting Venues Management Act	6	
	The State Sporting Venues Authority	6	
Connectivity	Immediately adjoining	10	10
	1 parcel removed	8	
	2 parcels removed	6	
	3 parcels removed	4	
	4+ parcels removed	2	
Current use	Unoccupied	10	10
	Occupied - Licence	6	
	Occupied - Lease	4	
Amenity	High	10	10
	Medium	7	
	Low	4	
Access	Easy	10	10
	Moderate	8	
	Difficult	6	
Size	≥ 16 Hectares	10	
	6-15 Hectares	8	
	≤ 5 Hectares	6	6
		Score	66

Narrabeen Lagoon State Park - Land Parcel Consideration Matrix



Lot 1 DP 225797

Score 68

Criteria	Categories	Weighting	Score
Warringah Biodiversity Conservation Study	Very High	10	10
	High	8	
	Moderate	6	
	Local	4	
Ownership / Management	Dept of Lands / Warringah Council	10	
	Dept of Lands / Cromer Golf Club	10	
	Dept of Lands / Pittwater Council	10	
	Dept of Lands / MLALC claim	10	
	Dept of Environment & Planning / Warringah Council	8	10
	Warringah Council	10	
	Pittwater Council	6	
	Metropolitan Local Aboriginal Land Council	6	
	Minister Administering The Sporting Venues Management Act	6	
	The State Sporting Venues Authority	6	
Connectivity	Immediately adjoining	10	10
	1 parcel removed	8	
	2 parcels removed	6	
	3 parcels removed	4	
	4+ parcels removed	2	
Current use	Unoccupied	10	10
	Occupied - Licence	6	
	Occupied - Lease	4	
Amenity	High	10	10
	Medium	7	
	Low	4	
Access	Easy	10	10
	Moderate	8	
	Difficult	6	
Size	≥ 16 Hectares	10	
	6-15 Hectares	8	8
	≤ 5 Hectares	6	
		Score	68

Narrabeen Lagoon State Park - Land Parcel Consideration Matrix



Part Lot 885 DP
752038

Score 47

Criteria	Categories	Weighting	Score
Warringah Biodiversity Consevation Study	Very High	10	
	High	8	8
	Moderate	6	
	Local	4	
Ownership / Management	Dept of Lands / Warringah Council	10	
	Dept of Lands / Cromer Golf Club	10	
	Dept of Lands / Pittwater Council	10	
	Dept of Lands / MLALC claim	10	
	Dept of Environment & Planning / Warringah Council	8	
	Warringah Council	10	
	Pittwater Council	6	
	Metropolitan Local Aboriginal Land Council	6	
	Minister Administering The Sporting Venues Management Act	6	
	The State Sporting Venues Authority	6	6
Connectivity	Immediately adjoining	10	
	1 parcel removed	8	
	2 parcels removed	6	
	3 parcels removed	4	
	4+ parcels removed	2	2
Current use	Unoccupied	10	10
	Occupied - Licence	6	
	Occupied - Lease	4	
Amenity	High	10	
	Medium	7	7
	Low	4	
Access	Easy	10	
	Moderate	8	8
	Difficult	6	
Size	≥ 16 Hectares	10	
	6-15 Hectares	8	
	≤ 5 Hectares	6	6
Score			47

Narrabeen Lagoon State Park - Land Parcel Consideration Matrix



Lot A DP 354369

Score 58

Criteria	Categories	Weighting	Score
Warringah Biodiversity Conservation Study	Very High	10	10
	High	8	
	Moderate	6	
	Local	4	
Ownership / Management	Dept of Lands / Warringah Council	10	
	Dept of Lands / Cromer Golf Club	10	
	Dept of Lands / Pittwater Council	10	
	Dept of Lands / MLALC claim	10	
	Dept of Environment & Planning / Warringah Council	8	
	Warringah Council	10	10
	Pittwater Council	6	
	Metropolitan Local Aboriginal Land Council	6	
	Minister Administering The Sporting Venues Management Act	6	
	The State Sporting Venues Authority	6	
Connectivity	Immediately adjoining	10	
	1 parcel removed	8	
	2 parcels removed	6	
	3 parcels removed	4	
	4+ parcels removed	2	2
Current use	Unoccupied	10	10
	Occupied - Licence	6	
	Occupied - Lease	4	
Amenity	High	10	10
	Medium	7	
	Low	4	
Access	Easy	10	10
	Moderate	8	
	Difficult	6	
Size	≥ 16 Hectares	10	
	6-15 Hectares	8	
	≤ 5 Hectares	6	6
		Score	58

Narrabeen Lagoon State Park - Land Parcel Consideration Matrix

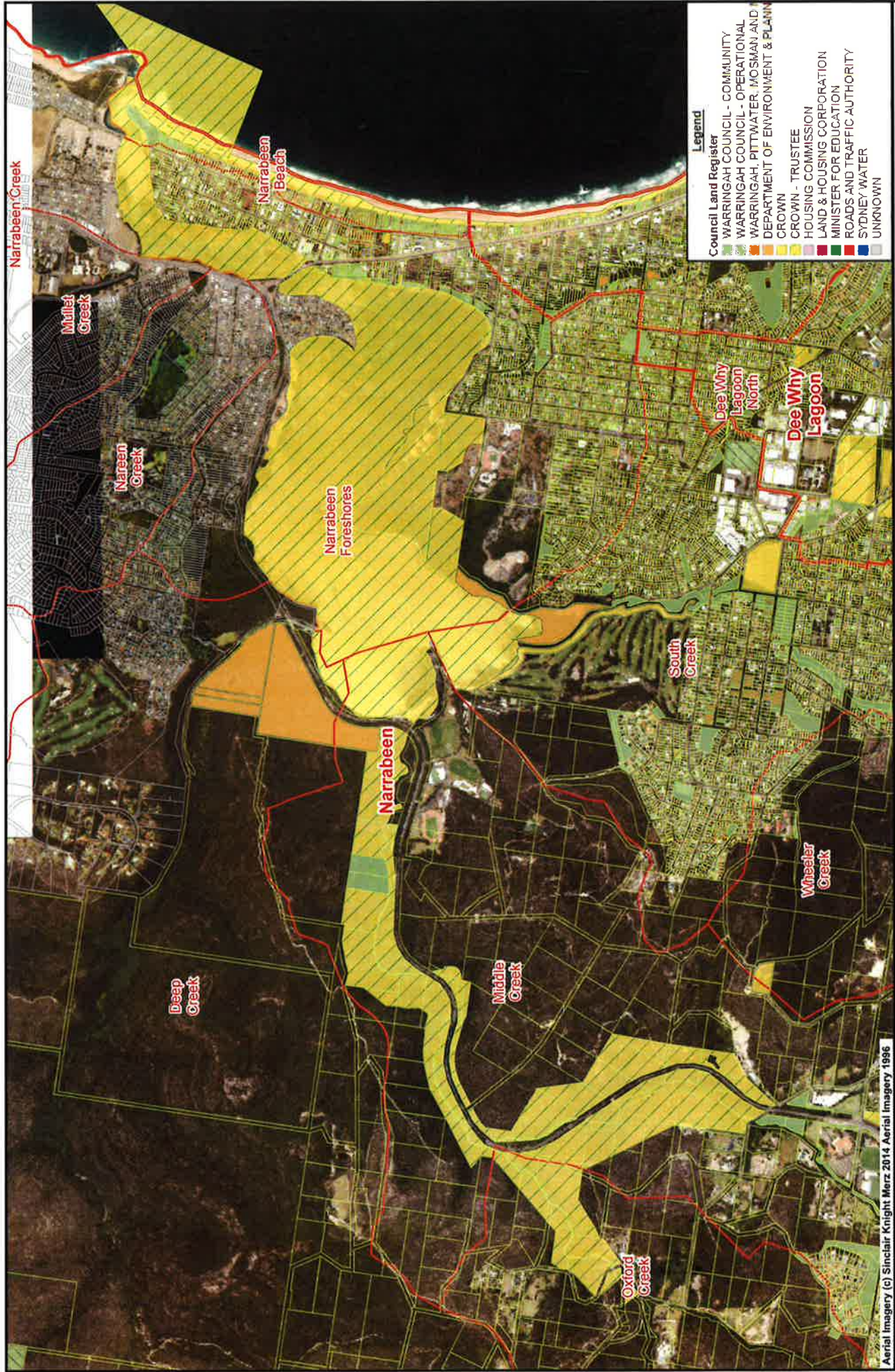


Lot 2 DP 1031932

Score 64

Criteria	Categories	Weighting	Score
Warringah Biodiversity Conservation Study	Very High	10	10
	High	8	
	Moderate	6	
	Local	4	
Ownership / Management	Dept of Lands / Warringah Council	10	
	Dept of Lands / Cromer Golf Club	10	
	Dept of Lands / Pittwater Council	10	
	Dept of Lands / MLALC claim	10	
	Dept of Environment & Planning / Warringah Council	8	8
	Warringah Council	10	
	Pittwater Council	6	
	Metropolitan Local Aboriginal Land Council	6	
	Minister Administering The Sporting Venues Management Act	6	
	The State Sporting Venues Authority	6	
Connectivity	Immediately adjoining	10	
	1 parcel removed	8	
	2 parcels removed	6	6
	3 parcels removed	4	
	4+ parcels removed	2	
Current use	Unoccupied	10	10
	Occupied - Licence	6	
	Occupied - Lease	4	
Amenity	High	10	10
	Medium	7	
	Low	4	
Access	Easy	10	10
	Moderate	8	
	Difficult	6	
Size	≥ 16 Hectares	10	10
	6-15 Hectares	8	
	≤ 5 Hectares	6	
		Score	64

ATTACHMENT 5 – NARRABEEN LAGOON STATE PARK – ADJACENT LAND OWNERSHIP



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