WARRINGAH COUNCIL

ATTACHMENT BOOKLET 2

ORDINARY COUNCIL MEETING

TUESDAY 24 JUNE 2014

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Section 94A

DRAFT DEVELOPMENT CONTRIBUTIONS PLAN 2014

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PART 1: Introduction

What is a Section 94A Development Contributions Plan?

Under Section 94A (s94A) of the *Environmental Planning and Assessment Act 1979* (the Act), Council may levy a flat rate contribution towards, or recoup the capital cost of providing or extending facilities, infrastructure and services necessary to meet the increased demand created by new development in its area.

s94A of the Act provides as follows:

94A Fixed Development Application Consent levies

(1) A consent authority may impose, as a condition of Development Application Consent, a requirement that the applicant pay a levy of the percentage, authorised by a contributions plan, of the proposed cost of carrying out the development.

(2) A consent authority cannot impose as a condition of the same Development Application Consent a condition under this section as well as a condition under section 94.

(2A) A consent authority cannot impose a condition under this section in relation to development on land within a special contributions area without the approval of:

- *(a) the Minister, or*
- *(b) a development corporation designated by the Minister to give approvals under this subsection.*

(3) Money required to be paid by a condition imposed under this section is to be applied towards the provision, extension or augmentation of public amenities or public services (or towards recouping the cost of their provision, extension or augmentation). The application of the money is subject to any relevant provisions of the contributions plan.

(4) A condition imposed under this section is not invalid by reason only that there is no connection between the development the subject of the Development Application Consent and the object of expenditure of any money required to be paid by the condition.

(5) The regulations may make provision for or with respect to levies under this section, including:

- *(a) the means by which the proposed cost of carrying out development is to be estimated or determined, and*
- *(b) the maximum percentage of a levy.*

The *Warringah Section 94A Development Contributions Plan* (the Plan) is the mechanism by which the entitlements under s94A of the Act are implemented and accounted for by Council. The Plan also includes a Works Program (Part 5) outlining when and where the new works will be provided.

The Plan is implemented through the development process by attaching conditions to any Development Application Consents or Complying Development Certificates that meets the requirements of this Plan.

Warringah Council has levied contributions for a range of facilities and services under previous Section 94 Development Contributions Plans. The preparation of this Plan provides the opportunity to implement a new, simplified development contributions structure that will improve the efficiency and flexibility of community facility provision, in a manner that best meets the needs of the population for which the contribution was levied.

PART 2: Administration and Operation

1 What is the name of this Plan?

This development contributions plan is called *Warringah Section 94A Development Contributions Plan 2014*.

2 What is the purpose of the Plan?

The primary purposes of the Plan are:

(1) To authorise, as a condition of Development Application Consent upon effected Development Applications and Complying Development Certificates, the imposition of a contribution pursuant to s94A of the Act

(2) To assist the Council to provide the appropriate public facilities which are required to maintain and enhance amenity and service delivery within the area

(3) To publicly identify the purposes for which the levies are required

(4) To include a revised Section 94 (s94) Works Program which will enable the expenditure of Council's existing s94 reserves.

3 When does this Plan commence?

1 July 2014.

4 What plans does this Plan repeal?

This Plan repeals *Warringah S94A Development Contributions Plan 2013* adopted by Council on 25 June 2013 and in operation on 1 July 2013.

All remaining funds collected under the *Warringah Section 94 Development Contributions Plan 2001* are to be applied toward completing the Works Program in *Warringah Section 94 Development Contributions Plan 2001* in accordance with the revised Section 94 Works Schedule included within Part 6 of this Plan. Upon full completion of the Section 94 Works Program, any remaining funds are to be pooled into the development contributions reserve established as part of this Plan (clause 16) and used upon works listed in Part 5.

5 Land to which this Plan applies

This Plan applies to all land within the local government area of Warringah.

6 Development to which this Plan applies

This Plan applies to all applications for Development Application Consent and Complying Development Certificates proposing works whose total development cost is $100,001 or greater.

The 'total development cost' is determined having accounted for each of the contributing cost factors set out within clause 25J of the *Environmental Planning & Assessment Regulation 2000* (the Regulation). It is provided to Council through the full and accurate completion (to the satisfaction of Council) of the Cost Summary Sheet lodged with the Development Application or Complying Development Certificate Application.

Development that satisfies any one (or more) of the following criteria are exempt from this Plan and from payment of the s94A levy:

(1) Development Applications and complying Development Applications whose total development cost is less than $100,001

(2) Applications lodged under Section 96 of the *EP&A Act 1979* to modify condition/s of an existing consent

(3) Development Applications and Complying Development Certificate Applications for public purposes as proposed by:

   a) Council, that involve the use of land classified as Community or Operational under the *Local Government Act 1993* or as Crown Land under the *Crown Lands Act 1989*
   b) Government agencies
   c) Public utility providers.

Development which complies with the Ministerial Direction under s94E dated 10th November 2006 and includes development:

(1) For the purpose of disabled access

(2) For the sole purpose of affordable housing

(3) For the purpose of reducing the consumption of mains-supplied potable water, or reducing the energy consumption of a building

(4) For the sole purpose of the adaptive reuse of an item of environmental heritage

(5) Other than the subdivision of land, where a condition under section 94 of the Act has been imposed under a previous Development Application Consent relating to the subdivision of the land on which the development is proposed to be carried out.

To avoid any doubt with regard to item (5) above, the then Department of Infrastructure, Planning and Natural Resources' *Development contributions Practice notes* (2005), provides that 'the Section 94E direction prohibits the use of Section 94A in respect of development that has been the subject of a condition under Section 94 under a previous Development Application Consent relating to the subdivision of the land on which the development is to be carried out.'

7 How is the total development cost determined?

Clause 25J of the Regulation sets out how to determine the total cost of development:

25J Section 94A levy—determination of proposed cost of development

(1) The proposed cost of carrying out development is to be determined by the consent authority, for the purpose of a section 94A levy, by adding up all the costs and expenses that have been or are to be incurred by the applicant in carrying out the development, including the following:

(a) if the development involves the erection of a building, or the carrying out of engineering or construction work—the costs of or incidental to erecting the building, or carrying out the work, including the costs (if any) of and incidental to demolition, excavation and site preparation, decontamination or remediation,

(b) if the development involves a change of use of land—the costs of or incidental to doing anything necessary to enable the use of the land to be changed,

(c) if the development involves the subdivision of land—the costs of or incidental to preparing, executing and registering the plan of subdivision and any related covenants, easements or other rights.

(2) For the purpose of determining the proposed cost of carrying out development, a consent authority may have regard to an estimate of the proposed cost of carrying out the development prepared by a person, or a person of a class, approved by the consent authority to provide such estimates.

(3) The following costs and expenses are not to be included in any estimate or determination of the proposed cost of carrying out development:

(a) the cost of the land on which the development is to be carried out,

(b) the costs of any repairs to any building or works on the land that are to be retained in connection with the development,

(c) the costs associated with marketing or financing the development (including interest on any loans),

(d) the costs associated with legal work carried out or to be carried out in connection with the development,

(e) project management costs associated with the development,

(f) the cost of building insurance in respect of the development,

(g) the costs of fittings and furnishings, including any refitting or refurbishing, associated with the development (except where the development involves an enlargement, expansion or intensification of a current use of land),

(h) the costs of commercial stock inventory,

(i) any taxes, levies or charges (other than GST) paid or payable in connection with the development by or under any law,

(j) the costs of enabling access by disabled persons in respect of the development,

(k) the costs of energy and water efficiency measures associated with the development,

(l) the cost of any development that is provided as affordable housing,

(m) the costs of any development that is the adaptive reuse of a heritage item.

8 Cost summary reports must accompany Development Applications or applications for Complying Development Certificates

A Development Application or application for a Complying Development Certificate is to be accompanied by a Cost Summary Report that addresses the matters set out in clause 25J of the Regulation.

For development with a total cost of $100,001 or greater, a Cost Summary Report (addressing the matters contained in Appendix B) is to be completed and certified by a person who is considered to be suitably qualified in the opinion of Council.

Council may request the provision of an independent Cost Summary Report (addressing the matters contained within Appendix B) that is certified by a registered quantity surveyor for larger developments or where a major discrepancy in a Cost Summary Report is detected.

9 Construction Certificates and the obligation of Accredited Certifiers

In accordance with clause 146 of the Regulation, a Certifying Authority must not issue a Construction Certificate for building work or subdivision work under a Development Application Consent unless it has verified that each condition requiring the payment of levies has been satisfied.

In particular, the Accredited Certifier must ensure that the applicant provides a receipt(s) confirming that levies have been fully paid and copies of such receipts must be included with copies of the certified plans provided to the council in accordance with clause 142(2) of the Regulation. Failure to follow this procedure may render such a certificate invalid.

The only exceptions to the requirement are where Council has agreed to works in kind, material public benefit or dedication of land as alternatives to payment of the s94A levy. In such cases, Council will issue a letter confirming that an alternative payment method has been agreed with the applicant.

10 How will the levy be calculated?

The levy will be determined on the basis of the rate as set out in the Summary Schedule, contained within Part 2 of this Plan. The levy will be calculated as follows:

Levy payable (O) = C x D

Where:
C = the levy rate applicable
D = the proposed cost of carrying out the development

The proposed cost of carrying out the development will be determined in accordance with clause 25J of the Regulation. The procedures set out in Appendix B to this Plan must be followed to enable the council to determine the amount of the levy to be paid.

Council may review the valuation of works and may seek the services of an independent person to verify the costs. In these cases, all costs associated with obtaining such advice will be at the expense of the applicant and no Construction Certificate will be issued until such time that the levy has been paid.

11 When is the levy payable?

A levy must be paid to Council at the time specified in the condition that imposes the levy. If no such time is specified, the levy must be paid prior to the issue of a Subdivision Certificate, Construction Certificate or Complying Development Certificate.

12 How will the levy be adjusted?

Contributions required as a condition of consent under the provisions of this plan will be adjusted at the time of payment of the contribution in accordance with the following formula:

Contribution at time of payment **= O + A**

Where:

O = the original contribution as set out in the consent

A = is the adjustment amount which is = $\frac{\$C_o \times (\text{Current CPI} - \text{Base CPI})}{\text{Base CPI}}$

Where:

Current CPI: the Consumer Price Index for 'Sydney – All Groups' as published by the Australian Bureau of Statistics available at the time of review of the contribution rate, and

Base CPI: the Consumer Price Index for 'Sydney – All Groups' as published by the Australian Bureau of Statistics at the date of adoption of this plan.

Note: In the event that the Current CPI for Sydney is less than that for the previous quarter, the Current CPI for Sydney shall be taken as not less than the previous.

13 Can deferred or periodic payments be made?

Council does not permit deferred or periodic payments of the s94A levy under this Plan.

14 How are credits for existing development addressed in this Plan?

No credits or levy discounts of any kind are issued for either existing development or prior approvals.

15 Are there alternatives to the payment of the s94A levy?

An applicant may only elect to forgo to the payment of monetary contributions upon effected development through the following means:

(1) By Council accepting an offer by an applicant to satisfy the contribution by carrying out works in kind, but only where the facility is identified in the works program and it is constructed by the developer to Council's standards and then transferred to Council. In these circumstances, Council will only transfer paid

contributions on receipt of invoices not exceeding the amount already collected or committed by the fund

(2) By both Council and the applicant entering into a written planning agreement in accordance with Section 93F of the Act, whose terms and conditions are voluntarily agreed to and signed by both parties. The agreement:

a) may be for the payment of a monetary contribution, the dedication of land free of cost, any other public benefit, or any combination of these, to be used for or applied toward a public purpose (as defined in the Dictionary of this Plan)

b) is not invalid by reason only that there is no connection between the development and the works or expenditure of any money it proposes.

Applicants proposing to enter into a Planning Agreement should enquire with Council with regard to the relevant procedures prior to the lodgement of their Development Application.

16 Pooling of levies

This plan expressly authorises s94A levies paid for different purposes to be pooled and applied progressively for the delivery of the community facilities and infrastructure listed in the Works Schedule in Part 5 of this Plan. The priorities for the expenditure of the levies are shown in this Works Schedule.

17 How will Council use collected contributions?

Council is to use the funds collected under this Plan toward meeting the cost of providing the community facilities listed in the Schedule of Works of this Plan (Part 5). Subject to s93E(2) of the Act and Clause 15 of this Plan, the community facilities listed in Part 5 are to be provided in accordance with the staging set out within Part 5.

A proportion of all funds collected (0.05%) will be pooled in a separate Council account for use toward ongoing forward planning and administration of development contribution funds. Funds collected in this account will be used to:

(1) Periodically engage consultants to undertake forward planning studies informing the use of development contributions

(2) To fund the full time employment of Council's Senior Strategic Planner (S94)

(3) To fund 30% of the costs of a Management Accounting position within Council.

18 In what circumstances are s94A levies to be refunded?

Levies collected from a developer under this Plan will only be refunded upon the formal surrender or lapsing of the relevant Development Application Consent to which the contribution was applied.

19 Is a contributions register kept?

Council maintains a register of all developer contributions collected and the details of all Voluntary Planning Agreements enacted through a condition of Development Application Consent. The Contributions Register can be inspected at Council's offices and contains the following information:

(1) Each Development Application Consent which levied contributions for facilities

(2) The address to which the Development Application Consent was issued, date when contributions are received and the amount

(3) A detailed account of the monetary contribution, land dedication or other material public benefit negotiated and signed off through any Voluntary Planning Agreement, including a full copy of the agreement.

20 Plan will be subject to annual review

Council is to undertake an annual review of the works included in the Schedule of Works within Part 5 of this Plan, including the maintenance of a record of completed works and the introduction of new community facilities into the Schedule in place of those completed.

PART 3: Summary Schedule

The Schedule of Works contained in Part 5 of the Plan identifies the public facilities for which a s94A levy will be required.

Levies paid to Council (in accordance with the rates set out in the Summary Schedule below) will be applied towards meeting the cost of provision or augmentation of these public facilities in the identified financial years.

Summary schedule for s94A Contributions Plan

Type of Development	**Levy**
All Development Applications and applications for Complying Development Certificates whose total costs amount to less than $100,001	Nil
All Development Applications and applications for Complying Development Certificates with a total cost from $100,001 - $200,000 (excluding exempt development, Section 96 (s96) applications to modify Development Application Consent and Development Applications proposed by Council)	0.5 percent
All Development Applications and applications for Complying Development Certificates with a total cost exceeding $200,000 (excluding exempt development, s96 applications to modify Development Application Consent and Development Applications proposed by Council)	1.0 percent

Conditions authorised by this Plan are subject to any direction given by the Minister under Section 94E (s94E) of the Act.

Funds collected under this Plan will be allocated toward the delivery of $2.8 million worth of projects in the 2014/15 financial year. A full list of projects to be funded has been included in Part 5 of this Plan.

Any relevant Ministerial direction under s94E of the Act which has been made and is in force from time to time is included in the Attachment to this Plan. Refer to Appendix A of this Plan for the content of relevant Ministerial directions.

PART 4: Expected Development and Demand for Public Facilities

Residential population growth and employment generation from new industrial, commercial and retail developments will increase demand on Council's existing public amenities and facilities. To ensure that the community's enjoyment of public facilities is not diminished by population growth Council must augment its existing facilities, and where possible, provide new facilities to accommodate the additional demand.

Residential Population Growth

The *City of Cities: A Plan for Sydney's Future* (2005) set the North East Subregion (comprising the Warringah, Pittwater and Manly local government areas) a target of 17,300 new dwellings from 2006 to 2031. The more localised component of that strategy, North East Subregion: Draft Subregional Strategy (2005), has set Warringah's share of this dwelling target at 10,300 dwellings.

The *Metropolitan Plan for Sydney to 2036* (2010) is the five year update to the *Sydney Metropolitan Strategy*. This document updated all subregional housing and employment targets within the Sydney Region. The housing target for the North East Subregion was increased to 29,000 between 2006 and 2036. The plan does not apportion dwelling targets to local government areas within the subregion.

The draft *Metropolitan Strategy for Sydney to 2031* (2013) was released in March 2013. This strategy classified Warringah as part of the 'North' subregion, which includes Warringah, Pittwater, Ku-ring-gai, Hornsby and Manly. Again, the draft strategy does not apportion dwelling targets to the Local Governmental Areas within the subregion. It listed the estimated number of dwellings in the subregion as 204,000 as of 2011, with a target of 223,000 (increase of 19,000) by 2021, and 241,000 (increase of 37,000) by 2031.

Below is an overview of recent trends in population and residential development within the Warringah local government area:

- Between 2001 and 2006, the total population of Warringah increased by 2.2%, which equates to an annual growth rate of approximately 0.44%
- Between 2006 and 2011, the total Estimated Residential Population (ERP) of Warringah increased from 139,163 to 147,611, representing a population increase of 8,448 or 6.1%. This equates to an annual growth rate of approximately 1.19% representing a significant increase in residential population growth
- Overall, population growth within Warringah is relative to the Sydney Statistical Division which, over the same period (2006 – 2011), experienced a population increase of approximately 6.6% or 1.29% per year

- Between October 1998 and December 2013 approximately 6800 additional dwellings have been approved. This equates to an average of 446 new dwellings per annum. *Councils Residential Development Strategy* 2000 (RDS) set a target of new 7200 dwellings between the years 1998 and 2021
- The *North East Subregion: Draft Subregional Strategy* (2005) required Council to plan for sufficient zoned land to accommodate their Local Government Area (LGA) housing targets through their Local Environmental Plans (LEP). In the absence of set dwelling targets for Warringah under *Draft Metropolitan Strategy for Sydney to 2031* (2013), Council is well placed to meet its dwelling target as contained within the *Draft Subregional Strategy*

Future residential development within Warringah is going to place additional demand on existing community infrastructure. In order to accommodate the additional growth, Council must increase provision of new community facilities in-line with the growth in development.

Non-Residential Population Growth

Sydney Metropolitan Strategy (2005) and Draft Subregional Strategy (2005) also set a target of 19,500 additional jobs between 2011 and 2031. Warringah's share of this target is 12,500 jobs which equates to approximately 64% of the employment target for the Subregion. In order to achieve this target, Council may have to consider changes to its planning controls to facilitate the renewal of under-utilised lands to achieve these higher employment densities.

The updated employment target as contained within the Draft Metropolitan Strategy for Sydney to 2031 (2010) cited an increase of 39,000 jobs between 2011 and 2031 for the North Subregion.

In 2008, the Shore Regional Organisation of Councils (SHOROC), representing Warringah, Mosman, Manly and Pittwater Councils, commissioned the preparation of SHOROC Regional Employment Study, March 2008 (the employment study). The purposes of the employment study was to assist in the refinement of the North East Subregion: Draft Subregional Strategy and North Inner North Subregion: Draft Subregional Strategy, and in the preparation of a Regional Economic Development Strategy. The employment study identifies the economic, social and environmental trends which will influence employment growth within the region and identifies key strategies and principles to better enable the region to accommodate employment growth to 2031.

The employment study has identified, that within Warringah, demand for employment in the retail, commercial and industrial sectors will continue to grow to 2016 with floorspace predicted to increase by 25,801m², 54,970m² and 5,830m² respectively. Between 2016 and 2031, demand for industrial floorspace is expected to reduce slightly, however demand for commercial and retail floorspace will continue to increase.

The main employment lands within Warringah are located in Dee Why, Frenchs Forest, Brookvale Industrial area, Forestville, and Austlink (Forest Way north precinct). Both the commercial and industrial areas have developed generally in line with population growth over the past decade. However, Council anticipates that more land will need to be made available in order to promote the employment objectives of Sydney Metropolitan Strategy (2010).

This non-residential development will create demand for the provision or upgrading of roads and traffic management facilities and civic improvements.

Rationale for Development Levy

As an established LGA, Warringah does not currently have any identified land release areas. State Government and Council strategic land use policies place significant restrictions on additional subdivision and development on the fringes of Warringah's urban areas and focuses development within existing centres. As such, the emphasis of development contribution expenditure in Warringah will increasingly take the form of upgrades and augmentations to existing community facilities, as opposed to new land dedications and facilities required to service 'new' residential areas.

There are a number of factors that have traditionally influenced the ability of Council to deliver community facilities in a manner that matches demand using a traditional s94 approach:

(1) Difficulties defining and maintaining the nexus between who contributes toward the cost of developing community facilities and who the users of the facilities are. The ability to apportion the costs of new community facilities strictly to new populations is increasingly difficult in highly urbanised local government areas such as Warringah. The users of community facilities are increasingly willing to travel to any part of Warringah to access community services, placing an undue burden on specific development to contribute toward their provision

(2) Low apportionments under a traditional s94 model. The proportion of works funded by development contributions can only match the proportion of new population into this area. Accordingly, new populations moving into established urban areas cannot be expected to fund the entire cost of these upgraded or augmented facilities that are enjoyed by the entire community. Employing this approach again through a new Development Contributions Plan will not enable Council to collect the funds required to deliver community facilities at a rate that matches demand

These problems are overcome through the adoption of a levy which is based on a fixed percentage of the total cost of development. Funds collected under this system are pooled into a single reserve and are used to fund the provision of new public facilities and services in locations where Council

has identified demand, through the ongoing residential and non-residential growth. This demand has led to the inclusion of specific projects within the Schedule of Works in the Plan.

With the majority of development types proposed in Warringah requiring Development Application Consent, including some of the most minor forms of residential development, there is justification for the application of a 'development value threshold' which would exempt these smaller developments from the fee being levied. The intent of a 'contribution free' threshold is to relieve smaller developments with negligible impact on the demand for additional community facilities from having to pay the levy. The contributions free threshold is set at $100,000, in-line with Clause 25K of the Regulation.

PART 5: Section 94A Schedule of Works

This Part lists the works to be funded by contributions collected under the provisions of this plan. It has been compiled based upon Council's Community Strategic Plan, Plans of Management for community land and needs analysis for a range of public purposes throughout the Warringah local government area and are to be completed using funds collected under this Plan. Inclusion of works within this Schedule follows their assessment through Council's Capital Justification and Evaluation Process as being a high priority on the basis of community need, safety and risk to Council.

This Schedule of Works is to be progressively updated to reflect adjustment to the CPI, the completion of the listed works and to add new projects as the Schedule nears completion. Where applicable, the location of these projects has been mapped at Appendix D.

Project No	Suburb	Project Type	Description of Works	2014/2015 S.94A Allocation	Estimated Completion	Council Team
BN3304	Narrabeen	Open space	Narrabeen Lagoon	$2,286,898	2014/2015	Natural Environment Unit
BN5881	Various	Open Space and Facilities	Sports Capital Assistance Program	$250,000	2017/2018	Parks Reserve Foreshore
BN6033	Narraweena	Open Space and Facilities	Berry Reserve and Jamieson Park Upgrades	$54,943	2014/2015	Parks Reserve Foreshore
BN6061	Dee Why	Design	Traffic and Streetscape Design	$170,000	2015/2016	Roads Traffic Waste
BN6060	Warringah	Capex	Digital Services – Libraries*	$50,000*	TBD	Libraries
BN6030	Frenchs Forest	Traffic	Dareen Street, Frenchs Forest – Traffic Calming*	$149,000*	TBD	Roads Traffic Waste
BN6031	Manly Vale	Traffic	King Street, Manly Vale – Traffic Calming*	$59,000*	TBD	Roads Traffic Waste

Note: * Currently on hold, pending approval for commencement of works.

PART 6: Section 94 Schedule of Works

This Part lists the works to be funded by existing Section 94 contributions collected under the Section 94 Development Contributions Plans 2001.

The projects listed within the Section 94 Schedule of Works, and the allocation of funds for these projects, reflects the intent under which the funds were originally collected.

The location of each project has been mapped in Appendix E. However please note that these maps are only indicative and are subject to more specific detailed plans.

Project Number	Project	2014/15 Section 94 Obligation	Total S94 Obligation	Section 94 Reserve	Estimated Delivery
BN5800	Dee Why Town Centre Parking and Community Facility	$9,536,021	$9,536,021	E10 – Dee Why Parking E5 – Community Centre Dee Why	2014/2015
BN5856	Walter Gors Reserve & Shared Walkway Dee Why parade	$175,000	$3,296,684	E7 – Open Space for Dee Why Town Centre and Surrounds	2016/2017
BN6061	Dee Why Design and Construction – Traffic Facilities and Streetscape Works	$300,000	$630,000	E7 – Open Space for Dee Why Town Centre and Surrounds E8 – Road and Traffic Management	2015/2016
BN6528	Perentie Road Reserve Recreation Space	$109,649	$109,649	E9 – Perentie & Dawes Road Open Space	2014/2015
BN5908	Pittwater Road Widening and signal adjustments	$0	$757,975	E8 – Road and Traffic Management	2017/2018
BN6062	Bus Interchange Pittwater Road at St David's Reserve	$0	$1,021,000	E7 – Open Space for Dee Why Town Centre and Surrounds	2017/2018
BN6430	Dee Why Construction – Traffic facilities	$0	$370,000	E7 – Open Space for Dee Why Town Centre and Surrounds E8 – Road and Traffic Management	2016/2017
BN6429	Dee Why Construction – Streetscape Works	$0	$6,072,398	E7 – Open Space for Dee Why Town Centre and Surrounds E8 – Road and Traffic Management	2016/2017

Note: The works program has been updated to reflect projects in the 2014/15 financial year. The timing of projects occurring in outlying financial years is subject to change as part of an annually scheduled review of the S.94A Plan.

PART 7: References

This Plan has been compiled with reference to the guidelines provided from the following key documents:

- *Department of Infrastructure Planning and Natural Resources, Development Contributions – Practice Note, 2005*
- *Department of Planning, Draft Local Development Contribution Guideline, November 2009*
- *Department of Planning, Metropolitan Plan for Sydney, 2036*
- *Department of Planning, Metropolitan Strategy for Sydney, 'City of Cities – A Plan for Sydney's Future' 2005*
- *Department of Planning, Draft North East Subregional Strategy 2007*
- *Department of Planning and Infrastructure, Draft Metropolitan Strategy for Sydney to 2031, March 2013*
- *ID Consulting, Warringah Council Community Profile, 2013*
- *SHOROC Regional Employment Study, March 2008*
- *Warringah Council, Warringah Local Environmental Plan 2011*
- *Warringah Council, Draft Warringah Community Strategic Plan 2013*
- *Warringah Council, Warringah Council Section 94 Development Contributions Plan 2001*
- *Warringah Council, Warringah Section 94A Development Contributions Plan 2012*
- *Warringah Council, Warringah Section 94A Development Contributions Plan 2013*
- *Warringah Council, Warringah Local Environmental Plan 2000*
- *Warringah Bike Plan 2010*
- *Warringah Pedestrian Access and Mobility Plan 2011*
- *Warringah Playground Strategy 2007*

Dictionary

In this Plan, unless the context or subject matter otherwise indicates or requires, the following definitions apply:

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

Council means Warringah Council.

Regulation means the *Environmental Planning and Assessment Regulations 2000.*

Total development cost means the cumulative cost of all factors listed in clause 25J of the Regulations and clause 6 of this Plan.

Public purpose includes (without limitation) any of the following:

(a) the provision of (or the recoupment of the cost of providing) public amenities or public services,

(b) the provision of (or the recoupment of the cost of providing) affordable housing,

(c) the provision of (or the recoupment of the cost of providing) transport or other infrastructure relating to land,

(d) the funding of recurrent expenditure relating to the provision of public amenities or public services, affordable housing or transport or other infrastructure,

(e) the monitoring of the planning impacts of development,

(f) the conservation or enhancement of the natural environment.

APPENDIX A: Applicable Direction under section 94E of the Act

ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

Revocation of Direction in force under section 94E
And Direction under section 94E

I, the Minister for Planning:

1. Pursuant to sections 4(8) and 94E of the *Environmental Planning and Assessment Act 1979* ("the Act"), revoke the direction in force under section 94E of the Act made by Craig Knowles, the former Minister for Infrastructure and Planning, on 6 November 2000, in relation to development applications to carry out development under *State Environmental Planning Policy No 5 – Housing for Older People or People with a Disability* ("SEPP 5"). This revocation applies to development applications made on or after commencement of *State Environmental Planning Policy (Seniors Living) 2004 (Amendment No 2)* ('the SEPP').

2. Pursuant to section 94E of the Act, direct consent authorities that there are no public amenities or public services in relation to which a condition under Division 6 of Part 4 of the Act may be imposed on the class of development consents identified in Schedule A granted to a social housing provider as defined in the SEPP. This direction applies to development applications made by such a social housing provider on or after commencement of the SEPP.

Schedule A

Development consents to carry out development for the purposes of any form of seniors housing as defined in State Environmental Planning Policy (Seniors Living) 2004.

Minister for Planning

Sydney, 14 Sept 2007.

ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

DIRECTION UNDER SECTION 94E

I, the Minister for Planning, under section 94E of the *Environmental Planning and Assessment Act 1979* ("the Act"), direct consent authorities that:

(1) The maximum percentage of the levy for development under section 94A of the Act, having a proposed cost within the range specified in the Table to Schedule A, is to be calculated in accordance with that Table.

(2) Despite subclause (1), a levy under section 94A of the Act cannot be imposed on development:

a) for the purpose of disabled access,

b) for the sole purpose of affordable housing,

c) for the purpose of reducing the consumption of mains-supplied potable water, or reducing the energy consumption of a building,

d) for the sole purpose of the adaptive reuse of an item of environmental heritage, or

e) other than the subdivision of land, where a condition under section 94 of the Act has been imposed under a previous development consent relating to the subdivision of the land on which the development is proposed to be carried out.

In this direction words and expressions used have the same meaning as they have in the Act. The term "item" and "environmental heritage" have the same meaning as in the *Heritage Act 1977*.

This direction does not apply to development applications and applications for complying development certificates finally determined before 1 December 2006.

FRANK SARTOR, M.P.,
Minister for Planning,
Sydney.
[Dated: 10 November 2006]

SCHEDULE A

Proposed cost of the development	Maximum percentage of the levy
Up to $100,000	Nil
$100,001–$200,000	0.5 percent
More than $200,000	1.0 percent

APPENDIX B: Procedure for determination of an S94A levy

A cost summary report is required to be submitted to allow council to determine the contribution that will be required.

To avoid doubt, section 25J of the *Environmental Planning and Assessment Act 1979* sets out the items that are included in the estimation of the construction costs by adding up all the costs and expenses that have been or are to be incurred by the applicant in carrying out the development, including the following:

- if the development involves the erection of a building, or the carrying out of engineering or construction work—the costs of or incidental to erecting the building, or carrying out the work, including the costs (if any) of and incidental to demolition, excavation and site preparation, decontamination or remediation,
- if the development involves a change of use of land—the costs of or incidental to doing anything necessary to enable the use of the land to be changed,
- if the development involves the subdivision of land—the costs of or incidental to preparing, executing and registering the plan of subdivision and any related covenants, easements or other rights.

The items and components of the following form should be used as guide in determining the total cost of a development, for the purpose of determining the s94A levy that applies.

APPENDIX C: Sample Cost Summary Report

Cost Summary Report

DEVELOPMENT APPLICATION No. _____ **REFERENCE** _____

CONSTRUCTION CERTIFICATE No. _____ **DATE** _____

APPLICANT'S NAME:
_____

APPLICANT'S ADDRESS:
_____

DEVELOPMENT NAME:
_____

DEVELOPMENT ADDRESS:
_____

ANALYSIS OF DEVELOPMENT COSTS:

Demolition and alterations	$	Hydraulic services	$
Structure	$	Mechanical services	$
External walls, windows and doors	$	Fire services	$
Internal walls, screens and doors	$	Lift services	$
Wall finishes	$	External works	$
Floor finishes	$	External services	$
Ceiling finishes	$	Other related work	$
Fittings and equipment	$	Sub-total	$

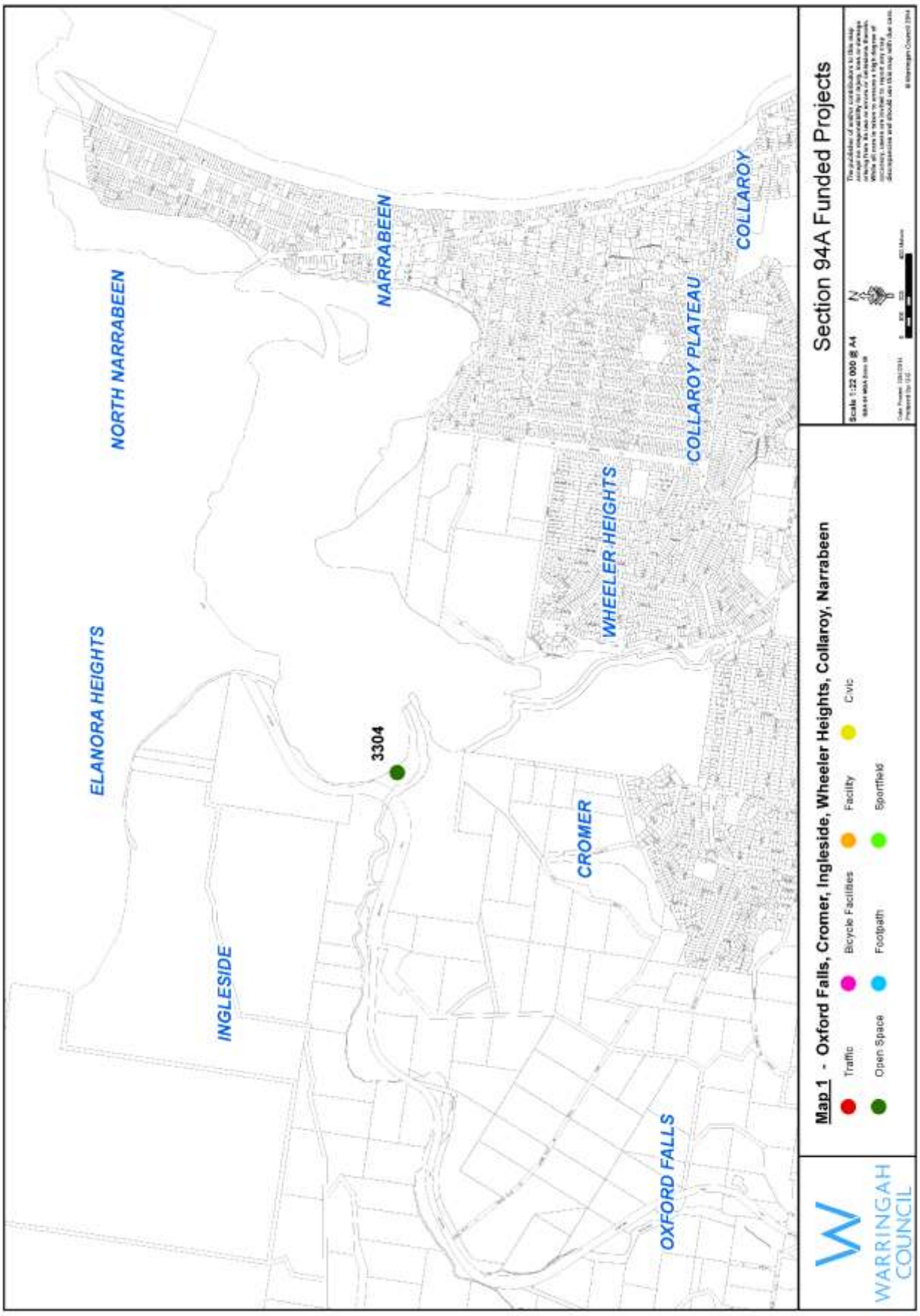
Sub-total above carried forward	$
Preliminaries and margin	$
Sub-total	$
Consultant Fees	$
Other related development costs	$
Sub-total	$
Goods and Services Tax	$
TOTAL DEVELOPMENT COST	**$**

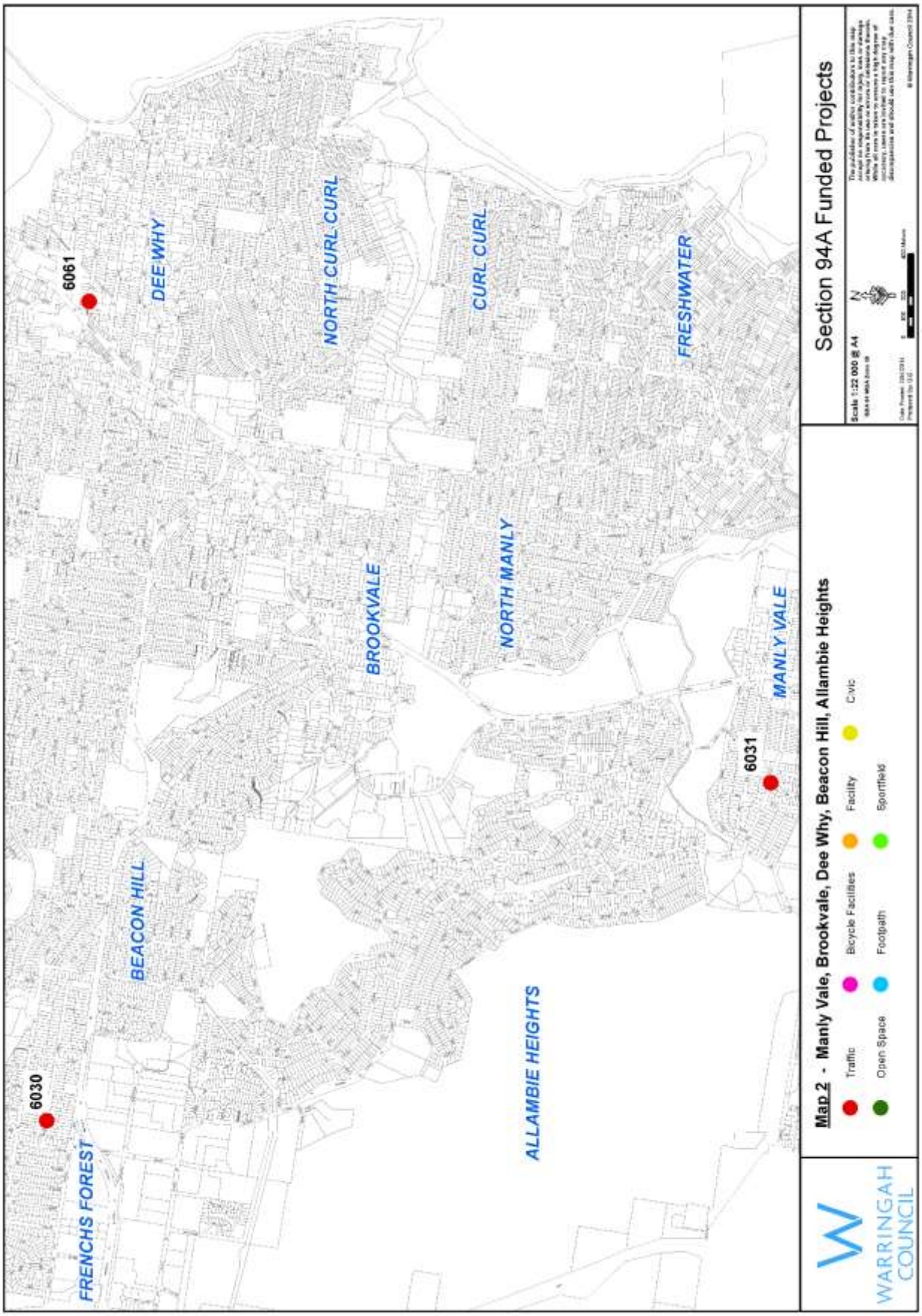
I certify that I have:

- inspected the plans the subject of the application for Development Application Consent or construction certificate.
- calculated the development costs in accordance with the definition of development costs in the S94A Development Contributions Plan of Warringah Council at current prices.
- included GST in the calculation of development cost.

Signed: _____
Name: _____
Position and Qualifications: _____
Date: _____

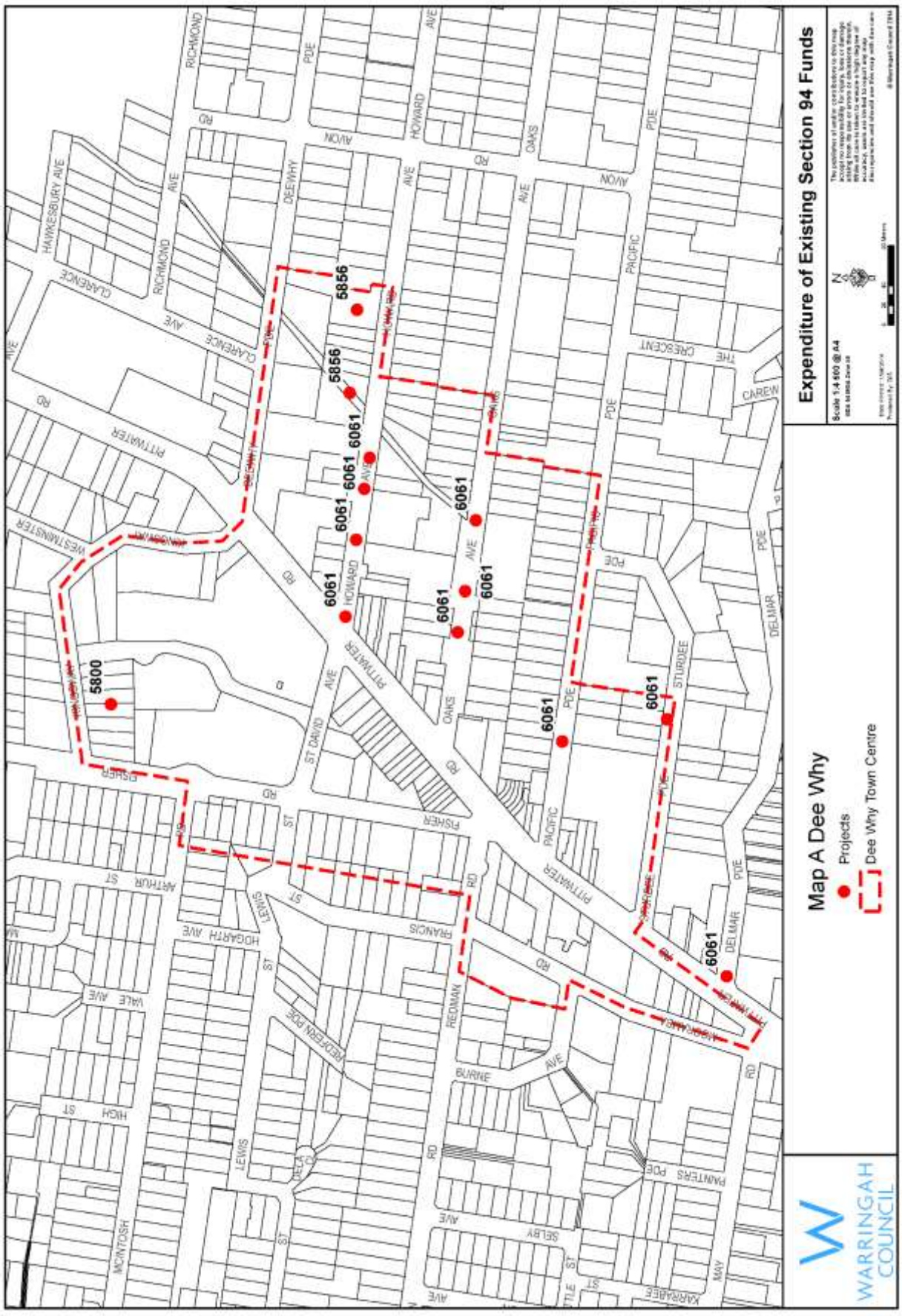
APPENDIX D: Location of Section 94A Funded Work

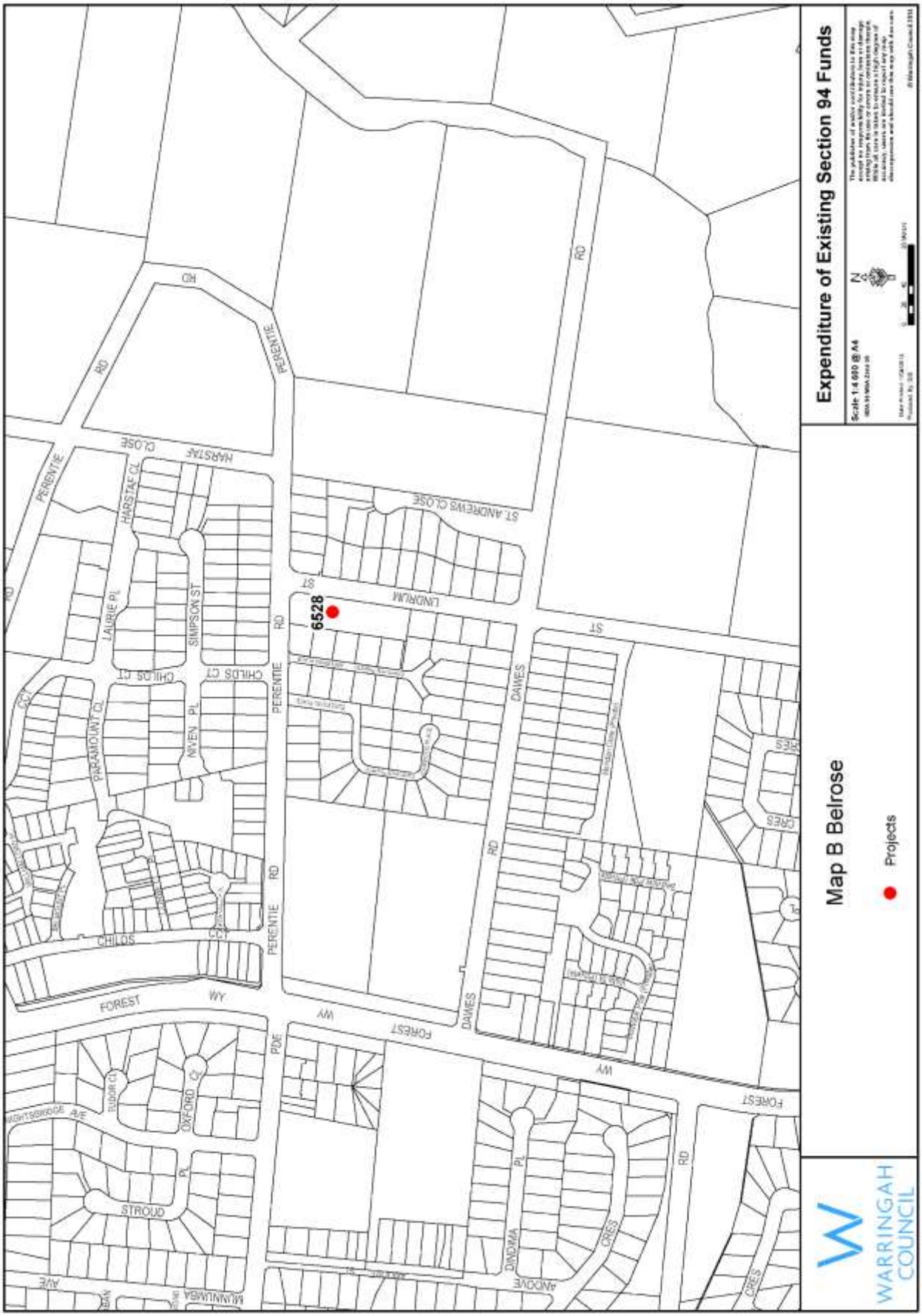



Section 94A Funded Projects
Map 2 - Manly Vale, Brookvale, Dee Why, Beacon Hill, Allambie Heights
Traffic
Bicycle Facilities
Facility
Civic
Open Space
Footpath
Sportfield
WARRINGAH COUNCIL
6030
6061
6031
FRENCHS FOREST
BEACON HILL
DEE WHY
NORTH CURL CURL
CURL CURL
FRESHWATER
BROOKVALE
NORTH MANLY
MANLY VALE
ALLAMBIE HEIGHTS

Note: Projects BN5881, BN6061 and BN6060 have not been identified on the maps. These projects are to be delivered in multiple locations. See relevant program for project detail.

APPENDIX E: Location of Section 94 Funded Work




Expenditure of Existing Section 94 Funds
Map B Belrose
Projects
6528
PERENTIE RD
HARSTAF CLOSE
ST ANDREWS CLOSE
LINDRUM ST
DAWES RD
CHILDS CT
SIMPSON ST
LAURIE PL
PARAMOUNT CL
NIVEN PL
FOREST WY
STROUD PL
OXFORD CL
DINDIMA PL
ANDOVE CRES
WARRINGAH COUNCIL

THE NORTH SHORE HORSE AND PONY ASSOCIATION INC.

President: Gillian Eagles (h) 9428 5692 & (fax.)
Secretary: Natalie Hulford (m) 0424 302 888

E-mail: nshandpa@gmail.com Website: www.nshpa.org.au
PO BOX 333, TERREY HILLS 2084

Correspondence to: PO BOX 333 TERREY HILLS NSW 2084
or: nshandpa@gmail.com

30 May 2014

Mr Rik Hart
General Manager;
Warringah Council,
Planning and Development Services,
725 Pittwater Road,
Dee Why, NSW 2099

Email: council@warringah.nsw.gov.au

Attn: Mr Taylor Richardson, Strategic Planner, 9942 2581
taylor.richardson@warringah.nsw.gov.au

Dear Mr Hart,

Re: North Shore Horse and Pony Association submission to the *Draft Warringah Section 94A Development Contributions Plan 2014* due 30 May 2014 on public exhibition

North Shore Horse and Pony Association (NSHPA) expresses our appreciation to Warringah Council for the opportunity to respond to the *Draft Warringah Section 94A Development Contributions Plan 2014* on public exhibition.

NSHPA Requests that the Warringah Section 94A Developer Contributions Plan 2014 specifically recognises and addresses the impact of existing and future developments on the public amenity, access and safety of the recreational horse riding industry and local communities of Terrey Hills, Duffys Forest, Belrose and Ingleside to ensure that the recreational horse riding industry does not continue to be so adversely affected by new developments.

NSHPA notes from the ***draft Warringah Section 94A Development Contributions Plan 2014***: "Under Section 94A of the *Environmental Planning and Assessment (EP&A) Act 1979*, Council may levy a flat rate contribution towards, or recoup the capital cost of providing or extending facilities, infrastructure and services necessary to meet the increased demand created by new development in its area. …"

And further, the primary purposes of this Contribution Plan include:
"…
(2) To assist the Council to provide the appropriate public facilities which are required to maintain and enhance amenity and service delivery within the area,
…".

NSHPA notes that the detailed program proposed Section 94A Development Contributions money for 2014-2018 supports many recreational pursuits, including the allocation of $300,000 towards the Bike Plan Implementation:

Section 94A Developer Contribution Plan				
	2014/15 $	2015/16 $	2016/17 $	2017/18 $
Balance as at 1 July	2,163,635	1,115,509	1,245,830	976,756
Revenue	1,600,000	1,600,000	1,600,000	1,600,000
Interest	58,772	47,322	50,925	51,034
Available Funds	**3,822,407**	**2,762,830**	**2,896,756**	**2,627,790**
Items Currently On Capex Plan:				
Berry Reserve and Jamieson Park Upgrades		120,000	120,000	110,000
Bike Plan Implementation		100,000	100,000	100,000
Dee Why - Design & Construction - Traffic and Streetscape	170,000	200,000		
Digital Resources - Libraries		50,000		
Floodlighting Improvement Program		150,000	250,000	250,000
Footpath New		300,000	350,000	350,000
Narrabeen Beach Viewing Tower			150,000	
Narrabeen Lagoon (Council Monies)	2,286,898			
Skate Park Program		47,000	400,000	200,000
Sports Capital Assistance Program	250,000	250,000	250,000	250,000
Traffic Program		300,000	300,000	300,000
Total Expenditure	**2,706,898**	**1,517,000**	**1,920,000**	**1,560,000**
Balance as at 30 June	**1,115,509**	**1,245,830**	**976,756**	**1,067,790**

In Terrey Hills, Duffys Forest, Belrose and Ingleside, despite these areas having a long standing horse heritage and their economic dependence on recreational horse riding, past and current developments have greatly reduced the number and access to recreational trails.

Past, current and pending developments are also continuing to increasingly reduce horse and rider safety by forcing horse riders, half of whom are children, to ride on and beside vehicular roads in the presence of ever-increasing traffic. The wider network of off-road trails that provided safe and enjoyable recreational access around Terrey Hills and Duffys Forest linking through to Ingleside, Belrose and St Ives, has been disrupted by developments, poor planning and poor community consultation, with many trails lost altogether.

NSHPA Requests that the Section 94A Developer Contributions Plan specifically recognises and addresses the impact of existing and future developments on the public amenity, access and safety of the recreational horse riding industry and local communities of Terrey Hills, Duffys Forest, Belrose and Ingleside to ensure that the recreational horse riding industry does not continue to be so adversely affected by new developments.

Vote of Thanks

NSHPA thanks Warringah Council for the opportunity to respond to the *Draft Warringah Section 94A Development Contributions Plan 2014*.

NSHPA requests that the *Draft Warringah Section 94A Development Contributions Plan 2014* fully supports the North East Regional Equine Industry Cluster and ensure that the recreational horse riding industry does not continue to be so adversely affected by new developments.

Please do not hesitate to contact us regarding this submission.

Yours sincerely

Gillian Eagles
President, NSHPA

c.c. Natalie Hulford, Secretary NSHPA

About The North Shore Horse and Pony Association Incorporated

The North Shore Horse and Pony Association was formed in 1975 to ensure that horses and horse riding activities continue to form a vital part of the community and lifestyle in Terrey Hills / Duffys Forest and nearby suburbs, and to support horse riding in the Ku-ring-gai Chase and Garigal National Parks. Horse riding and associated horse activities have a long history in the area and are recognised as central contributors to the unique heritage and economy of this part of Northern Metropolitan Sydney.

NSHPA is a community representative group, not a riding club. We consult with various riding groups and other associations and government bodies to help achieve better community and horse riding outcomes for stakeholders in the area.

Our ultimate aim is to leave this area a better safer area for the future generations of horse riders while preserving and enhancing our natural heritage.

The objects of the association are:

(a) to promote, encourage and support in the Local Area the keeping and riding of horses, other activities involving horses, and industries, trades and professions relating to horses,

(b) to lobby for and support the approval, funding, establishment, maintenance and improvement in the Local Area of arenas and grounds, tracks and trails, and other facilities for keeping and riding horses,

(c) to promote, encourage and support safety in the keeping and riding of horses in the Local Area,

(d) to promote, encourage and support good relations and the alignment of interests in the Local Area between the association and those who keep and ride horses and the wider community,

(e) to liaise, consult and cooperate with government entities and with Clubs, Businesses and other bodies, both in and outside the Local Area, in relation to these objects, and

(f) to raise and use the funds required to carry out these objects.

Contact Us:

-
- **Web:** www.nshpa.org.au
- **Mail: PO Box 333 Terrey Hills 2084**
- **Email:** nshandpa@gmail.com
- **President: Gillian Eagles 02 9428 5692**
- **Secretary: Natalie Hulford 0424 302 888**

www.nshpa.org.au

Taylor Richardson

From: Ann Sharp [redacted]
Sent: Monday, 2 June 2014 5:32 PM
To: Council Mailbox
Subject: Re Delivery Program 2014

Re Delivery Program 2014

Dear Sir/Madam

A few queries re the Draft Budget and Delivery Program 2014:

1. In the S94A contributions, what are the separate amounts in E5 Community Centre and E10 DY Parking?
2. What is proposed for the $6m streetscape improvements for Dee Why?
3. What is the funding allocation of the Environment and Stormwater Special Rate (ESSR) and the Sportsfield Rectification Levy?
4. What funding (not subject to Special Rate Variation) is allocated to improvement of waterways / bushland?

Yours sincerely

Ann Sharp

Taylor Richardson

From: leekaye tonkin-jones [redacted]
Sent: Tuesday, 27 May 2014 7:26 PM
To: Council Mailbox
Subject: Re: Your Say Update

I would like to see the funding from the state government for the 94A development contributions plan.
There should be transparency.
Regards
Lee Tonkin-Jones

On Tuesday, 27 May 2014 2:02 PM, Warringah Council <news@engagementhq.com> wrote:

You're receiving this email because you participated in the online discussions or you have opted to receive updates for Your Say Warringah.

Draft Voluntary Planning Agreements (VPA) Policy
Submissions close 5pm Tuesday 3 June 2014
Council has prepared a Draft Voluntary Planning Agreements Policy (Draft VPA Policy). A VPA is an agreement between a public authority (eg. Council) and a developer, where the developer agrees to make contributions towards a public purpose. The Draft VPA Policy aims to guide the formation of these agreements. You can make a submission, marked "Draft VPA Policy", to council@warringah.nsw.gov.au or Warringah Council, 725 Pittwater Road, Dee Why 2099.

Social Media Survey
Survey closes 3 June 2014
We are reviewing the way Council engages with you through social media. We want to make sure that the information we share is both useful and engaging. Please take a moment to complete the survey to help us better understand your social media needs.

Draft Warringah Section 94A Development Contributions Plan 2014
Submissions close 30 May 2014
Council has developed and is seeking comment on the draft Warringah Section 94A Development Contributions Plan 2014. This plan is updated annually and outlines the:

- percentage of the total cost of development applications that will be levied to contribute towards new public facilities and services
- schedule of works for new facilities and services over the coming financial year that the levies will be allocated towards.

Draft Budget and Delivery Program 2014 - 2018
Submissions close 30 May 2014
Council is seeking community input on the Draft Delivery Program 2014-2018 (including Operational Plan 2014-2015) and Long Term Financial Plan 2014-2024 before finalising the budget in June.

Stirgess Reserve Upgrade (Curl Curl) 2014
Submissions close 15 June 2014
We would like your feedback on the proposed upgrade of the existing park at Stirgess Reserve, Curl

Curl

Lindrum Reserve Upgrade (Belrose) 2014

Submissions close 15 June 2014

We would like your feedback on the proposed upgrade of the recently acquired park at Lindrum Street, Belrose.

Oxford Falls Valley and Belrose North Strategic Review

Public Meeting 18 June 2014

Council is seeking an independent public hearing and opinion from the Warringah Development Assessment Panel (WDAP) on the most appropriate land use controls for deferred land in Oxford Falls Valley and Belrose North.

Proposed Part Road Closure - South Creek Road Narrabeen (2014)

Submissions Close 23 June 2014

The Minister for Regional Infrastructure and Services is considering closing part of South Creek Road, Narrabeen.

Roads and Maritime Services (RMS) invite you to have a say about planned road upgrades near the Northern Beaches Hospital site. Comments close **Friday 30 May.**

Feedback in this early consultation phase will help inform the concept design for stage one, and the stage two strategic design, which are due to go out on display later this year. More information visit the project page, phone 1300 367 459 or email: nbhroadwork@rms.nsw.gov.au.

Not interested anymore? click here to unsubscribe instantly

CURL CURL BEACH
LANDSCAPE DRAFT MASTERPLAN

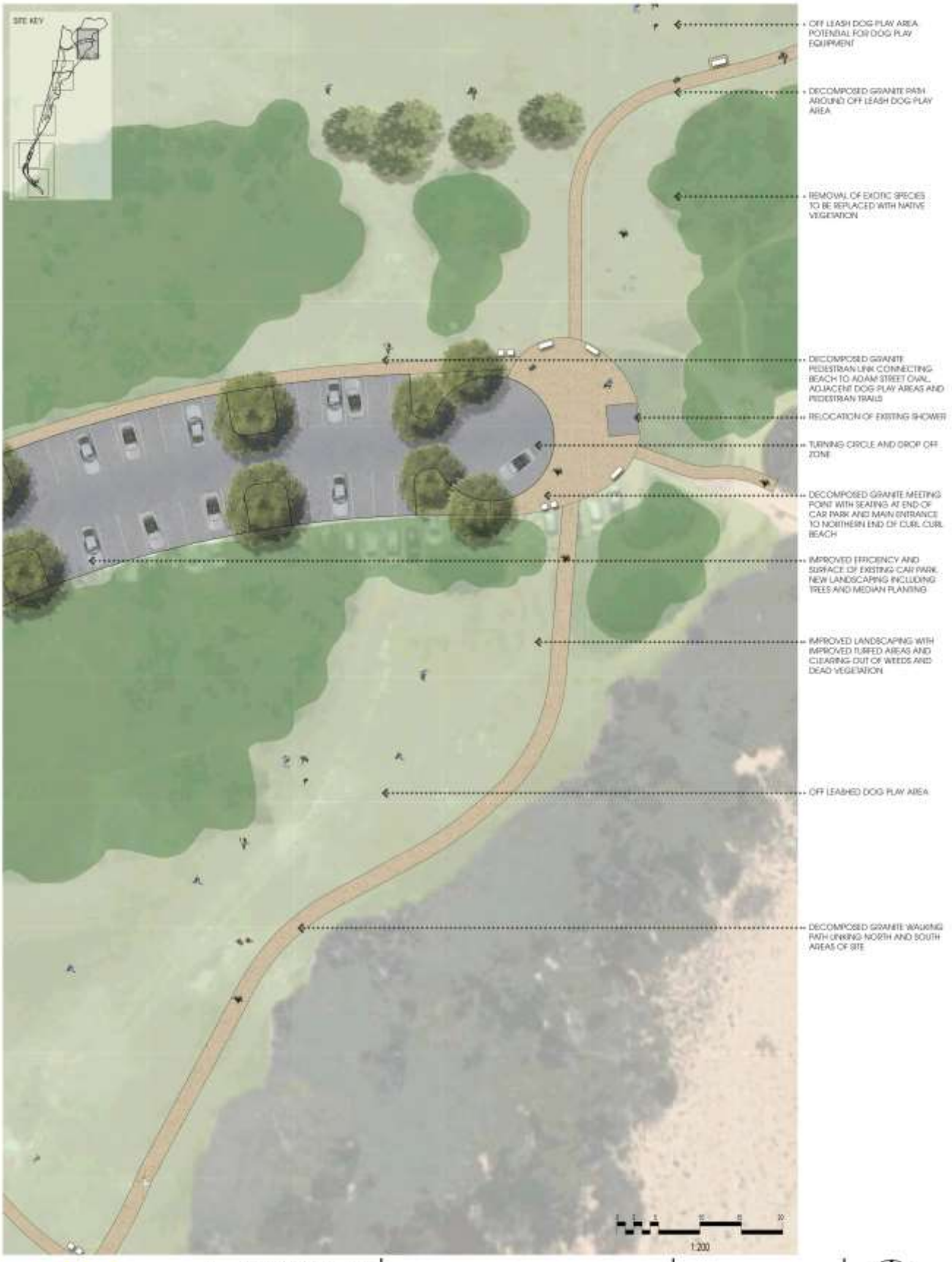
GROUPGSA WARRINGAH COUNCIL | CURL CURL BEACH LANDSCAPE MASTERPLAN | DRAFT MASTERPLAN JUNE 2014

CURL CURL BEACH
LANDSCAPE DRAFT MASTERPLAN

CURL CURL BEACH
LANDSCAPE DRAFT MASTERPLAN - DOG PLAY AREAS

GROUPGSA | WARRINGAH COUNCIL | CURL CURL BEACH LANDSCAPE MASTERPLAN | DRAFT MASTERPLAN JUNE 2014

CURL CURL BEACH
LANDSCAPE DRAFT MASTERPLAN - 03



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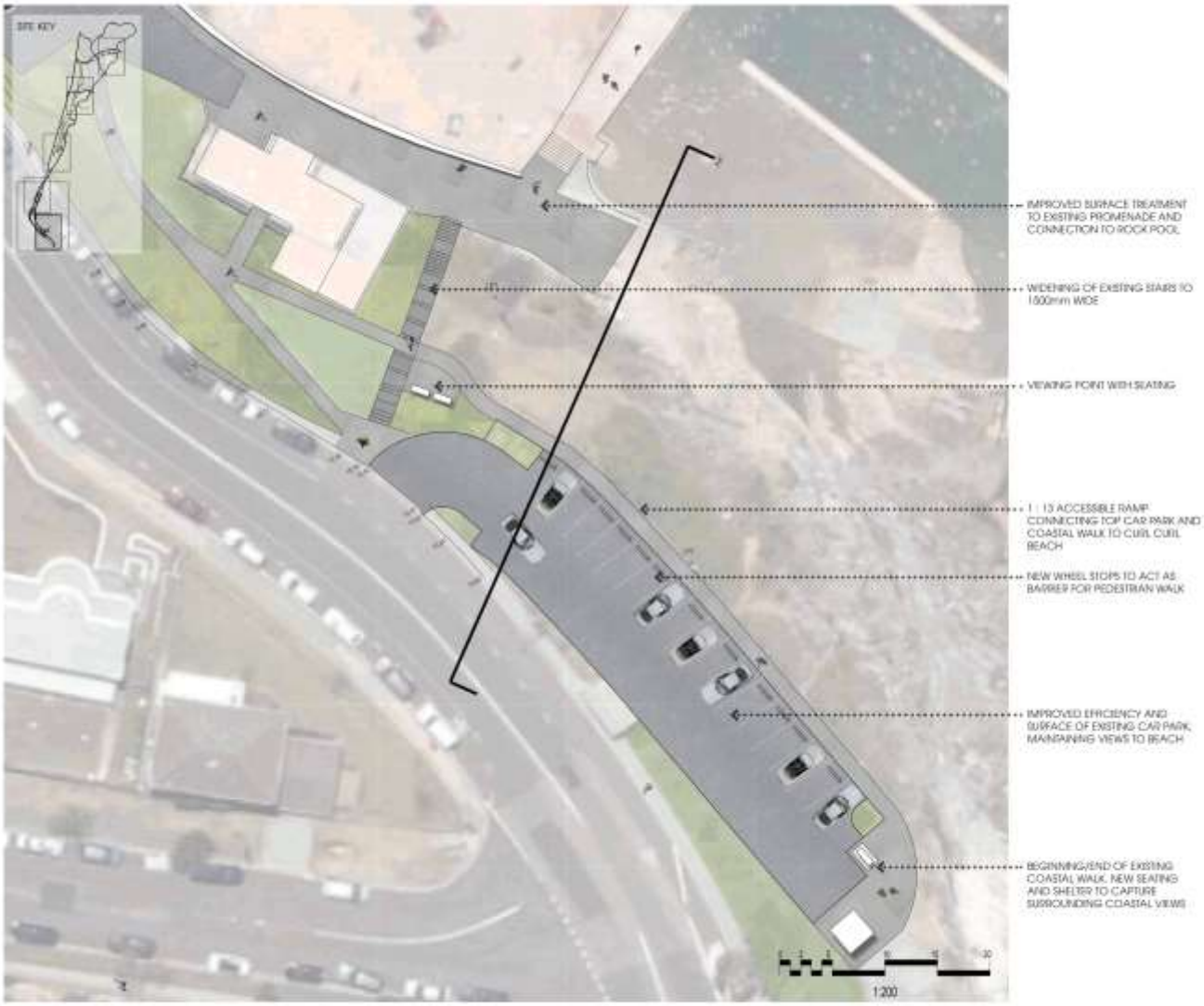

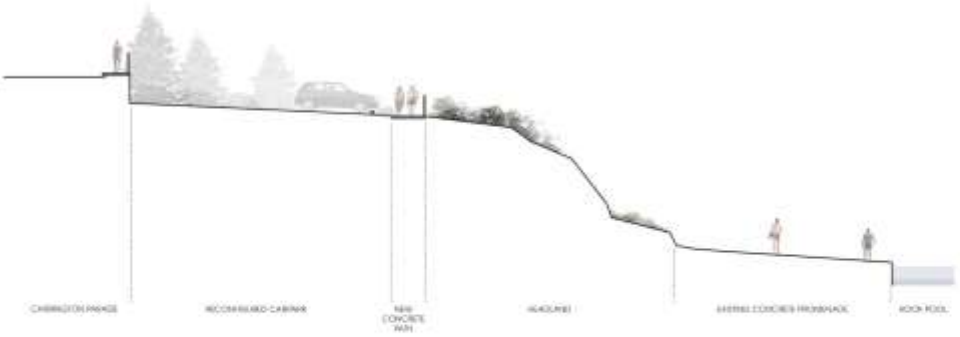

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Draft Coastal Zone Management Plan for Collaroy-Narrabeen Beach and Fishermans Beach

June 2014

This report has been prepared with financial assistance from the NSW Government through its Coastal Management Program. This document does not necessarily represent the opinions of the NSW Government or the Office of Environment and Heritage.

June 2014

EXECUTIVE SUMMARY

Collaroy-Narrabeen Beach and Fishermans Beach are two of Warringah's most iconic and significant locations. The Coastal Zone Management Plan (CZMP) for Collaroy-Narrabeen Beach and Fishermans Beach establishes the framework through which both beaches will be managed for current and future generations.

The plan covers the open coast and sandy shoreline of Collaroy-Narrabeen Beach and Fishermans Beach as well as the adjacent public assets and private development. The Collaroy-Narrabeen Beach embayment is characterised as having the most highly capitalised shoreline in Warringah. Development along the beach is also classified as the most at risk in NSW, and third most at risk nationally, from coastal processes. Collaroy-Narrabeen Beach also has a history of ad-hoc emergency protection works being placed during and after coastal storms.

In recognition of the complex issues Warringah Council faces in managing Collaroy-Narrabeen Beach and Fisherman Beach, a team of engineers, economists, lawyers, ecologists and town planners were engaged to prepare the CZMP and assist in prioritising management actions.

The overarching objective of the CZMP is to a find a balanced and achievable approach that protects and preserves beach environments while limiting the impact of coastal processes on public and private assets. Specifically the plan identifies and prioritises actions that:

- protect and preserve beach environments and beach amenity
- manage current and projected future risks from coastal hazards
- ensure continuing and undiminished public access to beaches, headlands and waterways
- protect or promote the culture and heritage of both beaches.

While recognising the need to protect and preserve the amenity and natural values of Collaroy-Narrabeen Beach and Fisherman Beach, the CZMP also recognises that properties adjoining both beaches have been impacted by the severe coastal storms in the past and are presently exposed to coastal processes including erosion and inundation. In response the CZMP has incorporated an innovative adaptive risk management approach to identify an acceptable level of risk for beachfront properties adjoining Collaroy-Narrabeen and Fishermans Beaches.

Management actions, such as beach nourishment and maintenance of public access, have been identified along with planning measures that allow for future development to be permitted without unduly impacting the beach environment. This has resulted in the development of acceptable risk lines to define the minimum setbacks for new development as well as consideration of existing and future coastal protection works.

The plan has been prepared in accordance with the NSW Government *Guidelines for Preparing Coastal Zone Management Plans.* This includes incorporating the NSW Coastal Management Principles articulated in the Guidelines as well as complying with the *NSW Coastal Protection Act 1979* and NSW Coastal Policy 1997.

In implementing the CZMP, Warringah Council will work constructively with all stakeholders to ensure the significant values of Collaroy-Narrabeen Beach and Fishermans Beach are preserved and protected.

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1. INTRODUCTION

1.1 Background

Collaroy-Narrabeen Beach and Fishermans Beach are two of Warringah's most significant natural assets and are highly valued by both residents and visitors to Warringah. Additionally, these beaches and adjacent development are identified as being at particularly high risk from coastal erosion and inundation.

In February 2011, Warringah Council was directed by the then (NSW) Minister for Climate Change and the Environment to complete a CZMP for Collaroy-Narrabeen Beach. Fishermans Beach was included in the CZMP as it is located within the same embayment as Collaroy-Narrabeen Beach and it is the only other beach along Warringah's coastline that has private residential properties immediately adjacent the beach.

The draft Coastal Zone Management Plan (CZMP) for Collaroy-Narrabeen Beach and Fishermans Beach has been prepared in order to best manage these beaches in a balanced and sustainable manner for current and future conditions. The draft CZMP covers the open coast and sandy shoreline of Collaroy-Narrabeen Beach and Fishermans Beach as well as the adjacent public land and private development.

1.2 Study Team

In recognition of the complex issues Warringah Council faces in managing Collaroy-Narrabeen Beach and Fishermans Beach, a team of engineers, economists, ecologists, lawyers and town planners were engaged to prepare the draft CZMP and assist in prioritising management actions.

Haskoning Australia Pty Ltd, a company of Royal HaskoningDHV, were engaged by Council to prepare the CZMP in August 2012. Technical information and advice was sought from the following organisations City Plan (planning), Wilshire Webb Staunton Beattie (legal), Ernst & Young (economics), Eco Logical Australia (ecology) and Elton Consulting (community engagement).

1.3 Previous Studies on Collaroy-Narrabeen Beach and Fishermans Beach

There have been a significant number studies undertaken to assess the impacts of coastal processes on Collaroy-Narrabeen Beach and Fishermans Beach. Therefore, a good understanding of coastal processes and their impacts on development already exists. Recent studies include:

- Warringah Council (1997), *Collaroy Narrabeen Coastline Management Plan, A Coastline Hazards Policy – Plan of Management*
- WorleyParsons (2009), *Review of Coastline Hazard Lines for Collaroy Narrabeen Beach and Fishermans Beach*
- WorleyParsons (2012a), *Coastal Erosion Emergency Action Subplan for Beaches in Warringah*
- WorleyParsons (2012b), *Coastal Erosion Emergency Action Subplan for Beaches in Warringah, Reference Document.*

The draft CZMP provides an opportunity to consolidate the existing information and document strategies and actions that are appropriate for the current understanding of coastal management issues, in accordance with existing NSW government guidance, policy and legislation.

1.4 Community Consultation

Consultation has been undertaken throughout the development of the draft CZMP with a number of key stakeholder and community groups, including beachfront landowners, Surf Life Saving Clubs and surfing groups. A key action in preparing the draft CZMP has been the preparation and public distribution of a Discussion Paper to inform the community and facilitate comment on the issues being considered within the draft CZMP.

The Discussion Paper outlined the purpose of the CZMP, historical coastal management practices and requested responses to a number of 'frequently asked questions' that were known to be of interest to the community. It also invited written comments to be submitted through Council's website or by completion of a Community Response Form. The distribution of the Discussion Paper was followed up by a Community Forum held at Long Reef Golf Club and several meetings with landowners and community groups in April 2013.

The issues raised during these activities have been considered and guided the direction of the draft CZMP.

A detailed description of community consultation undertaken in the preparation of the draft CZMP, including the issues raised and the consideration of these issues is included in Section 7.

1.5 Coastal Management Principles

The Coastal Management Principles, below, identified in the *Guidelines for Preparing Coastal Zone Management Plans* below have been developed by the Office of Environment and Heritage (OEH) to inform strategic considerations in coastal management, including the preparation of CZMPs. These principles have been considered in identifying and evaluating potential coastal management actions within this CZMP.

Principle 1:	Consider the objects of the Coastal Protection Act 1979 and the goals, objectives and principles of the NSW Coastal Policy 1997
Principle 2:	Optimise links between plans relating to the management of the coastal zone
Principle 3:	Involve the community in decision-making and make coastal information publicly available
Principle 4:	Base decisions on the best available information and reasonable practice; acknowledge the interrelationship between catchment, estuarine and coastal processes; adopt a continuous improvement management approach
Principle 5:	The priority for public expenditure is public benefit, public expenditure should cost effectively achieve the best practical long-term outcomes
Principle 6:	Adopt a risk management approach to managing risks to public safety and assets; adopt a risk management hierarchy involving avoiding risks where feasible and mitigation where risks cannot be reasonably avoided; adopt interim actions to manage high risks while long-term options are implemented
Principle 7:	Adopt an adaptive risk management approach if risks are expected to increase over time, or to accommodate uncertainty in risk predictions
Principle 8	Maintain the condition of high value coastal ecosystems; rehabilitate priority degraded coastal ecosystems
Principle 9:	Maintain and improve safe public access to beaches and headlands consistent with the goals of the NSW Coastal Policy
Principle 10:	Support recreational activities consistent with the goals of the NSW Coastal Policy

1.6 Requirements for Preparing Coastal Zone Management Plans

The OEH has prepared *Guidelines for Preparing Coastal Zone Management Plans* and a CZMP must be prepared in accordance with these guidelines as per Section 55D of the *Coastal Protection Act 1979*.

In the Guidelines it is stated that the main purpose of a CZMP is to describe the proposed management actions to be implemented by a council, other public authorities and potentially by the private sector to address priority management issues in the coastal zone over a defined implementation period. These issues include managing risks to public safety and built assets, pressures on coastal ecosystems, and community uses of the coastal zone.

In Appendix P, the requirements of *Guidelines for Preparing Coastal Zone Management Plans* are listed, along with the sections of the draft CZMP that comply with each requirement. Given that no estuaries are included in the study area, requirements in OEH (2013b) relating to coastal ecosystem estuary health as per Section 4 of that document have not been considered in the preparation of this draft CZMP.

To assist in understanding the legislative and planning context within which the CZMP will be delivered Appendix H references key legislation and associated guidelines.

1.7 Objectives for Collaroy-Narrabeen Beach and Fishermans Beach

Following stakeholder consultation, four overarching objectives were defined by Warringah Council and the Study Team to guide the management of Collaroy-Narrabeen Beach and Fishermans Beach. These objectives were applied in setting the strategic direction of the CZMP as well as in the selection and assessment of management options. They are considered to be consistent with the NSW Coastal Management Principles and OEH *Guidelines for Preparing Coastal Zone Management Plans*.

1. Warringah Council seeks to maintain beach amenity in the future as its highest priority.
2. Warringah Council seeks to allow property owners to carry out new development on beachfront and near beachfront land adjacent to Collaroy-Narrabeen Beach and Fishermans Beach where the risk of damage to development from coastline hazards can be demonstrated to be acceptably low.
3. Property owners are responsible for protecting their property from the impacts of coastal processes.
4. Warringah Council seeks to maintain its own public beachfront and near beachfront assets where the risk of damage from coastal processes can be demonstrated to be acceptably low.

Implementation of the management actions identified in the draft CZMP will ensure that these objectives are met and that Warringah Council achieves a balanced and practical approach to protecting Collaroy-Narrabeen Beach and Fishermans Beach while limiting the impact of coastal processes on public and private built assets. Warringah Council recognises the importance of working in a coordinated and constructive manner with key stakeholders including the NSW Government, residents, peak user groups and beach users in implementing the CZMP.

The actions and planning controls relating to private development outlined in the draft CZMP are intended to apply to all new development on land adjacent to Collaroy-Narrabeen Beach and Fishermans Beach.

1.8 Structure of the draft CZMP

In producing this draft CZMP a considerable amount of specialist information was produced by the engaged experts. This information has been applied in establishing the management approach articulated in the CZMP. To provide readers with a clear description of the characteristics of Collaroy-Narrabeen Beach and Fishermans Beach, as well as Warringah Council's vision for its present and future management, this information has been structured in the following manner:

Volume 1 Coastal Zone Management Plan for Collaroy-Narrabeen Beach and Fishermans Beach

This document establishes the strategic direction and management actions Warringah Council will apply in managing Collaroy-Narrabeen Beach and Fishermans Beach. It describes the proposed management actions to be implemented that address priority management issues relevant to Collaroy-Narrabeen Beach and Fishermans Beach.

Volume 2 Appendices: Technical Reports and Supporting Information

The appendices contained in Volume 2 collate all the technical information and research undertaken by Haskoning Australia Pty Ltd and the experts utilised in preparing the CZMP.

2. DESCRIPTION OF COLLAROY-NARRABEEN BEACH AND FISHERMANS BEACH

2.1 General Setting

The coastline of the Warringah Local Government Area (LGA) extends from the entrance of Narrabeen Lagoon in the north, to Queenscliff Head in the south. This includes 8 main sandy beaches (Figure 1), including the beaches covered by the draft CZMP of Narrabeen Beach, Collaroy Beach, and Fishermans Beach. The continuous sandy beach comprising Collaroy Beach and Narrabeen Beach is denoted as Collaroy-Narrabeen within the draft CZMP.

A view of the Collaroy-Narrabeen Beach and Fishermans Beach embayment is provided in Figure 2. The suburbs of Narrabeen in the north, and Collaroy in the south, are adjacent to the Collaroy-Narrabeen Beach and Fishermans Beach. The suburb of North Narrabeen (in the Pittwater Council LGA) is located to the north of the Narrabeen Lagoon entrance.

At 3.6km in length, Collaroy-Narrabeen Beach is Sydney's second longest beach. The beach generally faces approximately east, facing east south east at the northern end and east north east at the southern end. Average wave heights decrease moving south along the beach, mainly due to the sheltering provided by the Long Reef headland and adjacent rock platform.

A rocky headland separates Collaroy-Narrabeen Beach and Fishermans Beach (this headland is not covered by the draft CZMP).

Fishermans Beach is about 800m long and is strongly curved, facing east north east in the north, and bending to face north moving south. Nearshore rocks are evident at both ends of the beach. Average wave heights at this beach are only about 20% of average wave heights at fully exposed beach areas such as North Narrabeen.

The key Council public assets in the area located landward of Collaroy-Narrabeen Beach include four Surf Life Saving Clubs (North Narrabeen, Narrabeen, South Narrabeen and Collaroy). Along the south-eastern portion of Fishermans Beach, Council public assets include the Long Reef Golf Club clubhouse, car parking areas, a Warringah Surf Rescue building, and Long Reef Fishing Club Hut.

Figure 1: Aerial view of Warringah LGA coastline

Figure 2: Aerial view of Collaroy-Narrabeen Beach and Fishermans Beach embayment

2.2 Damage to Development from Coastal Storms

Houses and other development have been destroyed, damaged and threatened by beach erosion at Collaroy-Narrabeen and Fishermans Beaches in the past (PWD, 1987). This has included:

- damage to houses at Collaroy in the "great storm of 1920", likely to be near Fielding Street (Figure 3)
- five houses being wrecked and ten other houses being damaged in March and May 1925 due to "cyclone squall" wind action at Collaroy near Fielding Street
- a report that the "sea came in and took out the back" of Arlington Hall (now Surf Rock Hotel and Collaroy Services Beach Club) in the 1920's (possibly in April 1927 or June 1928)
- damage to houses at Collaroy in May 1944, with a statement that "nearly every home north of Collaroy surfing beach, where houses are close to the sea, suffered severe damage" in a newspaper report (it was also noted that a wooden retaining wall had been erected as emergency protection)
- two houses being destroyed at Collaroy in June 1945 near Fielding Street, with seven other adjacent houses suffering substantial damage, due to wave impact and undermining
- a house immediately north of Frazer Street and the "Flight Deck" and "Shipmates" unit blocks being undermined at Collaroy in September 1967 (with many other developments threatened, particularly in the Fielding Street to Wetherill Street area)
- several houses at Collaroy-Narrabeen Beach and the foundations of the pool and eastern "Marquesas" unit block being threatened at Narrabeen in May-June 1974
- storm erosion in August 1998 leading to emergency rock protection works being undertaken by Council along the beachfront between Stuart Street and Wetherill Street (from 27 August to 3 September 1998)
- storm erosion in June to July 2007 exposing the rock protection works between Stuart Street and Clarke Street (Figure 4 and Figure 5), and leading to damage to property fences and the undermining and eventual removal of two pine trees at the lot south of Clarke Street (Figure 6).

Moderate erosion, particularly towards the northern end of the Collaroy-Narrabeen Beach, occurred in June 1978 (PWD, 1987). There was also moderate beach erosion in August 1986, with run up levels of up to 7.3m AHD occurring between Clarke Street and Devitt Street, which was also the strip of greatest erosion (Higgs and Nittim, 1988).

Storms in May 2009 caused dune erosion and damage to beach accessways at North Narrabeen Beach, as shown in Figure 7. Further erosion led to undermining of a lifeguard shed and viewing platform at North Narrabeen in June 2013 which were subsequently relocated by Council using a crane.

Council also engaged a contractor to mechanically 'slump' the relatively steep and high erosion scarps after this June 2013 storm, to reduce risks to public safety from collapsing sand dunes.

PWD (1987) considered that the only documented report of storm damage at Fishermans Beach was some cut to the beach around the boat ramp in the severe May-June 1974 storms. This was also noted by Foster *et al* (1975) who reported that there was some scour of the boat launching ramp south of Anzac Avenue.

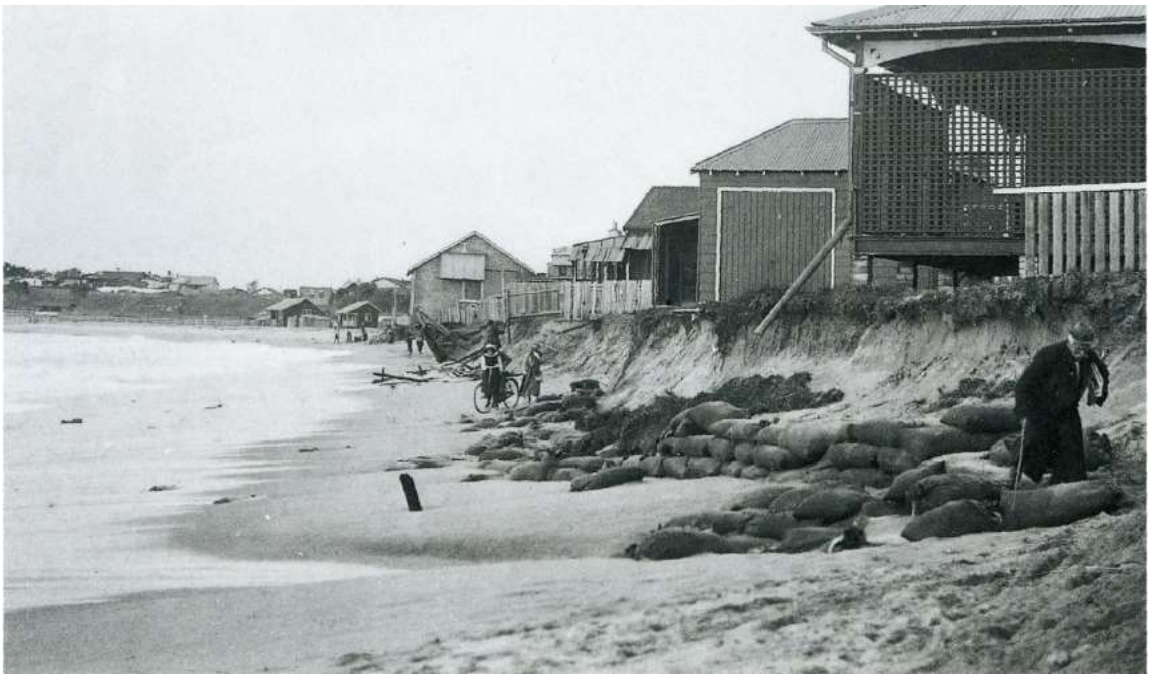

Figure 3: Damage to houses at Collaroy Beach in 1920

Figure 4: Exposure of rock protection between Stuart Street and just south of Clarke Street, 28 July 2007

Figure 5: Exposed rock protection between Stuart Street and Wetherill Street, 17 June 2007

Figure 6: Undermining of pine trees at 1184-1186 Pittwater Road Narrabeen, 29 July 2007

Figure 7: Dune erosion at North Narrabeen Beach in May 2009 (looking north)

Figure 8: Example of steep erosion escarpment at North Narrabeen on 29 March 2013

2.3 Existing Protective Works

There is a long history of ad-hoc protective works, generally consisting of rocks, being placed in front of properties during or closely after coastal storms at Collaroy-Narrabeen Beach. Examples of such works can be seen in Figures 3, 4, and 5. Collaroy-Narrabeen Beach can be divided into two sections based on the proximity of public and private development to the beach and presence of protective works, namely the areas north and south of Devitt Street.

South of Devitt Street there is limited dunal vegetation, and extensive lengths of (usually buried) protective works. North of Devitt Street, development is generally setback further landward and there is typically a well-developed dune with healthy coverage of dunal vegetation seaward of development (with no known protective works in this area).

This two section delineation and the location of known protective works at Collaroy-Narrabeen Beach is depicted in Figure 9, with a closer view of the southern portion of Collaroy-Narrabeen Beach provided in Figure 10.

The location of protective works was derived based on Patterson Britton & Partners (1993), MHL (1999), Patterson Britton & Partners (1999), a survey completed by Byrne & Associates on 26 June and 2 July 2007, and field observations.

The risk of damage to public and private development from coastal erosion has been reduced as a result of past construction of these protective works. These works include:

- a vertical mass gravity sandstone seawall south of Collaroy SLSC
- a stepped concrete and vertical steel sheet pile seawall at Collaroy SLSC
- a vertical mass gravity sandstone seawall at Collaroy Services Beach Club
- sloping rock revetments and some isolated concrete walls along the southern part of Collaroy-Narrabeen Beach (along most of the area south of Devitt Street).

It is evident that there is some form of protective structure at Collaroy-Narrabeen Beach:

- along almost the entire length of beach between Stuart Street and Devitt Street
- from Jenkins Street to Ramsay Street
- from about 20m north of Fielding Street southwards.

That is, south of Devitt Street, the only unprotected sections are likely to be.

- a portion of the lot south of Clarke Street
- between Ramsay Street and Stuart Street (covering 10 lots)
- between about 20m north of Fielding Street and Jenkins Street (that is, the northern portion of the car park north of Collaroy Services Beach Club).

For most of the time, the sloping rock revetments (and lower portions of the vertical walls) are buried under sand, but they can become exposed after erosive storms and are generally subsequently buried by sand as the beach naturally recovers.

While the existing protective works at the southern end of Collaroy-Narrabeen Beach remain in place, erosion and recession would be constrained from progressing landward of the works. Indeed, the works have successfully provided property protection over the last 40 or so years.

However, the protective works are variable in standard, and they may be undersized and/or founded inadequately. Most of the works are not engineer designed nor approved structures, and were

generally implemented by various landowners and authorities and constructed from the 1920's onwards, and mostly in the 1960's and 1970's during or immediately after erosion events.

The protective works would generally not satisfy current design standards and cannot be certified by a qualified coastal engineer as providing protection for an appropriate design storm and design life. Also, full details of the protective works are generally unknown or uncertain.

Given this, as well as the potential for larger waves attacking the structures under sea level rise (and more frequent wave attack as the beach width narrows due to shoreline recession associated with sea level rise), future effectiveness of the protective works cannot be guaranteed.

There are beach profile measurements at Collaroy-Narrabeen Beach extending back to the 1940's. It is evident that despite the construction of protective works (since the 1930's at the southern end of the beach, with rock revetments known to be constructed since 1967), the long term average beach shape/width/volume has been relatively stable for the last 70 or so years. This indicates that the presence of protective works has had little impact on the regular cycle of beach erosion and beach recovery at the beach. That is, these buried protective works have not caused significant long term beach recession, contrary to the view of some that protective works always cause loss of beaches.

The long term average beach stability in the Collaroy-Narrabeen Beach and Fishermans Beach embayment is also evidence that the embayment is essentially compartmentalised, with negligible net sand supply or loss.

Figure 9: Delineation of Collaroy-Narrabeen Beach into areas north and south of Devitt Street, without and with known protective works respectively

Figure 10: Location of known protective works at Collaroy-Narrabeen Beach

3. FEATURES OF COLLAROY-NARRABEEN BEACH AND FISHERMANS BEACH

3.1 Natural Landscape

Collaroy–Narrabeen Beach and Fishermans Beach comprise the following natural landscape components:

- an exposed stretch of ocean beach extending northwards from near Collaroy SLSC to the entrance of Narrabeen Lagoon including vegetated dune areas established on the landward edge of the beach just north of Collaroy Services Beach Club and on the northern two thirds of the beach north of Devitt Street
- Fishermans Beach immediately north of Long Reef Headland, a short curving beach relatively sheltered to waves from the south by the headland
- Long Reef Headland at the southern end of Fishermans Beach, consisting of outcropping Narrabeen Group shales and surrounded by a broad intertidal rock platform protected as an Aquatic Reserve under the *Fisheries Management Act 1994*.

3.2 Vegetation Types and Broad Condition

Much of the dune system along Collaroy–Narrabeen Beach and Fishermans Beach has been covered by development, with the vegetated foredune remaining only within a series of fenced dune areas (or bays) between beach accessways at some locations. Four vegetated dune areas are located adjacent to the public car park north of Collaroy Services Beach Club, and 34 vegetated dune areas extend approximately 2 km northwards from Devitt Street to the entrance of Narrabeen Lagoon (Figure 11). There is more limited dune vegetation at Fishermans Beach, with no fenced areas.

The native vegetation within the dune bays is consistent with a Coastal Wattle Heath vegetation community grading into a Spinifex Grassland vegetation community on the seaward edge of the foredune, as mapped and described by Smith and Smith (2005a). As noted in Smith and Smith (2005a) the Spinifex Grassland vegetation community supports one threatened plant species, *Chamaesyce psammogetom* (Sand Spurge).

Collaroy – Narrabeen and Fishermans Beach has been mapped as a wildlife corridor in Smith and Smith (2005b) which is a general vegetation linkage along the Warringah coastline and around the edge of coastal lagoons.

Figure 11: Location of main vegetated dune areas at Collaroy-Narrabeen Beach

3.3 Fauna Habitat

The dune vegetation provides foraging and shelter habitat for small bird and reptile species. Small bird activity can be particularly high in the dense shrubby areas.

A large part of Long Reef Aquatic Reserve provides important foraging and roosting habitat for many shorebirds protected as migratory species under both the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* and as threatened species under the NSW *Threatened Species Conservation Act 1995*. The many recorded numbers of these species is highly significant in the Sydney region, particularly as other important shorebird habitat areas in Sydney have suffered from increased disturbance and/or habitat loss (Straw, 2005).

The entrance of Narrabeen Lagoon and sandy beach environment of Collaroy–Narrabeen Beach and Fishermans Beach also provides potentially suitable foraging habitat for shorebirds such as the endangered Pied Oystercatcher (*Haematopus longirostris*) and, to a lesser extent, the vulnerable Sooty Oystercatcher (*Haematopus fuliginosus*) and the vulnerable migratory Sanderling (*Calidris alba*).

Potential breeding habitat for the endangered migratory Little Tern (*Sterna albifrons*), the critically endangered Beach Stone-curlew (*Esacus neglectus*) and roosting habitat for the vulnerable migratory Sanderling may be found in the dune system at The Gardens Reserve and northwards to the entrance of Narrabeen Lagoon. However, this habitat is highly unlikely to be utilised due to heavy recreational usage on the beach, particularly during the spring-summer breeding season for these birds.

An endangered population of Little Penguin (*Eudyptula minor novaehollandiae*) occurs about 9km south of Collaroy-Narrabeen Beach and Fishermans Beach at Manly, and about 19km north at Lion Island. Any penguins swimming offshore of either Collaroy-Narrabeen Beach or Fishermans Beach could be from either the Manly or Lion Island breeding populations, but the penguins are unlikely to come ashore unless sick or injured.

Potential threats to the habitat values of Collaroy–Narrabeen Beach and Fishermans Beach include:

- loss of habitat for the endangered Sand Spurge and other flora and fauna species through the erosion of the dunes resulting from storms or other disturbance events
- degradation of dune vegetation from rabbit activity and prolific weed invasion in particular the highly invasive coastal weed Bitou Bush
- disturbance to shorebirds foraging and roosting on the Long-Reef intertidal rock platform and foraging on intertidal areas of the beach from recreational use (although it is acknowledged that this threat is difficult to manage on the beach given the high usage by the surrounding large urban population).

Proposed management actions to protect areas with important habitat and biodiversity values are identified in Chapters 6 and 8.

3.4 Aquatic Reserves

Two aquatic reserves have been established in and near the area covered by the CZMP under the NSW *Fisheries Management Act 1994*, namely at Long Reef and Narrabeen Head. The purpose of these reserves is to protect biodiversity and threatened species, and to provide representative samples of diverse marine life for tourism, research and educational roles.

3.4.1 Long Reef Aquatic Reserve

Long Reef Aquatic Reserve was declared in 1980 (Ogden, 2011). It extends from Collaroy rock baths south to Long Reef SLSC, and from mean high water to 100 metres seaward of mean low water (OEH, 2013a), see Figure 12.

Long Reef Aquatic Reserve has been set aside for the protection of marine invertebrates on the rock platforms as well as subtidal marine plants and animals. It is also an important site for marine education (OEH, 2013a).

Regulations stipulating prohibited activities in the Reserve are in the NSW *Fisheries Management (Aquatic Reserves) Regulation 2002*. It is prohibited to take anything from the Reserve except fin-fish by line with externally brought bait or by spear. Strict bag limits apply to both the numbers and sizes of fish species caught. The reserve contains Aboriginal heritage features including a midden.

3.4.2 Narrabeen Head Aquatic Reserve

Narrabeen Head Aquatic Reserve is located immediately north of the area covered by the CZMP and comprises the whole foreshore from the southern end of Turimetta Beach to the rock baths at Narrabeen Head, extending 100m seawards from the mean low water mark (Figure 13).

Due to the close proximity to Narrabeen Lagoon, the combination of estuarine and oceanic influences supports a wide variety of marine life including threatened species. Permissible activities within the reserve include line fishing and spearfishing (subject to normal restrictions) and collection of rock lobster, sea lettuce and bait weed. It is prohibited to collect cunjevoi and all invertebrates, including empty shells. The reserve area has a number of Aboriginal heritage features including shelter caves, art sites, axe grooves and middens (DPI, 2012).

Figure 12: Extent of Long Reef Aquatic Reserve

Figure 13: Extent of Narrabeen Head Aquatic Reserve

3.5 Cultural and Heritage Significance

Prior to European settlement, the Aboriginal people inhabited the local foreshore and headlands in Warringah. A search of the Office of Environment and Heritage "Aboriginal Heritage Information Management System" (AHIMS) was undertaken in January 2014. This did not indicate that there were any particular Aboriginal objects or Aboriginal Places at Collaroy-Narrabeen Beach or Fishermans Beach.

In 2005 the remains of an aboriginal man, commonly referred to as Narrabeen Man, were unearthed on Ocean Street near the intersection with Octavia Street, Narrabeen. The remains were subsequently removed and the bones radiocarbon dated to around 4000 years old. The remains are currently located at Sydney University's Shellshear Museum.

Collaroy-Narrabeen Beach and Fishermans Beach are part of Sydney's northern beaches, considered by Ogden (2011) as "one of the world's most magnificent stretches of coastline", and:

> "the birthplace of modern Australian beach culture. It is here that Australians witnessed the first ocean bathing, the development of swimsuits, the genesis of the surf life saving movement and the beginning of wave riding. Because of the quality of the surf beaches, many world surfing champions were either raised here or chose to make the area their home at some stage of their career. Some of the world's best recognised painters, potters, writers, poets, photographers, filmmakers, musicians and architects also call the northern beaches home".

There are 145 heritage items and heritage conservation areas listed within Schedule 5 of the *Warringah Local Environment Plan 2011*. Heritage items/areas that are in the area covered by the CZMP comprise (moving north to south):

- Narrabeen Fire Station at 9 Ocean Street Narrabeen (2 lots north of Goodwin Street)
- house at 1184-1186 Pittwater Road Narrabeen (lot south of Clarke Street)
- Arlington Amusement Hall (now Surf Rock Hotel and Collaroy Services Beach Club)
- street trees and plaque along eastern side of Pittwater Road between Collaroy Street and Birdwood Avenue
- Collaroy Rock Pool
- the former Collaroy Hospital site at 1 Brissenden Avenue Collaroy
- the Long Reef Fishing Club Hut at Fishermans Beach
- coastal cliffs at Long Reef Headland.

Based on a search of the State Heritage Inventory, there are no items on the State Heritage Register at Collaroy-Narrabeen Beach or Fishermans Beach.

3.6 Community Uses

3.6.1 Surfing

Collaroy-Narrabeen Beach is a popular location for surfing. North Narrabeen in particular is recognised nationally and internationally for the quality of its waves and world class surfers it produces. North Narrabeen Beach was declared a National Surfing Reserve in October 2009. The extent of the Reserve is depicted in Figure 14.

The recognition of North Narrabeen as a surfing reserve was firstly due to the quality and consistency of its waves, described as “the most consistent break on the east coast and probably in Australia” (National Surfing Reserves, 2013). Secondly, it has produced many world class surfers, including Australian and World champions, together with some of the greatest innovations in surfboard design.

A surfing reserve is a dedicated area that is protected for use by the general public and surfing community, recognising sites of environmental, cultural and historic significance in Australian Surf Culture. To date, 24 sites along Australia’s coastline (including 7 in NSW) have been identified for dedication by the National Surfing Reserves organisation in partnership with Crown Lands. In NSW, Crown Lands have moved to legally reserve declared sites as Crown reserves for the public purpose of surfing recreation under the *Crown Lands Act 1989*. This offers legal protection to a national surfing reserve and highlights the significance of the Crown estate in the surfing culture and Australian lifestyle (NSW Crown Lands Division, 2014).

Figure 14: Extent of North Narrabeen National Surfing Reserve

3.6.2 Fishing

Fishing is a popular activity along Collaroy-Narrabeen Beach, which offers rock, inlet and beach fishing options (Short, 2007). Narrabeen Lagoon provides sheltered estuary fishing. The rock platform at North Narrabeen provides rock fishing. Following storm swells, nearshore gutters provide opportunities for beach fishing.

At Fishermans Beach, boats are able to launch from the boat ramp to access offshore areas. Long Reef Headland is used for rock fishing.

3.6.3 Surf Life Saving Clubs

There are four Surf Life Saving Clubs along Collaroy-Narrabeen Beach, comprising North Narrabeen, Narrabeen, South Narrabeen and Collaroy SLSC. These attract significant membership from the local community with North Narrabeen and Collaroy SLSC being the largest clubs. In addition to regular "nippers" meetings, a variety of competitions are held by the clubs each year including surf boat races, ocean swimming, beach running, board and ski relays, rescue and resuscitation drills and inflatable rescue boat races. These clubs also run training and education courses in first aid and surf life saving skills.

3.6.4 Swimming Clubs

There are two active swimming clubs operating at Collaroy-Narrabeen Beach, namely at the rock pools at North Narrabeen and Collaroy Beach respectively. These comprise the:

- Narrabeen Ladies Amateur Swimming Club, which was established in 1933 and has now evolved into a mixed gender club that holds weekly race meetings between October and March
- the Collaroy Amateur Swimming Club, which was established in 1952 and also holds regular weekend and mid-week meetings between October and March. Club membership is open to all ages and abilities promoting family participation and social swimming.

3.6.5 Other Recreational Activities

The beach, rock pools, lagoon and foreshore reserves within the area covered by the CZMP cater for a wide range of other recreational activities including swimming, sunbathing, picnicking/barbequing, running/exercising, jet skiing, sail boarding, kite surfing and scuba diving.

In annual community surveys of residents undertaken by Council, visiting and swimming at the beach consistently ranks highly as popular activities. Beach usage is highest at Collaroy Beach and North Narrabeen Beach, which are also the most popular locations for families. In addition to the open coast beach areas, sheltered areas within the entrance of Narrabeen Lagoon (between the mouth of Narrabeen Lagoon and the Ocean Street Bridge, and immediately upstream of the Bridge adjacent to Sydney Lakeside Holiday Park) are also extremely popular (particularly amongst families) for swimming, passive recreation, fishing and canoeing.

3.6.6 Beach Usage

There were approximately 3.1 million visits to patrolled beaches in Warringah over the 2012 to 2013 swimming season (end of September to end of April) and 3.6 million corresponding visits over the 2013 to 2014 swimming season. Attendances were estimated by lifeguards covering the whole beach including the water, sand and reserve during the hours on duty (generally 9am to 6pm).

3.7 Land Use

3.7.1 Collaroy-Narrabeen Beach

In terms of land use, Collaroy-Narrabeen Beach can be divided into five distinct zones, namely (moving from north to south):

- the Council-owned Birdwood Park and North Narrabeen SLSC area north of Malcolm Street
- a pocket of retail development landward of a Council-owned car park immediately south of Malcolm Street, then residential development between Malcolm Street and Albert Street
- the mainly Council-owned Narrabeen SLSC and open space parkland area (The Gardens Reserve) between Albert Street and Devitt Street
- the extensively developed residential area between Devitt Street and Jenkins Street, which includes the high rise unit blocks “Shipmates” and “Flight Deck” (located immediately south of Ramsay Street), and “Marquesas” (twin towers located just south of Devitt Street)
- the generally Council-owned area south of Jenkins Street, including a car park north of the privately owned Collaroy Services Beach Club; and an open space promenade, car park and parkland surrounding the Council-owned Collaroy SLSC.

The delineation of public (Council and Crown) and private land at Collaroy-Narrabeen Beach is depicted in Figures 15 and 16.

3.7.2 Fishermans Beach

Fishermans Beach can be divided into two zones in terms of land use, namely:

- the mainly residential area north of Anzac Avenue
- the extensive Council-owned open space area south of Anzac Avenue, including Long Reef Golf Course, car parking areas, the Warringah Surf Rescue building, and Long Reef Fishing Club Hut.

The delineation of public (Council and Crown) and private land at Fishermans Beach is depicted in Figure 17.

Figure 15: Delineation of public (Council and Crown) and private land at northern half of Collaroy-Narrabeen Beach

Figure 16: Delineation of public (Council and Crown) and private land at southern half of Collaroy-Narrabeen Beach

Figure 17: Delineation of public (Council and Crown) and private land at Fishermans Beach

3.8 Economic Value

3.8.1 Recreational Value

Beaches act as strong sources of attraction for both Australian residents and domestic and international tourists. Australians have a strong geographical affinity to the coast, with around 50% of residential addresses located within seven kilometres of the coastline, and around 6% in the zone that is less than five metres above mean sea-level and within three kilometres of the coast (Sydney Coastal Councils Group Inc., 2013).

Approximately 1.3 million domestic daytrips taken in the Sydney region in the year ended December 2012 involved visiting the beach. It is likely that these visits represent a desire for recreation opportunities, and also a desire for nature-enhanced cultural activities, such as eating fish and chips on a beach or coastal promenade (Sydney Coastal Councils Group Inc., 2013).

Many residents choose to live in Warringah LGA because of the attractiveness of the coastal area and opportunities to enjoy the beach and beach lifestyle, and would therefore place a high value on beach amenity.

3.8.2 Land Value

At Collaroy-Narrabeen Beach, the 377 beachfront lot addresses had a 1 July 2012 combined unimproved land value of $239 million, at an average of $635,000 per address. This average was skewed by the large number of units (which do not get individually valued), with the average unimproved land value per lot address (with 97 lot addresses) being $2.5 million. The largest unimproved lot land value was $12.5 million at “Marquesas” (11 Ocean Street Narrabeen) and the smallest was $1.2 million.

The 2012 combined unimproved beachfront land value of $239 million at Collaroy-Narrabeen Beach was distributed as follows:

- $118 million south of Devitt Street (average of $2.4 million per lot address and $530,000 per individual address)
- $121 million north of Devitt Street (average of $2.6 million per lot address and $780,000 per individual address).

Including non-beachfront property ($38 million land value at an average of $1.4 million per lot address and $725,000 per individual address) the total 2012 land value at Collaroy-Narrabeen Beach was $278 million at an average of $2.2 million per lot address and $646,000 per individual address.

At Fishermans Beach, the 14 beachfront lot addresses had a 1 July 2012 combined unimproved land value of $61.5 million, at an average of $4.4 million per address. Including non-beachfront property ($8.7 million land value at an average of $2.2 million per address) the total 2012 land value at Fishermans Beach was $70.2 million at an average of $3.9 million per address.

3.8.3 Tourism

The extent of tourism travel to Collaroy-Narrabeen Beach and Fishermans Beach is unknown, although it is expected that beach visitation is dominated by local and other Sydney residents. Sydney Coastal Councils Group Inc. (2013) estimated that the average travel cost per visit and per person to Collaroy-Narrabeen Beach was only $2.90, noting that the beach was frequented by local residents and that many walk or ride to the beach so have zero costs. Approximately 60% of visitors to Collaroy-Narrabeen Beach travelled less than 20 minutes to get there according to the analysis of Sydney Coastal Councils Group Inc. (2013).

3.9 Access to Beaches and Headlands

3.9.1 Vehicular Access

Vehicles are not generally permitted on Collaroy-Narrabeen Beach or Fishermans Beach. Vehicular access to near Collaroy-Narrabeen Beach is available via a number of side streets off Pittwater Road (7 roads) and Ocean Street (8 roads) that form road heads along the beachfront. Street parking is available along Pittwater Road (at non-clearway times) and Ocean Street. Nine public car parks also exist.

The southern end of Collaroy Beach can be accessed via Birdwood Avenue and Beach Road.

Vehicular access to near Fishermans Beach is available via Florence Avenue, Ocean Grove, Anzac Avenue and along the access road to Long Reef Headland adjacent to Long Reef Golf Course. Street parking is available at these locations. There are five public car parks adjacent to Collaroy-Narrabeen Beach and Fishermans Beach.

3.9.2 Pedestrian Access

North of Devitt Street, pedestrian beach access is provided by a number of walkways through the established dune vegetation. Most of these walkways have been formalised by fencing and typically lead from foreshore reserve areas, road heads, public car parks and (for private use) directly from private property.

Between Devitt Street and the carpark north of Collaroy Services Beach Club, public pedestrian access is via the end of road heads (and also at South Narrabeen SLSC between Mactier Street and Clarke Street). At a number of road heads, beach access has been formalised by the provision of a stairway, which provides effective access after storms when there is a steep back beach erosion escarpment. In other areas access is informal with the beach profile merging with the area around the road head (under “beach full” conditions). There are times after storms when access to the beach is difficult due to a steep erosion escarpment and/or the exposure of rock protective works which are generally relatively steep and can be difficult and dangerous to traverse.

Access from private development south of Devitt Street is also possible under “beach full” conditions when beach levels are similar to lot levels. However, again there are times after storms when access to the beach can be difficult due a steep erosion escarpment and/or the exposure of rock protective works.

Several formal beach access walkways are provided through the dune vegetation established adjacent to the public carpark north of Collaroy Services Beach Club. Further to the south, a seawall and promenade provide access to Collaroy Beach and the Collaroy Rock Pool.

Public pedestrian access to Fishermans Beach can be achieved via a path extending from Collaroy Beach and the northern end of Beach Road along the headland between Collaroy Beach and Fishermans Beach, with stairs at each end, Fox Park, a car park north of Florence Avenue, reserves at the seaward end of Ocean Grove and Anzac Avenue as well as most of the foreshore south-east of Long Reef Golf Club.

Private access from private development at Fishermans Beach is possible by directly walking from properties to the beach.

3.9.3 Headland Access

The North Narrabeen Headland Reserve can be accessed by road from Pearl Place or from a walkway starting from the public car park on the northern side of the lagoon entrance.

The headland south of Collaroy Beach can be accessed via Beach Road or by walking along the foreshore promenade to Collaroy Rock Pool in the north, or via Florence Avenue and stairs in the south.

Vehicular access to Long Reef Headland is provided by a road extending landward of the Long Reef Golf Club building. The viewing area at the top of the headland can be accessed via a walkway starting from the eastern end of this road, which continues along the cliff line around the perimeter of Long Reef Golf Course to the northern end of Long Reef Beach.

3.9.4 Boating Access

Offshore boating access is provided by an open coast boat ramp at Fishermans Beach, which was repaired and upgraded in 2009.

Boats can also be launched within Narrabeen Lagoon for use within the Lagoon, and NSW Roads and Maritime Services publishes a Boating Map for the area (Map 9a, "Boating Map for Pittwater, Cowan Creek And Narrabeen Lagoon"). The Lagoon entrance is not typically navigable due to breaking waves, strong currents and shallow depths.

3.9.5 Universal Access

The Collaroy Beach foreshore reserve has recently been redeveloped to include an upgraded accessible area as part of the Collaroy Accessibility Precinct project. The universal access features include:

- a 'liberty swing' within the children's playground for wheelchair users
- a 'freewheeler' submersible wheelchair available for public use
- wider parking spaces near the children's playground
- an accessible toilet
- universal access facilities at Collaroy Rock Pool.

3.10 Stormwater Outlets

3.10.1 Collaroy-Narrabeen Beach

There are 8 formalised stormwater drain outlets along Collaroy-Narrabeen Beach. These comprise:

- back beach/dune pipe discharges near Malcolm Street, Tourmaline Street, Albert Street, Goodwin Street, Ramsay Street and Frazer Street
- an outfall into the surf zone near Collaroy Street
- a culvert outlet immediately north of the Collaroy Rock Baths.

At road heads without piped discharges (such as at Emerald Street, Loftus Street, Albemarle Street, Wellington Street, Waterloo Street, Mactier Street, and Wetherill Street), stormwater generally flows towards dunal areas as overland flow and/or ponds at the seaward ends of the roads. Stormwater from the surrounding catchment is also discharged to the ocean via the Narrabeen Lagoon entrance.

3.10.2 Fishermans Beach

There are 5 main stormwater drain outlets along Fishermans Beach. These are located (moving north-west to south-east) near Fox Park, Florence Avenue, Ocean Grove, Anzac Avenue, and about 40m west of the boat ramp. There is also a minor stormwater outlet at the Warringah Surf Rescue

building. In addition to the formalised stormwater outlets, unchannelled stormwater flows onto the beach during heavy rainfall, particularly from the ends of various streets (PWD, 1987). Photographs of stormwater outlets along Fishermans Beach are provided in Appendix G.

Some of the existing stormwater outlets located along Collaroy-Narrabeen Beach and Fishermans Beach cause localised scour to beach berm and/or dune areas, localised flooding when outlets are blocked with sand, and can be accessed by the public. Potential upgrade works could include:

- installation of 'duckbill' check valves at outlets to prevent sand ingress
- installation of surcharge pits to mitigate local flooding caused by buried beach outlets
- installation of safety screens on outlets to prevent public access
- diversion of stormwater discharges away from the beach where possible (such as away from Fishermans Beach and into the Long Reef Golf Course wetland area).

These actions have been included in Section 8 and will be incorporated into Warringah Councils Stormwater Asset Management Plan.

3.11 Sewerage Infrastructure

There are sewer mains close to Collaroy-Narrabeen and Fishermans Beaches which are the responsibility of Sydney Water Corporation (SWC). The risk of damage to this infrastructure depends not only on cross-shore setback (plan proximity to the beach) but also the elevation of the mains (if the assets are at significant depth, such as below typical beach scour levels of -1m AHD, they would be less likely to be damaged in coastal erosion events). Locations where sewer mains are particularly close to the beach (moving north to south) are:

- immediately south of Clarke Street (seaward of residential development)
- between Stuart Street and Ramsay Street (where there are no known protective works, and again seaward of residential development)
- at Frazer Street
- along a small section south of "The Breakers" near Jenkins Street (also including a sewage pumping station)
- between Fielding Street and midway along the Collaroy Services Beach Club
- along almost the entire length of Fishermans Beach north of Anzac Avenue (note that maintenance manhole covers are evident along the beach in this area).

Over the long term, sewer mains in other areas may potentially be at risk of damage from coastal erosion, namely (moving north to south):

- between Emerald Street and Octavia Street at Narrabeen;
- between Albemarle Street and Wellington Street at Narrabeen;
- midway between Wellington Street and Waterloo Street at Narrabeen;
- near Albert Street at Narrabeen;
- near Narrabeen Street at Narrabeen;

- at Goodwin Street, Narrabeen (note that there are known protective works in this area); and,
- between Frazer Street and Fielding Street at Collaroy (note that there are known protective works in this area).

Given that sewer mains are located (in plan) within coastline hazard areas, Council will work collaboratively with SWC to encourage the Corporation to undertake further investigations to assess the elevation of the sewer mains and to assess the risk to sewerage infrastructure from coastal erosion. This would enable SWC to manage this risk consistently with the CZMP. SWC may need to consider either protection or relocation of some sewer mains, particularly as long term hazards are realised.

3.12 Other Authority Assets

There may be assets such as electricity cables, water mains, communications cables (such as Telstra and Optus), and gas lines in beachfront areas, but details on these assets have not been investigated as part of the investigation this CZMP. Additionally, Pittwater Road, classified as regional road, runs parallel to Collaroy-Narrabeen Beach and Fisherman Beach. The responsibility for these assets lies with the particular asset owners. However, Warrinagh Council will work collaboratively with these asset owners to encourage them to assess the location and elevation of these assets in relation to coastline hazards so that the risk of damage can be determined and managed by these owners consistently with the CZMP. Some assets may need to be protected or relocated by the relevant assets authorities, particularly as long term hazards are realised.

Two submarine telecommunications cables, owned and managed by the Australian Communications and Media Authority, exist at Narrabeen Beach. The two cables, the Australian Japan Cable and Southern Cross Cable connect Australia with Japan and North American respectively. They lie on the sea floor and are protected by the Northern Sydney Protection Zone which extends from Narrabeen Beach to 40 nautical miles off shore. The protection zone limits activities that could damage submarine cables. As all actions proposed in the draft CZMP occur outside the Northern Sydney Protection Zone.

4. COASTAL PROCESSES AND COASTLINE HAZARDS

This chapter describes the coastal processes and coastline hazards relevant to Collaroy-Narrabeen Beach and Fishermans Beach.

4.1 Coastal Processes

4.1.1 Waves

Offshore Wave Climate

Beach erosion and relatively large wave runup is strongly linked to the occurrence of high wave conditions with elevated ocean water levels. As a result erosion and runup are more likely to be significant when large waves coincide with a high tide. Most storm waves offshore of Sydney come from the south (48%), with about 26% coming from the south-south-east and 10% from the south-east. That is, 84% of storm waves come from the south to south-east octant (WorleyParsons, 2009). The peak wave height during a 100 year Average Return Interval (ARI) event is predicted to be 8.8m for storm waves coming from the south and 9.3m for storm waves coming from the south south east.

Nearshore Wave Climate

As waves approach the shore they may be transformed by the processes of refraction, shoaling, diffraction, attenuation, reflection and breaking. Therefore, wave height and wave direction of the nearshore wave climate differs from the offshore wave climate, with wave period generally remaining constant.

The relative prominence (offshore extent) of the Long Reef headland provides some sheltering to Fishermans Beach and the southern end of Collaroy Beach from offshore storm waves coming from the dominant south to south east directions. Narrabeen and North Narrabeen are generally fully exposed to the offshore wave climate, but it is recognised that various offshore reefs cause complexities in wave transformation in the study area.

Peak 100 year ARI wave setup is estimated to be in the order of 1.3m. Based on modelling completed by WorleyParsons (2009), peak 100 year ARI wave heights reduce to about 75% of fully exposed values south of Fielding Street at Collaroy Beach, and to about 63% at Fishermans Beach (with the fully exposed values applying north of Stuart Street at Collaroy-Narrabeen Beach).

4.1.2 Elevated Water Levels

The main factors which contribute to elevated ocean still water levels on the NSW coast comprise:

- astronomical tide
- storm surge (barometric setup and wind setup)
- wave setup (caused by breaking waves).

Astronomical tide is the regular rise and fall of sea level in response to the gravitational attraction of the sun, moon and planets, and a rotational effect due to the spin of the earth on its axis. Tides along the NSW coastline are semi diurnal, with high and low water approximately equally spaced in time and occurring twice daily (that is, on average, there are two high tides and two low tides in any 24 hour period). There is also significant diurnal inequality in NSW coast tides, a difference in height of the two high waters or the two low waters of each tidal day.

Barometric setup is a localised vertical rise in the still water level due to a reduction in atmospheric pressure. The increase in water level is approximately 0.1m for each 10 hectopascal drop below normal barometric pressure of 1013 hPa (MHL, 1992). Wind setup is the vertical rise in the still water level on the downwind side of a body of water caused by wind stresses on the surface of the water.

Wave setup is defined as the superelevation of the mean water level caused by wave action alone. Individual waves also cause temporary water level increases above the still water level due to the process of wave runup or uprush. In NSW, open coast still water levels (within the wave breaking zone) can increase by up to about 2m above normal levels in storms due to storm surge and wave setup.

The Department of Environment, Climate Change and Water [DECCW] (2010b) estimated that the 100 year ARI still water level offshore of Sydney (excluding wave setup) is 1.44m AHD at present. Including wave setup of 1.3m, the 100 year ARI water level at fully exposed shorelines landward of wave breaking would be about 2.7m AHD. At less exposed areas (such as the southern end of Collaroy Beach, and Fishermans Beach), equivalent elevated water levels would be reduced due to lower wave setup, to about 2.4m and 2.2m respectively.

It is not relevant to map tidal inundation at Collaroy-Narrabeen Beach and Fshermans Beach as per Item 6 of the *Guidelines for Preparing Coastal Zone Management Plans*. This is because water levels of 2.2m to 2.7m AHD are contained within the sandy beach areas, and do not extend landward to developed areas, and mapping these water levels on the beach would not be meaningful.

4.1.3 Wave Runup

Wave runup is site specific, but typically reaches a maximum level of about 8m AHD at beaches on the open NSW coast at present. Higgs and Nittim (1988) found that for a coastal storm that occurred in August 1986, maximum runup levels at Narrabeen Beach were about 7.3m AHD (near Clarke Street), with 4.4m AHD recorded near Fielding Street at Collaroy, and up to 5.3m AHD at Fishermans Beach. It is considered to be reasonable to adopt a 100 year ARI wave runup level of 8m AHD for exposed areas of Collaroy-Narrabeen Beach at present.

At the southern end of Collaroy Beach (south of Fielding Street) and at Fishermans Beach, equivalent runup levels would be lower (WorleyParsons, 2009). A wave runup level of 6m AHD was adopted at these locations.

4.1.4 Coastal Storms

The NSW coastline is subject to intense tropical and non-tropical storms at irregular intervals. Key coastal storms that have affected Collaroy-Narrabeen Beach and Fishermans Beach occurred in 1920, March and May 1925, May 1944, June 1945, September 1967, May-June 1974, August 1998 and June-July 2007. The most significant of these in terms of damage along the coast were the 1974 storms. The May 1974 storm was particularly severe as it was accompanied by the highest water level ever recorded along the NSW coast.

Damaging storms have generally occurred as a closely linked series of storms, rather than being particularly severe storms in isolation. In this way the beach may already be in a depleted state at the time of arrival of the second and subsequent storms. A key factor in the erosiveness of a storm, besides the storm energy, is also the water level occurring during the storm.

The beaches covered by the CZMP have been subject to damaging coastal storms in the past, and can thus be expected to again be exposed to such storms at irregular intervals in the future. These storms are most likely to occur in Autumn and Winter, and are least likely to occur in Summer, but can occur at any time.

4.1.5 Sediment Transport

In the region between where waves break and the shoreline, two natural forms of sediment transport occur, namely longshore sediment movement and onshore/offshore sediment movement. Sediment transport can also occur due to the action of wind. Lagoon entrances (and to a lesser extent stormwater systems) may also contribute sediment to or capture sediment from the beach system. Manual forms of sediment transport, namely beach nourishment, beach sediment recycling and beach scraping, also influence sediment transport at Collaroy-Narrabeen Beach and Fishermans Beach. A detailed description of these modes of sediment transport is provided in Appendix I.

4.1.6 Climate Change

Sea Level Rise

The possibility of global climate change accelerated by increasing concentrations of greenhouse gases, the so-called Greenhouse Effect, is widely accepted by the scientific and engineering communities. This is predicted to cause globally averaged surface air temperatures and sea levels to rise.

The *NSW Sea Level Rise Policy Statement* (DECCW, 2009b) was released in October 2009. It included sea level rise planning benchmarks of 0.4m at 2050 and 0.9m at 2100 (both relative to 1990), with the two benchmarks allowing for consideration of sea level rise over different timeframes. The sea level rise planning benchmarks can be used for purposes such as incorporating the projected impacts of sea level rise on predicted flood risks and coastline hazards. However, note that DECCW (2009b) is no longer NSW government policy.

In considering the impacts of sea level rise at Collaroy-Narrabeen Beach and Fishermans Beach three sea level rise scenarios were applied. A “mild case” estimate of 10% increase in sea level rise, a “best” estimate of 15% increase in sea level rise and a “severe case” estimate of 20% increase in sea level rise. These scenarios were selected based on the sea level rise projections outlined in the 5th IPCC Assessment Report with an allowance for regional variation. A detailed discussion of their application is provided in Section 5 and Appendix L.

This approach is considered to be consistent with the advice provided by the NSW Government in April 2014 that Councils are to obtain expert advice in using a range of sea level rise projections as well as document the methodology and approach applied.

Other Climatic Change Considerations

Another potential outcome of climate change is an increase in the frequency and intensity of storm events. Modest to moderate increases in average and maximum cyclone intensities are expected in the Australian region in a warmer world. However, cyclone frequency and intensity are strongly associated with the El Niño/Southern Oscillation (ENSO) phenomenon. How this phenomenon will vary in a warmer world is currently unknown (CSIRO, 2001; CSIRO Marine Research, 2001). The potential for climate change related recession needs to be continually reviewed as more information develops in the scientific community.

4.2 Coastline Hazards

4.2.1 Beach Erosion (Storm Demand)

During storms, large waves, elevated water levels and strong winds can cause severe erosion to sandy beaches. The hazard of beach erosion relates to the limit of erosion that could be expected due to a severe storm or from a series of closely spaced storms (NSW Government, 1990). The following beach erosion (storm demand) values have been applied for Collaroy-Narrabeen Beach and Fishermans Beach.

- 250m^3/m north of Frazer Street
- linearly reducing to 200m^3/m at Collaroy Services Beach Club
- linearly reducing to 150m^3/m south of Collaroy SLSC
- 100m^3/m at Fishermans Beach.

4.2.2 Beach Rotation

There is evidence that Collaroy-Narrabeen Beach rotates in response to shifts in the Southern Oscillation Index (SOI). Broadly, accretion occurs at the north end of Collaroy-Narrabeen Beach during El Niño phases (periods of negative SOI) with erosion occurring in the south. During La Niña phases (periods of positive SOI) erosion occurs at the north with accretion occurring at the south end. Allowance for beach rotation at Collaroy-Narrabeen Plan has been made in the preparation of the plan. No allowance for beach rotation at Fishermans Beach was included.

4.2.3 Shoreline Recession

The hazard of shoreline recession is the progressive landward shift in the average long term position of the coastline (NSW Government, 1990). Two potential causes of shoreline recession are net sediment loss, and an increase in sea level. The following rates of shoreline recession were applied for Collaroy-Narrabeen Beach and Fishermans Beach in the CZMP:

- A long term recession due to net sediment loss of 0.05m/year at Collaroy-Narrabeen Beach and Fishermans Beach; and
- Long term recession due to sea level rise 0.04m/year at Collaroy-Narrabeen Beach and 0.02m/year at Fishermans Beach.

4.2.4 Stormwater Erosion Hazard

During major stormwater runoff events, stormwater that is collected from back beach areas and discharges into coastal waters can cause significant localised erosion to the beach berm. Flow from stormwater pipes and outlets at Collaroy-Narrabeen Beach and Fishermans Beach can also potentially scour the surrounding sand, creating erosion zones.

4.2.5 Slope Instability

For sandy areas a number of coastline hazard zones can be delineated as shown in Figure 18.

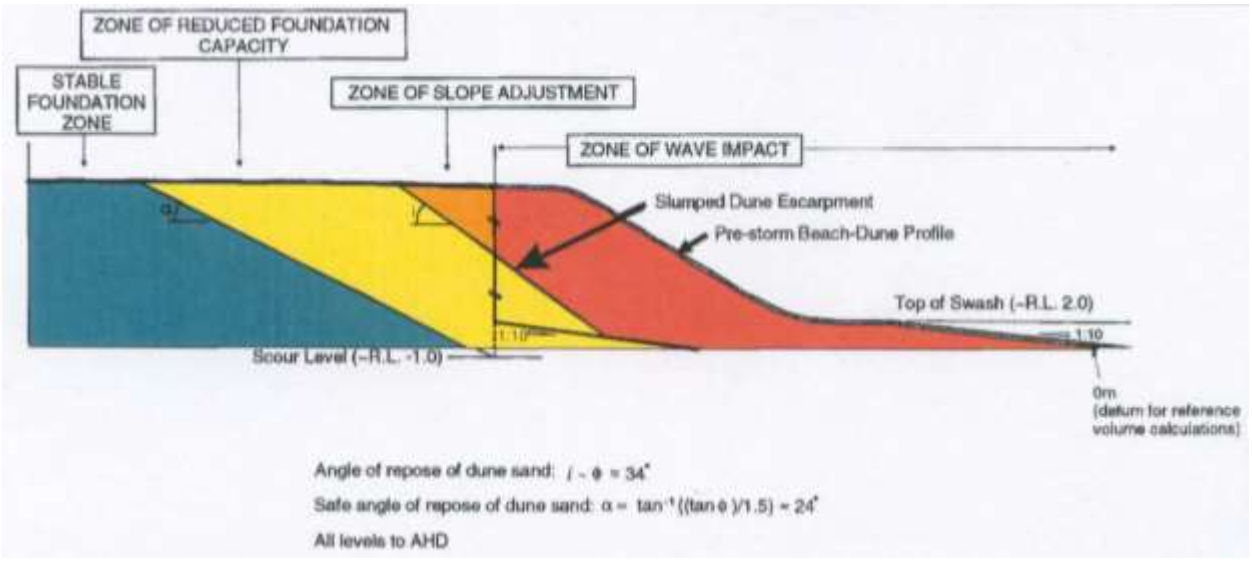

Figure 18: Schematic representation of coastline hazard zones (after Nielsen et al, 1992)

The *Zone of Wave Impact* delineates an area where any structure or its foundations would suffer direct wave attack during a severe coastal storm. It is that part of the beach which is seaward of the beach erosion escarpment.

A *Zone of Slope Adjustment* (ZSA) is delineated to encompass that portion of the seaward face of the beach that would slump to the natural angle of repose of the beach sand following removal by wave erosion of the design storm demand. It represents the steepest stable beach profile under the conditions specified.

A *Zone of Reduced Foundation Capacity* (ZRFC) for building foundations is delineated to take account of the reduced bearing capacity of the sand adjacent to the storm erosion escarpment. Nielsen et al (1992) recommended that structural loads should only be transmitted to soil foundations outside of this zone (i.e. landward or below), as the factor of safety within the zone is less than 1.5 during extreme scour conditions at the face of the escarpment. In general (without the protection of a terminal structure such as a seawall), dwellings/structures not piled and located within the ZRFC would be considered to have an inadequate factor of safety.

Coastline hazard lines for Collaroy-Narrabeen Beach and Fishermans Beach are provided in Appendix I, corresponding to both the position of the landward edge of the ZSA and the landward edge of the ZRFC (defined at present, at 2050, and at 2100).

4.2.6 Coastal Inundation

Coastal inundation is the flooding of coastal lands by ocean waters, which is generally caused by large waves and elevated water levels associated with severe storms. Severe inundation is an infrequent event and is normally of short duration, but it can result in significant damage to both public and private property (NSW Government, 1990).

The components which give rise to elevated still water levels at times of storms have been referred to in Section 4.1.2, namely wind setup, barometric setup, and wave setup. Individual waves cause further temporary water level increases above the still water level due to the process of wave runup or uprush.

Wave runup levels of 6m to 8m AHD are above dune crest levels in parts of Collaroy Narrabeen Beach and Fishermans Beach, particularly:

- south of Devitt Street at Collaroy-Narrabeen Beach, and in particular south of Stuart Street, with the area surrounding Collaroy SLSC and Collaroy Services Beach Club being particularly vulnerable to coastal inundation as it is generally below 4m AHD
- at Fishermans Beach.

Therefore the potential for occasional wave overtopping and coastal inundation in these areas exists. However, it should be noted that runup levels of 6m to 8m AHD would only be realised if the foreshore was at the runup height or higher. In reality, any waves that overtopped the foreshore would 'fold over' the foreshore crest and travel as a sheet flow at shallow depth, spreading out and infiltrating over landward areas. A significant reduction in the velocity and depth of the runup would be expected within the order of 10m landward from the foreshore crest.

That is, even if a structure (in particular habitable floor level) was below a predicted wave runup level, this does not necessarily imply there would be damage to the structure, as this would depend primarily on the depth of overtopping flow (or flow momentum in immediate foreshore areas), and nature of the construction.

5. RISKS TO PUBLIC SAFETY AND BUILT ASSETS

5.1 Risks to Public Safety

Risks to public safety at Collaroy-Narrabeen and Fishermans Beaches may arise at any time for swimmers. To assist in managing these risks, Council Lifeguards patrol Collaroy, South Narrabeen and North Narrabeen Beach seven days a week typically from late September to late April (with Narrabeen Beach only patrolled over this period on weekends, public holidays and during school holidays). Volunteer SLSC patrols also operate in these areas. There are no patrols at Fishermans Beach.

Council advises that swimmers and waders should only enter the water at patrolled locations, and only between the red and yellow flags.

Risks to public safety may also potentially arise both during coastal storms, and after coastal storms (prior to beach recovery).

Large waves and elevated water levels may be a risk to swimmers, surfers and other water users (or those near the water) during storms. Lifeguards have the opportunity to close beaches when conditions are considered to be unsafe during patrol hours.

Risks to public safety can also arise after storms when there may be steep and high erosion escarpments along the beach, and particularly at beach accessways which may make beach access difficult. An action has been included in Section 8 regarding mechanically regrading steep and high erosion escarpments where required, as has been undertaken in the past, to reduce risks to public safety from collapsing sand dunes as the escarpment dries out. These works may typically be required when erosion escarpments are several metres high.

Additionally, an action has been included in Section 8 to ensure sufficient warning signage and barricades are available for use, and to implement these as required to close off damaged and potentially dangerous public beach access points after storm erosion. Signage will be placed both at the top and the bottom of the accessways, since injury can occur by people trying to leave as well as arrive at the beach. Examples of barricading installed by Council are provided in Figures 19 and 20. Natural beach recovery after storms would be expected to eventually restore ease of access after erosion. Beach scraping (discussed below) may also be considered to assist in mechanically accelerating recovery.

Figure 19: Damaged beach accessway at North Narrabeen Beach in May 2009

Figure 20: Barricading installed by Council at North Narrabeen Beach in May 2009

Exposure of existing protective works at the southern end of Collaroy-Narrabeen Beach may also be a risk to public safety if beach users choose to climb on the structures or tunnel into them, due to the potential (for example) for rocks to be dislodged, or for such a beach user to slip, with a risk of injury in both cases. The existing protective works have not generally been designed for beach access, often being relatively steep and with random rock placement, thus making traversing the structures inappropriate. There is also the possibility that exposed rocks could suddenly collapse, posing a risk of injury to any beach users who were adjacent to the protective works.

Council currently manages risks associated with exposed protective works by employing signage, see example in Figure 21, where the sign says “Danger, Keep Clear, Rocks Unstable”. An action has been included in Section 8 regarding erecting barricades and safety signage to discourage people from walking on or near exposed existing protective works.

Figure 21: Example of signage placed by Council to warn public of danger of being in proximity of rocks at Collaroy-Narrabeen Beach

Council has constructed stairway access to Collaroy-Narrabeen Beach over existing protective works at Goodwin Street, Wetherill Street and Stuart Street, to enable safe beach access in these areas at times when existing protective works are exposed.

Landowners are advised not to access the beach seaward of their property if existing protective works are exposed. An action is included in Section 8 that ongoing education of residents on these and other relevant issues is undertaken by Council.

Council also currently manages risks associated with exposed protective works by undertaking beach scraping. An action has been included in Section 8 relating to beach scraping, namely: “undertake

beach scraping after storms to accelerate beach recovery where resources allow, in particular to accelerate the burial of exposed historical protective works and restoration of beach accessways".

Risks to public safety may also arise during non-storm periods, for example due to foreign objects on the beach or poor water quality. Council currently undertakes beach raking at Collaroy-Narrabeen Beach (Figure 22) to remove litter weekly in the swimming season (early October to the end of April) and every 4 weeks outside this period. Fishermans Beach is not raked due to existence of a rock platform just beneath the sand.

Figure 22: Beach cleaning at Collaroy Beach (from Warringah Council, 2014a)

It is recognised that cleansing the beach of debris and other inappropriate materials may be required at other times (outside the raking cycle), and also at Fishermans Beach (as well as Collaroy-Narrabeen Beach), particularly after storms. Where feasible, Council will remove or order removal of inappropriate objects on the beach, once aware of their presence. Fencing/barricading around inappropriate objects may be necessary until they are removed. A CZMP action that debris and other inappropriate materials is to be removed off the beach as required has been included in Section 8. Seaweed washed up on the beaches is considered to be a natural material and is not removed by Council.

The Collaroy Rock Pool is cleaned once a week in the swimming season and once a fortnight in the non-swimming season. A CZMP action has been included in Section 8 that this continues. Hot humid conditions, high water temperature and a large number of people using the pool, with sunscreen applied will affect the water condition. Water may appear green and slimy due to these factors very quickly after cleaning (Warringah Council, 2014b).

OEH administers the Beachwatch program that includes water quality (faecal contamination) monitoring at North Narrabeen and Collaroy as well as Birdwood Park in the Narrabeen Lagoon entrance. OEH (2014a) recommended the following:

- avoid swimming during and at least one day after heavy rain at ocean beaches, and for at least three days at harbour beaches, due to the possibility of pollution from stormwater drains;
- avoid swimming near stormwater drains or sewage outfalls
- avoid swimming if you see signs of pollution such as discoloured water, oil or scum on the water, and litter or other debris floating in the water or on the tide line.

Water quality has generally been good at North Narrabeen and Collaroy over the last decade, but the water may be susceptible to pollution after rain.

5.2 Risks to Built Assets

5.2.1 Erosion/Recession

In 2012 a risk assessment for Warringah's coastal structures was completed, in which a relative risk rating was defined for all coastal structures (public and private). In this risk assessment the proximity to coastline hazards, presence and nature of existing protective works, and presence of piled foundations was considered. Structures that were assessed to be at 'Very High' risk included some Fishermans Beach properties, Collaroy Services Beach Club, and some Collaroy Beach properties between Jenkins Street and Stuart Street.

To assess the appropriate setbacks and controls for future development a risk assessment was undertaken in preparing the draft CZMP. This assessment considered the potential impacts of coastal erosion/ recession to development on conventional and piled foundations.

The methodology applied in the risk assessment is based on the Australian Geomechanics Society (AGS) procedures for landslide risk management, which were developed over a period of more than a decade via a Working Group of experts, and have been widely applied in geotechnical engineering practice since 2000. The AGS procedures can be considered to be an established, recognised and peer reviewed methodology for defining landslide risk for development assessment.

With modification to be appropriate for "sandy beach" coastal hazards, it was considered that the same principles of the AGS procedures could be applied to define acceptable risk for beachfront development at Collaroy-Narrabeen Beach and Fishermans Beach.

The risk assessment considered the likelihood and extent of coastal erosion/ recession against the likely consequences to development on conventional foundations and development on piled foundations.

Applying the risk matrix below, developed by AGS, the acceptable risk level for new residential development was defined as "low". As identified in AGS (2007a,b) a low level of risk was considered to be acceptable as most informed home owners are likely to be risk adverse and this risk aversion suggests low risk of damage to property is acceptable for domestic dwellings.

Likelihood	Consequence				
	Catastrophic	Major	Medium	Minor	Insignificant
Almost Certain	Very High	Very High	Very High	High	Medium
Likely	Very High	Very High	High	Medium	Low
Possible	Very High	High	Medium	Medium	Very Low
Unlikely	High	Medium	Low	Low	Very Low
Rare	Medium	Low	Low	Very Low	Very Low
Barely Credible	Low	Very Low	Very Low	Very Low	Very Low

As "low" risk can be considered acceptable for the residential structures adjacent to Collaroy-Narrabeen Beach and Fishermans Beach, it follows that:

- the "unlikely" likelihood defines the acceptable risk for new development that is constructed on conventional foundations, as this has "minor" consequences
- the "likely" likelihood defines the acceptable risk for new development that is constructed on piled foundations, as this has "insignificant" consequences.

The resulting acceptable risk lines for new development on conventional foundations and the minimum setback for new development on piled foundations are presented in Figures 23 to 27. The application of these lines in relation to building controls and setbacks is discussed in Section 6.

Compared to methods of defining development setbacks through delineation of coastal hazard lines applied previously along Collaroy-Narrabeen Beach and Fishermans Beach this approach allows for site specific characteristics including the existence of existing protection works and the non-sandy surface nature of Fishermans Beach to be taken into account.

In considering the impacts of sea level rise at Collaroy-Narrabeen Beach and Fishermans Beach three sea level rise scenarios were applied. These scenarios were selected based on the sea level rise projections outlined in the 5th IPCC Assessment Report with an allowance for regional variation. The selected scenarios are described below. A design life of 60 years was adopted for all new development, applied in 2014, hence 2074 represents the end of the design life.

- "mild case" estimate of 10% increase in sea level rise (0.02m) above 95% exceedance global mean in study area (that is, 0.27m sea level rise at 2074)
- "best" estimate of 15% increase in sea level rise (0.05m) above median global mean in study area (that is, 0.4m sea level rise at 2074)
- "severe case" estimate of 20% increase in sea level rise (0.09m) above 5% exceedance global mean in study area (that is, 0.54m sea level rise at 2074).

The consequences of coastal erosion/ recession were considered for each of these scenarios. It is considered that the sea level rise probabilities and risk based framework applied for the CZMP is more appropriate than the direct adoption of the former sea level rise benchmarks.

A detailed description of the reasoning behind this approach and the methodology applied is provided in Appendix L.

Figure 23: Acceptable risk setback lines determined at northern end of Narrabeen Beach

Figure 24: Acceptable risk setback lines determined near Narrabeen Street to Albemarle Street at southern end of Narrabeen Beach

Figure 25: Acceptable risk setback lines determined from Stuart Street to Robertson Street at Collaroy-Narrabeen Beach (including consideration of existing protective works)

Figure 26: Acceptable risk setback lines determined at southern end of Collaroy Beach (including consideration of existing protective works)

Figure 27: Acceptable risk setback lines determined at Fishermans Beach

5.2.2 Coastal Inundation

Areas along Collaroy-Narrabeen Beach and Fishermans Beach at particular risk from coastal inundation are:

- south of Devitt Street at Collaroy-Narrabeen Beach, and in particular south of Stuart Street, with the area surrounding Collaroy SLSC and Collaroy Services Beach Club being particularly vulnerable to coastal inundation as it is generally below 4m AHD
- at Fishermans Beach.

5.3 Emergency Action Subplan

A *Coastal Erosion Emergency Action Subplan for Beaches in Warringah* was adopted by Warringah Council in 2012. Due to NSW Government legislative changes, some parts of this document are out of date, and a CZMP action that this document is updated has been included in Section 8.

Some of these changes include that:

- the sand-filled geotextile containers (sandbags) placed under specific conditions and defined as “emergency coastal protection works” (“Part 4c sand/sandbags ECPW”) in WorleyParsons (2012a, b) are now defined as “temporary coastal protection works”
- “temporary coastal protection works” can still only be placed at Collaroy-Narrabeen Beach, but only where buildings are currently vulnerable to erosion (this is taken to mean where existing structures are seaward of the Immediate ZSA).

As per WorleyParsons (2012a, b), it is reiterated that these specific sandbag “temporary coastal protection works” cannot be recommended for use at Collaroy-Narrabeen Beach due to the severe wave climate during storms.

6. PROPOSED MANAGEMENT ACTIONS

The CZMP has identified and prioritised management actions that achieve the following outcomes:

- protect and preserve beach environments and beach amenity
- manage current and projected future risks from coastal hazards
- ensure continuing and undiminished public access to beaches, headlands and waterways
- protect or promote the culture and heritage environment.

An initial assessment of all available management actions was undertaken based on a broad assessment of social, economic and environmental factors. In selecting management options a wide range of potential management actions were considered. Options initially considered but not investigated further because they were not deemed realistic or affordable for Collaroy-Narrabeen Beach or Fishermans Beach included: groynes, training walls, artificial headlands, offshore breakwaters and artificial reefs, configuration dredging, planned retreat and property purchase.

Planned retreat was not considered feasible at Collaroy-Narrabeen Beach and Fishermans Beach due primarily to the level of existing development and to the small lot size of the properties. Additionally, while property purchase has been undertaken by Warringah Council in the past it is now considered to be a cost-prohibitive management option for Warringah Council and not a priority for public expenditure.

Management options deemed to be appropriate for further investigation included, sand recycling and nourishment, dune management, land use planning, the application of development controls and consideration of new or upgraded protective works.

Further discussion on identification and evaluation of CZMP management options is provided in Appendix M, and discussion on financial impacts of potential CZMP management options on stakeholder groups is given in Appendix N. Actions identified as realistic and affordable with acceptable (or positive) environmental and social impacts are discussed below and prioritised in Section 8.

Options development was also informed by workshops held with a diverse team involved in development of this draft CZMP, comprising coastal engineers, planners, lawyers, economists and ecologists as well as council staff. Feedback received during community engagement activities was also considered in selecting and prioritising actions.

6.1 Actions to Protect and Preserve Beach Environments and Beach Amenity

6.1.1 Beach Environments

The following actions have been identified to protect areas with important habitat/biodiversity values:

- continue the implementation of dune maintenance works including repair of fencing and walkways, stabilisation of blow-outs, ongoing targeted Bitou Bush control and effective rabbit control
- prepare and implement actions to manage the known population of Sand Spurge
- identify management actions for the dune vegetation which address ongoing management issues including weed control and replacement/replenishment planting, monitoring and maintenance of vegetation structure and species diversity for small bird habitat. This plan will also address the maintenance of sight lines to assist Council's Life Guards and Surf Life Savers.

Examples of areas that could be targeted for restoration of dune vegetation include (moving north to south) at and immediately north of Emerald Street, at and immediately north of Tourmaline Street

(although stormwater discharge may make this problematic), immediately south of Albemarle Street, immediately north of Wellington Street, and immediately north of Waterloo Street.

Advice will also be distributed to relevant Council staff that any works involving disturbance to dune vegetation should ensure that:

- areas directly and indirectly impacted are kept to a minimum
- sand removal and deposition works within potential habitat for Sand Spurge are undertaken in accordance with guidelines to protect a Sand Spurge soil seedbank and to trigger germination at a recipient site
- major works occur outside the small bird breeding period (spring)
- disturbance is minimised to shorebirds foraging or roosting on the Long Reef rock platform and intertidal areas on the beach and Narrabeen Lagoon entrance by ensuring major works are timed outside the migratory shorebird visitation period (late Spring and Summer) and through ongoing public education and enforcement of bans on dogs on beaches and marine invertebrate collection on Long Reef Aquatic Reserve.

6.1.2 Dune Management

Dune management activities will include maintenance of dunes and their vegetative cover at a number of sites. Along Collaroy-Narrabeen Beach, established vegetated dune areas north of Devitt Street will be maintained. In particular the dune at Birdwood Park North Narrabeen, which was raised substantially after the 1974 storms, be managed in accordance with the North Narrabeen Beach Reserve and Birdwood Park Masterplan, with dune height maintained at or above 7m AHD.

South of Devitt Street there is little opportunity for dune vegetation to be established due to the proximity of private development to the beach. A buffer of dune vegetation has been established adjacent to the public parking area north of the Collaroy Services Beach Club.

Along Fishermans Beach, dune vegetation is limited, again due to the proximity of private development to the beach (north of Anzac Avenue), and proximity of paths and car parking areas to the beach (south of Anzac Avenue). Existing areas of dune vegetation will be maintained and opportunities taken to increase the coverage of dune vegetation in other areas where possible.

In relation to the North Narrabeen National Surfing Reserve and the dune at Birdwood Park, surfing conditions change naturally as sand is moved offshore in response to storms and onshore in calmer conditions (affecting the amount of sand in offshore bars), and alongshore. The effect that long term recession due to sea level rise would have on surfing conditions has not been investigated.

The Birdwood Park dune has grown over the last few decades, it is considered that this has generally been capturing sand that would have otherwise moved into Narrabeen Lagoon, as opposed to taking sand away from surf breaks.

On 11 December 2012 Council resolved to adopt a revised North Narrabeen Beach Reserve and Birdwood Park Masterplan (NNBRBP). As part of the adopted NNBRBP Masterplan, there is allowance for lowering and managing the dunes seaward of the SLSC, but large scale works on the Birdwood Park dune (north of the SLSC) were not recommended.

The adopted NNBRBP Masterplan is considered to be consistent with the CZMP, and any further studies or works in this area should be completed through the NNBRBP Masterplan process ensuring impacts on coastline hazards are taken into account. Warringah Council will review management of the dune and opportunities to redistribute sand during planning for the Narrabeen Lagoon entrance clearance works planned for 2016 while maintaining the dune height at or above 7m AHD.

6.1.3 Beach Amenity

A wide sandy beach is attractive to beach users, but will be a challenge to maintain if beaches recede due to sea level rise. The application of beach nourishment is essential to achieving the maintenance of beach amenity in the future. To guide the implementation of moderate beach nourishment the identification of required sand volumes, appropriate sand sources, extraction methods and funding mechanisms is necessary.

Moderate beach nourishment would most economically be achieved by using offshore sand sources (assuming environmental impacts of such works will be demonstrated to be acceptable). Undertaking beach nourishment is consistent with Coastal Management Principles 9 and 10 and has been strongly supported by the community in consultation completed during the draft CZMP to date. However, Council is unable to implement beach nourishment without the support of the NSW government in:

- modifying the *Offshore Minerals Act 1999*
- providing funding
- taking a coordinating role as nourishment would only be cost effective if it was to be implemented over a wide geographical area covering numerous Council areas.

Beach nourishment is not likely to be necessary for in the order of 20 years, subject to monitoring of beach width. However, an action has been included in Section 8 to liaise with and lobby the NSW Government on legislative and funding issues, and to investigate other sources of funding, in conjunction with other coastal Councils. This action is necessary to progress beach nourishment from concept to completion.

The type of beach nourishment envisaged would aim to maintain the present beach widths into the future, addressing the effects of long term recession due to sea level rise.

Actions currently undertaken by Warringah Council including beach scraping to assist in accelerating the recovery of beach amenity after storms and beach replenishment using sand from Narrabeen Lagoon entrance clearance operations are also actions that will continue to be implemented, enhancing beach amenity.

6.2 Actions to Manage Current and Projected Future Risks from Coastal Hazards

6.2.1 Existing development located adjacent to Collaroy-Narrabeen Beach and Fishermans Beach

The actions and controls outlined below are intended to apply to all new development on land adjacent to Collaroy-Narrabeen Beach and Fishermans Beach. Existing unmodified lawful development under the *Environmental Planning and Assessment Act 1979* and the *Coastal Protection Act 1979* is not controlled by the CZMP.

6.2.2 Erosion/Recession Hazards

Council seeks to allow private landowners to carry out new development on beachfront and near beachfront land where the risk of damage to development from coastal processes can be demonstrated to be acceptably low. This can be achieved through stipulating the following controls for new development.

- minimum setbacks
- piled foundations where required

- new or upgraded protective works where required south of Devitt Street at Collaroy-Narrabeen Beach (where environmental impacts of such works can be demonstrated to be acceptable)
- sufficiently raised ground floor levels
- piling of access to new development where seaward of the minimum setback for development on conventional foundations.

To assist in understanding the impact of these controls to individual properties discussion of their application has been broken into three sections. These are:

- Area 1: Collaroy-Narrabeen Beach north of Devitt Street
- Area 2: Collaroy-Narrabeen Beach south of Devitt Street
- Area 3: Fishermans Beach.

Area 1: Collaroy-Narrabeen Beach north of Devitt Street

Protective works are not considered to be necessary or suitable in this area to achieve an acceptable level of risk to new development from coastal hazards. A minimum setback for development with upgraded/new protective works is accordingly not shown north of Devitt Street.

North of Devitt Street at Collaroy-Narrabeen Beach, minimum setbacks are adopted for:

- development on conventional foundations; and
- piled development.

The building setback for development on piled foundations is a fixed 15 metre rear (seaward boundary) setback to achieve a consistent seaward building alignment. This is considered necessary to minimise view loss for surrounding properties and visual impact of structures near the public beach

The minimum setbacks for this area under the CZMP are shown in Figures 28 and 29.

Figure 28: Minimum setbacks at northern end of Narrabeen Beach

Figure 29: Minimum setbacks near Narrabeen Street to Albemarle Street at southern end of Narrabeen Beach

Area 2: Collaroy-Narrabeen Beach south of Devitt Street

South of Devitt Street at Collaroy-Narrabeen Beach three minimum setbacks are adopted for:

- development on conventional foundations (without any upgraded/new protective works)
- piled development (without any upgraded/new protective works)
- piled development with upgraded/new protective works.

The building setback for development on piled foundations with new or upgraded coastal protection works (subject to the following variations) incorporates a fixed 15m rear (seaward boundary) setback to achieve a consistent and acceptable seaward building alignment.

Between Wetherill and Stuart streets a fixed 20m rear (seaward boundary) setback applies and between Stuart and Ramsey streets a fixed 10m rear (seaward boundary) setback applies.

These setbacks are considered necessary to prevent development moving so far seaward with construction of protective works so as to impact on:

- equity (for example, view loss for neighbours due to existing building lines)
- beach amenity (for example, visual impact of structures near the public beach)
- available space for construction of protective works on private land
- protective works maintenance (allowing space for plant and equipment to work seaward of development to undertake maintenance on the protective works if required).

The minimum setbacks under the CZMP for this area are shown in Figures 30 and 31.

The implementation of consistent and appropriate protective works on Collaroy-Narrabeen Beach is complex and will require co-ordination of the various property owners, consideration of funding and maintenance mechanisms, and detailed design guidance.

In recognition of this, one of the highest priority actions in the CZMP is to develop guidelines on the protective works to resolve these issues. The guidelines will include design standards, alignments and required setbacks. Additionally, the guidelines will recommend that all future protective works shall be contained on private property and existing protective works on public land be removed where appropriate.

Between Stuart Street and Ramsay Street at Collaroy, where there are no known existing protective works, it is likely to be necessary for all 10 lots owners to work collaboratively to construct new protective works, if required. To assist this, a policy for new and upgraded protective works will also identify funding mechanisms and strategies to coordinate the construction and maintenance of protective works.

Area 3: Fishermans Beach

Protective works are not considered to be necessary or suitable in this area to achieve an acceptable level of risk to new development from coastal hazards. A minimum setback for piled development with upgraded/new protective works is accordingly not shown for Fishermans Beach.

At Fishermans Beach, three minimum setbacks will be adopted for:

- development on conventional foundations
- piled development

- a 15m setback for beach amenity.

However at Fishermans Beach, piled development may be approved seaward of the "minimum setback for piled development" where geotechnical/coastal engineering advice demonstrates that the proposed structure is at acceptable risk over a 60 year design life.

Piled development may also be approved seaward of the 15m setback where development would not be feasible otherwise and impacts on beach amenity are acceptable.

The minimum setbacks under the CZMP for this area are shown in Figure 32.

Figure 30: Minimum setbacks from Stuart Street to Robertson Street at Collaroy-Narrabeen Beach

Figure 31: Minimum setbacks at southern end of Collaroy Beach

Figure 32: Minimum setbacks at Fishermans Beach

6.2.3 Coastal Inundation Hazards

To manage the risk of coastal inundation, controls will be added into Council's development assessment process as appropriate. In developing these inundation controls, it should be recognised that inundation hazards can generally be managed through ensuring minimum structure floor levels and/or maintaining a difference in height between structure floor levels and surrounding land levels (say 0.5m), and/or by applying risk minimisation measures such as:

- using construction materials that would not be adversely damaged by inundation, such as concrete floors
- placing electrical equipment, wiring, or any other service pipes and connections that could be damaged by water at a suitably high level
- storing goods or materials that could potentially be water damaged or water polluting at a suitably high level
- using impact resistant construction materials in areas that may be subject to direct wave action
- maintaining seawalls seaward of development at a suitably high crest level.

All development applications must include a risk assessment report from a qualified practicing coastal engineer to demonstrate that the proposed development is at an acceptable risk of damage from inundation over a 60 year design life unless the Council confirms that the nature and location of the development does not require such a report.

Additional investigation reports should be submitted assessing the risks and required controls in areas subject to both coastal inundation and catchment flooding, that may apply at the southern end of Collaroy-Narrabeen Beach. This includes areas at risk due to backwater from the ocean impacting the stormwater system, exacerbated due to sea level rise.

6.2.4 Requirements for upgrading or constructing new protective works

The only location where coastal protective works by property owners are considered to be necessary and suitable (provided they manage any offsite impacts and subject to the requirements of the *Environmental Planning and Assessment Act 1979*), is south of Devitt Street at Collaroy-Narrabeen Beach (Area 2). Protective works at other locations are not necessary or suitable.

Property owners are responsible for protecting their property from coastal erosion and inundation hazards.

Maintenance of any upgraded/new protective works is the responsibility of landowners.

To mitigate any impacts of landowner protective works any upgraded/new works should be built entirely on private property.

It is noted that landowners may be able to construct specific "temporary coastal protection works" in accordance with Part 4C of the *Coastal Protection Act 1979* to attempt to reduce coastal erosion threats.

6.2.5 Development Applications

In determining a development application for development that requires consent under the *Environmental Planning and Assessment Act 1979*, the Council, as the consent authority, must take into consideration the provisions of the CZMP that are of relevance to that development.

Table 1 outlines the area specific setback requirements under the CZMP referred to in Section 6.1.2 that should be specifically addressed for development of properties adjacent to Collaroy-Narrabeen Beach and Fishermans Beach in the assessment of a development application.

In addition, the development application and its assessment should also address any other relevant CZMP provisions.

Table 1: Area specific setback requirements

Interpretation - Applies to Requirements for Areas 1, 2 and 3
For the purposes of these provisions a reference to *protective* works means seawalls or revetments or works of a similar nature. It does not include the placement of sand (including for beach nourishment) or sandbags. **A reference to *conventional foundations* means strip footings and slabs. In common building standards the bearing capacity of such footings has been determined generally for the case of a horizontal bed.** **A reference to *piled foundations* means development founded on piles in such a way that the load is transmitted to strata below any possible failure zone within the dune.**
General Requirements for Areas 1, 2 and 3
1. Minimum set back lines identified for Areas 1, 2 and 3, apply to all new development except development that is protective works. If approved, protective works are to be located along the seaward boundary of, and wholly within, the property. **2. A risk assessment report must be prepared by a qualified practising coastal engineer and submitted to Council with the development application except where Council has confirmed in writing that the nature and location of the development does not require such a report.** **3. For development on conventional foundations, all parts of the development must be located landward of the 'Setback line for development on conventional foundations'.** **4. Should the location of access to new development on conventional foundations be required to be located seaward of the 'Setback line for development on conventional foundations', such access must be constructed on piled foundations.**
Requirements for Area 1 - Collaroy – Narrabeen Beach north of Devitt Street
5. Protective works are not considered to be necessary or suitable in this area to achieve an acceptable level of risk to new development from coastal hazards. **6. Minimum setback lines for development in this area are shown in Figures 28 and 29 as follows:** **a) Setback line for development on conventional foundations - the location of this setback line has been set in order to manage risks from coastal hazards.** **b) Setback line for development on piled foundations - the location of this setback line has been set in order to manage risks from coastal hazards and in order to manage impacts of development on the visual amenity and the maintenance of views for users of the public beach and for occupants of properties adjoining the beach. This setback line is located parallel to and 15 metres landward of the seaward property boundary.** **7. Development that is on conventional foundations must not be located seaward of the 'Setback line for development on conventional foundations'.** **8. Development that is on piled foundations must not be located seaward of the 'Setback line for development on piled foundations'.** **9. Exception may be made for new development at No. 2 Loftus Street provided that:** • **the development is piled development, and** • **it can be demonstrated, to Council's satisfaction, that the impacts associated with view loss and visual impact are acceptable.**

Requirements for Area 2 - Collaroy – Narrabeen Beach south of Devitt Street

10. **Minimum setback lines for development in this area are shown in Figures 30 and 31 as follows:**

    a) Setback line for development on conventional foundations (without any upgraded/ new protective works) - the location of this setback line has been set in order to manage risks from coastal hazards.

    b) Setback line for development on piled foundations (without any upgraded/ new protective works) - the location of this setback line has been set to manage risks from coastal hazards.

    c) Setback line for piled development (with upgraded/ new protective works) - the location of this setback line has been set in order to manage risks from coastal hazards and in order to manage impacts of development on the visual amenity and the maintenance of views for users of the public beach and for occupants of properties adjoining the beach. It also recognises the need to allow sufficient site area for the construction and future maintenance of protective works within the site.

11. **Development that is on conventional foundations must not be located seaward of the 'Setback line for development on conventional foundations'.**

12. **Development that is on piled foundations must not be located seaward of the 'Setback line for development on piled foundations' unless the development includes upgraded/ new protective works.**

13. **Development that includes upgraded/ new protective works must not be located seaward of the 'Setback line for development (with upgraded/ new protective works)'.**

14. **Exception may be made for new development at the Collaroy Services Beach Club site provided that:**

    - **the development is piled, and**
    - **the development is located within the footprint of the existing building, and**
    - **the development includes upgraded/ new protective works, and**
    - **it can be demonstrated, to Council's satisfaction, that the impacts associated with visual amenity for the public beach reserve is acceptable, and**
    - **the development application is accompanied by geotechnical/ coastal engineering advice that demonstrates that the proposed structure is at acceptable risk over a 60 year design life.**

Requirements for Area 3 - Fishermans Beach

15. **Protective works are not considered to be necessary or suitable in this area to achieve an acceptable level of risk to new development from coastal hazards.**

16. **Minimum setback lines for development in this area are shown in Figure 32 as follows:**

    a) Setback line for development on conventional foundations - the location of this setback line has been set in order to manage risks from coastal hazards.

    b) Setback line for development on piled foundations - the location of this setback line has been set in order to manage risks from coastal hazards.

    c) 15 m setback line - the location of this setback has been set in order to manage the impacts of development on visual amenity and the maintenance of views for users of the public beach and for occupants of properties adjoining the beach. This setback line is located parallel to and 15 metres landward of the property boundary.

17. **All development must be located landward of the setback lines identified in Figure 32. Exceptions to this requirement may be made provided that:**

    - **development would not be feasible otherwise, and**
    - **it is demonstrated, to Council's satisfaction, that the impacts on beach amenity and on**

view lines of nearby properties are acceptable, and

- **the development is piled development, and**
- **the development application is accompanied by geotechnical/ coastal engineering advice that demonstrates that the proposed structure is at acceptable risk over a 60 year design life.**

6.2.6 Proposed changes to Warringah Local Environment Plan 2011 and Development Control Plan 2011

Implementation of the area specific setback requirements outlined in section 6.1.6 and other standards or controls in the CZMP will require amendments to Warringah Local Environment Plan 2011 (WLEP 2011) and Development Control Plan 2011 (WDCP 2011). To address this, Section 8 of the CZMP identifies the modification of WLEP 2011 and DCP 2011 as a high priority action for the Council to undertake once the CZMP is adopted. Specific actions include:

- liaise with NSW Department of Planning and Environment to create a local planning clause to enable modification of WLEP 2011 (to ensure new CZMP setbacks and other appropriate controls are stipulated in WLEP 2011)
- modify Section E9 of WDCP 2011.

6.2.7 Planning certificates under Section 149 of the *Environmental Planning and Assessment Act 1979*

On the commencement of the CZMP, the Council will issue certificates requested under Section 149(2) of the *Environmental Planning and Assessment Act 1979* for land in the coastal zone specifying whether or not the land is affected by the provisions of the CZMP adopted by the Council as a policy that restricts development because of the likelihood of risks arising from coastal hazards (Paragraph 7 of Schedule 4 of the regulations).

A high priority action has also been included in Table 2 of Section 8 to update the information required for a Section 149(2) certificate (Action H2) to reflect modifications of Warringah Local Environmental Plan 2011 and Warringah Development Control Plan 2011 made after the commencement of the CZMP (Action H1).

6.3 Actions to Ensure Continuing and Undiminished Public Access to Beaches, Headlands and Waterways

At present, no significant issues or impacts to access are expected, beyond risks to public safety following a coastal storm. As noted in Section 5.1 risks to public safety may arise after storms when there may be steep and high erosion escarpments along the beach, and particularly at beach accessways which may make beach access difficult. Actions to address this risks and associated impact to access include mechanically regrading steep and high erosion escarpments when required and ensuring sufficient warning signage and barricades are available following erosion.

In response to long term recession resulting from sea level rise undertaking beach nourishment would be expected to reduce the frequency that existing protective works were exposed and reduce the likelihood of steep escarpments forming within beach accessways, thus reducing the potential for restricted beach access. Actions to investigate the required sand volumes, appropriate sand sources, extraction methods and funding mechanisms for this action are identified in Section 8.

6.4 Actions to Protect or Promote the Culture and Heritage Environment

With regard to cultural and heritage significance at Collaroy-Narrabeen Beach and Fishermans Beach:

- there are no known Aboriginal objects or Aboriginal Places that need to be protected from coastline hazards
- the beach culture would be expected to be maintained if beach nourishment was undertaken
- the heritage items at most potential risk (that could be protected) are 1184-1186 Pittwater Road Narrabeen, Arlington Amusement Hall and Long Reef Fishing Club Hut.

The first two locations identified in the third dot point are private property and the responsibility of landowners to maintain (within the constraints of heritage listing), the allowance of upgraded/new protective works south of Devitt Street at Collaroy-Narrabeen Beach, promotes protection of these heritage items.

7. COMMUNITY AND STAKEHOLDER CONSULTATION

7.1 Requirements from Guidelines for Preparing CZMPs

CZMPs are to be prepared using a process that includes consulting with the local community and other relevant stakeholders. The minimum consultation requirement is to publicly exhibit a draft plan for not less than 21 days, with notice of the exhibition arrangements included in a local newspaper as per Section 55E of the *Coastal Protection Act 1979*.

To meet the requirements of the *Guidelines for Preparing Coastal Zone Management Plans* it will also be necessary to consider all submissions made during the consultation period, and potentially amend the draft plan as a result of these submissions as per Section 55F of the Coastal Protection Act 1979.

7.2 Consultation Activities

Consultation has been undertaken throughout the development of the CZMP with a number of key stakeholder and community groups, which have included:

- NSW Office of Environment and Heritage
- Warringah Council staff from various units
- Warringah Coastal Community Committee
- Warringah Mayor and Councillors
- Warringah Council Strategic Reference Groups, including the Environmental Conservation and Overall Sustainability SRG and its precursor the Environmental Sustainability SRG.
- General public (through Public Meetings and a Discussion Paper)
- Beachfront landowners
- Surf Life Saving Clubs
- Surfing groups (including Surfrider Foundation Northern Beaches and North Narrabeen Boardriders Club).

Consultation activities undertaken to date with the above stakeholders have included meetings, workshops, presentations and forums.

The main form of engagement with community stakeholders to date has been the preparation and public distribution of a Discussion Paper to inform the community of the issues being considered within the draft CZMP. The Discussion Paper outlined the purpose of the CZMP, historical coastal management practices and provided responses to a number of 'frequently asked questions' that were known to be of interest to the community. It also invited written comments to be submitted through Council's website or by completion of a Community Response Form. The distribution of the Discussion Paper was followed up by a Community Forum held at Long Reef Golf Club and several meetings with landowners and community groups in April 2013.

7.3 Discussion Paper Submissions

Public comment on the Discussion Paper was invited in March 2013 through completion of a Community Response Form. This asked several questions relating to community views on coastal management, which included:

- visions for the study area in 50 years and 100 years
- key challenges being faced
- priority actions to address these challenges
- who should be responsible and/or pay for these actions.

A total of 36 submissions were received from the public, which included:

- 18 from beachfront residents (6 at Fishermans Beach, 9 at Collaroy-Narrabeen Beach from south of Devitt Street, and 3 at Collaroy-Narrabeen Beach from north of Devitt Street)
- 8 from those affiliated with the Surfrider Foundation Northern Beaches or North Narrabeen Boardriders Club
- 7 from general Warringah residents
- 3 from people who live outside of Warringah.

A synthesis of the main views and issues raised in the submissions received is provided below:

- general desire to maintain the existing beach condition or widen the beach
- Collaroy-Narrabeen Beach and Fishermans Beach should be treated as separate beaches;
- general support for some form of beach nourishment in a coordinated approach with other coastal councils
- some recognition that protective works along Collaroy-Narrabeen Beach provide protection of public and private property and should be maintained and upgraded
- coastal hazard lines should take the presence of protective works into account
- beachfront residents have a desire to protect their property with protective work upgrades/construction but would like guidance on how they can do this (such as through a Fact Sheet prepared by Council)
- the existing protective works also protect critical public infrastructure (such as sewers) and should therefore be maintained by public authorities
- funding for management actions should come from Council and the NSW Government
- protection of private property should be at the landowners' expense (note that a number of landowners expressed a contrary view), whilst maintenance of beach amenity and protection of public assets should be funded by Council.

In response to reading and considering all submissions, in relation to the CZMP actions, it is noted that:

- the proposed option of beach nourishment has general community support

- it was decided to consider both Collaroy-Narrabeen Beach and Fishermans Beach herein as these are the only beach areas in Warringah with adjacent private development, and many issues are common to both locations
- it is noted that protective works along Collaroy-Narrabeen Beach provide protection of public and private property and should be maintained and upgraded where required to meet acceptable risk considerations
- there is a CZMP action in Section 8 to develop a fact sheet on the CZMP, as well as a protective works policy
- landowners funding their own protective works is consistent with NSW Coastal Management Principle 5. It is noted that landowner protective works may offer benefits in protecting public infrastructure landward of the works, such as sewer mains and roads. Landowners may consider approaching the relevant asset owners to seek funding assistance for works, but it is reiterated that private property owners are responsible for protecting their property.

8. MANAGEMENT ACTIONS

The recommended management actions identified in Section 6 have been prioritised as follows:

- high (H) priority, see Table 2
- medium (M) priority, see Table 3
- low (L) priority, see Table 4
- ongoing (O) actions (actions that should be undertaken on a regular cycle), see Table 5
- as required (AR) actions (actions that should be undertaken if an event occurs such as severe coastal erosion), see Table 6.

8.1 Sources of Funding for CZMP Actions

A number of Federal Government, NSW Government and Warringah Council funding mechanisms are potentially available for both implementing actions outlined in the CZMP and assisting recovery following storm events, see Appendix O. Funding programs are regularly changing and Warringah Council will maintain an awareness of appropriate funding opportunities as they arise.

It is proposed that actions identified in the draft CZMP be funded with assistance from the NSW Coastal Management Program or through application of the Coastal Protection Service Charge set out in Section 496B of the *Local Government Act 1993*.

Actions that may be particularly suitable for NSW Coastal Management Program funding (if application for funding is successful) would include updating or preparing the relevant plans, policies and controls (H1 to H5), further investigation into the extent and management of coastal processes and the maintenance of the beach environment (M1, M2 and L1), and ongoing programs to inform and educate residents (O3 and O4).

The Coastal Protection Service Charge may be utilised in the maintenance and repair of coastal protection works as well as mitigating any impacts (such as replacement of eroded beach sand) of coastal protection works (H6).

The action to undertake beach nourishment to maintain beach amenity (M4) is beyond the financial capacity of Warringah Council. Narrabeen Lagoon Entrance Clearance operations have been previously undertaken with funding support from the NSW Floodplain Management Program and Pittwater Council.

A number of actions, such as modifying the Local Environment Plan and Development Control Pan (H1), advocating for and undertaking beach nourishment to maintain beach amenity (M7, L2), and the management of aquatic reserves (R7) involve State Government Agencies. As the role of these agencies in such actions is procedural their written confirmation is not required.

8.2 Implementation, monitoring and reporting

The section of Warringah Council, responsible for coordinating implementation of the CZMP will be Council's Natural Environment Group. Responsibility for monitoring and reviewing implementation of the CZMP will also rest with the Natural Environment Group.

Progress in implementation of the CZMP will be reported on an annual basis (Action O2 in Table 5). This will involve listing all CZMP actions and advising progress on each action. It is also an action (Action O8 in Table 5) to update the CZMP every 10 years (to take account of new data, updated coastline hazards understanding, revised climate change information and changes to legislation).

Table 2: High priority management actions

Action	Description	Issues addressed	Timeframe for completion
H1. Modify Warringah Council Local Environment Plan (LEP) and Development Control Plan (DCP)	Warringah Local Environment Plan 2011 • liaise with NSW Department of Planning and Infrastructure to create a Local planning clause to enable modification of Warringah LEP (to ensure new CZMP setbacks and other appropriate controls are stipulated in LEP) Warrinagh Development Control Plan 2011 • modify Section E9 of Warringah DCP	Risk to private development	July 2014 to July 2015
H2. Update Section 149(2) certificates	• update to reflect modification of planning instruments and properties affected	Risk to private development	July 2014 to December 2014
H3. Develop policy for development in areas impacted by coastal hazards	Policy to include (but not limited to): • guidelines on requirements for new and upgraded protective works south of Devitt Street at Collaroy-Narrabeen Beach (such as design standard, alignment and required setback for development located landward) and integrate into planning controls • identification of funding mechanisms and strategies to coordinate construction and maintenance of protective works • identification of opportunities to remove existing coastal protection works on public land • develop details on foundation requirements • guidelines for construction of stairways from private property to the beach	Risk to private development	July 2014 to July 2015
H4. Update Emergency Action Subplan	• update *Coastal Erosion Emergency Action Subplan for Beaches in Warringah*, to reflect latest legislation and guidelines	Risk to private development and public infrastructure	July 2014 to July 2015
H5. Clarify permissibility of exempt development in areas impacted by coastal processes	• liaise with the NSW Department of Planning and Infrastructure to resolve issues associated with exempt development being permissible in areas impacted by coastal processes as a result of State Environmental Planning Policy (Exempt and Complying development Codes)	Risk to private development	July 2014 to July 2015
H6. Funding to restore beach amenity	• investigate funding mechanisms to contribute to restoration of beach amenity adjacent to protective works after storms	Beach amenity	July 2015 to July 2016
H7. Integrate the management of assets impacted by coastal processes into Council's Assets Management Planning Framework	• management actions required for assets impacted by coastal processes integrated into the appropriate asset management plans for buildings, roads, stormwater and natural area assets	Risk to public infrastructure	July 2015 to July 2016

Action	Description	Issues addressed	Timeframe for completion
H8. Community consultation	• develop and deliver actions to communicate CZMP outcomes, to beachfront landowners and the wider community	Community consultation	July to December 2014

Table 3: Medium priority management actions

Action	Description	Issues addressed	Timeframe for completion
M1. Assess Management of Birdwood Park and Narrabeen Lagoon Entrance	• through the Narrabeen Lagoon Flood Risk Management Study investigate opportunities to combine any dune lowering works at North Narrabeen SLSC and Birdwood Park (undertaken in accordance with the adopted Masterplan, and ensuring impacts on coastline hazards are considered) with Narrabeen Lagoon Entrance Clearance operations. • Investigate alternative strategies placing sand from Narrabeen Lagoon Entrance onto Collaroy-Narrabeen Beach.	Risk to private development Risk to public infrastructure	July 2015 to July 2016
M2. Develop Dune Management Plan for all beaches in Warringah	Plan to include: • ongoing management actions including weed control and replacement/replenishment planting, monitoring and maintenance of vegetation structure and species diversity for small bird habitat • actions to manage threatened species including known populations of Sand spurge • stabilise blow-outs with dune vegetation (in particular north of Waterloo Street; north of Wellington Street; south of Albemarle Street and at Birdwood Park) • increase the coverage of dune vegetation along Fishermans Beach where possible	Coastal ecosystems	January 2015 to December 2015
M3. Liaise with asset authorities	• encourage Sydney Water to undertake further investigations assess the risk to sewerage infrastructure from coastal erosion • encourage other asset authorities to accurately define plan location and elevation of other assets (electricity, water, communication, gas) so risk of damage can be assessed • provide advice to assist and encourage asset authorities to consider either protection or relocation of these assets, particularly as long term hazards are realised	Risk to public infrastructure	January 2015 to December 2015

Table 4: Low priority management actions

Action	Description	Issues addressed	Timeframe for completion
L1. Dune vegetation	• stabilise blow-outs with dune vegetation (in particular north of Waterloo Street; north of Wellington Street; south of Albemarle Street and at Birdwood Park)	Beach amenity	January 2016 to December 2017

	• increase the coverage of dune vegetation along Fishermans Beach where possible	Coastal ecosystems	
L2. Work with other Councils and organisation working on sand sources for beach nourishment	• liaise with and lobby NSW Government to modify Offshore Minerals Act 1999 and secure funding to undertake beach nourishment to maintain beach amenity in future (and investigate other funding sources) • group should also liaise with other coastal Councils to ensure coordination and prevent duplication of effort	Beach amenity	January 2015 to December 2015, and ongoing
L3. Beach nourishment to maintain beach amenity*	• undertake investigations to define sand source, extraction method and beach nourishment profile and volumes • complete environmental assessment • secure all necessary approvals and permits • engage dredging contractor to undertake beach nourishment works • all of the above tasks are likely to be undertaken in conjunction with the NSW Government and other Sydney Coastal Councils	Beach amenity	The timeframe for the completion of this action depends on the outcomes of L2.

*Warringah Council recognises the importance of beach nourishment to protect beach amenity. This action has been given a low priority as it not expected to be required within the next 20 years. The priority of this action will be re-assed as new information and opportunities for beach nourishment arise.

Table 5: Ongoing management actions

Action	Description	Issues addressed	Frequency
O1. Monitoring beach conditions and forecasts	• in partnership with research organisations maintain activities to monitor beach conditions and forecasts for storms	Risk to private development Risk to public infrastructure Public safety Beach amenity	Daily to weekly
O2. Reporting on CZMP progress	• report on progress in implementation of CZMP	Overall CZMP implementation	Every year
O3. Community consultation	• develop and deliver actions to communicate CZMP outcomes, to beachfront landowners and the wider community	Community consultation	Every Year
O4. Education of residents	• ongoing education of residents on coastal hazards, risk to development, risk to public safety and other relevant issues	Risk to private development Public safety	Every 1 to 2 years
O5. Deliver Northern Beaches Flood and Coastal Storms Education Strategy	• in coordination with the State Emergency Service deliver actions identified the Northern Beaches Flood and Coastal Storms Education Strategy to keep affected communities informed before and during a coastal erosion emergency	Public safety	Every 1 to 2 years
O6. Beach scraping consents, approvals, licences and permits	• ensure that any necessary consents, approvals, licences and permits are maintained for beach scraping works	Public safety Beach amenity	Every 1 to 2 years
O7. Narrabeen Lagoon entrance clearance	• remove sand from entrance and place on Collaroy-Narrabeen Beach as "beach sediment recycling"	Risk to private development Risk to public infrastructure Public safety Coastal ecosystems Beach amenity	Every 4 to 5 years
O8. Update CZMP**	• update CZMP to take account of new data, updated coastline hazards understanding, revised climate change information, changes to legislation, etc.	Overall CZMP implementation	Every 10 years

**This action may be necessary earlier if there are significant legislative changes

Table 6: As required management actions

Action	Description	Issues addressed
AR1. Implement actions identified in Coastal Erosion Emergency Action Subplan for Beaches in Warringah relating to public safety	Key actions include: • ensure sufficient warning signage and barricades are available for use • implement signage and barricades as required to close off damaged and potentially dangerous public beach access points after storm erosion	Public safety
AR2. Monitoring and reporting on storm conditions	• monitor beach erosion and weather, wave and water level conditions and forecasts during storms • within Council's Natural Areas Asset Management Plan report beach condition after each significant storm (describing the storm, extent of erosion/inundation etc., including photographs)	Risk to private development Risk to public infrastructure Public safety
AR3. Monitoring unauthorised coastal protection works	• monitor to detect installation of unauthorised works and order removal of works if required	Beach amenity Public safety
AR4. Opportunistic beach nourishment	• continue opportunistic beach nourishment when clean sand excavated from building sites becomes available	Beach amenity
AR5. Dune maintenance	• continue the implementation of dune maintenance works including repair of fencing and walkways, ongoing targeted Bitou Bush control and effective rabbit control	Coastal ecosystems Beach access Beach amenity
AR6. Planning for restoration and sediment recycling activities	• minimise disturbance to shorebirds foraging or roosting on the Long Reef rock platform and intertidal areas on the beach and Narrabeen Lagoon entrance by ensuring major works are timed outside the migratory shorebird visitation period • ensure that this advice is distributed to relevant Council staff	Coastal ecosystems
AR7. Lifeguard services	• continue to provide lifeguard patrols at Collaroy-Narrabeen Beach	Public safety
AR8. Regrading of steep escarpments	• mechanically regrade steep and high erosion escarpments where required, to reduce risks to public safety from collapsing sand dunes	Public safety
AR9. Restricting proximity to exposed protective works	• implement signage and barricades as required to restrict public from areas near exposed protective works after storm erosion	Public safety
AR10. Beach scraping	• undertake beach scraping after storms to accelerate beach recovery where resources allow, in particular to accelerate the burial of exposed historical protective works and restoration of beach	Public safety Beach amenity
AR11. Beach raking	• continue raking of Collaroy-Narrabeen Beach weekly in swimming season and monthly in non-swimming season	Public safety Beach amenity

Action	Description	Issues addressed
AR12. Removal of debris off beaches	• remove debris and other inappropriate materials off the beach as required (where feasible), particularly after storms	Public safety Beach amenity
AR13. Rock Pool cleaning	• continue cleaning of Collaroy Rock Pool weekly in swimming season and fortnightly in non-swimming season	Public safety Beach amenity

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DISTRICT PARK

Draft Strategic Directions Paper

Prepared by Warringah Council
Adopted 24 June 2014
Effective from 1 July 2014

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WARRINGAH COUNCIL

District Park Strategic Directions Paper

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Appendices

1 District Park Discussion Paper (Summary of written submissions)
2 Northern Beaches Regional Golf Study April 2014 (Executive Summary)

1. BACKGROUND

Warringah's Community Vision is:

"A vibrant, caring community, thriving in a unique beach and bush environment, supporting a balance of lifestyle, business and recreation."

In addition, Warringah's Recreation Vision is:

"A healthy and active Warringah community that has access to a wide range of appropriate, suitable, sustainable and quality recreation opportunities, both now and in the future."

District Park comprises approximately 62 hectares of public open space in Manly Vale and North Manly. District Park is one of Warringah's most significant reserves, in terms of its sporting and recreational uses, its extent of open space, and its natural bushland and creeks. Most of the Park is Community land owned by Warringah Council, with a small portion of Crown land.

The Park is well used by the Warringah community and visitors for a variety of sporting, recreational and social activities.

2. PURPOSE AND OBJECTIVES OF THIS STRATEGIC DIRECTIONS PAPER

Warringah Council has identified the opportunity to review the current Plan of Management for District Park which was adopted by Council in December 2002.

Council resolved, in part, on 11 December 2012, to:

Give priority to commencing the review of the District Park Plan of Management (as listed in the 2012 Strategic Community Plan), and ensure it is brought back to Council for adoption no later than December 2015.

In early 2013, Council reviewed the 2002 Plan of Management and conducted research to support preparation of a Discussion Paper. This review and research were then discussed at the Recreation and Open Space Strategic Reference Group meeting in August 2013. Following the SRG meeting, a Discussion Paper was placed on public exhibition from November 2013 to March 2014.

The Discussion Paper:

- Identified issues with the current provision of sport, recreation and community facilities and settings in District Park.
- Presented ideas for future opportunities for District Park for consideration.

This Strategic Directions Paper incorporates feedback from the community on the Discussion Paper and the recommendations of a Regional Golf Study.

The objectives of this Strategic Directions Paper are to:

- Present the community feedback on the Discussion Paper.
- Present the findings and recommendations from the Warringah Regional Golf Study.
- Present strategic directions for use and management of District Park to the community for further consideration.

These strategic directions are outlined in Section 10 of this paper.

3 HOW TO HAVE YOUR SAY ON THE STRATEGIC DIRECTIONS PAPER

3.1 Process

The process from here in preparing the updated Plan of Management, indicative timetable and the ways the community can get involved are as follows:

Date	Engagement Activity
June 2014	Council meeting to approve public exhibition of Strategic Direction Paper
July 2014	Strategic Directions Paper placed on public exhibition
August 2014	Consider submissions on Strategic Directions Paper
September 2014	Prepare Draft Plan of Management
September 2014	Prepare Council report to approve public exhibition of Draft Plan of Management
October 2014	Council meeting to approve Public Exhibition of Draft
November-December 2014	Public Exhibition of Draft Plan of Management
January 2015	Consider submissions on Draft Plan of Management and prepare Final Plan of Management
February 2015	Council meeting to approve Final Plan of Management

DRAFT

3.2 Feedback on the Strategic Directions Paper

We welcome your feedback on this Strategic Directions Paper by Sunday 27 July 2014.

Several ways to provide your comments are outlined below.

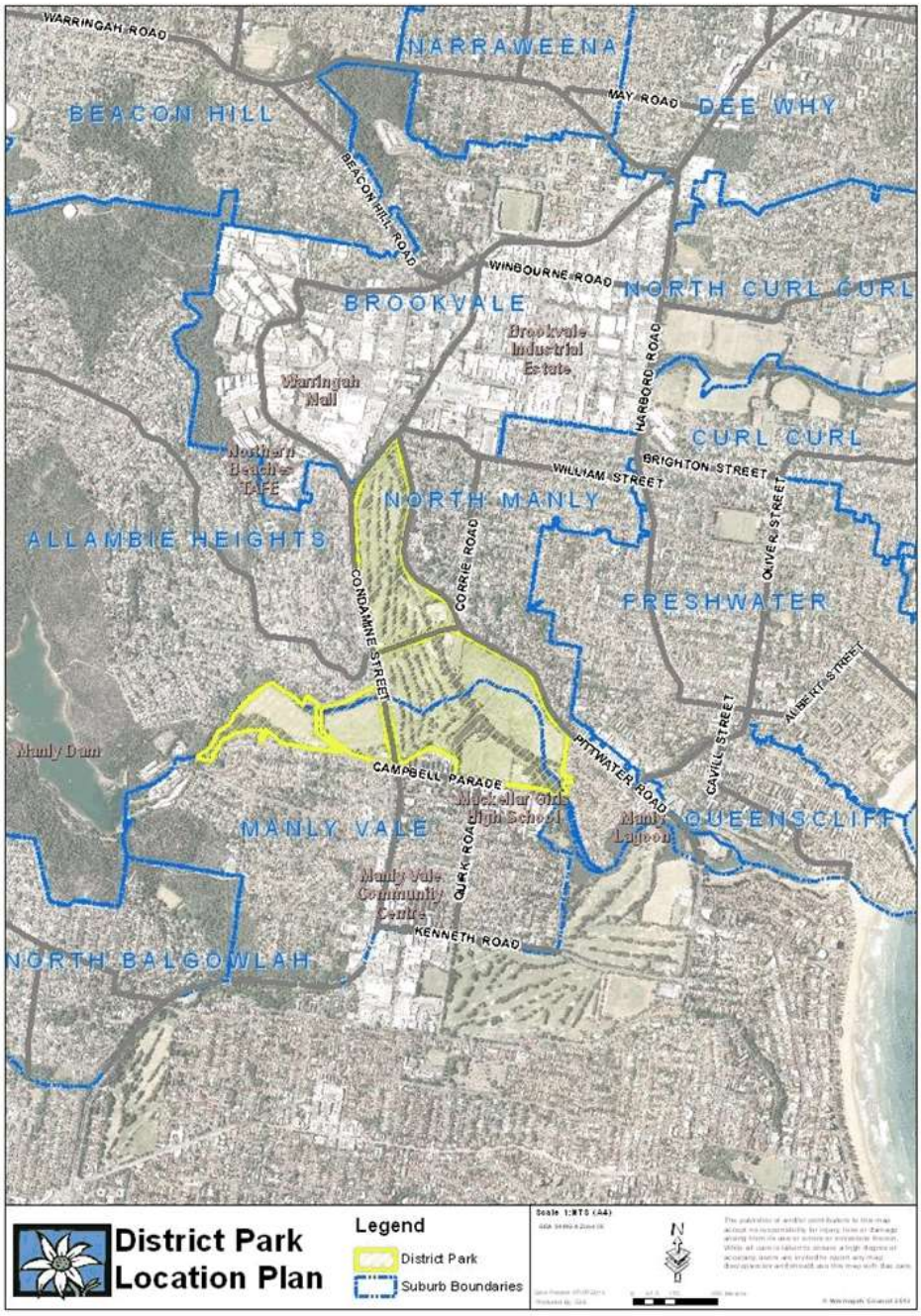
Date	Engagement Activity
Attend one of the community engagement activities to be held in July 2014	View the project page at www.warringah.nsw.gov.au Join the Community Engagement Register to be advised about the details of the activities i.e. dates, times and locations https://www.warringah.nsw.gov.au/get-involved/community-engagement-register
How to make a written comment	There are a number of ways to provide comments: • Join the online forum. • Complete the feedback form. • By email and in writing: Email: Council@warringah.nsw.gov.au - marked "District Park Strategic Directions Paper" Mail: General Manager, Warringah Council, 725 Pittwater Road, Dee Why NSW 2099 – marked "District Park Strategic Directions Paper" Fax: 9971 4572 – marked "District Park Strategic Directions Paper"

The next opportunity to have your say about District Park will be during the public exhibition of the Draft Plan of Management in late 2014.

Enquiries can be directed to:
Christine Deaner
Senior Recreational Service Planner
Parks, Reserves and Foreshores Group
Warringah Council
Email - Christine.Deaner@warringah.nsw.gov.au
Phone - 9942 2543

4 WHERE IS DISTRICT PARK?

The Plan below shows the location of District Park and surrounding localities.



5 FACILITIES IN DISTRICT PARK

District Park incorporates:

- Four sportsgrounds (David Thomas Reserve, Miller Reserve, Passmore Reserve and Nolan Reserve) with support facilities such as amenities buildings, flood lighting and car parks.
- Warringah Golf Course (18 holes)
- Warringah Recreation Centre (Tennis, Squash and Futsal courts)
- Manly Small Bore Rifle Club
- Christian Brothers Junior Rugby League Football Club
- North Manly Bowling and Recreation Club
- Manly Vale Calabria Bowling Sports and Social Club
- Childcare centre
- Playground and picnic/barbecue facilities
- Skate park
- Manly Creek and Brookvale Creek.

The locations of the major facilities in District Park are shown below.

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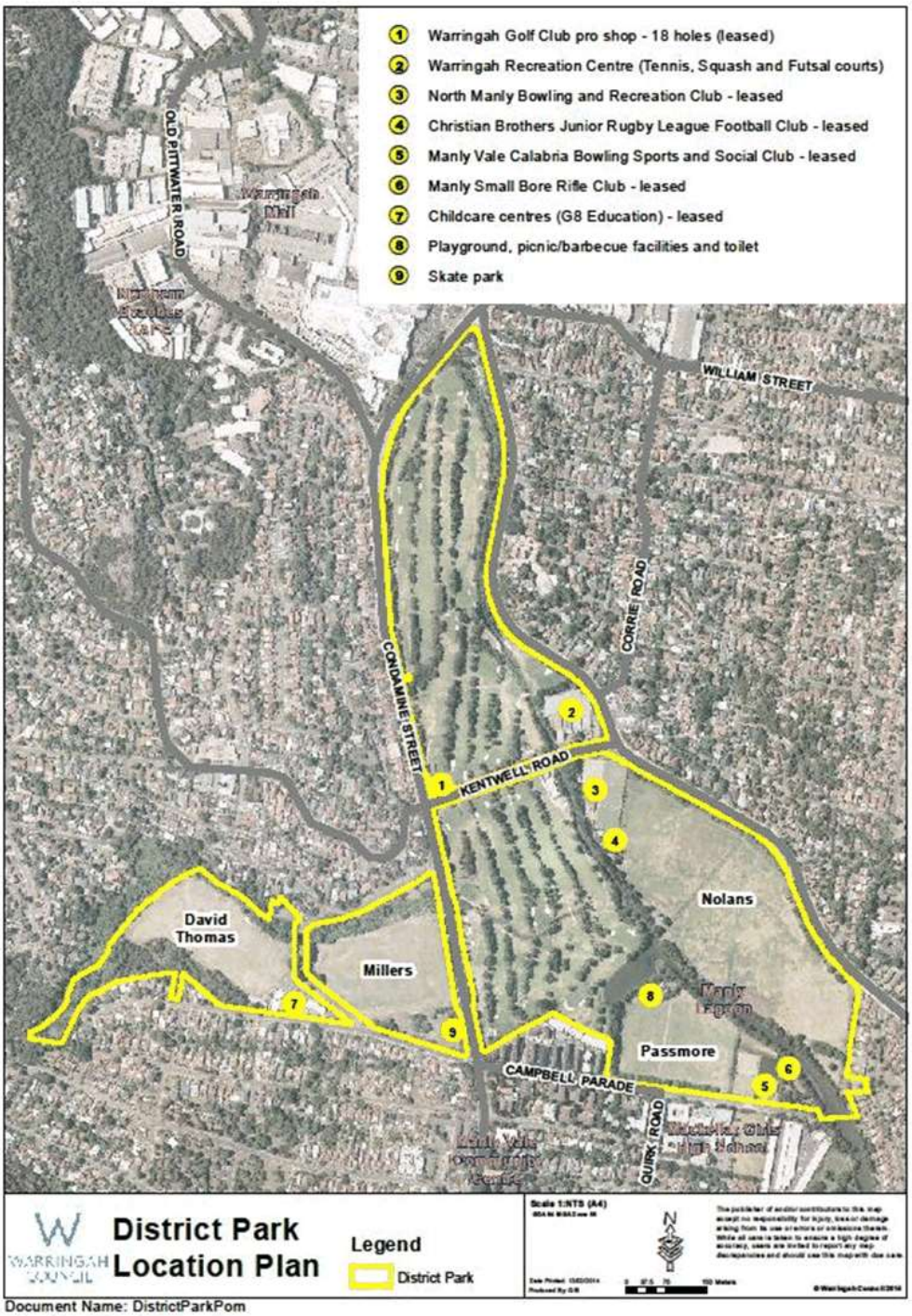

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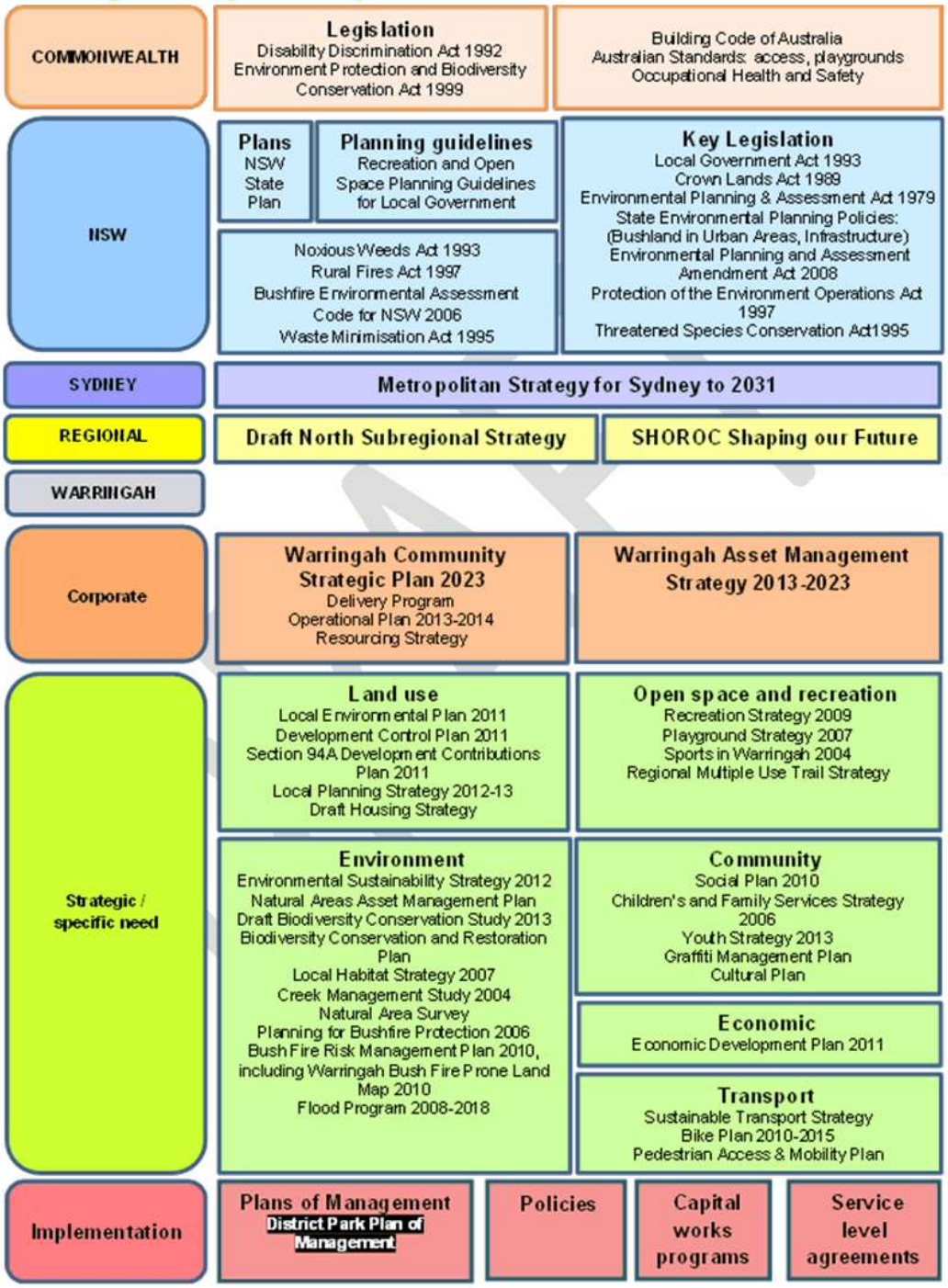
6 PLANNING CONTEXT OF DISTRICT PARK

6.1 Legislation, plans and policies



6.2 Plans of Management for community and Crown land

A Plan of Management (PoM) sets out how public open space is to be used, managed, maintained and improved. It describes the uses that are allowed on the land. A Plan of Management is needed to be prepared for Council owned land which is classified as 'community land' under the *Local Government Act 1993*.

District Park also includes a small percentage of Crown land. The new PoM will also need to comply with the *Crown Lands Act 1989*.

Crown Lands have advised that Plans of Management for Crown Lands managed by Council are to be adopted under the provisions of the Local Government Act.

As such, Crown Lands do not require being part of the plan of management process unless there are any recommendations that have implications for the Department and/or Minister, be it financial or otherwise.

7 COMMUNITY FEEDBACK ON THE DISTRICT PARK DISCUSSION PAPER

The community engagement for the District Park Discussion Paper between November 2013 and March 2014 was advertised and promoted by advertisements in the *Manly Daily*, a letter box drop of adjoining residents and businesses, signage installed in the Park, and by posters and hard copies of the Discussion Paper at the Warringah Golf Club, North Manly Bowling Club, Child Care Centre, and Calabria Club.

Approximately 120 people attended four community drop-in sessions as follows:

- Saturday 22 February 2014 from 9.30-11.30am at the North Manly Bowling Club - approximately 38 attendees
- Wednesday 26 February 2014 from 6-8pm at the Calabria Club – approximately 32 attendees
- Saturday 8 March 2014 from 1-4pm at the Boronia Hall Child Care Centre – approximately 18 attendees
- Monday 10 March 2014 from 6-8pm at the Warringah Golf Club – approximately 32 attendees.

A high degree of community interest in District Park is also reflected by over 250 written submissions received from individuals and organisations by the closing date of 31 March 2014. A compilation of written submissions can be found in Appendix 1.

The majority (60%) of submissions commented on the Warringah Golf Course including that the Warringah Golf Course remain as an 18 hole golf course rather than reducing it in size to 9 holes as was identified as an option in the Discussion Paper.

The most frequently-mentioned desired changes to the status quo at District Park are:

- Synthetic turf hockey/multi-sport field(s) (20%)
- A new combined sports club (12%)
- New walking/cycling tracks (8%)
- Cricket practice nets (8%)

8 Relocation of the golf clubhouse on to the golf course NORTHERN BEACHES REGIONAL GOLF STUDY REPORT

The Warringah Golf Course is currently leased to the Warringah Golf Club Limited, with the lease recently extended to the end of January 2016.

The District Park Discussion Paper (November 2013) stated with regard to the sport of golf:

Council is uncertain about the wider and long-term needs of some sports, particularly golf. The Warringah Recreation Strategy 2009 recommended reviewing and assessing current golf provision and demand in Warringah (including private and council facilities). This review has not been completed for golf. Council needs to establish the current demand for golf courses in Warringah and adjoining local government areas, and whether an 18 hole golf course in this location is the best use, given other sport and recreation *needs and poor connectivity in the Park.*

In January 2014 an external consultant was engaged to undertake:

- An assessment of national, state and regional trends in golf
- An assessment of the current supply of golf facilities in Warringah region and potential future needs
- A detailed analysis and specific recommendations relating to the provision of golf opportunities in Warringah and in particular with regard to the Warringah Golf Course.

The final report indicated that the viability of the Warringah Golf Club, North Manly Bowls Club may be enhanced through merging of their operations and facilities including with the operations of the Warringah Recreation Centre and other District Park Groups. A feasibility study is required to investigate options.

The Executive Summary of the Regional Golf Study can be found in Appendix 2.

9 VALUES AND FUNCTIONS OF DISTRICT PARK

The values of District Park expressed by respondents in their submissions to the Discussion Paper include:

- Its central location
- Being an area of large open space
- The green spaces with a mix of trees, bush and grass

- The pleasure it gives to the local community
- Catering for a wide range of recreational activities
- It is the only ground in Many Warringah /north of the harbour which can be used for large numbers of players of all football codes, as well as being the prime group of cricket grounds in the district.
- Habitat for native wildlife seen constantly throughout the year
- The visual amenity provided by the landscape
- The refreshing outlook it provides
- The pleasant visual contrast it provides to the development of the adjacent large shopping centre and the Brookvale semi-industrial area.

The roles of District Park expressed by respondents in their submissions to the Discussion Paper include:

- Diverse sport and recreation opportunities
- Habitat for wildlife
- A green belt or corridor
- A natural landscape and amenity for recreation opportunities and open space
- Containment of environmental events (flooding, bushfires)
- Emergency evacuation.

The District Park Plan of Management will take a value based approach to land use planning and management. This feedback will be used to identify the key values and roles for District Park.

10 PROPOSED STRATEGIC OPPORTUNITES

Strategic opportunities to be included / excluded for District Park are set out below and are in response to submissions from the community to the District Park Discussion Paper. The structure of the following tables aligns with the Discussion Paper (Appendix 3).

10.1 Vibrant Community

Opportunity	Actions
Combined sports, recreation, community facility	Commission a feasibility study for a combined sports, recreation, and community facility in District Park. Study to include investigations into: • Possible arrangements with the Warringah Golf Club, Manly Vale Bowls Club, Warringah Recreation Centre and or other District Park groups facilities and operations • Viability of a range of services including food and beverage • Management models including Public Private Partnerships

Opportunity	Actions
	• Cost benefit analysis
Shared buildings	Support a shared use principle in agreements for use of buildings and open spaces
Childcare	Retain the current childcare centre as needed.

10.2 Lifestyle and Recreation

Opportunity	Actions for Strategic Directions
18-hole golf course	Collaborate with the Warringah Golf Club to facilitate the provision of a viable 18-hole golf course at District Park,
Sporting use of the golf course	Investigate the use of Warringah Golf Course for other sports, recreation activities (in addition to golf).
Upgrade amenities / facilities at sporting fields	Develop and maintain amenities and facilities at District Park in accordance with Council's Asset Management Plans and other relevant strategies and plans. Update existing master plans for District Park
Cricket nets	Investigate the provision of new cricket nets at District Park through the master planning process.
Buildings	Enter into shared use agreements with users regarding sports fields and buildings.
Additional Futsal courts	Investigate provision based on outcomes of the combined sports facility feasibility study and master planning.
Upgrade Tennis courts	Investigate provision based on outcomes of the combined sports facility feasibility study and master planning – Warringah Recreation Centre
Upgrade / new Netball basketball courts	Investigate provision based on outcomes of the combined sports facility feasibility study and master planning – Warringah Recreation Centre and Nolan Reserve
Small-bore rifle range	Retain the small-bore rifle range at its current location. Investigate establishment of an environmental sinking fund for eventual

Opportunity	Actions for Strategic Directions
	rehabilitation of the site.
Fitness centre/gym	Investigate provision based on outcomes of the combined sports facility feasibility study and master planning.
Shade / shelter at sporting fields	Investigate provision via master planning process – include a variety of shade options including trees and built structures
Picnic and barbecue facilities	Investigate provision via master planning process
Children's playgrounds	Retain the children's playground at Passmore Reserve. Investigate future provision via master planning process
Skate park	Investigate upgrade of the skate park in Miller Reserve.
Outdoor fitness equipment	Investigate provision via master planning process. Consider locations adjacent to pathways in District Park.
Outdoor table tennis	Investigate provision via master planning process.
Mobile food/ beverage services	Investigate infrastructure and accessibility requirements for provision of mobile food and beverage outlets via master planning process.
Lighting of sports fields	Investigate upgrades of sports field lighting at all District Park sports field to required sports standards and current best practise. The consideration of any new sports field lighting, including at Passmore Reserve, is to include comprehensive engagement particularly with nearby residents.
Field management	Manage sports fields in consideration of; local amenity, sporting needs, carrying capacity of the fields and Council policies and practices.
Indoor swimming facility	Investigate provision based on outcomes of the combined sports facility feasibility study and master planning

The following sporting and recreational facilities and spaces are not supported as part of the strategic direction for District Park for the reasons outlined below.

Opportunity	Reason(s) for not including in Strategic Directions
Golf driving range	Insufficient land available.
Extension to golf course	Insufficient land available. Conflicts with other uses.
Synthetic field for hockey, other sports	Recent internal research does not recommend District Park as a potential location. The main issue is that this area is prone to flooding and there are other more suitable locations in Warringah.
Indoor cricket/sport facility	An indoor cricket facility could be considered as part of a future regional indoor sport needs study for Warringah.
Turf cricket wickets	There are currently three turf wickets in Warringah. There are no current plans to increase the number of turf wickets in Warringah. The cost to maintain turf wickets is significantly higher than synthetic wickets.
Unleashed dog exercise area	This activity does not fit with the current and future proposed uses of the open spaces in District Park.
Children's learn to ride bike track	An ideal location would be adjacent to the existing playground. However, there is insufficient area available. Other sealed surface areas are available in Nolan Reserve.
Dirt jump bike track	A dirt bike jump track is being considered at JJ Melbourne Hills Reserve and/or at Currie Road, Forestville.
Park our facilities / spaces	Insufficient land available due to the large footprint required for this type of facility.
Graffiti walls	Two areas are already available in District Park- Miller Reserve and Passmore Reserve.

10.3 Healthy Environment

Opportunity	Actions for Strategic Directions
Addition of Crown land to District Park	Liaise with Crown Lands Division to investigate the need to formalise management of adjacent crown reserves.
Wildlife corridors	Recognise the east-west habitat corridor along Manly Creek to Manly Dam in the next review of the Local Habitat Strategy.
Bird hides / viewing platforms	Construct environmental recreation and interpretation structures (such as bird hides and viewing platforms) where appropriate and sympathetic with the environment and other use.
Contaminated land	Manage contamination issues as they arise.
Aquatic weeds	Continue to control high priority aquatic weeds in Brookvale and Manly Creeks.
Creek water quality	Continue to monitor and maintain Stormwater Quality Improvement Devices (SQIDs) every three months and following heavy rain events. Continue water quality monitoring and project partnerships with Sydney Water and other stakeholders.
Bush regeneration	Continue strategic bush regeneration activities in District Park.
Water Sensitive Urban Design	Incorporate Water Sensitive Urban Design (WSUD) in to the design of all future facilities, landscaping and car parks.
Flooding	Implement Council policies and plans in regard to flooding issues. Consider these issues in the combined sports facility feasibility study and master planning
Bushfire risk	Coordinate bushfire risk management activities in accordance with the Warringah Pittwater Bushfire Risk Management Plan 2010.
Environment walks	Facilitate environmental education and community activities in District Park where appropriate.
Foreshores and waterways	Continue to implement the Warringah Creek Management Study 2004 and the Protection of Waterways and Riparian Land Policy 2010. Continue replanting of habitat corridors, especially along riparian areas. Require restoration and stabilisation of riparian areas as part of lease agreements.

Opportunity	Actions for Strategic Directions
	Investigate opportunities to expand community volunteer groups to monitor water quality, biodiversity and to restore riparian and bushland areas. Review existing interpretive signage, update or replace damaged signs, where required and in accordance with Warringah's signage strategy.
Sustainability	Develop environment management plans which addresses restoration of riparian areas and the use and management of pesticides, chemicals, fertiliser, water and energy as required. Review waste management requirements in future park agreements.
Threatened species	Ensure future management actions on stormwater infrastructure should not impact on or deny access to roosting sites for threatened species of micro-bats including the Eastern Bentwing (*Miniopterus schreibersii*).

10.4 Connected Transport

Opportunity	Actions for Strategic Directions
Public transport access	Improve opportunities to access District Park by public transport, car, walking and cycling. Include opportunities to support access to public transport in any future development options for District Park.
Vehicle parking	Investigate opportunities to upgrade and re-configure vehicle parking throughout District Park.
Vehicle parking – Kentwell Road	Investigate the feasibility of relocating the fence and providing a pedestrian access path along the southern side of Kentwell Road.
New walking/ cycling tracks in District Park	Develop strategic links for pedestrians and cyclists which facilitate activity within and around District Park. Implement new walking/cycling tracks in District Park identified in the Warringah Bike Plan. Investigate new perimeter tracks in Nolan, Miller and David Thomas Reserves.
Walking/ cycling links to adjoining areas	Investigate the feasibility of linking David Thomas Reserve with Manly Dam via Mermaid Pool. Implement walking/cycling links between District Park and adjoining areas identified in the Warringah Bike Plan.
Improvements to walking/ cycling paths	Implement improvements to walking/cycling tracks in District Park identified in the Warringah Bike Plan.
Lighting of paths for	Investigate lighting upgrades along walking/cycling paths in District Park to improve safety and public amenity.

Opportunity	Actions for Strategic Directions
safety	

The following connected transport aspects are not supported as part of the strategic direction for District Park for the reasons outlined below.

Opportunity	Reason(s) for not including in Strategic Directions
Pedestrian crossing on Kentwell Road	There is an existing pedestrian crossing on the corner of Condamine Street and Kentwell Road. Any additional crossing or refuge island would affect service access to the Pro Shop building and a loss of existing car parking spaces on Kentwell Road.
Traffic in Sloane Crescent	Closing Sloane Crescent would have a major negative impact on access to the Park and in particular the Child Care Centre.
New walking/ cycling tracks in District Park	New path on western side of Old Pittwater Rd through the golf course difficult as there is a pinch point at the WRC, environmental considerations and risk management and no pedestrian crossing at intersection of Old Pittwater Rd and Condamine Street.

10.5 Other issues

Opportunity	Actions for Strategic Directions
Management of the sports fields	Warringah Council continue to manage sports fields to ensure equitable access to facilities that align with community needs.
Maintenance	Allow for any future relocation, renewal and increase in the size of the Council depot maintenance facility.
Way finding	Improve signage and way finding within District Park
Leases and other agreements	Are to be developed in alignment with Council policies and practises and community needs.

11 WHERE TO FROM HERE?

As outlined earlier, Council welcomes your comments on this Strategic Directions Paper. Refer to Section 3 regarding how to make a written submission.

Submissions from the community on this Strategic Directions Paper will inform the preparation of the Draft Plan of Management which will be put on public exhibition following approval by Council in late 2014.

It is expected that Council will approve the Final Plan of Management in early 2015.

APPENDICES

Appendix 1

District Park Discussion Paper (Summary of written submissions)

Appendix 2

Northern Beaches Regional Golf Study April 2014 (Executive Summary)

Appendix 1

District Park Discussion Paper (Summary of written submissions)

DISTRICT PARK DISCUSSION PAPER

Summary of written submissions

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1 INTRODUCTION

A high degree of community interest in District Park is reflected by the 251 written submissions and 75 online survey responses received from individuals and organisations by the closing date for submissions of 31 March 2014.

Several respondents thanked Council for preparing a comprehensive Discussion Paper, and for giving the community a chance to comment and express their views about District Park. They were thankful that Council are seriously reviewing and considering a balance of a wide range of uses in District Park at a strategic level. In particular, the review of leases, licences and the terms and conditions of use of community buildings (such as sharing) received positive feedback. Listing the capital and operational improvements in District Park since 2002 enabled the community to appreciate the works that Council and other organisations have carried out in the Park since the current Plan of Management was prepared.

The majority (60%) of submissions requested that Warringah Golf Course remain as an 18 hole golf course rather than reducing it in size to 9 holes as was set out as an option in the Discussion Paper.

The most frequently-mentioned desired changes to the status quo at District Park are:

- synthetic turf hockey/multi-sport field(s) (20%)
- a new combined sports club (12%)
- new walking/cycling tracks (8%)
- cricket nets (8%)
- relocation of the golf course clubhouse on to the golf course (6%).

Values and functions of District Park, issues raised by the community which should be addressed in the Strategic Directions Paper / Plan of Management for District Park, and changes to the Park suggested by the community, are outlined below.

2 HISTORY OF DISTRICT PARK

The history of District Park outlined in the Strategic Directions Paper/Plan of Management should state that Chinese market gardens were a previous land use on the present Passmore Reserve, and land on the southern boundary of the Park was used as a dairy farm.

The Small-Bore Rifle Club represents Australia's striving for peace through civilian defence in the Great wars. Reserve defence goes back to 1800.

3 VALUES OF DISTRICT PARK

The values of District Park expressed by respondents in their submissions include:

- central location
- large open space
- green spaces with a mix of trees, bush and grass
- gives pleasure to the community
- caters for a wide range of recreational activities

- it is the only ground in Manly Warringah / north of the harbour which can be used for large numbers of players of all football codes, as well as being the prime group of cricket grounds in the district
- habitat for native wildlife seen constantly throughout the year (birds, lizards, owls, possums, water dragons, kinks, masked lapwings, topknot pigeons, mopokes, magpies, crows, spoonbills, currawongs, butcher birds, schools of baby fish, eels, and evidence of bandicoots
- landscape - it is a pleasure to view the area when passing by bus or on foot
- refreshing outlook
- visual contrast to the development of the adjacent large shopping centre and the Brookvale semi-industrial area.

4 FUNCTIONS / ROLES OF DISTRICT PARK

Functions and roles of District Park which respondents felt should be reflected in the Strategic Directions Paper / Plan of Management include:

- sport and recreation
- wildlife habitat
- green belt or corridor
- natural landscape and amenity for recreation and open space
- containment of environmental events (flooding, bushfires)
- emergency evacuation.

5 RECREATIONAL USES

Recreational activities undertaken in District Park include:

- sport: golf, tennis, squash, cricket, soccer, rugby, touch football, running training. Club and combined school sport events.
- informal recreation activities: bike riding, skating, kite flying, dog exercise, children's play
- environmental: bush regeneration by Warringah Council's Friends of the Bush program, Warringah Golf Club Creek Care Volunteer Group.

6 ISSUES TO ADDRESS

Issues to address in the Strategic Directions Paper / Plan of Management include:

6.1 General

- Explore and address a "raison d'etre" for District Park other than various reserves which are geographically adjacent.
- Better name for District Park

6.2 Vibrant Communities

- community health and wellbeing

6.3 Lifestyle and Recreation

- any changes to the golf course will affect adjoining residents
- public access to the park has been limited by leasing large areas to narrow-use groups
- encroachment of development for buildings and hard surfaces. Use existing and adjoining buildings.
- needs and trends in participation in passive and organised recreational activities.
- An up-to-date report on golf should have been completed before the Issues Paper was produced. The 2009 report was after the GFC and two years of sustained rain which affected golf
- balance of use. Passmore is a good balance of organised sport, casual sport, running, waking, cycling, picnicking, and places to sit quietly
- ensure a range of sports can be played i.e. not dominated by one sport
- multi-use buildings
- healthy lifestyle i.e. good sporting facilities
- review need for golf and for other sports
- recognise the value added by the golf course
- review need for and use of the golf course. Other golf courses on the northern beaches are struggling
- conflict between winter and summer sports i.e. soccer ruins fields for rep cricket
- crisis in lack of sporting fields
- lack of facilities for hockey
- noise from sporting activities. Bowling and golf are low-noise sports. Proposals for recreational facilities and use will increase noise.

6.4 Healthy Environment

- inadequate attention given to environmental issues. Insufficient areas have been retained as bio diverse bushland and riparian zones.
- retention of green space
- recognise ecological values
- highlight the historical natural integrity of the wetlands/swamp which is now playing fields.
- the park is prone to flooding which limits use. Nolan's floods earlier than the golf course. Flooding of the golf course has rarely occurred in the last decade as surface water is absorbed in the sandy soil and drains quickly off the surface. The 13th fairway and part of the 10th/11th fairway hold surface water after heavy rain but this doesn't affect playability. The whole course is available for play after heavy rain, but it may be soggy.
- health of trees in and near the playground areas.
- pollution of the creek
- trees

- rubbish ending up in waterways. Sporting users tend to clean up rubbish. Non-supervised activities tend to leave rubbish behind.

6.5 Connected Transport

- vehicle parking around reserves, especially if many of the proposals are taken up, and for sporting competitions on Friday nights and weekends.
- traffic management. Pittwater Road becomes congested on weekends. Traffic, especially on Kentwell Road, is a problem.

6.6 Other issues

- sound financial management

7 SUGGESTIONS FOR DISTRICT PARK

Suggested changes and actions for District Park are listed below.
Contrary views regarding particular suggestions are in *italics*.
The number of people who made the suggestion or comment is in brackets.

7.1 General

Don't change the park in a major way

7.2 Vibrant Communities

7.2.1 Health and wellbeing

Space could be included for a library, leisure activities, even respite care for carers of aged locals.

7.2.2 Safety

-

7.2.3 Support and connection

Combined sports club (29)
Combine Bowling, golf, tennis, squash, sports on Nolan Reserve
Opportunities for other sports
Build a clubhouse for golf, tennis and squash west of the squash courts as close as possible to the creek.
Combine clubhouses for golf, tennis and North Manly Bowling Club.
WGC is open to a new combined sports club facility but would cost more than funds that could be contributed by the golf club. The tennis centre site provides direct on-course access and would be preferable to redevelopment of the NMBC site.
Allow Warringah Golf Club to possibly amalgamate with other sporting facilities and become a sporting club incorporating an 18 hole course and playing fields

Benefits for all members, and improve financial viability of clubs.

Large enough function centre to host profitable events.

Relocate the golf club ground staff facility to the pro-shop location. Build a new pro shop and facility in the existing ground staff location adjacent to the new sports club.

A clubhouse being host to all sporting activities in the park. Somewhere people can go after their sport, or the public can use for leisure activities, restaurant, entertainment etc. similar to a leagues or RSL club. Needs private funding – Council has neither funds or experience to run it alone.

Benefits: cut costs, encourage public use, and reduce costs of upkeep

Opportunity to make this area a leading community facility to generate income which can be used for other community projects.

Amalgamate clubhouses at North Manly Bowling Club

Centralising the club facilities should be controlled by the golf club as it is the busiest operation.

If the golf club sells their club house they should pay to build a new one incorporating Manly Vale Bowling Club and Christian Brothers clubhouse, with a new footbridge across the creek to the golf course.

Sell the Warringah Golf Club site and establish a new sports club on the site of the North Manly Bowling Club with the proceeds. Maybe retain two bowling greens.

Amalgamate the golf and bowling clubs 2 to establish a joint registered community club on the bowling club site

Redevelop the Warringah Golf Club site and relocate the childcare centre. Sell the Campbell Hall preschool site to provide redevelopment funds for the new club.

Merge the two bowling clubs, the golf club and tennis/squash centre into one member service venue.

Combine golf, tennis club and bowling club with new clubhouse on either golf course or bowling club.

Run on a commercial basis

Managed by one of the user sporting groups, preferably Warringah Golf Club as it is the only viable club. Partnering arrangement between Warringah Council and WGC.

Cater for local community

Refreshments and food can be obtained for all of the sports, and ratepayers can use

Direct access to the golf course

View of the golf course

Meet in more modern facilities

Combined club, partnered by Council, but allow respective clubs to remain autonomous in their operation with an overarching board.

Golf course should continue being managed by Warringah Golf Club which absorbs all costs and volunteers look after peripheral areas.

Council leases to sporting bodies need to provide security of tenure so they can make plans with a degree of certainty.

Golf club should be given a 20 year lease to allow security of tenure and for development to take place.

Features of a combined sports club:

- expanded second level with views over the golf course, bowling greens and Nolan Reserve.
- improved parking.

Retain existing dispersed facilities rather than invest in a combined sporting clubhouse. Distribution of facilities allows more convenient access from adjoining areas. It also avoids

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the high cost of building new facilities. Existing buildings are satisfactory and can be adapted to provide additional community uses. The North Manly Bowling Club and Calabria Club are conveniently located in the northern and southern parts of the park respectively. The clubs provide a local facility as well as attracting patrons from a wider area.

Shared buildings in the park

All winter sports who have buildings should be forced to allow summer sports to use their empty facilities. Christian Brothers clubhouse at Nolan's, the touch canteen by Nolan's 1 pitch, and canteen at Millers and David Thomas.

Consider a licence which permits shared community use rather than exclusive use for community buildings where the lease has expired or is due to be renewed.

Café

Tennis facility with a pro shop can offer café services to tennis participants, and as a canteen service on weekends if sports fields are located adjacent.

Café attached to a playground/equipment for children (younger and older) such as the flying fox park at Mona Vale, and Centennial Park.

Not in favour of more cafes – too many in the area including Rosebery Street and Condamine Street

Childcare

Do not support an additional childcare centre

Entertainment

Community events

No demand for concerts, outdoor cinemas in parks

Do not support additional entertainment facilities, or use of the park for concerts, cinema etc.

Markets

Markets such as those in Market Lane at Manly, with a different theme every week and food stalls.

7.2.4 Heritage and cultural diversity

Trees

The heritage item large Norfolk Pine on the corner of Condamine Street and Kentwell Road was removed by Council contractors in 2007 due to severe termite damage.

A large Port Jackson Fig at the southern end of the golf course is likely to be more than 100 years old, having been located on a former dairy farm at the southern boundary of the golf course near Campbell Parade. This tree should be added to the heritage listing.

Public art

-

7.3 Lifestyle and Recreation

7.3.1 Diverse facilities

General

Maintain a wide range of activities and facilities in District Park.

Support proposals to upgrade aging facilities.

Better utilisation of overall park facilities.

Sporting facilities

Sporting facilities to include for growing sports

18 hole golf course

More thorough research on international trends in golf as a sport is needed before Council makes a decision on future use of the golf club.

Keep Warringah Golf Course at 18 holes **(154)**

Reasons given for retaining 18 hole course include:

- It is an excellent course for juniors
- The golf club has an excellent junior development program
- It is a good course for senior players because it is flat
- The layout enables time-poor golfers who may only play 9 holes at a time the opportunity to enjoy two different experiences
- 18 holes enables more golfers on the course at once.
- Flexibility to start from 1st and 10th tees
- It caters for males and females
- Low membership fees
- Public golf course
- Kept in an excellent condition
- Over 50,000 rounds played per year
- Used every day dawn to dusk
- Public course – affordable
- Accessible
- 9 holes is not financially viable to Council, which would result in a loss of members and the club's demise
- The entire course is on a floodplain, not just the southern end of the course
- Low social green fees compared to other 18 hole golf courses on the peninsula
- Able to play 18 holes on a weekend
- Over 20 social clubs regularly use Warringah for their members
- Club members help to maintain the waterways and surrounds, removing noxious weeds.

- The golf club provides employment for over 30 people, both directly and through contractors.
- The golf course is used every day from first light to dusk.
- WGC is reputed to be the second busiest golf course in Sydney after Moore Park
- The proposed site for the hospital, and the fish kill impacted financially on the club which is now getting back on track.
- Warringah Golf Course is the last to close and the first to open during inclement weather.

Renew and extend the duration of the golf club lease.
If the golf course is to remain at 18 holes areas of the fairways should be floodlit and used for touch football at night.
Replace exotic vegetation with native trees and shrubs to improve the wildlife corridor value and aesthetic appeal of the golf course.
Retain the trees in the golf course as they provide a park-like environment and useful shade.

Support a 9 hole golf course (4)
"Warringah Golf Course is 18 mediocre holes squeezed between two main roads in a very high traffic urban environment." Idea presented for the golf course:

- *Northern section: 9 hole golf course on the northern section*
- *Southern section: Golf Rocks – Australia's first purpose-built junior golf academy, full length driving range, club house with classrooms, golf simulators, café, junior gymnasium, accommodation block to service international students.*

If the golf course becomes 9 holes, consult with the Manly Warringah Pittwater Sporting Union about catering for demand for sports fields on the Peninsula
The Warringah Golf Club's exclusive use of a significant area should be terminated or severely restricted. A 9 hole course is an option.
If the golf course is reduced to 9 holes, retain the mature trees as part of a landscaped and shady park for passive recreation.

New clubhouse on golf course land (15)
Varying views on the location of a new golf clubhouse among those who want just a clubhouse for golf and not to share with other clubs
The golf club is prepared to invest in the building of a new clubhouse.
A new golf clubhouse.
The clubhouse doesn't adjoin the course making other clubs more attractive, and limits use of Warringah Golf Club.
An on course club house would encourage the public to use the facilities of the club to enhance and ensure the viability of the club and golf course.
Move the golf club house and assign that land to some other use – the location and unsuitability of the golf clubhouse limits the club
Golf clubhouse needs to be on the golf course, not across a busy road.
Help Warringah Golf Club to move the clubhouse onto the course in an inviting facility that would attract functions.
In a more convenient location to the golf course.
Better connection between the clubhouse and golf course.

Rezone the WGC facilities on the corner of Kentwell Road and Condamine Street to RE2 Private Recreation.

Clubhouse is remote from the golf course, so relocate the golf club house to a site abutting the golf course

A clubhouse on the golf course over the buggy/storage footprint or a similar area adjacent to the buggy room behind the 8th tee and 9th green would provide a first class facility for weddings, conferences and other community events with a spectacular outlook. This would be funded by WGC from the sale of its existing premises at no cost to ratepayers.

Relocate the golf clubhouse across Condamine Street to above the pro shop on the corner of Kentwell Road and Condamine Street.

WGC: redevelop the corner of Condamine Street and Kentwell Road with funds from sale of the clubhouse, involving redevelopment of the buggy store and pro shop with a second floor addition and minimal extension of footprint. Car park using the practice area adjacent to the tennis club. Amalgamation with North Manly Bowling Club requires approval of members of both clubs, and rebuilding of NMBC, and does not provide direct on-course access.

Sell the golf clubhouse and rebuild above the pro shop, tea house area.

Affordable long term lease for the golf club to continue providing an affordable golf club

Desirable features of the golf club:

- modern appealing function centre available to the public to hire
- provides good views
- two-storey
- use Long Reef as an example

Do not support a golf clubhouse in the park as this would further alienate public land.

Golf driving range

A golf driving range

Close the Calabria Club and convert the area into a golf driving range.

A driving range could be located in other areas, would become run down and unviable as others in the area, and impact on local residents with night-time activity and light spill.

Extend the golf course

Expand the golf course to improve its attraction to golf players.

Move holes away from Condamine Street if more land was made available.

Junior golf facilities

Provide facilities to grow junior golf development 2

Mini golf course

Other golf

Provide better coffee at the kiosk and clubhouse to encourage patronage of the golf course.

Improve the existing golf course

The golf pro shop is a commercial activity and should not be on public land.

Synthetic turf hockey/multi-purpose field(s) 49

Manly Warringah District Hockey Club 600 members. Have to travel to Ryde, Turramurra, Concord, Pennant Hills, Moorebank, and juniors play at Narrabeen. Closest field is at Ryde where the club is allocated night training slots only.

Full-sized synthetic turf field for hockey and other sports that can be played on synthetic turf.

Clubhouse, parking, lights.

Consider using rugby fields at the northern edge of Nolan Reserve with administration via the tennis centre.

Investment in more all-weather playing surfaces. Many of the grass playing fields seem under-utilised and are often closed/flooded.

Grounds should remain grass so no sport is disadvantaged.

Indoor cricket/sport facility

More indoor activity space is a great idea and would be well used.

Construct an indoor cricket/futsal facility (4) for training, practice, off-season indoor games, birthday party venue

Need for an indoor facility catering for many current and new sports.

Indoor cricket facility catering for seasonal sports including cricket 2

Indoor cricket nets with bowling machines e.g. Sutherland, North Shore

Incorporate an indoor cricket facility into a multi-storey car park if built

Upgrade amenities / club facilities

Rationalisation of amenities

Upgrade amenities at sports fields

Fix some amenities

Christian Bros. JRLFC seems to serve only as change rooms and toilets for Nolan's playing fields.

Millers

Decent clubhouse at Millers

Bigger clubhouse at Miller or Passmore

Extend the amenities building at Miller Reserve to accommodate another change room, or replace it as it was built in the 1960s. Stormwater runoff from the car park at the Campbell Parade entrance causes flooding in heavy rain.

David Thomas

Develop David Thomas amenities block with an upper storey for Pilates, child care etc.

Manly Vale Football Club and Manly Warringah Football Association are willing to contribute funds to add another floor to the David Thomas amenities building for community recreational use, subject to security of tenure, kitchen and access

Nolan's

New amenities building at Nolan's Reserve designed and built for multi-purpose use by sports groups. Elements: accessible toilets, change rooms and showers for males and females; close to car park, central location in Nolan's Reserve, two canteens with separate

storage, large open area for meetings etc.; secure storage; kitchen; first aid/referees room. A two-storey facility should include full-length balconies for views across the reserve.

Cricket nets

Install minimum 6 and maximum 15 cricket nets at Nolan's (4) on an all-weather synthetic surface minimum 40 metres long with pull-out nets so when not in use there is a large area for basketball/netball training.

Install cricket nets at David Thomas 4

Install cricket nets at Millers 4

Provide cricket practice nets at Nolan's, Passmore, David Thomas and Millers because there are about 10 cricket pitches at but no cricket practice nets. (2)

All grounds with cricket pitches should have cricket nets installed so teams can train and prepare for games. 4

Cricket nets (5) for practice use

Install multiple all-weather cricket nets

Turf cricket nets at Nolan's

Indoor cricket nets for public use.

Cricket clubhouse

Dedicated cricket ground, club house and bathroom facilities.

A clubhouse for cricket

Cricket clubhouse at Nolan's (3) with kitchen, equipment storage, toilets, meeting/club room. Also be used for soccer, rugby league, touch and other sports.

Cricket clubhouse built on the site of the old netball courts at Nolan's (2)

Clubhouse for Manly Warringah Junior Cricket Association at Nolan's as it is "homeless" and needs a place to keep / display trophies.

New rep cricket clubhouse at Nolan's as a central place for trophies etc., a meeting place and with cricket nets will create a reputation for Nolan's as the cricketing hub of the northern beaches.

Let MWJCA share the Christian Brothers rugby clubhouse.

Futsal

Relocate futsal to near the Calabria Club because of noise from futsal in its current location.

Calabria Club should provide more all-weather futsal courts which generate more revenue than bowling greens.

Bowling clubs

North Manly Bowling and Recreation Club is used by few people

Manly Vale Calabria Bowling and Recreation Club – dilapidated, dirty, dysfunctional. Most bowling greens are not fit for purpose.

Commission a regional lawn bowls study in conjunction with any revamp of the NMBC site to consider whether its facilities could be better used

Combine bowling clubs. (2) Need for two bowling clubs within 600 metres of each other?

Retain lawn bowling greens at the Calabria Club and Club North Manly. The greens provide recreational facilities for which demand could increase in future.

Turf cricket wickets

Additional turf cricket wickets (5) for representative matches

Proper grass for first grade cricket.

Level around the wickets at Nolan's 3 and 4 because it floods quickly

Tennis courts

Provide purpose-built smaller modified courts suitable for juniors and people who don't have the physical capacity to play tennis on a full-sized court.

Upgrade the remaining tennis courts.

Tennis courts have been taken away for futsal, which is not supported.

Netball courts

Need for netball courts

Sell the Calabria Club and Passmore Reserve to the Department of Education. In partnership with the Department provide more sealed netball courts for school and public use. Could support North Curl Curl netball courts and kids could learn to ride bikes and ball games. Supplement with a picnic and barbecue area. Retain the playing fields.

Half courts

Half courts are a great idea and would be well used

Small-bore rifle range

Retain the small-bore rifle club as it is a legitimate sport with minimal impact on the area.

Terminate the lease and remove the Manly Small Bore Rifle Club as it is inappropriately located near a school, prevents foreshore access, and is in a riparian zone. The land should be decontaminated at cost to the club, and the land made part of a riparian bushland corridor.

Relocate the small bore rifle shooting range. It is within the riparian corridor of Manly Creek. Set aside the land adjacent to Manly Creek as a riparian buffer and open space corridor.

Fitness / gym

Add fitness, gym and club amenities to the tennis centre.

Shade / shelter

Provide shaded and undercover areas at David Thomas, Millers, Passmore and Nolan's for cricket.

Additional canopies needed at all grounds, maybe from canteens, to provide shelter for summer sport spectators on rainy days.

Each cricket/soccer pitch could be serviced by a gazebo. As cricket is a long sport, with whole days spent at the side of these grounds, a gazebo with power where drinks could be served and a barbecue would be fantastic.

Shelter at Millers

Learn to swim facility

A swimming organisation has proposed establishing a learn to swim school in District Park as a central location to serve growing demand in the Manly Warringah area. Their preferred location is near North Manly Bowling and Recreation Club and Warringah Recreation Centre at the junction of Pittwater Road and Kentwell Road. A learn to swim facility could be part of a combined bowling, tennis and golf club.

Unstructured

Upgrade and enlarge playground and picnic/barbecue facilities with bike tracks, e.g. Mona Vale

Picnic/barbecue areas/facilities

Increased areas to socialise with other members of the community – shelters, barbecues, picnic areas, cafes.

Additional barbecues and shelters are a great idea and would be well used

Provide shelters, seating, picnic tables and barbecues

Use unused parts of the golf course for barbecue facilities

Build some sheltered barbecues along some paths to enable walking/cycling use which doesn't happen now as it is all grass, and greater social use of sporting areas when they are not used. For example the sides of Brookvale Creek.

Picnic/barbecue area because people don't visit District Park for picnics and barbecues

Picnic area wouldn't be compatible with dirt bike track

Unleashed dog exercise area

Off-leash dog area. there are no dog off-leash areas in Manly Vale so people have to drive to access such facilities.

Leash free area for dogs to run, in an area with very few other parks and ovals where dogs can run leash free.

Dog exercise area

A dog walking area is too limited in scope, would endanger abundant wildlife, and result in a fly nuisance similar to dog exercise facilities at other sports fields.

Play areas

Play areas are a great idea and would be well used

Play equipment for older children

Play equipment for older children 3

Youth recreation facilities

Provision of more youth-oriented recreation

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Adventure sports

Many of the suggestions for replacing 9 holes on Warringah Golf Course already exist at Passmore. District Park is not an adventure sports area – keep this at Terrey Hills. It cannot be everything to everyone.

park our spaces / facilities (6)

Outdoor fitness equipment

Outdoor fitness equipment (2) providing it is low key.

Skate facilities

Skate park
Beginner skate park

A skate park exists at Kierle Park in Manly, which attracts anti-social behaviour
Skating facilities already exist so new facilities would waste money
Skate ramp could be located in many other places and will attract graffiti, high insurance costs and possibly impact on neighbours

Graffiti walls

Communities which have tried legal graffiti walls in over a dozen cities in the USA and Canada, and in Parramatta, have typically found them ineffective. (2)
Graffiti wall would be a practice facility for potential vandals (2)

Dirt bike track

Bike dirt jump track is a great idea and would be well used.
In 2011 Warringah Council demolished the Freedom dirt jumps while promising to replace them with another dirt jump park nearby. Council has betrayed the riders who agreed to the demolition, and should include dirt jump facilities needed in this plan.

Residents wouldn't appreciate a noisy dirt bike track
Don't support a bike dirt jump track as it is not a suitable location.

Children's learn to ride bike track

A learn to ride bike track for small children would be uninteresting

Botanic garden

Botanic gardens would be expensive to provide with no revenue generated, and other suitable natural areas under Council control could serve this purpose.

Outdoor table tennis tables

Questions practicality of playing table tennis outdoors.

7.3.2 Activities and use

Maintain present uses for recreation by existing sporting bodies. The park is well used now without additional community uses.
Any person proposing new use for the park should demonstrate the benefit of their proposal, rather than expect current users to demonstrate why they should retain occupancy.

Sport

Allocation of fields and spaces

Rationalise use of sports fields
Allocate more sports fields to soccer as it has more participants than rugby and AFL.
Maintain all sporting fields at District Park as they exist now.
Sporting groups which have had long term use of the park should continue that use.
Block bookings for touch football on summer evenings which are not used makes fields unavailable for other sports (2)

Return the cricket pitch at the Sloane Street end of Millers to its pre-2014 location (2). Since it was moved at soccer's instruction the distance between the two Millers cricket pitches is now too short for two games to be played at the same time (except for very young junior matches). The number of cricket pitches in the district has now reduced by one.

Lighting

Fix some lighting
Better lighting for evening/night training and games – cricket (2)
Floodlight parks and facilities until at least 8pm at night to allow for safe, regular exercise to occur after work which makes a healthier community.

Lighting of Nolan's Reserve

Upgrade the southern lighting on Nolan's Reserve from 50 lux training standard to 100 lux competition standard.
Install lighting (minimum 100 lux) for night cricket 20/20 games at Nolan's (4)

Lighting of Millers Reserve

Install/upgrade lighting at Millers to facilitate night games on one or more cricket pitches (2)

Lighting of Passmore Reserve in winter (8)

Light Passmore Reserve on some nights of the week until 8pm in winter to allow general exercising and for the Sydney Striders Road Runners Club, a local running group, to train on grass instead of hard pavements.

Object to floodlighting in Passmore Reserve due to visual impact of light towers, light spill into nearby apartment buildings, noise from game play until 9.30pm, anti-social behaviour, and noise from traffic, and demand for limited car parking.
Don't light Passmore Reserve (2) – Warringah Development Assessment Panel decision about 5 years ago

Lighting in the park should be kept to a minimum

Unstructured

Areas for unsupervised activities would lead to anti-social behaviour

Camping

Council policy and policing of overnight and long term camping, especially at the southern end car park in Nolan Reserve. Proposed increased facilities will encourage extended overnight camping to become a much bigger problem for local residents. Place "No Camping Overnight" signs as at the northern end of Nolan reserve adjacent to the North Manly Bowling Club.

Fishing

Fishing would require a significant improvement in water quality.

7.3.3 Design, maintenance, waste management

Move garbage bins to the beaches in summer

Place recycling bins and water fountains at David Thomas and Millers to discourage plastic litter left after sport.

7.4 Healthy Environment

7.4.1 Natural environment

There appears to be a heavy reliance on volunteers to monitor water quality, biodiversity and to restore riparian and bushland areas. This has merit, but the input of professional expertise is important.

Allocate revenue derived from leases to environmental projects in the park.

Extend boundaries of the park to include adjoining natural environment

Rezone unallocated Crown land parcels around the Mermaid Pool to Environmental Protection to protect them from ad hoc development.

Extend the boundaries of the park to include adjacent Crown land, Council land, and unused road reserves.

Transfer Crown land parcels near the Mermaid Pool to District Park i.e. R81298, R84688, R752038, and R87786. R752038 was recently rezoned for low density residential.

Include land on both sides of Manly Creek near David Thomas Reserve up to the Mermaids Pool in District Park. The Mermaid Pool is undergoing careful natural restoration.

Council should ask for care and control of this land and it should be retained as bushland and riparian zone.

Recognise the ecological value of the upper natural areas of David Thomas Reserve, the Mermaid Pool, and the unallocated Crown land. Ecological restoration is often swamped by recreation demands in District Park.

Secure the protection of Crown land in the upper reaches of Manly Creek (downstream from Manly Dam) into the park.

Flora and fauna habitat / corridors

Preserve indigenous plants and animals

Local habitat planning

Protect wildlife when they travel between various habitats and a wildlife corridor between Manly Dam and Manly Lagoon. This is essential with the proposed loss of the wildlife corridor between Garigal, Narrabeen Lagoon and Manly Lagoon when the Frenchs Forest hospital is built.

Create and/or significantly enhance the wildlife corridor from Manly Warringah War Memorial Park and the lower reaches of Manly Creek to Manly Lagoon. An outstanding wildlife corridor extends from Manly Warringah War Memorial Park through Oxford Falls to Ku-ring-gai Chase National Park, Marramarra National Park and beyond.

Provide habitat/homes (such as possum boxes) for native wildlife in bushland

Environmental/local habitat planning including weed maintenance, planting of indigenous plants

Clear invasive non-native species at Nolan's between Manly Creek and Sloane Crescent which is overgrown and unused. Construct a footpath with views into Nolan's.

Opportunities for viewing wildlife

Improving opportunities for bird watching means improving the environment for the birds.

Bird hides

Viewing platforms

Avoid the construction of viewing platforms along waterways where they would intrude into natural habitat.

Contaminated land

Investigate contaminated land as contamination potentially compromises the health of all park users. Investigate any disturbance of existing infrastructure for contamination before implementation.

Encourage Manly Council to decontaminate the land between Campbell Parade and Addiscombe Road. This would improve the riparian bushland corridor along the lagoon foreshore, and allow the Kenneth Road to Passmore Reserve shared track to be completed. Investigate the transfer of this land from Manly Council to Warringah Council and include it in District Park.

Rehabilitate the former tip site as a park so it can be incorporated into the open space corridor. Negotiate an agreement with Manly Council which owns the site.

Landscaping

Landscaping would improve vistas from one reserve to another e.g. sightlines through trees between Nolan and Passmore

Plant some separating trees/shrubs between adjacent playing fields.

Replace exotic plantings around the playing fields and along the shoreline with indigenous vegetation.

Retain or plant additional trees and vegetation in the Brookvale Creek and Manly Creek riparian area to enhance the waterway and landscape amenity of the corridor.

7.4.2 Foreshores and waterways

Aquatic weeds

Infestation of Water Primrose in Manly Creek west of Condamine Street on the north side of Miller and David Thomas Reserves. Council made three attempts to control this infestation – the first in 2009 was partly successful, and a second and third action later resulted in no mew infestation east of the Condamine Street bridge. A lack of follow-up control has resulted in the return of heavy re-infestation.

Control sediment and gross pollutants

Service the sediment trap to remove accumulated sediment resulting from storms. Sediment is carried past the trap and downstream to Kentwell Road bridge and beyond, covering the rock spillway below the GPT and wetland areas.

Major work on all creeks from the mouth of Queenscliff Lagoon to gross pollutant traps at the intersection of Pittwater Road and Condamine Street, and the creek which flows up to the Mermaid Pool.

Ensure the creeks are kept free of obstructions to fish passage.

Remove obstructions along the route of Manly Creek to facilitate fish passage.

Protect native fish habitat.

Maintenance of creek banks and riparian corridor

More continual maintenance of the banks of Brookvale Creek on both sides, particularly north of Passmore on the eastern side.

Restoration and stabilisation of riparian areas and water quality issues should be addressed by Council, not just by leaseholders.

Continue riparian restoration and sensitive stormwater design.

Remove the north-eastern tennis court at Warringah Recreation Centre because it prevents extension of the Brookvale Creek track and riparian corridor.

Restore and widen riparian zones along Brookvale Creek, Manly Creek and Manly Lagoon foreshores. In numerous places there is no satisfactory riparian zone, and grass is mowed to the top of the bank.

Extend environmental protection, bushland and riparian areas. Reduce mowed sports field areas.

Open up and restore the piped section of Manly Creek on the Warringah Golf Course to an open creek with riparian vegetation and satisfactory fish passage.

Replace sections of piped waterway along Manly Creek with an open waterway where possible.

Remove or modify the dam on Manly Creek downstream of Condamine Street which is blocking fish passage.

Remove fences restricting access to the Brookvale Creek gross pollutant trap at the junction of Condamine Street and Pittwater Road, in line with access to other GPTs in Warringah

Improve water quality

Clean waterways

Achieve a water quality standard which is at least suitable for secondary contact recreation, such as canoeing.

Improve water quality and recreational opportunities in Manly Creek which is full of litter and unsightly.

Consider a secure water storage facility at the creek inlet servicing Nolan's, Passmore, and the golf course to provide dam storage and eliminate water stagnation in that area.

Street drain management

Pump water from the ocean to Kentwell Road to flush the creeks.

Limit use of fertilisers, pesticides, herbicides, fungicides, wetting agents etc. in the park.

Prepare environmental management plans that restrict, avoid or prohibit the use of pesticides, chemicals and fertilisers to protect water quality and fish habitat in Manly Creek and lagoon.

Restore inflow creeks to enhance the natural landscape to improve water quality in Manly Lagoon.

Look at opportunities to replace concrete culverts, channels and pipes with an open waterway and riparian vegetation.

7.4.3 Bushland

Undertake bush regeneration in all riparian zones and other residual bushland areas.

Restore or recreate bushland and wildlife corridors to link Manly Dam with Manly Lagoon.

7.4.4 Sustainability

Address storage of large volumes of mulch at the southern end of the Kentwell Road car park to free up car parking spaces, and prevent mulch blowing away or washing into the creek.

Use water in Manly Dam for grass maintenance in summer. Agree with suggested tanks and sprinklers.

Support water sensitive urban design measures

How sustainable is the use of bore water? Assess the likely impact of bore water extraction on groundwater, particularly in the long term.

7.4.5 Natural hazards and climate change

Address flooding.

Ensure the park is kept free of significant obstructions which could worsen flooding.

Keep the park substantially free of buildings as most of it is a floodway.

Any changes to existing facilities must not increase the risk of flooding to local residences.

Address poor drainage at Nolan's Reserve.

Address drainage at Passmore

7.5 Connected Transport

7.5.1 Public transport

Bus rapid transit system

Improve access to the park prior to the proposed bus rapid transit by trialling a shuttle bus to reduce the need for car parking, particularly for major sporting events.

Walking access to buses is a serious problem and needs to be addressed.

If the proposed northbound bus land impacts on the golf clubhouse presumably compensation would be paid if the clubhouse was to be relocated.

7.5.2 Roads

Any changes to existing facilities must not increase the risk of traffic issues.

Safer access across major roads

Pedestrian crossing of Kentwell Road

WGC support constructing a footbridge with ramp access between the north and south sections of the golf course.

Provide a fence in the middle of Kentwell Road to force golfers to cross busy Kentwell Road at the traffic lights.

Kentwell Road should not have parking and have two lanes in each direction to ease traffic congestion.

Repair potholes in the car park off Kentwell Road

Sloane Crescent

Closing off Sloane Crescent would cause more traffic chaos.

7.5.3 Parking

Improve parking (2)

Shortage of parking around Millers Reserve during the soccer season, making entry and exit from adjoining properties virtually impossible from 9.00am because of parked cars and cars exiting the reserve after matches (2) and baking up at the traffic lights at the Condamine Street/Campbell Parade intersection. Extend parking areas into the Sloane Avenue section of Millers, and extend the parking area at the Campbell Parade entrance.

Any changes to existing facilities must not increase the risk of parking issues.

New parking area behind the Calabria Club

Construct additional car parking spaces at Nolan's Reserve to cater for increased use of the Warringah Sports Centre.

Reduce parking requirements during school sport events with shared transport, including buses. Expansion of car parking areas in District Park for occasional events is not cost-effective and would encroach on limited open space in the park.

The golf club has the benefit of a generous parking area. if the golf clubhouse was relocated to District Park a substantial area of open space would need to be converted to a car park.

Kentwell Road at golf course

Parking is limited to Kentwell Road and is in short supply

Maintain parking along Kentwell Road as the prime area for the public to access to golf course, unless on-course parking can be provided.

Improve dangerous parking especially on Kentwell Road as cars on the inside of the lane almost hit golfers unloading their golf gear from their car boots. (2) Widen the parking area into the golf course area.

Provide additional parking in the car park off Kentwell Road by using the unused/ unmaintained tree borders.

Provide adequate off-street parking for the sports club using part of the 5 par hole, making it 4 par to service the new expanded club facilities. Widen Kentwell Road to 4 lanes by changing parking from front-end to parallel parking.

The golf club should build a multi-storey car park on a section of the golf course.

Passmore Reserve/ Campbell Parade

Object to extending perpendicular parking along the south-western end of Campbell Parade west of Quirk Road and adjacent to Passmore Reserve 2 because of high traffic volumes and noise on Campbell Parade and Quirk Road, safety concerns for children, a No Stopping zone and pedestrian crossing at the corner of Quirk road and Campbell Parade, removal of the footpath causing people to walk along the road, the need for school buses to pass safely, and garbage bins requiring collection.

7.5.4 Walking and cycling

Provide public access to the majority of the park and remove fences.

Improve bicycle access to adjacent areas.

Rabbits at David Thomas have caused damage to the northern and western perimeter of the reserve, making it unsafe for walking at twilight.

New walking/cycling links

Extended bike paths

Expand bike tracks as proposed, but within reason

Build bike/walking paths around all of the playing fields.

Bike path network linking Manly Dam with Manly.

Walking/cycling track from Millers Reserve with pedestrian/cycle bridges over Condamine Street near Campbell Parade and Pittwater Road between Keirle Park and Lagoon Park to provide a designated walking path/cycleway from Allambie to Queenscliff and on to Manly.

Construct walking and bike tracks outside the golf course for pedestrian safety

Footpath on the south side of Pittwater Road.

Walking track along the creek between the Mermaid Pool and Manly

Walking/cycle paths for David Thomas and Millers

Link Manly Vale with Manly with increased bike tracks and safer access from main roads.

Make walking and cycling on western side of District Park more attractive and less dangerous.

Green transport corridor linking surrounding suburbs to each other and connecting residents to recreational areas of the beach and Manly Dam, and economic centres of Manly and Warringah Mall.

Ensure there is adequate space for an informal walking trail between Warringah Mall and Kentwell Road alongside (to the east of) Brookvale Creek.

Paths and cycleways up to Warringah Mall.

Provide public access to both sides of Brookvale and Manly Creeks and to all foreshores of Manly Lagoon.

Provide a footpath/cycleway on the eastern side of Nolan's along Pittwater Road.

Construct a bridge across Manly Creek connecting woodlands to Mermaid Falls to north and west of Manly Creek. Also basic path improvements

East-west Forest to Beach pathway linking Manly Dam to Nolan Reserve links to national parks. Safe pathway skirting the southern edge of the golf course connecting Passmore to Millers, safe crossing (underpass) across Condamine Street.

Mall to Manly pathway along Pittwater Road

Allow walkers to walk within the perimeter of the golf course and to the creeks and lagoon foreshore. Remove tees from the east side of Brookvale Creek north of Kentwell Road to improve and extend public access and riparian zones.

Incorporate a running track around the outside of the park. There are very few safe areas for distance runners in Warringah.

Bike and walking track around the full perimeter of District Park, including the golf course

Pedestrian access to the childcare centre

Pedestrian access to the Campbell Parade side of David Thomas.

Provide footbridges across the central stormwater drain in Nolan Reserve

Improvements to walking/cycling paths

Separate walkers and cyclists on paths

Improve lighting on walking paths in the park (2)

Less formal walking tracks

Moving the golf course fence to widen the footpath along Condamine Street would not be practical, safe or affordable.

Bike paths already exist so new facilities would waste money

7.6 Other suggestions

7.6.1 Management

A single authority should have control of the park. The golf club and bowling club have the necessary expertise. The other sporting clubs would need to be consulted

Warringah Recreation Centre is well used, but questions whether Council should be managing it.

7.6.2 Use agreements

Approve leases only if there is clear public support and benefits, and no adverse impact on the environment, public access etc.

Discourage commercial activities unless there is a clear public benefit.
Reduced fees for ratepayers. Pricing is high for tennis and squash at Warringah Recreation Centre, with nearby clubs the same or cheaper.

7.6.3 Maintenance

Maintenance of facilities

7.6.4 Promotion of District Park

Council should advertise various facilities more if they feel they are underused.
Better signage – more information available at the park

Advertising signs should not be permitted in the park or on its boundaries.

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Appendix 2

Northern Beaches Regional Golf Study April 2014 (Executive Summary)

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JBAS is pleased to present to Council the findings of its regional golf study, undertaken over the period January to March 2014. This study was requested by Council to assist it in its update of the current Plan of Management (POM) for District Park ("the Park"), a 62 hectare public green space predominantly located between Condamine Street and Pittwater Road in Manly.

In addition to changing sports participation and recreation habits and overall golf participation trends, there are also mounting operational and financial pressures being faced at many golf clubs across metropolitan NSW.

The membership trend evident within the wider Sydney metropolitan market is one that has exhibited a slow level of decline since 2000. Since 2000, at the wider metropolitan level, there has a 16% decline recorded in membership demand, with a 6% decline recorded since 2009.

The regional club peer set for WGC contains 11 golf clubs, all located within 18 kms of the WGC. Within the peer set sub markets, the primary market outcomes have largely matched the wider market outcomes with a 17% decline and 7% decline recorded for the same periods as above. Aggregated club membership capacity is presently estimated at around 90%. Public rounds demand over the period 2010 to 2013 has declined by approximately 8%. The average of the EBITDA outcomes achieved across the peer set is 4%, ranging from a low of -3% to +10% at two clubs.

The history of the Warringah Golf Club dates back to 1935 when the first nine holes (the current area north of Kentwell Road) were opened as the Warringah Golf Course. Capital funds were then accumulated to fund the clearing of the area south of Kentwell Road to develop the second nine holes which were opened in 1939.

Measuring some 2,400 square metres in size, the clubhouse site is zoned R2 Low Density Residential. Whilst a number of overlays exist on the site, JBAS is advised that the land is able to be developed for other uses and thus has an indicative value of $5-$6 million. The Club's formal tenure on site has recently been extended through to 31 January 2016.

The trend within club playing membership over the past six years has been a declining one with a 5% decline recorded between the period 2008/09 to 2012/13. 68% of the club's membership is aged over 55 years, and 88% of the Club's membership resides within 10 kms of the Club.

The Club, whilst being operational profitable, is not generating significant levels of profit that allow it to re-invest in and improve its amenities. There are a number of challenges to be faced by the Club as it continues to maintain, remediate, and improve the golf course.

Whilst these challenges will be present, the future of the Club should not be seen as ultimately a terminal one. To date the Club has survived largely due to a balanced make-up within its trading outcomes. Membership demand and green fee revenues were topped up with gaming profits and these outcomes covered the expense base incurred in operating the Club. Given its location and disconnection from the golf experience provided to almost two thirds of all users, in the present day, (and perhaps different to past times) the clubhouse building and the amenities it contains is not able to make an increased contribution to the Club's income and overall outcomes. That is the Club is exposed to trends within its key income streams and is unable to reasonably adjust.

The golf operating model is now simply not optimised to reflect the realities of its current environment nor appropriately positioned to be able to service not only the golf market but other users of the Park. Optimisation and adjusted positioning is possible and with that adjustment the likelihood of long term sustainability of the golf club's operations within the Park will be enhanced. In this light, Council is therefore encouraged to consider how

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this optimisation and re-positioning could occur, whilst also potentially assisting Council deliver on some of its wider community goals.

The North Manly Bowls Club is supportive of an assessment of the potential amalgamation with the golf club and the creation of a new centralised clubhouse building that become core to the Park's users.

Based on a review of key Council documents and the history concerning past club relocation and merger discussions, there appears to be a significant win/win opportunity for Council to actively encourage e a golf club relocation outcome that also ties in to a merger with the resident bowls club. This merger could also include responsibility for operations of the WRC.

A merged entity, enjoying a new building and amenities that is funded via the sale of the golf club land, which is park focused and accessible to all becomes a meeting hub for the Park. This outcome assists Council achieve its goals around recreation and creates an opportunity that should result in improved long term sustainability for both clubs. Depending upon the capital investment levels required, and the potential opportunity available from enhanced park food and beverage services, it may be necessary for the clubs to seek a partnership with a specialist provider of food and beverage services.

Recommendations

Based on the detail to be found in this report, it is recommended that Council:

1. Gains club buy in to a formal independent assessment of the potential club merger opportunity. This assessment is to determine what hurdles might exist and what a merged entity might look like in terms of its operating model. This process produces an outcome that could also be known as a feasibility study and clear outcomes should be known well in advance of the current expiration of the golf and bowling club leases in January 2016. A mapped process should conclude with a vote of both club's membership bodies to approve or reject the proposal.
2. In conjunction with the assessment above, and prior to its conclusion, engages a planning firm to develop an indicative master plan for the bowls club site.
3. Gains a clear understanding of its own zoning restrictions regarding permitted uses of the bowling club site and any other site issues that exist.

With reference to recommendation number 1 as above, it is JBAS view that this assessment should be commissioned as soon as possible, as the outcomes achieved become a key part of the updated POM for District Park.

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