



**ORDINARY MEETING OF COUNCIL  
TO BE HELD ON TUESDAY, 13 NOVEMBER 2007 AT 7.00PM  
LEVEL 3, COUNCIL CHAMBERS**

**A G E N D A**  
**\*\* \*\* \* \*\* \* \*\* \***

NOTE: For Full Details, See Council's Website –  
[www.kmc.nsw.gov.au](http://www.kmc.nsw.gov.au) under the link to business papers

**APOLOGIES**

**DECLARATIONS OF INTEREST**

**CONFIRMATION OF REPORTS TO BE CONSIDERED IN CLOSED MEETING**

**ADDRESS THE COUNCIL**

**NOTE: Persons who address the Council should be aware that their address will be tape recorded.**

**DOCUMENTS CIRCULATED TO COUNCILLORS**

**CONFIRMATION OF MINUTES**

**Minutes of Ordinary Meeting of Council**

File: S02131

Meeting held 30 October 2007

Minutes numbered 422 to 442

## MINUTES FROM THE MAYOR

### PETITIONS

### GENERAL BUSINESS

- i. *The Mayor to invite Councillors to nominate any item(s) on the Agenda that they wish to have a site inspection.*
- ii. *The Mayor to invite Councillors to nominate any item(s) on the Agenda that they wish to adopt in accordance with the officer's recommendation and without debate.*

**GB.1 Representation on Ku-ring-gai Meals on Wheels Committee Inc 1**

File: S02355, S03148

For Council to make an appointment to the Ku-ring-gai Meals on Wheels Committee Inc.

**Recommendation:**

That Council appoints a representative to the Meals on Wheels Committee Inc and an alternate representative.

**GB.2 7 Shelby Road, St Ives - Torrens Title Subdivision of Approved Dual Occupancy 3**

File: DA0764/07

Ward: St Ives

Applicant: Glendinning Minto & Associates

Owner: Helen Blaxland

To determine development application No.0764/07 which seeks consent for Torrens Title subdivision of an approved dual occupancy.

**Recommendation:**

Approval.

**GB.3 Sir David Martin Reserve Landscape Masterplan 15**

File: S04471

For Council to consider responses received during the public exhibition of Sir David Martin Reserve Draft Landscape Masterplan and adoption of the Masterplan.

**Recommendation:**

That Council adopt the Sir David Martin Reserve Draft Landscape Masterplan with the inclusion of amendments recommended in this report.

**GB.4 Tender for Sewer Mining Project, Gordon Golf Course 57**

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File: S04265

The purpose of this report is to award a contract to Econova Operations Pty Ltd for the design, construction and operation of the sewer mining and irrigation works at Gordon Golf Course.

**Recommendation:**

That Council award the contract for the sewer mining project and associated works to Econova Operations Pty Ltd in accordance with the contract, tender submission dated 8 October 2007 and price.

**GB.5 Proposed Lot 1, Water Street (aka Lot 1, 134 to 136 Eastern Road, Wahroonga) - Proposal to Acquire 67**

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File: P41852

For Council to consider the acquisition of proposed Lot 1, Water Street (aka Lot 1, 134 to 136 Eastern Road) Wahroonga.

**Recommendation:**

That Council determine its course of action in relation to the acquisition of Lot 1.

**GB.6 Heritage Advisory Committee - Minutes of Meeting held 21 August 2007 83**

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File: S03816

To report to Council the Minutes from the Heritage Advisory Committee Meeting held on Tuesday, 21 August 2007.

**Recommendation:**

That Council receive and note the Minutes from the Heritage Advisory Committee Meeting held on Tuesday, 21 August 2007.

GB.7 **4 Munderah Street, Wahroonga - To Alter Terms of Council's Drainage Easement & Connection to Council Pipeline**

93

File: DA0532/02-3

Ward: Wahroonga

To consider a request by owner of No 4 Munderah Street, Wahroonga to alter the terms of the Council drainage easement over downstream properties to permit connection and discharge into a Council pipeline.

**Recommendation:**

That the proposal be approved subject to Conditions A to C noted in the recommendation.

GB.8 **North Turramurra Recreation Area Review of Exhibition Submissions**

File: S02796

Report by Director Strategy dated 22 October 2007 - circulated separately

GB.9 **West Pymble Indoor Pool & Leisure Centre**

File: S04066

Report by Director Strategy dated 6 November 2007 - circulated separately

**EXTRA REPORTS CIRCULATED AT MEETING**

**MOTIONS OF WHICH DUE NOTICE HAS BEEN GIVEN**

NM.1 **Funds for Open Space**

99

File: S03175

**Notice of Motion from Councillor M Shelley dated 31 October 2007.**

I move:

"That Council undertake an analysis of the feasibility of utilising funds identified for the acquisition of open space to convert the Lord Street Car Park in Roseville for the purpose of open space with above-ground parking replaced underground".

**BUSINESS WITHOUT NOTICE - SUBJECT TO CLAUSE 14 OF MEETING  
REGULATION**

**QUESTIONS WITHOUT NOTICE**

**INSPECTIONS COMMITTEE - SETTING OF TIME, DATE AND RENDEZVOUS**

**CONFIDENTIAL BUSINESS TO BE DEALT WITH IN CLOSED MEETING - PRESS &  
PUBLIC EXCLUDED**

*The Item listed hereunder is recommended for consideration in Closed Meeting, Press & Public  
excluded for the reason stated below:*

- C.1 **102 Rosedale Road, St Ives - Purchase Update** **1**  
*(Section 10A(2)(c) - Information that would confer a commercial advantage)*

File: P57397

Report by Director Strategy dated 5 November 2007.

- C.2 **Staff Matter - General Manager's Performance Review**  
*(Section 10A(2)(a) - Personnel matters concerning particular individuals)*

File: S04516

Report by the Mayor, Councillor Nick Ebbeck - circulated separately

John McKee  
GENERAL MANAGER

**\*\* \*\* \*\* \*\* \*\***

**Environmental Planning & Assessment Act 1979  
(as amended)**

**Section 79C**

1. *Matters for consideration - general*

*In determining a development application, a consent authority is to take into consideration such of the following matters as are of relevance to the development the subject of the development application:*

a. *The provisions of:*

- i. any environmental planning instrument, and*
- ii. any draft environmental planning instrument that is or has been placed on public exhibition and details of which have been notified to the consent authority, and*
- iii. any development control plan, and*
- iv. any matters prescribed by the regulations,*

*that apply to the land to which the development application relates,*

- b. the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,*
- c. the suitability of the site for the development,*
- d. any submissions made in accordance with this Act or the regulations,*
- e. the public interest.*

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## REPRESENTATION ON KU-RING-GAI MEALS ON WHEELS COMMITTEE INC

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### EXECUTIVE SUMMARY

**PURPOSE OF REPORT:**

For Council to make an appointment to the Ku-ring-gai Meals on Wheels Committee Inc.

**BACKGROUND:**

Council at its meeting of 25 September 2007 appointed Councillor Cross as Council's representative on the Committee.

**COMMENTS:**

Councillor Cross is now unable to attend the meetings. Appointment of an alternate delegate should also be considered.

**RECOMMENDATION:**

That Council appoints a representative to the Meals on Wheels Committee Inc and an alternate representative.

Item 1

S02355, S03148  
30 October 2007

## PURPOSE OF REPORT

For Council to make an appointment to the Ku-ring-gai Meals on Wheels Committee Inc.

## BACKGROUND

Council at its meeting of 25 September 2007 appointed Councillor Cross as Council's representative on the Committee.

## COMMENTS

Councillor Cross is now unable to attend the scheduled meetings which are held monthly on the third Thursday at 8.30am.

As the Committee is keen to have a Council representative at its meetings, it may be prudent to appoint a second or alternate representative for those times when the main delegate is unable to attend the Committee's meetings.

## CONSULTATION

The Acting Director Community agrees that an alternate representative would be appropriate and is permitted in the Committee's Constitution.

## RECOMMENDATION

- A. That Council appoint a representative to the Meals on Wheels Committee Inc.
- B. That Council appoint an alternate representative to the Meals on Wheels Committee Inc.

Geoff O'Rourke  
Senior Governance Officer

John McKee  
General Manager

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## DEVELOPMENT APPLICATION

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### SUMMARY SHEET

<b>REPORT TITLE:</b>	7 SHELBY ROAD, ST IVES - TORRENS TITLE SUBDIVISION OF APPROVED DUAL OCCUPANCY
<b>WARD:</b>	St Ives
<b>DEVELOPMENT APPLICATION N<sup>o</sup>:</b>	0764/07
<b>SUBJECT LAND:</b>	7 Shelby Road, St Ives
<b>APPLICANT:</b>	Glendinning Minto & Associates
<b>OWNER:</b>	Helen Blaxland
<b>DESIGNER:</b>	Bergstrom Architects
<b>PRESENT USE:</b>	Single Occupancy Dwelling
<b>ZONING:</b>	Residential 2(c)
<b>HERITAGE:</b>	No
<b>PERMISSIBLE UNDER:</b>	Ku-ring-gai Planning Scheme Ordinance
<b>COUNCIL'S POLICIES APPLICABLE:</b>	Ku-ring-gai Planning Scheme Ordinance
<b>COMPLIANCE WITH CODES/POLICIES:</b>	Yes
<b>GOVERNMENT POLICIES APPLICABLE:</b>	SEPP 55 & SREP 20
<b>COMPLIANCE WITH GOVERNMENT POLICIES:</b>	Yes
<b>DATE LODGED:</b>	20 August 2007
<b>40 DAY PERIOD EXPIRED:</b>	29 September 2007
<b>PROPOSAL:</b>	Torrens Title Subdivision of approved Dual Occupancy
<b>RECOMMENDATION:</b>	Approval

Item 2

**DEVELOPMENT APPLICATION N<sup>o</sup>** 0764/07  
**PREMISES:** 7 SHELBY ROAD, ST IVES  
**PROPOSAL:** TORRENS TITLE SUBDIVISION OF  
APPROVED DUAL OCCUPANCY  
**APPLICANT:** GLENDINNING MINTO & ASSOCIATES  
**OWNER:** HELEN BLAXLAND  
**DESIGNER** BERGSTROM ARCHITECTS

### **PURPOSE FOR REPORT**

To determine development application No.0764/07 which seeks consent for Torrens Title subdivision of an approved dual occupancy.

This matter has been called by Councillor Hall.

### **EXECUTIVE SUMMARY**

**Issues:** Subdivision of dual occupancy  
**Submissions:** One (1) submission received  
**Land & Environment Court Appeal:** N/A  
**Recommendation:** Approval

### **HISTORY**

Development application history:

- *DA1146/06 Detached Dual Occupancy*

Development Application No. 1146/06 for a Detached Dual Occupancy pursuant to State Environmental Planning Policy No. 53 was refused by Council at the meeting dated 9 February 2007.

- *LEC Appeal 10122 of 2007*

An appeal against Council's refusal of DA1146/06 was subsequently lodged with the Land and Environment Court. The applicant amended the proposal to address Council's concerns and Council entered into consent orders. The appeal was upheld on 27 May 2007.

### **THE SITE AND SURROUNDING AREA**

#### **The site**

**Zoning:** Residential 2(c)  
**Visual Character Study Category:** 1945-1968

Item 2

Lot Number:	25
DP Number:	223453
Area:	1072m <sup>2</sup>
Side of Street:	Southern side of Shelby Road, western side of Collins Road
Cross Fall:	North-west to south-east
Stormwater Drainage:	Easement adjacent to southern boundary
Heritage Affected:	No
Required Setback:	N/A
Integrated Development:	No
Bush Fire Prone Land:	No
Endangered Species:	No
Urban Bushland:	No
Contaminated Land:	No

**Site description**

The subject site is legally described as Lot 25 in DP 223453. The site is a corner allotment located at the south-western corner of the intersection of Collins Road and Shelby Road, St Ives.

The site has an area of 1072m<sup>2</sup> and is rectangular in shape, with a splayed corner adjacent to the intersection. The site has frontages of approximately 19 metres to Shelby Road and 38.5 metres to Collins Road.

Development on the site currently comprises a one and two storey dwelling house with a low brick wall along both frontages and the western side boundary. The dwelling primarily addresses Shelby Road and features pedestrian and vehicular entrances to this frontage. The dwelling is set back 9 metres from Shelby Road and 7.5 metres from Collins Road and comprises a 'stepped' design.

**Surrounding development:**

The site is surrounded by single occupancy residential dwellings.

**THE PROPOSAL**

The application proposes torrens title subdivision of the approved detached dual occupancy.

**Lot A:** The proposed lot A is a rectangular allotment with a frontage of 21.115 metres and vehicular access to Collins Road. Lot A has an area of 511.6m<sup>2</sup> with a width of 21.115 metres and depth of 24.232 metres.

**Lot B:** The proposed lot B is roughly rectangular in shape though is splayed at its north-eastern corner. Lot B has a frontage of 18.13 metres and vehicular access to Shelby Road. Lot B has a maximum width of 24.23 metres and maximum depth of 23.45 metres.

Item 2

## CONSULTATION - COMMUNITY

In accordance with Council's Notification DCP, owners of surrounding properties were given notice of the application. In response, submissions from the following were received:

The following comments have been received:

«Comments Received»

1. *Mr G., Mr C & Mrs J. Eyre – No. 128 Collins Road, ST IVES NSW 2075*

The submission raised the following issue:

*Concerns relating to allocation of house numbers. Objection to use of No. 128A Collins Road.*

Street numbers are allocated in accordance with section 124 (order No. 8) of the Local Government Act 1993 and are dealt with by Council's Strategy Department upon registration of the linen plans with the Department of Lands. Allocation of street numbers is not a valid consideration under section 79C of the Environmental Planning and Assessment Act and cannot be dealt with during the development assessment process.

## CONSULTATION - WITHIN COUNCIL

### Engineering

Council's Development Engineer, Masahiro Kimura, has commented on the proposal as follows:

*This application seeks the approval for the subdivision of an approved dual occupancy under Development Application No. 1146/06 & LEC Appeal No. 10122 of 2007.*

*In summary, Development Engineers are satisfied with the engineering aspects of the proposed development, subject to the placement of engineering conditions of consent on any approval issued.*

### Landscaping

Council's Landscape Officer, Tempe Beaven, has no objection to the proposed development with regard to landscaping issues.

## STATUTORY PROVISIONS

### State Environmental Planning Policy No. 55 – Remediation of Land

The provisions of SEPP 55 require Council to consider the potential for a site to be contaminated. The subject site has a history of residential use and as such, it is unlikely to contain any contamination and further investigation is not warranted in this case

Item 2

**Ku-ring-gai Planning Scheme Ordinance (KPSO)**

Development standard	Proposed	Complies
Site Area: 1072m <sup>2</sup>		
<b>Subdivision requirements (dwelling house) (clause 58B (5))</b>		
Site area: No minimum	Lot A: 511.6m <sup>2</sup> Lot B: 560.4m <sup>2</sup>	YES YES
Site width: No minimum	Lot A: 21.115m Lot B: 18.130m	YES YES

The provisions of Clause 58 of the KPSO establish minimum size allotments, allotment widths and minimum street frontages for each of the separate residential zones. These provisions do not apply to the subdivision of an approved dual occupancy as Clause 58B(5) excepts such lawfully constructed development from having to achieve the more stringent subdivision requirements normally applied to torrens title subdivision.

Clause 58B(5) states:

*“This clause does not apply to a subdivision creating two adjoining lots if the dwelling houses on those lots are lawful because of a consent granted pursuant to Sydney Regional Environmental Plan No.12 – Dual Occupancy or State Environmental Planning Policy No.53 – Metropolitan Residential Development before or after the commencement of this clause.”*

The proposed subdivision relates to an approved detached dual occupancy development that is yet to be constructed. Nonetheless, the proposed subdivision layout is consistent with the approved dual occupancy design and the plans issued by the Court under Development Application No. 1146/06. The proposed subdivision is consistent with the provisions of Clause 58B(5) and therefore satisfies the subdivision requirements of the KPSO.

**Part B: Aims and objectives for residential zones:**

The development: (i) maintains the amenity and environmental character of the residential zone; and (ii) allows for residential development compatible with the character of the area. Consequently, the aims of the KPSO have been satisfied.

**POLICY PROVISIONS**

**Subdivision Code**

The Subdivision Code does not contain any specific provisions for the subdivision of an approved dual occupancy. Clause 58B(5) of the KPSO is therefore applicable. The proposed subdivision is consistent with the provisions of Clause 58B(5) and satisfies Council’s relevant subdivision requirements.

Item 2

## LIKELY IMPACTS

The proposed subdivision of an approved dual occupancy development will not create any additional physical impacts on the land or locality, providing that the dwellings are constructed in accordance with the approved plans.

The proposed subdivision of the dual occupancy results in two (2) separate allotments of land which are consistent with the dual occupancy approval issued by the Land and Environment Court.

## SUITABILITY OF THE SITE

The site is suitable for the proposed development.

## ANY SUBMISSIONS

All submissions received have been considered in the assessment of this application.

## PUBLIC INTEREST

The approval of the application is considered to be in the in the public interest. Given that street numbering is dealt with separately to subdivision, the proposed development will result in no additional impacts than the approved dual occupancy.

## ANY OTHER RELEVANT MATTERS/CONSIDERATIONS NOT ALREADY ADDRESSED

There are no other relevant matters for consideration.

## CONCLUSION

Having regard to the provisions of section 79C of the Environmental Planning and Assessment Act 1979, the proposed development is considered to be satisfactory. Therefore, it is recommended that the application be approved.

## RECOMMENDATION

THAT the Council, as the consent authority, grant development consent to DA0764/07 for Torrens Title subdivision of an approved dual occupancy on land at No. 7 Shelby Road St Ives, for a period of two (2) years from the date of the Notice of Determination, subject to the following conditions:

### Conditions that identify approved plans:

#### Approved architectural plans and documentation (new development)

The development must be carried out in accordance with the following plans and documentation listed below and endorsed with Council's stamp, except where amended by other conditions of this consent:

Item 2

<i>Plan no.</i>	<i>Drawn by</i>	<i>Dated</i>
DA07 Rev A	Bergstrom Architects	3 July 2007

**Reason:** To ensure that the development is in accordance with the determination of Council.

**Conditions to be satisfied prior to the issue of a Subdivision certificate:**

**OSD positive covenant**

The applicant shall create a positive covenant and restriction on the use of land under Section 88B of the Conveyancing Act 1919, burdening the property with the requirement to maintain the on-site stormwater detention facilities on site. The terms of the instruments are to be generally in accordance with the Council's "terms of Section 88B instrument for protection of on-site detention facilities" and to the satisfaction of Council (refer to appendices of Ku-ring-gai Water Management Development Control Plan No. 47). The location of the on-site detention facilities for all dwellings is to be noted on the final plan of subdivision.

**Reason:** To ensure maintenance of on site stormwater detention facilities.

**Retention and re-use positive covenant**

The applicant shall create a positive covenant and restriction on the use of land under Section 88B of the Conveyancing Act 1919, burdening the property with the requirement to maintain the site retention and re-use facilities. The terms of the instruments are to be generally in accordance with the Council's "terms of Section 88B instrument for protection of on-site retention facilities" and to the satisfaction of Council (refer to appendices of Ku-ring-gai Water Management Development Control Plan No. 47). The location of the on-site retention facilities for all dwellings is to be noted on the final plan of subdivision.

**Reason:** To ensure maintenance of site retention and re-use facilities.

**Sydney Water Section 73 Compliance Certificate**

Prior to release of the linen plan/issue of the subdivision certificate, the Section 73 Sydney Water compliance certificate **which refers to the subdivision application** must be obtained and submitted to the Council.

**Reason:** Statutory requirement.

**Reinstatement of crossings**

Prior to issue of the Subdivision Certificate, the principal Certifying Authority is to be satisfied that following works have been completed:

Item 2

- construction of the new driveway crossing(s) and layback(s) in accordance with the levels and specifications issued by Council
- removal of all redundant driveway crossings, pipe crossing and/or kerb laybacks. Full reinstatement of these sections to footway, and/or turfed verge and/or kerb and gutter to the satisfaction of Council
- reinstatement works match surrounding adjacent infrastructure with respect to marrying of levels and materials
- any sections of damaged grass verge are to be replaced with a non-friable turf of native variety to match existing
- any damaged public infrastructure caused as a result of construction works on the subject site (including damage caused by, but not limited to, delivery vehicles, waste collection, contractors, sub contractors, concrete vehicles) has been repaired to the satisfaction of Council and at no cost to Council

**Reason:** To protect public infrastructure and the streetscape.

**Issue of Subdivision Certificate**

The Subdivision Certificate must not be issued until all conditions of development consent DA 1146/06 & LEC Appeal No. 10122 of 2007 have been satisfied and an Occupation Certificate has been issued by the Principal Certifying Authority.

**Reason:** To ensure that the development is completed prior to transfer of responsibility for the site and development to another person.

**Submission of 88b instrument**

Prior to the issue of the Subdivision Certificate, the applicant must submit an original instrument under Section 88B of the Conveyancing Act with the plan of subdivision, plus 5 copies to Council. Ku-ring-gai Council must be named as the authority whose consent is required to release, vary or modify the burdens.

**Reason:** To create all required easements, rights-of-carriageway, positive covenants, restrictions-on-use or other burdens/benefits as may be required.

**Submission of plans of subdivision (Torrens Title)**

For endorsement of the subdivision certificate, the applicant shall submit an original plan of subdivision plus 6 copies, suitable for endorsement by Council. The following details must be submitted with the plan of subdivision and its copies:

- a) the endorsement fee current at the time of lodgement
- b) the 88B instrument plus 5 copies

Item 2

- c) a copy of the Occupation Certificate issued for DA 1146/06 & LEC Appeal No. 10122 of 2007.
- d) all surveyor's and/or consulting engineers' certification(s) required under this subdivision consent
- e) The Section 73 (Sydney Water) Compliance Certificate for the subdivision.

Council will check the consent conditions on the subdivision. Failure to submit the required information will delay endorsement of the linen plan and may require payment of rechecking fees. **Plans and copies of subdivision must not be folded. Council will not accept bonds in lieu of completing subdivision works.**

**Reason:** Statutory requirement.

**General easement/R.O.W. provision and certification**

Prior to issue of the Subdivision Certificate, a registered surveyor is to provide details to Council that all physical structures are fully contained within the proposed allotments or will be fully covered by the proposed burdens upon registration of the final plan of subdivision. Alternatively, where the surveyor is of the opinion that creation of burdens and benefits is not required, then proof to this effect must be submitted to the Principal Certifying Authority.

**Reason:** To ensure that all physical structures are fully contained within the proposed allotments or will be fully covered by the proposed burdens upon registration of the final plan of subdivision.

B Pendlebury  
**Development Assessment  
Officer**

D Hoy  
**Acting Team Leader  
Development  
Assessment - Central**

R Kinninmont  
**Team Leader  
Development Assessment -  
Central**

M Prendergast  
**Manager  
Development  
Assessment Services**

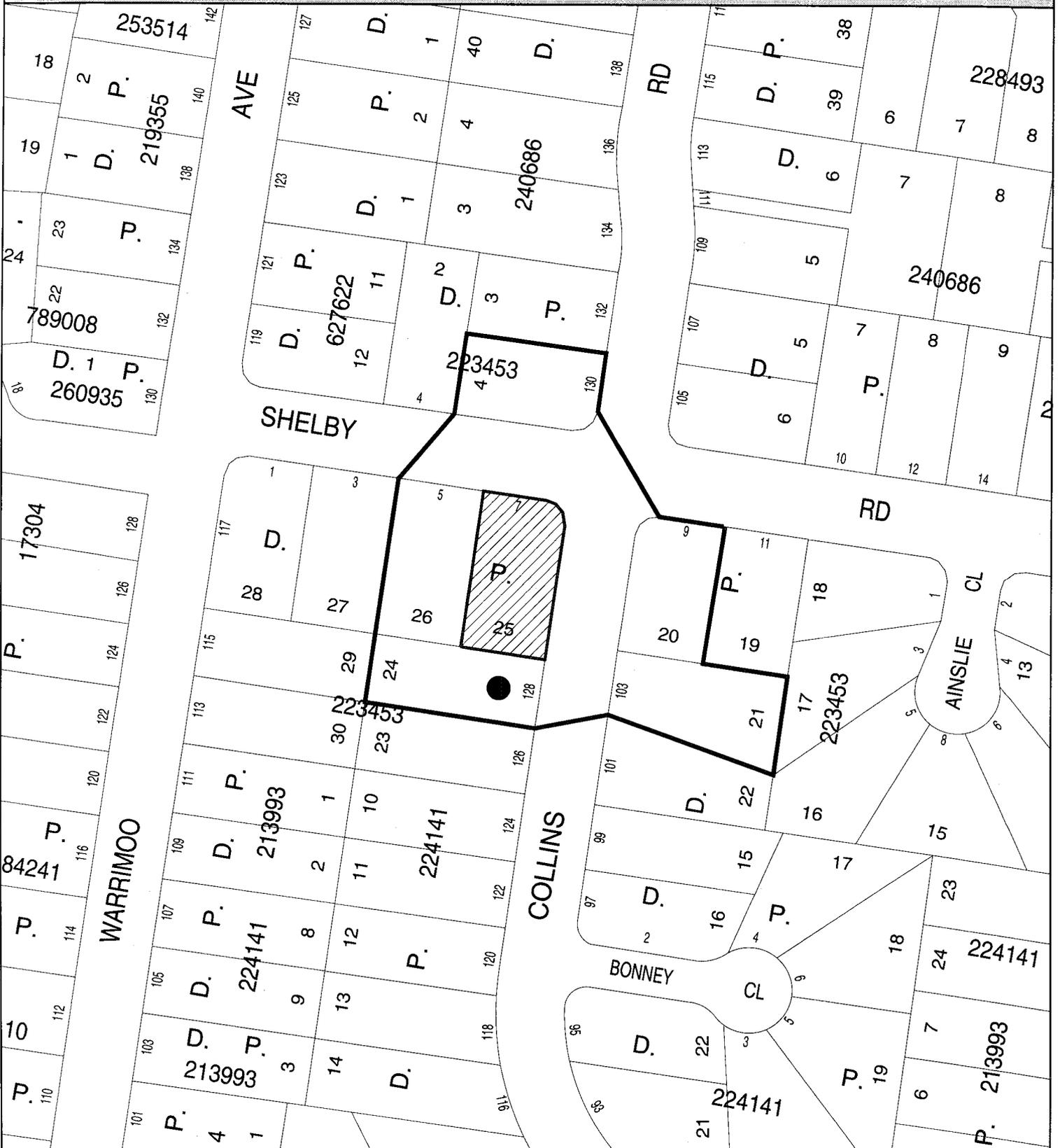
M Miocic  
**Director  
Development & Regulation**

**Attachments:**      **Location sketch - 850286**  
                                 **Zoning extract - 850286**  
                                 **Subdivision plan - 850286**

# LOCATION SKETCH

## 7 Shelby Road, ST IVES CHASE

### DEVELOPMENT APPLICATION No 764/07



**Scale : 1:1500**

**05-11-2007**

- |                                                                                     |              |                                                                                      |                 |
|-------------------------------------------------------------------------------------|--------------|--------------------------------------------------------------------------------------|-----------------|
|  | AGREEMENT    |   | PETITION        |
|  | OBJECTION    |   | SUBMISSION      |
|  | SUBJECT LAND |  | CIRCULATED AREA |



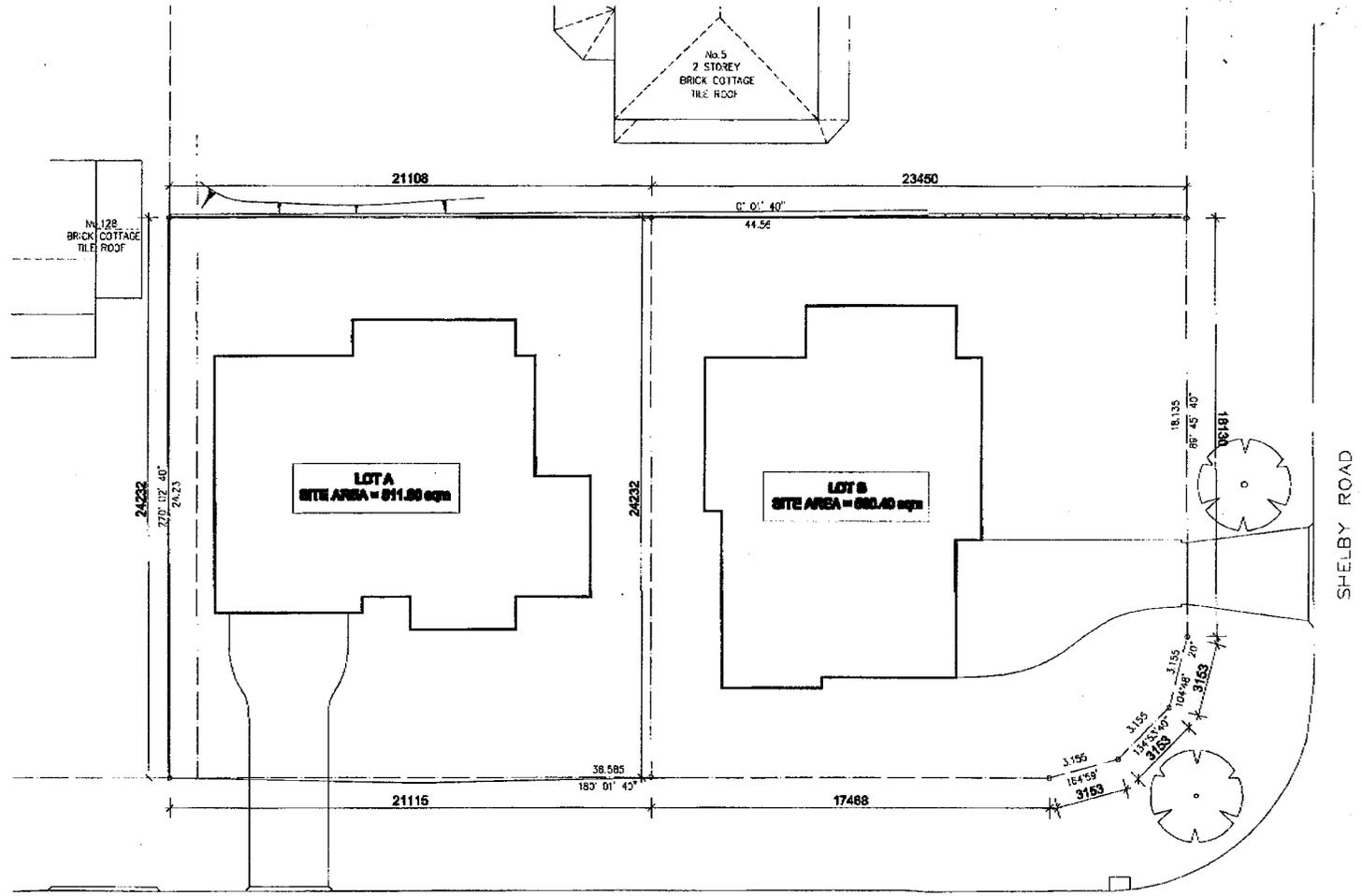
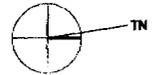
# Zoning Extract

7 SHELBY RD ST IVES DA 746/07



ZONES		RESERVATIONS		GENERAL	
<p><b>2. RESIDENTIAL</b></p> <p>(a) RESIDENTIAL A </p> <p>(b) RESIDENTIAL B </p> <p>(c) RESIDENTIAL C </p> <p>(c1) RESIDENTIAL C1 </p> <p>(c2) RESIDENTIAL C2 </p> <p>(d) RESIDENTIAL D </p> <p>(d3) RESIDENTIAL D3 </p> <p>(e) RESIDENTIAL E </p> <p>(f) RESIDENTIAL F </p> <p>(g) RESIDENTIAL G </p> <p>(h) RESIDENTIAL H </p>	<p><b>3. BUSINESS</b></p> <p>(a) RETAIL SERVICES </p> <p><b>FLOOR SPACE RATIOS</b></p> <p>A1 2.0:1 </p> <p>A2 1.0:1 </p> <p>A3 0.75:1 </p> <p>(b) COMMERCIAL SERVICES </p> <p><b>FLOOR SPACE RATIOS</b></p> <p>B1 1.0:1 </p> <p>B2 1.0:1 </p>	<p><b>5. SPECIAL USES</b></p> <p>(a) SPECIAL USES A (Schools etc) </p> <p>(a1) SPECIAL USES A1 </p> <p>(b) SPECIAL USES (Railway) </p> <p><b>6. OPEN SPACE</b></p> <p>(a) RECREATION EXISTING </p> <p>(b) RECREATION PRIVATE </p> <p>(c) RECREATION PROPOSED </p>	<p><b>OPEN SPACE</b></p> <p>(a) OPEN SPACE (Public Parks &amp; Recreation) </p> <p>(b) COUNTY OPEN SPACE </p> <p><b>SPECIAL USES</b></p> <p>SPECIAL USES (Parking etc) </p> <p><b>ROADS</b></p> <p>(a) COUNTY ROAD PROPOSED </p> <p>(b) COUNTY ROAD WIDENING </p> <p>(c) LOCAL ROAD PROPOSED </p> <p>(d) LOCAL ROAD WIDENING </p>	<p>EXISTING COUNTY ROAD </p> <p>OTHER PLANNING INSTRUMENTS </p>	<p></p> <p><b>Scale: 1:1500</b></p> <p><b>Date: 05-11-2007</b></p>

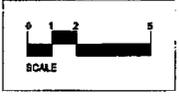
7 SHELBY ROAD  
ST IVES, NSW



COLLINS ROAD

SHELBY ROAD

SUBDIVISION PLAN  
SCALE 1:100



NO.	DATE	REVISION
1	03/07/2007	SUBMITTED FOR COUNCIL

**bergstrom ARCHITECTS**  
 BERGSTROM ARCHITECTS PTY. LTD. (ABN 78 004 788 888)  
 45 STEVE LINDSEY ST. BARNESVILLE STATION  
 NORTH SYDNEY NSW 1585  
 PH: 00255 5448 FAX: 00255 1189

PROJECT  
**PROPOSED DUAL OCCUPANCY**

DRAWING  
**SUBDIVISION PLAN**

SCALE 1 : 100	DRAWING NO. DA07	NOV. A
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DATE: 04/07/2007  
 DRAWN BY: MB  
 JOB NUMBER: 88-007

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## SIR DAVID MARTIN RESERVE LANDSCAPE MASTERPLAN

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### EXECUTIVE SUMMARY

**PURPOSE OF REPORT:**

For Council to consider responses received during the public exhibition of Sir David Martin Reserve Draft Landscape Masterplan and adoption of the Masterplan.

**BACKGROUND:**

Council resolved on 14 August, 2007 to place the Sir David Martin Reserve Draft Landscape Masterplan on public exhibition for a period of 28 days with a further 14 days for comments to be received prior to adoption by Council.

**COMMENTS:**

The public exhibition period generated a total of 172 submissions from 136 households/groups (including 11 duplicate submissions on letter and petition), which includes a petition with 42 signatures (see **Attachment 3**). A number of amendments have been made to the Draft Plan as a result of the submissions. The submissions and recommended amendments are documented in this report. The Sir David Martin Reserve Landscape Masterplan provides a vision for the development of the Reserve over the next ten years. It will allow Council to carry out improvements at the park in stages, as funding becomes available, with the knowledge that all projects at the Reserve are in keeping with and will contribute to a long term vision for the Reserve.

**RECOMMENDATION:**

That Council adopt the Sir David Martin Reserve Draft Landscape Masterplan with the inclusion of amendments recommended in this report.

## PURPOSE OF REPORT

For Council to consider responses received during the public exhibition of Sir David Martin Reserve Draft Landscape Masterplan and adoption of the Masterplan.

## BACKGROUND

At the Ordinary Meeting of Council on 6 December 2005 it was resolved that:

1. *The District Park Landscape Masterplanning process be commenced for St Ives Village Green, Kissing Point Village Green (Sir David Martin Reserve) and The Swain Gardens during 2005/0006.*
2. *District Park Landscape Masterplanning continue to be identified within Council's Management Plan.*

The Reserve is located on Kissing Point Road, South Turrumurra and covers an area of 10.5ha, including about 5ha of endangered vegetation (Duffys Forest Ecological Community), three sportsfields, a dog off-leash area and a picnic area with a playground for young children.

The masterplanning process commenced in consultation with residents and stakeholders. Three community information sessions were conducted on 27, 29 and 30 September 2006. At each session a workbook was distributed to collect ideas, which are included as an appendix in the draft Plan to demonstrate how Council has responded to the resident's ideas. The main concern from local residents was that the Reserve would be overdeveloped or noisy activities would be introduced. The range of facilities that were requested by stakeholders was considerate of other peoples needs and well-suited to the site, such as the youth activities area and additional seating for elderly people. All groups valued the established landscape character of the Reserve, which contains the endangered vegetation of Duffys Forest Ecological Community.

One matter that was considered in detail was whether the plan could allow for an increase in the playing field area of Auluba 1 and 2 sportsfields. An increase in the size of this area would have detrimental impacts on vegetation surrounding the oval including potential clearing of Duffys Forest vegetation. It was not proposed in the draft plan.

On the 14 August, 2007, Council resolved to place the draft Plan on public exhibition for 28 days with a further 14 days for comments to be received prior to adoption by Council.

## COMMENTS

The approach utilised in the development of the Landscape Masterplans has followed the principles of successful placemaking.

The master planning process included significant community consultation from the conceptual stage of the design through to the production of a completed draft plan. Gaining a better understanding of the recreational needs of the local community and being able to help them achieve their goals was one of the main outcomes of the master planning process.

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The Sir David Martin Reserve Landscape Masterplan provides a vision for the development of the Reserve over the next ten years and beyond. It will allow Council to carry out improvements at the Reserve in stages, as funding becomes available, with the knowledge that all projects at the park are in keeping with and will contribute to a long term vision for the Reserve.

The Masterplan aims to:

- Integrate sustainable principles into park design;
- Incorporate elements that are important to the community and user groups; and
- Balance the concerns of all community groups

This has resulted in a holistic design outcome that has provided facilities that can be shared by clubs, school groups and the local residents.

The Masterplan seeks to improve the ecology of the site by protecting and enhancing the vegetation and implementing sustainable practices.

The public exhibition of the Masterplan generated a total of 172 submissions from 136 households (see Attachment 2 summary of individual responses), which includes a petition with 42 signatures (see Attachment 3 petition) and 11 duplicate submissions on letter and petition. A number of amendments have been made to the Draft Plan as a result of the submissions. The submissions and recommended amendments are documented below.

Those submissions that were opposed to some part of the draft Masterplan are considered below. A number of submissions carried the same theme, such as opposition to identifying properties surrounding the Reserve for possible future acquisition. Where this was evident the comments are considered on a collective basis.

1. Appendix D - Additional sportsfield at Chisholm Street

The site in Chisholm Street, known as "the horse paddocks", is composed of the redundant B2 freeway corridor, which is partly owned by the Department of Lands, and surrounding lands which are owned by Council. Council has been negotiating with the Department to develop the site as a sportsfield and/or housing. The sportsfield option has been included in the draft Plan as an opportunity to inform the local community that Council would like to consider dedicating this land for sportsfield if it is able to acquire the land.

Submissions were as follows:

- 92 submissions representing 75 households in the form of a standardised letter
- 42 submissions representing 34 households in the form of a petition
- 1 submission representing Kissing Point Progress Association (KPPA) in the form of a letter
- 18 submissions representing 15 households as letters or emails

Submissions made reference to current traffic conditions associated with sports matches, particularly during the winter soccer and netball season, when traffic builds-up along Kissing Point Road and parking requirements increase. Local residents are concerned that an additional sportsfield at Chisholm Street will increase traffic congestion at the intersection of Kissing Point Road and The Comenarra Parkway. Some submissions also argued that South Turrumurra

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already contains ample recreation facilities and any further developments would exceed a reasonable amount for the area.

This land is not actually part of Sir David Martin Reserve. The appendix was provided to provide context for this proposal within this area and the final decision regarding the zoning and use of the land will need to be the subject of a detailed process, including thorough community consultation, therefore, so that the adoption of this Masterplan can proceed without unnecessary delays involving debating options for the future use of this land, it is recommended that Appendix D be deleted from the Masterplan.

**Recommendation**

*Delete Appendix D from the Masterplan.*

2. Appendix C - Properties to consider for acquisition for future extension to the Reserve as parkland

Council's Section 94 Contributions Plan 2004-2009 specifies the acquisition and embellishment of recreation facilities and open space to meet the growth and demand of the new population. Local open space acquisition requirements have been identified over the eight precincts, with Acquisition Priority rankings determining the amount of additional open space required within each precinct. The properties outlined in appendix D have been identified by Council as an extension of parklands or forest and suitable for recreation. The position and dimensions of the properties does not provide enough space for additional sportsfields at Sir David Martin Reserve.

Submissions were as follows:

- 92 submissions representing 75 households in the form of a standardised letter
- 42 submissions representing 34 households in the form of a petition
- 1 submission representing Kissing Point Progress Association (KPPA) in the form of a letter
- 18 submissions representing 15 households as letters or emails

Submissions made reference to current traffic and parking conditions associated with sports matches as discussed in Point 1 above. KPPA also requested that Council re-examine the Open Space Acquisition Strategy and circulate the outcome widely to residents.' Other submissions expressed the concern that properties could be compulsorily resumed, people could be displaced and property values could be depreciated. Two residents objected on behalf of the church, however the church sent confirmation that it has no plans to sell its property. Other concerns included the financial cost of acquisition to the broader community.

Council has just adopted its Open Space Acquisition Strategy. Compulsory acquisition has not been identified as a component of the acquisition process, even the vendor initiated provisions provided by rezoning.

During the period of exhibition, staff advised owners of identified properties that it was highly unlikely that Council would seek to acquire their properties through compulsory means. Some owners and residents believed that Council was seeking to acquire their properties to extend the sportsfields and that their property values and ability to sell would be affected if Council persisted with the identification of these properties in the Masterplan. Given the strength of community feedback and that the level of priority for open space acquisition in this area is identified as level 3

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in the draft Acquisition Strategy it is recommended that Appendix C be deleted from the Masterplan. What is proposed is that a section be inserted into the Masterplan in words only that Council seeks to extend the park over time to provide additional opportunities for passive recreation and ecological conservation, consistent with its status as a District Park.

**Recommendation**

Delete Appendix C from the Masterplan and insert the following words into the Landscape Masterplan. *"Council seeks to extend the park over time to provide additional opportunities for passive recreation and ecological conservation, consistent with its status as a District Park"*.

3. Parking and traffic

Submissions were as follows:

- 9 submissions from 6 households were concerned about current traffic conditions in South Turramurra
- 8 submissions from 9 households are affected by inadequate existing parking conditions.
- 3 submissions supported angle parking for SDM Reserve
- 1 submission supported parking at the 'horse paddocks' for current facilities, rather than an additional sportsfield
- 2 submissions would like upgrades of local roads and footpaths
- 2 submissions were concerned that Council is complying with Car Parking Development Control Plan No 43

Submissions that raised objections based on traffic issues relating to current facilities at South Turramurra were concerned with the high volume of traffic in relationship to the restricted road access off the Comenarra Parkway into South Turramurra, particularly on weekends between sports games.

Parking issues focused on congestion and illegal parking. Residents objected to drivers using private driveways to turn-around and parking cars across driveways which restricted or blocked access to private homes.

One submission was opposed to creating additional parking because it will bring more traffic.

Several solutions were proposed for additional parking. One submission suggested the 'horse paddocks' in Chisholm Road as suitable for a carpark for existing facilities (or housing). Three submissions supported formalising angle parking around the Reserve, including Kissing Point Road, Auluba Road and Vernon Street.

Car Parking Development Control Plan No 43 provides guidelines for car parking in Ku-ring-gai LGA. Planning requirements for parks and reserves are to be determined on merit, preferably with a traffic impact assessment submitted with the application.

**Recommendation**

*Investigate the suitability of the road verge west of the amenities building in Auluba Road for 45-degree angle parking.*

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4. New facilities

There was overall general support for the new facilities in the Masterplan.

- 92 submissions representing 75 households in the form of a standardised letter – “Acknowledgement that aspects of the masterplan enhance and maintain the aesthetics of SDM Reserve”
- 1 submission representing Kissing Point Progress Association (KPPA) as a letter – Approval of improved features for Sir David Martin Reserve
- 8 submissions from 6 households agree with new facilities including buildings, paths, planting. One submission agreed with the half-basketball court for casual rather than team use for the benefit of local teenagers, while another 5 agreed that Council should provide safe areas for children to participate in outdoor recreational activities

There were also some objections to the new facilities in the Masterplan as follows:

- 1 submission – concern for safety on the shared pedestrian/cycleway.
- 3 submission - new youth area – concern new youth area will create noise and that the adjacent gazebos will provide a place for young people to drink in the gazebos at night.
- 3 submission from two households - concerned that the larger picnic shelter near Auluba Road will encourage youth hang-out and late night drinking space and dislike aesthetics of shelter.
- 1 submission from KPSC is concerned that the new youth facility will reduce the playing field.

Increasing landscape elements (picnic shelters and youth facilities) provides additional infrastructure to vandalise and a location for youth to gather, which applies to each facility at any location. New, improved picnic shelters have been installed at many locations, including Bicentennial Park, Echo Point, Roseville Park and favourable comments and increased utilisation of these areas has been the result. Operations Department report few incidences of vandalism in these shelters.

The new facilities have been located at Auluba 1 and 2 to provide a separate youth facility from the Village Green which caters for preschool to primary-school aged children and is already highly used.

The new facility has been designed to cater for a range of uses:

- The location of the youth facilities provides younger children with a choice of activities while their parents/carers are watching their other children play sport or while families are picnicking at the larger shelter. The youth facility has been located in an area that places children using the facility within view of the parents/carers in these situations.
- The youth activity area is designed for the youth of South Turrumurra in particular and addresses current research. Children/young people need 1.5 hours of physical activity a day (World Health Organisation) but physical activity is declining, generally due to lifestyle changes, particularly small screen recreation. The youth activity area provides interactive elements as a means of providing impromptu activities for local youth – both boys and girls.
- The shared pedestrian path/cycleway is a critical element of the design and intended to complement the small picnic shelters, half-basketball court/rebound wall and additional

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seating. It has been designed specifically to create both an interactive and a comfortable area that will promote social interactions between all young people, as well as catering for the broader community. It will meet current standards for shared pedestrian / cycleways.

- The youth facility is also suitable for young families, grandparents with their grandchildren and elderly people, who can sit in comfort, elevated above the sportsfields and watch the activities on Auluba 1 and 2.
- Council is concerned about antisocial behaviour including illegal or excessive alcohol consumption. The provision of spaces designed to provide enjoyment for young people will help reduce antisocial behaviour. As these facilities are implemented, a concurrent focus on youth and separately, security, can be implemented within the park.

**Recommendation**

Additional wording to be included:

*That the playing field area at Auluba 1 and 2 not be reduced when the youth activities area is constructed.*

5. Vegetation

- 2 submission supporting planning that enhances the future survival of Duffys Forest vegetation
- 1 submission requesting tree reduction
- 2 submission requesting dead and burnt timber be removed from the Reserve
- 1 submission objected to Council planting fire prone vegetation

The vegetation in the Reserve, Duffy's Forest Ecological Community, is an endangered plant community and a valuable resource for present and future generations. The Plan has considered and lessened the impact of new facilities on the vegetation and incorporated additional measures to strengthen the vegetation in order to safeguard its survival into the future.

The Masterplan is a 10 year plan, and over this period vegetation will require replanting in addition to regeneration to ensure its health and to provide a continuous and more integrated landscape. Council appreciates the concerns regarding fire from residents whose homes adjoin the forest and does not intend to increase canopy directly behind these homes.

Removal of burnt and dead timber which has been identified as a 'key threatening process' is not supported. Burnt-out branches and tree hollows provide habitat for fauna. Removing this timber from the Reserve will have negative effects on the biodiversity of the Reserve and wider area. Council monitors forest areas within urban parks such as these for dangerous trees.

6. Litter

- 5 submissions concerned that rubbish generated from use of the Reserve often builds-up

The lack of bins and rubbish removal was raised by the residents during the consultation process, and has been addressed in the draft Plan. Refer to page 4, Council's response: "introduce recycling bins and improve service." This request has been forwarded to Operations Department

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to consider more bins and/or more frequent collection of rubbish and recycling and will be included as part of stage one works for the Reserve.

7. Lighting

- 42 submissions representing 34 households in the form of a petition oppose “lighting to playing fields that will attract an increase in night traffic to the area.”
- One submission opposes lighting Auluba 1 and 2.
- 2 submissions agree with lighting Auluba 1 and 2, but not intensified night use of these fields such as competition.
- 1 submission supports lighting of sportsfields but respects the opinion of residents who do object
- 2 submissions are opposed to lighting Auluba 3 due to traffic and noise.

The improvement of sportsfield lighting across Ku-ring-gai is a high priority for Council, lighting at Auluba 1 & 2 does not currently meet standard which substantially inhibits ability for the local community to undertake sport. The shortage of lit fields is increasing. The retention or installation of improved lighting at all three fields is supported.

In line with Council’s usual approach, detailed consultation will take place with all residents potentially affected by any lighting proposal well before a development application is lodged. This allows for many issues to be resolved prior to the formality of a notification process occurring under a development application.

Modern lighting systems will substantially reduce visual impacts arising from floodlights. Night training already occurs and a consultation process and development application will provide an opportunity to manage impacts from this uses

8. Issues with fields

Two submissions requested new fields be located in other areas of Ku-ring-gai.  
Three submissions requested fields be constructed at school grounds.  
Other issues were the poor conditions of fields (dust bowl) and over use, along with use by teams from other areas.

Shortages of sportsfields will remain an issue for Council. A number of strategies are in place to attempt to deal with this issue. Agreement with schools to broaden the community use of these facilities are already being sought in conjunction with the Department of Education and local schools. Due to the high cost of land acquisition and the difficulty in finding appropriate land, opportunities to increase the number of fields is limited to a small number of sites. This report recommends the removal of Appendix D to enable its consideration as a separate matter and does support the upgrading of Auluba 1, 2 and 3 (incorporating the baseball diamonds and an additional field within Auluba 3) as one step in achieving additional supply of sustainable, quality fields. The capacity to “spread” the use across the entire LGA is an integral component of improved sporting facilities.

Specific increases in weekend use of these existing fields is not the sought outcome of the masterplan. Improving the management of those uses such as traffic and parking is sought through the various recommendations in this masterplan.

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9. Social issues

Council is aware of and concerned about antisocial behaviour including alcohol consumption by youth and drivers exceeding the speed limit in the South Turrumurra area. It is considered that providing youth with activities, including sport, is an essential component of mitigating antisocial behaviour.

10. Auluba No.3 Sportsfield

Kissing Point Sports Club has raised concerns that the proposal to level Auluba 3 sportsfield could see the fence on the western side of the field moved in when the field level is raised and the batter is constructed. This would be unsatisfactory for the Kissing Point Baseball Club as the distance from the baseball diamond to the western fence is already small and should not be further reduced.

In response to these concerns it is recommended that the following words be inserted in to the Masterplan:

*Undertake upgrade works at Auluba 3 playing field with the design aimed at maximising opportunities for multiple sporting uses such as baseball, softball and football by maintaining the existing field dimensions. Works may include changes in level requiring retaining walls, batters and possibly relocation of baseball diamonds and fences. Planning for this project will involve consultation with the sports user groups.*

**Summary of recommended amendments**

1. *Delete Appendix D from the Masterplan*
2. *Delete Appendix C from the Masterplan and effect future property acquisitions for open space in South Turrumurra through the Open Space Acquisition Strategy and insert the following words into the Landscape Masterplan. "Council seeks to extend the park over time to provide additional opportunities for passive recreation and ecological conservation, consistent with its status as a District Park".*
3. *Investigate the suitability of the road verge west of the amenities building in Auluba Road for 45-degree angle parking.*

4. *Additional wording to be included in New Facilities section:*

*'That the playing field area at Auluba 1 and 2 not be reduced when the youth activities area is constructed.'*

5. *Amend wording for Auluba 3 sportsfield:*

*Undertake upgrade works at Auluba 3 playing field with the design aimed at maximising opportunities for multiple sporting uses such as baseball, softball and football by maintaining the existing field dimensions. Works may include changes in level requiring retaining walls, batters and possibly relocation of baseball diamonds and fences. Planning for this project will involve consultation with the sports user groups.*

## CONSULTATION

The draft Sir David Martin Landscape Masterplan was placed on public exhibition for 28 days with a further 14 days (until 28 September 2007) for comments to be received prior to adoption by Council. Letters were sent to residents who attended any of the three initial community consultation sessions in September 2006 and requested to be kept informed of the masterplan process. The exhibition was advertised in the Mayor's Column of the North Shore Times newspaper and Council's e-newsletter "Out in the Open". The Plan was available for viewing at Council's libraries, Chambers and website.

Council staff had two meetings to consult the Kissing Point Sports Club during the public exhibition period and also a consultation meeting with the President and other committee members of the Kissing Point Progress Association to obtain their feedback prior to this report being prepared.

A presentation of the draft Plan was delivered to the Parks, Sport and Recreation Reference Group on 30 August 2007.

The public exhibition period generated a total of 172 submissions from 136 households (including 11 duplicate submissions on letter and petition), which includes a petition with 42 signatures (**see Attachment 3**). A number of amendments and additions will be made to the Draft Plan as a result of the submissions. The amendments are documented in this report.

All individuals and groups who have participated in the development of the Plan have been thanked for their submission and notified that this report is being considered by council.

## FINANCIAL CONSIDERATIONS

The Plan will allow for improvements at Sir David Martin Reserve to occur in stages, as funding becomes available, with the knowledge that all projects are in keeping with and will contribute to a long term vision for the park.

\$100,000 has been allocated in 2007/2008 budget for implementation of high priority components in the Sir David Martin Reserve Landscape Masterplan, including the upgrade of floodlights at Auluba No.1 & No.2 sportsfields and the youth recreation area. This funding is expected to be supplemented by grant funding from NSW Sport and Recreation Capital Assistance Program, which is due to be announced in December this year, as well as a financial contribution from the Kissing Point Sports Club.

## CONSULTATION WITH OTHER COUNCIL DEPARTMENTS

The draft Plan has been discussed with staff from the Operations and Community Departments. Further consultation will occur with these departments during the planning and implementation stages of the Masterplan as adopted by Council.

## SUMMARY

The public exhibition period generated a total of 172 submissions from 136 households (including 11 duplicate submissions on letter and petition), which includes a petition with 42 signatures (**see Attachment 3**). A number of amendments have been made to the Draft Plan as a result of the submissions. The submissions and recommended amendments are documented in this report.

The Sir David Martin Reserve Landscape Masterplan provides a vision for the development of the Reserve over the next ten years. It will allow Council to carry out improvements at the park in stages, as funding becomes available, with the knowledge that all projects at the Reserve are in keeping with and will contribute to a long term vision for the Reserve.

The Sir David Martin Reserve Landscape Masterplan supports the objectives of the Open Space Distribution Needs Study (2000) which identified that "Council's local and district parks are not (in terms of both quantity and suitability) fully meeting the recreation needs of existing populations and do not have the capacity therefore, to absorb the recreation needs and demands of new populations." Further the current 2004 - 2009 Section 94 Contributions Plan acknowledges that "a large number of parks require further embellishments to more effectively meet the needs and expectations of (existing and future) recreational users".

## RECOMMENDATION

That Council adopt the Sir David Martin Reserve Draft Landscape Masterplan to guide future development and management of the park with the inclusion of the following amendments:

- Delete Appendix C from the Masterplan and effect future property acquisitions for open space in South Turrumurra through the Open Space Acquisition Strategy and insert the following words into the Landscape Masterplan.

*"Council seeks to extend the park over time to provide additional opportunities for passive recreation and ecological conservation, consistent with its status as a District Park".*

- Delete Appendix D from the Masterplan.
- Investigate the suitability of the road verge west of the amenities building in Auluba Road for 45-degree angle parking.
- Additional wording to be included in New Facilities section:

*"That the playing field area at Auluba 1 and 2 not be reduced when the youth activities area is constructed."*

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- Amend wording for Auluba 3 sportsfield:

*“Undertake upgrade works at Auluba 3 playing field with the design aimed at maximising opportunities for multiple sporting uses such as baseball, softball and football by maintaining the existing field dimensions. Works may include changes in level requiring retaining walls, batters and possibly relocation of baseball diamonds and fences. Planning for this project will involve consultation with the sports user groups..*

Jenny Cronan  
**Landscape Project Officer**

Roger Faulkner  
**Sport & Recreation Planner**

Steven Head  
**Director Strategy**

**Attachments:**

- 1. Sir David Martin Reserve Draft Landscape Masterplan – 844475 & 782876**
- 2. Summary of submissions and Council responses – 850236 - circulated separately**
- 3. Petition to Council, 41 Signatures – Confidential**



# **Sir David Martin Reserve Draft Landscape Master Plan**

**July 2007**

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# CONSULTATION ACTIVITIES

## MASTER PLAN PROCESS

Identify key issues with the community and stakeholders

Develop a Draft Landscape Master Plan

← We are here!

Refine Draft Master Plan and adopt by Council

Master Plan to be implemented in stages



## STAGE 1 CONSULTATION

to identify key issues

### *Consultation*

- Community workshop held 27 September, 2006
- Staffed display/site meeting at Kissing Point Village Green 29 and 30 September, 2006
- Spring Regional Sports Forum presentation 23 August 2006
- Interviews with staff from Turramurra High School and Turramurra Public School.

### *Responses*

37 worksheets and email responses plus Kissing Point Sports Club's responses on behalf of their 1,500 members.

### *The main activities undertaken at the Reserve*

- Organised sport: soccer, cricket, softball, baseball
- Children's playground and junior cycle track
- Socialising at Kissing Point Village Green
- Dogs: off-leash area and exercising
- Walking



Sports groups use the Reserve for competitive sport on weekends, team training weeknights, occasionally for special sport development days, social/community functions. Members also use the Reserve for jogging, walking and other impromptu activities such as picnics.

Schools use the fields weekly for sport, as well as gala days and annual sports carnivals.

See Appendix A – Completed Worksheets

## STAGE 2 CONSULTATION

to gain direction for refining concepts

This Draft Landscape Master Plan for Sir David Martin Reserve, as presented, is based on the above consultation with the community. We would like your response to the ideas presented, particularly where there are several options. Your input will be considered in the preparation of the final Landscape Master Plan.

# SENSE OF PLACE: COMMUNITY VISION

## What you told us

### What you value

- **Local character:** “Quiet ambience.” “Pleasant place.” “Casual, informal character, clear of motor vehicle pollution.”
- **Bushland:** “Wild, rustic.” “Bush ambience.” “Sense of being in the bush.” “Nature and space in the suburbs.” “Access to bushland.”
- **Open space:** “Space for playing with children.” “Walking across the ovals and seeing how big the Aussie sky is.”
- **Large open space areas:** “Flexibility of use, location, community feel and sense of ownership ... the focus of the Reserve as a place of community interaction, given the location of the shops are nearby, is extremely important.”

### What you would not like

- **Destruction of bushland:** “More cleared areas for passive recreation.” “Youth 'hang-out' in bushland - damaging bush.”

### Your vision

- **The Reserve to remain relatively unchanged:** “Kept clean and tidy.” “Not too much development.” “Casual, community feel.” “Don’t light up bush areas at the risk of disturbing native animals.”
- **Bushland protected and enhanced:** “Nature reserve with bushland protected and enhanced for passive recreation.” “Flannel flowers and Christmas Bells exist to the east.” “Remove weeds and plant indigenous.” “Remove dead timber in the freeway corridor.” “More native trees.” “Trees for shade.”

### Council’s response

Enhance local character, bushland and open space:

- Replant Duffys Forest vegetation particularly around boundaries to provide continuous and more integrated landscape character.
- New structures, such as buildings and activity areas, to occur in existing building zones and developed areas to complement the landscape.
- Plant additional trees to screen structures and provide shade..
- Consider adjoining properties for future extension to the Reserve (see Appendix C).



# SENSE OF PLACE: SITE IDENTITY

## Furnishings and accessories to compliment the existing character of the Reserve

All furniture to be accessible such as picnic tables and bubblers.



Seating to match existing with good back support and arm rests.



Source: "Town and Park Furniture"

Opportunity for public art to highlight the unique properties of site, such as sculpture of the native plants and animals. This echidna is by Ishi Buki



Fencing to match existing at Kissing Point Village Green.



Steps in bushland, where necessary, to be either timber or sandstone.



Source: steps at Palm Beach light house



Source: 'Landmark'

# ECOLOGY

## Masterplanning principles . . .

### Integrate sustainable principles into park design

- Reuse, recycle and reduce waste
- Manage off-site impacts such as noxious weeds and encroachments
- Biodiversity conservation:
  - Protect and enhance native plants and habitat
  - Provide corridors to link bushland areas
- Incorporate water sensitive urban design principles

### What you told us

#### What you would not like

- **Destruction, or negative impacts on bushland:** "Insufficient management." "Weeds." "More cleared areas for passive recreation." "Youth 'hang-out' in bushland - damaging bush."
- **Poor drainage:** "Muddy surrounds of the baseball ground, boggy areas." "Poor drainage areas near cricket nets."
- **Rubbish, litter:** "Not enough bins." "Not enough bins in park or the dog off-leash area." "Bins overflow on weekends." "Alcohol bottles."

#### Your vision

- Sustainable principles
- Environmental studies of bushland (school expressed an interest).
- Bushland protected and enhanced
- Support for water recycling project

### Council's response

- Prepare timetable and action plan to implement adopted 'Plan of Management' for bushland on this site.
- Plants to be Duffys Forest species where possible, otherwise native plants.
- Provide fencing where required to protect bushland.
- Provide bushland corridors and additional shade.
- Harvest stormwater to irrigate sportsfields and improve water quality.
- Redirect stormwater run-off away from bushland to improve bushland health and condition.
- Solar lighting where required, or lighting that can be adapted for solar energy as it becomes available.
- Introduce recycling bins and improve collection service.
- Interpretative elements installed.



Example from Marine Biological Station Park at Watson's Bay. Interpretative signage imprinted in concrete sets along path in bushland to avoid cluttering the landscape with signs.



Locations for new plantings of Duffy's Forest vegetation while retaining solar access to neighbouring properties and maintaining visibility into the site from the streets.

# ACCESS AND CIRCULATION

## What you told us

### How you access the Reserve

- The majority of local residents said that they walk to the Reserve including the high school students. People walk with dogs and with prams and they also bicycle. Most sports-club members come by car. Most short-cuts linked Chisholm Street to Kissing Point Road or from Auluba Road to Kissing Point Road/Vernon Street.

### What you would like

- **Walking tracks through bushland:** “Better defined walking tracks through bush.” “Boardwalk.” “Connect Chisholm Street with shops.” “Wider and level paths.” “Access through the bush is very difficult with a baby buggy - need wider, level paths made from compacted earth, rather than asphalt, which is in keeping with bush landscape. If its accessible for a 3 wheel buggy then it’s accessible for almost everyone.”
- **Path with lighting from Kissing point Road to Auluba 1 and 2.**

### Your vision

- **Walking tracks through bushland:** “Walking tracks identified and remove logs beside path.” “Two walking tracks through bush”. “ Define access from Chisholm St to Auluba 1 and 2 .” “Walking tracks designed to protect bushland; particularly from youth activities”.



Existing undefined and eroded tracks



Proposed stabilised paths

## Council’s response

- Maintain existing access points where residents enter and exit the Reserve. Formalise main entries with landscaped areas for a more welcoming feel to the Reserve (refer to pages 8 & 9). Provide park information signs at main entrances (refer to plans pages 7 & 10).
- Upgrade two of the existing paths through bushland and provide suitable surface for walking, such as crushed sandstone, to compliment the bushland character and improve drainage and erosion. Minimum width of path 1.2m. Paths located on the fire breaks.
- Define paths through bushland and deter shortcutting.
- Connect developed areas of Reserve for all-weather access as a shared pedestrian/cycle way. Grade towards Auluba 3 to direct stormwater away from bushland. Minimum width of path 2.5m. See page 15.
- Provide bicycle racks.



# PARKING AND TRAFFIC

## What you told us

### What you would not like/least like

- **No parking within the Reserve.**
- **No parking along Kissing Point Road:** “Current problem due to new paths that prevent cars parking adjacent to baseball field.” “Cars park on cycleway on both sides of Kissing Point Road. Why not relocate the path inside the park fence and reinstate parking with bays and use logs/stumps and create permanent, screened parking at 2 Vernon St?” “Dislike parking along Kissing Point Road; suggest permanent parking at 2 Vernon Street with vegetation to screen carpark.”
- **Traffic issues generated by sport:** “Lack of parking control” “Driving behaviour.” “Parking congestion by sporting activities.” “Auluba Road is dangerous with cars on both sides and impatient parents turning in driveways.” “Driving behaviour of parents at Saturday sports which can be careless.”
- **Lack of vehicular parking.**

### What you would like

- **Parking facilities near sportsfields:** “Angle parking at clubhouse area of Auluba Road and along Kissing Point road.” “Angle parking from the main diamond to Vernon Street with the footpath relocated inside the Reserve for walking, jogging.” “Paved parking along Kissing Point Road”. “Paved parking along Vernon Street.” “What is intended with the parking opposite Kissing Point Village Green?”

### Your vision

- **Improved parking:** “Parking needs improvement as the upgraded pathway has greatly restricted parking.” “Parking barrier along Kissing Point Road (particularly on Saturdays) to prevent cars from angle parking over the footpath – a dangerous situation as pedestrians are forced onto the road”. “Improved parking for Auluba 3 – better parking facilities.”



## Council's response

### Options for increasing parking

Option 1. Provide sealed angle parking along Kissing Point Road beside sportsfield area to increase parking capacity.

Option 2 Vernon Street: formalise parking beside the Village Green – surface and line mark.

Option 3. Seal carpark on vacant site at 2 Vernon Street. Informal planting at edges to screen from housing.

Retain kerbside parking along Auluba Road

Options subject to Car Parking Development Control Plan No. 43.

New parking areas to incorporate water sensitive urban design to reduce the impact on bushland and waterways.

# COMMUNITY: PASSIVE RECREATION

## Masterplanning principles

### Sustainable principles

- Provide access and amenity to all residents
- Design for low maintenance
- Offer opportunities for a range of recreational activities, both formal and informal, active and passive
- Incorporate elements that are important to the community and user groups
- Balance the concerns of all community groups
- Implement strategies that promote community health and well being

### What you told us

#### What you value most

- **Social opportunities:** “We place great value on the large open space, clubhouse and its home fields, the children's playground and the bush areas. We value the whole area enormously and are very aware that the KPSC, clubhouse and surrounding grounds form an integral part of the physical development of young and old and the social and community life in South Turramurra and the surrounding suburbs.”
- **Social opportunities at Kissing Point Village Green:** “Good place to take visitors.” “Good place to take children.”

#### What you would like to be available

- **Increased social opportunities:** “The facilities are fully used now, however, there is scope for increased social facilities. Upgrade clubhouse as community building; a multipurpose venue or registered/licensed club with outdoor BBQ/picnic area. There is scope to use the open space for one-off or irregular events (concerts, carols, weddings, school events and so on) ... promote the idea of the Reserve as a community space.” “BBQ shelter with chess table for elderly residents.”
- **More seating:** “Quiet areas for contemplation.” “Seating along pathways.” “Need seating with good back support.”

#### Your vision

- **More seating:** “More tables and chairs.” “Quiet areas for sitting.” “Double length table with bench seats and roof for larger group picnics.” “Spectator seating/shade and some passive areas.”

### Council's response

*Formalise main entries to Reserve with attractive landscaped spaces suitable social gatherings.*

#### Auluba Road:

- New entrance next to memorial area/clubhouse with sealed surface and seating to promote social opportunities and enhance the suitability of the Reserve for community events (see pages 9-10).
- Additional seating to compliment new youth area next to cricket nets (see pages 10, 12 & 13).

#### Kissing Point Road

- New seating at entrance adjacent to the field (see page 7)

#### Additional seating

- Seats beside pathways; limited in bushland and placed to avoid disturbing the vegetation and to allow for shady and sunny places.
- Seating at edge of fields for spectators and community use.
- Double-sized picnic setting at Kissing Point Village Green.

# COMMUNITY: PASSIVE RECREATION



New seating areas



Existing entrance area next to clubhouse.



Proposed combined entrance and seating area next to clubhouse.

## FORMALISE ENTRIES WITH LANDSCAPED AREAS

# COMMUNITY : ACTIVE RECREATION

## *What you told us*

### *What you would like to be available*

- Children's play and playground
- Jogging walking track with exercise stations

### *What you value most*

- **Playground:** "It's great." "Enclosed, good." "Safe area."
- **Dog area:** "Complete fencing to dog off-leash area." "Maintain dog area and complete fence." "Contain dogs so they don't go into the bush."

### *What you would not like*

- **Vehicles or traffic through bushland:** "Trail bikes". "Motorised vehicles." "Mountain bike tracks."
- **Skateboard activities:** "Encourages anti-social behaviour, graffiti, litter, consumption of alcohol, attracts undesirable elements."
- **Noisy activities:** "No parties." "No model aircraft." "Dog area (left as is) not fenced."
- **Expansion of dog off-leash areas.** "The Reserve should not be opened for access as a dog reserve in the same manner as other ovals in the municipality – the focus to be on human activity..."

### *Your vision*

- **Maintain dog area and complete fence:** "Contain dogs so they don't go into the bush."
- **Walking/jogging track**
- **Exercise stations:** "Along jogging track" "Stretch station similar to Scarborough Field near Loftberg."

## *Council's response*

- Provide for future expansion of the playground in the longer term.
- Complete fence to dog off-leash area (completed)
- Provide exercise equipment located at new sealed path (from Auluba Road to Vernon Street).
- Path suitable for bicycle use included (refer page 5)



*Suitable exercise equipment*

# COMMUNITY: ACTIVE RECREATION

## NEW YOUTH ACTIVITIES

### *What you told us*

#### *What you would like to be available*

- **Activities for older children:** “Formal activities that are challenging, but not skateboard.” “Space for informal football; away from organised sports area.” “Kicking wall/tennis wall; carefully positioned within sporting area, not in bushland.”
- **Facilities school children like:** “All ball games, basketball, volleyball, hoop areas, frisbees.”
- **Pitching wall located at Auluba 1 and 2**

#### *What you would not like*

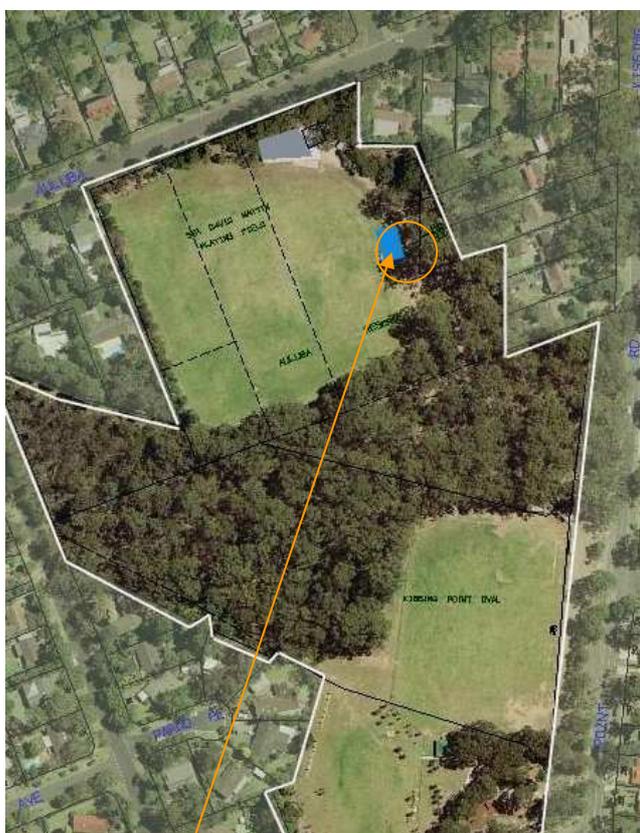
- (Refer page 10) Trail bikes, motorised vehicles, mountain bike tracks.

#### *Your vision*

- **Social opportunities for youth:** “Meeting places where youth can meet and talk near activity zone.”

### **Council’s response**

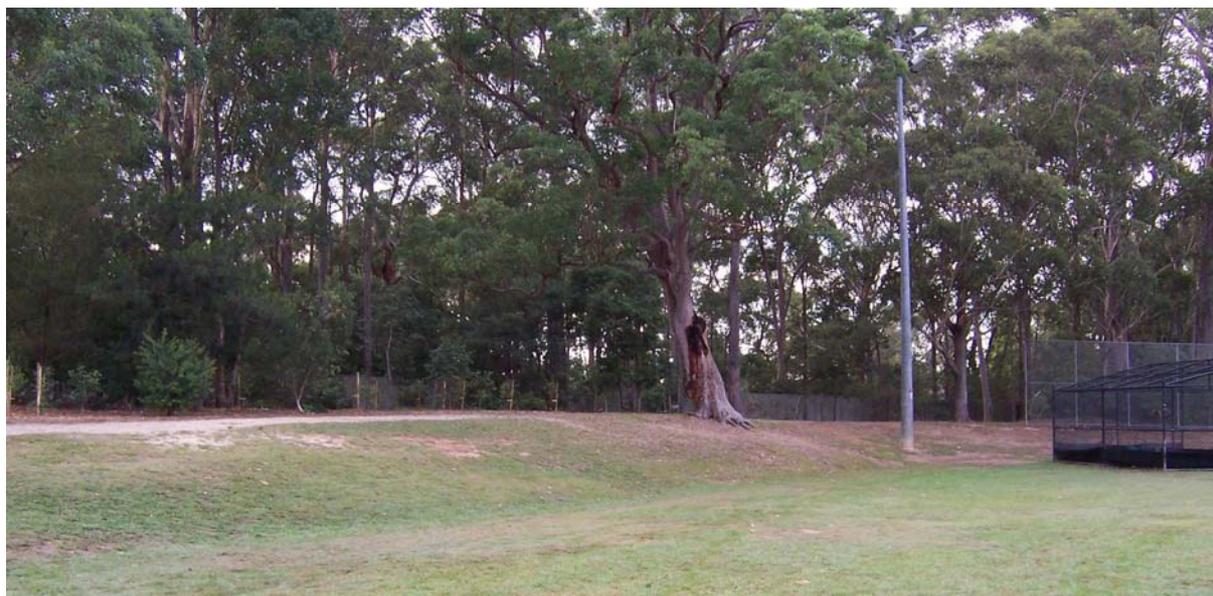
- Provide youth activities, located next to cricket nets. Basketball area and practice wall, suitable for tennis, softball and soccer.
- Seating area next to clubhouse compliments this facility (see pages 10 & 13).
- The location for the youth facility allows activities to expand onto the fields. It is near the local shops and clubhouse facilities.
- The facilities can be used by the club for training and therefore reducing wear and tear on the fields.
- A new batting cage is included next to the existing cricket nets to compliment this facility (see page 10)
- Refer to image of proposed youth area (see pages 13 & 14).



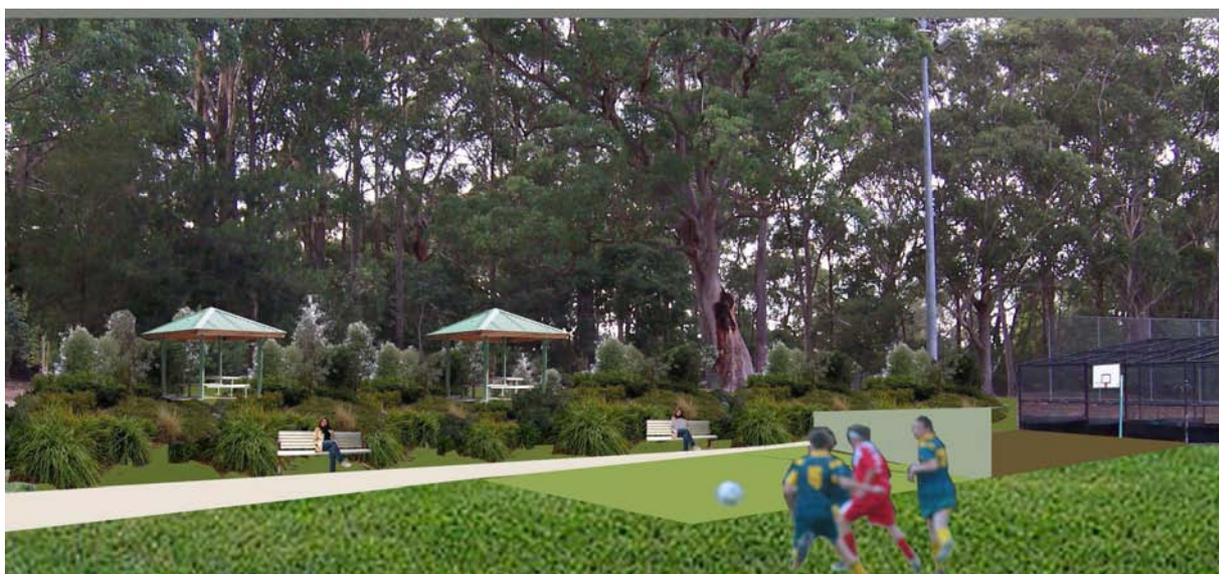
*Location of new youth activities area*

# COMMUNITY: ACTIVE RECREATION

## NEW YOUTH ACTIVITIES



*Existing area adjacent to cricket nets*



*Proposed area adjacent to cricket nets*

# COMMUNITY: SPORTS CLUBS

## What you told us

### What you would like

- Practice and game facilities – prefer Auluba 3 shared with softball.
- Improved field condition and repositioning of fields 1 and 2 with senior field to front of site.
- Lighting to allow training for sports using small balls such as cricket and softball.
- Fencing to Auluba 1 and 2 to prevent ball loss.
- Extension of safety fencing at Auluba 3.
- Shelters for teams to sit under at diamonds and updated benches.
- Practice nets – upgraded and enlarged to suit cricket, baseball and softball practice.
- Storage for equipment and bins.
- Clubhouse improved as community building, multipurpose venue.
- Spectator seating and shade for Auluba 1, 2 and 3.

### What you value

- **Open space:** “Flexibility of open space.”
- **Sportsfields and facilities:** “For youth.” “Available all year round.”
- **Clubhouse:** “Related social opportunities.” “Ideal clubhouse.”

### What the community would not like

- **No more sporting activities:** “Currently used to its optimum, Canoon Road complex nearby.” “No more soccer.” “All weekend.”
- **No night evening sports activities:** “Other than properly organised training sessions.” “Soccer practice is noisy.” “No activities after 9 pm.” “No night baseball etc., no floodlights please.”
- **Noise:** “Noise generated by soccer spectators.” “Noise from night time practice.”
- **Clubhouse:** “substandard.” “Ugly.” “Poor landscaping around clubhouse.”

### What the sports club would not like

- **Poorly maintained playing surface**
- **Poor condition and inadequacy of cricket nets**
- **Dilapidated infrastructure**

## Your vision for the future of the Reserve

### Short term

- Best use of sportsfields - rotate junior fields mid-season
- Upgrade and refurbish Auluba 1, 2 and 3 with watering system to fields 1 and 2.
- Lighting suitable for small ball activities
- Practice nets and kicking wall
- Storage for clubhouse
- Fencing: Safety nets at Auluba 3
- Toilet facilities upgraded and improved maintenance
- Improved parking

### Medium term

- New turf wicket
- Upgrade clubhouse
- Relocate cricket training facilities
- Field 3 used for multi-purpose sport

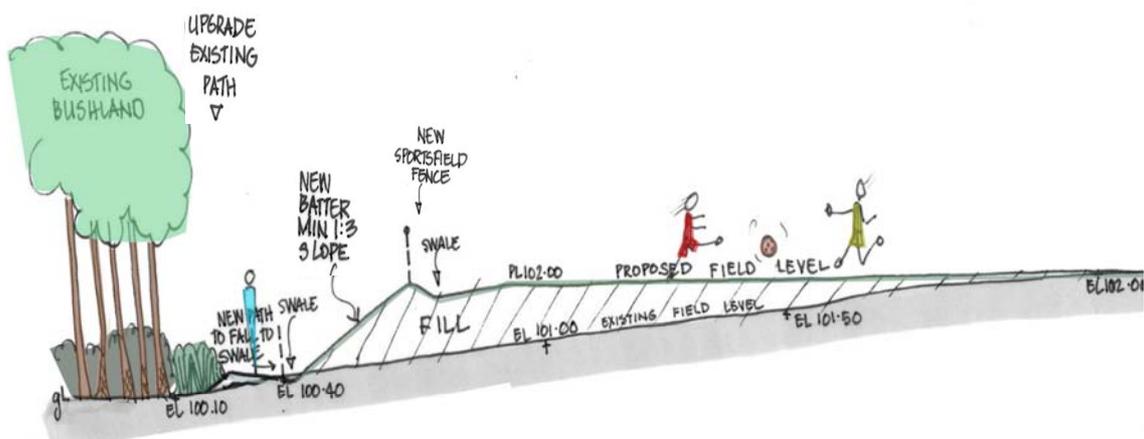
### Long term

- Facility use as registered/licensed club
- Realignment of fields for soccer and cricket
- Turf wicket strips for fields 1 and 2.

# COMMUNITY: SPORTS CLUBS

## Council's response

- Improve maintenance of public toilets and provide unisex accessible toilet at clubhouse.
- Upgrade Auluba fields 1 and 2 with water harvesting, irrigation and lighting.
- Maintain location of Senior field at Auluba 1. Changing the orientation will result in the cricket pitch being located in the football field. North/south orientation is more effective as it reduces the impacts of the westerly sun (see page 16).
- Rotate Junior fields as suitable.
- Upgrade Auluba field 3: level with new surface and size to accommodate senior football field and reposition junior baseball diamond slightly to the south.
- Investigate options for like-sports to be grouped together, such as softball and baseball.
- Investigate opportunities for lighting at Auluba 3 to AS 2460-2.6-1994 Guide to Sports Lighting – Specific Recommendations for Baseball and Softball
- Provide additional seating.
- Provide rebound wall suitable for soccer, softball and tennis (see page 10 & 13), or a synthetic surface area suitable for training.
- Upgrade fencing to fields to meet safety, aesthetic and Council standards.
- Provide batting cage adjacent to existing cricket nets (see page 10).
- Consider increased storage for bins and sports equipment where possible (see page 10).
- Design cricket pitches to accommodate winter use surfaces – located between football fields and with synthetic covers.
- Support opportunities to upgrade clubhouse in order to provide a flexible-use community building.
- Consider access to power for softball pitching machine.

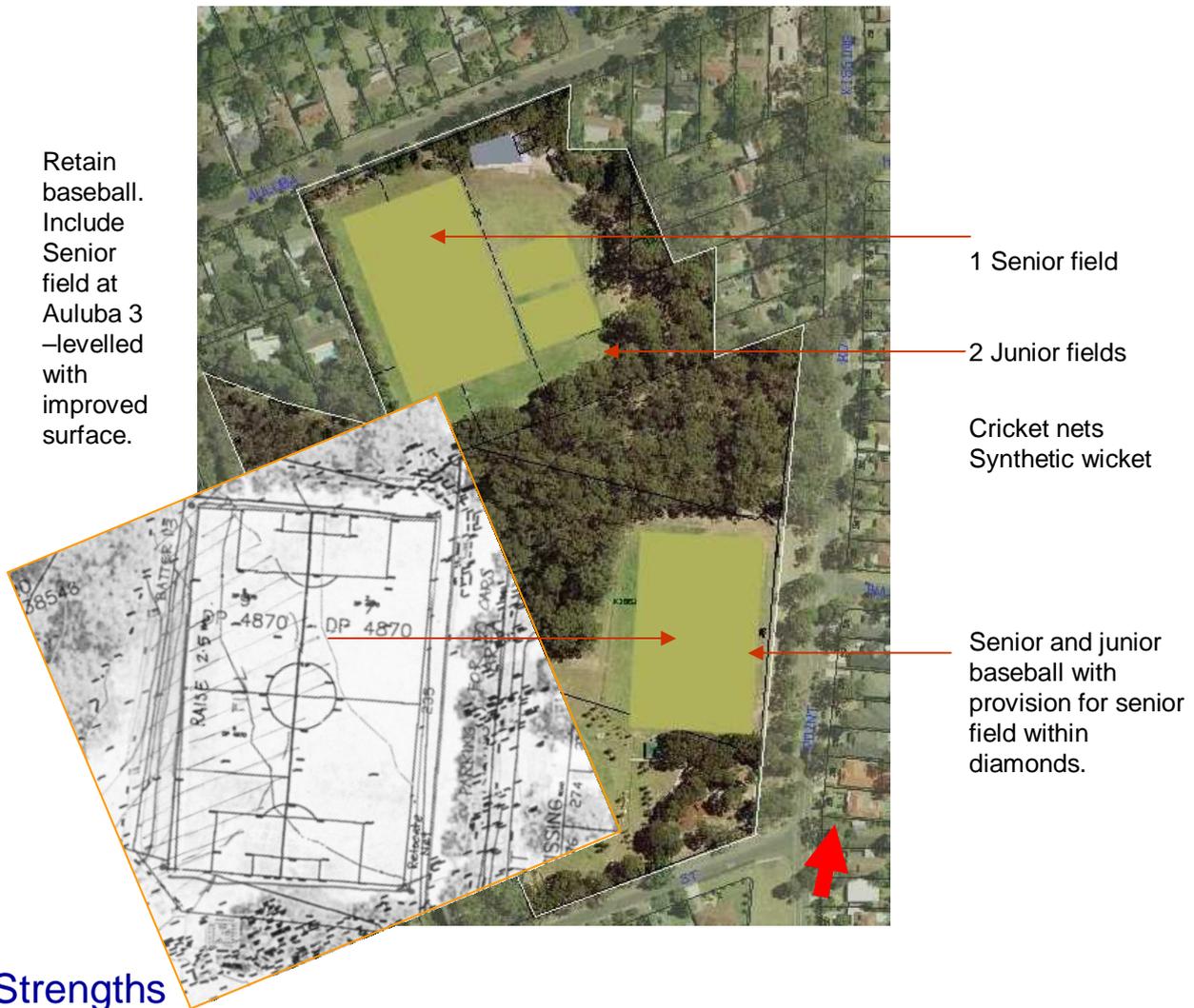


## CONCEPTUAL SECTION

*Auluba 3 – leveled to accommodate senior football field.  
Fence at rear above embankment.*

*Path below embankment.*

# SPORTSFIELD CONFIGURATION



## Strengths

- Set in cleared area – no existing vegetation to clear
- No existing services in field area to damage
- Existing toilets, storage and club kiosk adjacent
- Existing playground and picnic area adjacent
- Field orientated North/South
- Existing site infrastructure – water and power available for connections
- Can be sited without effect to existing senior baseball backnet and dug-outs
- Re-levelled site and path can be graded to control stormwater run-off and associated damage to bushland
- If lights installed, no adjacent housing on site
- Greater connection of sports grounds with walking track

## Weaknesses

- Small run-out and limited spectator space around field
- Baseball diamonds to be summer use only
- Baseball mound to be moved each season
- No club storage sheds or change rooms

# SIR DAVID MARTIN RESERVE

## CONCEPT PLAN



## APPENDIX A – WORKSHEETS

<b>What are the main activities undertaken at the Reserve?</b>		
ISSUE	No of responses	COMMENTS
<b>NATURAL ENVIRONMENT</b>		
Nature study	2	
<b>ACTIVE RECREATION</b>		
General exercising	3	
<b>Walking</b>	<b>12</b>	<b>"Mums time out." "Walk through the Reserve to watch various activities." "Walk as short cut to the shops."</b>
Bush walking	4	"Walking through bush to visit friends - horses."
<b>Dogs - off-leash and exercising</b>	<b>19</b>	
Bicycling through park	4	
Jogging/walking	5	
Open space activities	1	
Kite flying	3	"Running around baseball oval to fly kites."
Model aeroplane flying	1	
Golf practice	1	
Scooter riding	1	
<b>School sport</b>		<b>Turrumurra High: Weekly sport, Seasonally for gala days and (generally) annually for cross country. Turrumurra Public: Alternate weeks in summer for sport and weekly in winter for soccer.</b>
<b>PASSIVE RECREATION</b>		
Relaxing/passive activities	3	
Picnics	1	
<b>Socialising at Kissing Point Village Green</b>	<b>22</b>	
<b>Children's play/playground and cycle track</b>	<b>22</b>	
Public toilets	1	
<b>ORGANISED SPORT</b>		
<b>Soccer, cricket, softball, baseball</b>	<b>25</b>	
Sport/circuit training	3	
Sport spectators	1	
Clubhouse activities	4	
<b>Organised sport with Kissing Point Sports Clubs</b>	<b>KPSC</b>	<b>Training of teams during weeknights, playing competition games on weekend &amp; occasionally special sport development plus social/community functions.</b>
<b>Softball</b>	<b>KPSBC</b>	<b>Softball use Auluba 1 and 2 for practice two nights a week from April to September (5-9pm) and some weekends for development days.</b>

**Are there any activities that you would LIKE to be available at the Reserve?**

ISSUE	NO OF RESPONSES	COMMENTS
Remain unchanged	3	"Like it just the way it is - not too busy and unspoilt." "Just the activities currently there."
<b>NATURAL ENVIRONMENT</b>		
Bush regeneration	1	
Interpretative signs through bushland	2	"Describing habitat - birds etc. and the history of the area such as an orchard where shops are."
Water recycling project	1	"Rainwater tanks for watering fields would certainly be worthwhile."
<b>ACTIVE RECREATION</b>		
<b>Walking tracks through bushland</b>	<b>7</b>	<b>"Better defined walking tracks through bush." "Boardwalk." "Connect Chisholm St with shops." "Wider and level paths." "Access through the bush is very difficult with a baby buggy - need wider, level paths made from compacted earth (rather than asphalt) which is in keeping with bush landscape. If it's accessible for a 3 wheel buggy then it's accessible for almost everyone."</b>
Guided bush walks/explorations	1	
Walking/jogging track	4	"Path for seniors." "Path around perimeter." "Path linking the Village Green and Ovals 1 and 2."
General exercise	2	
Exercise equipment	3	"Similar to that at Lofberg Oval." "Exercise stations around the baseball oval - very small and similar to E. Gordon Primary School."
Bicycle track and related facilities	3	
<b>Dog exercise</b>	<b>5</b>	
Dog off-leash area fenced	3	"Quite often dogs run into the bush and scare unsuspecting walkers."
Area/activities for older generation	3	"Boules/bocchi next to Auluba clubhouse." "Areas for informal and organised sport."
Outdoor entertainment	1	"Bicentennial Park is too far away."
Specific outdoor activities	2	"Kite flying." "Model aeroplane flying."
<b>Activities for older children</b>	<b>5</b>	<b>"Formal activities that are challenging, but not skateboard." "Space for informal football away from organised sports area." Kicking wall, tennis wall - carefully positioned within sporting area, not in bushland." (2)</b>
Skate area for children	2	
<b>PASSIVE RECREATION AT KISSING POINT VILLAGE GREEN (the Village Green)</b>		
<b>Additional seating</b>	<b>5</b>	<b>"Quiet area for contemplation." (2) "Need seating with good back support." "Seating along pathways."</b>
Picnic area	1	
BBQ	4	
Bubblers - drinking water supply	1	
<b>Children's play and playground</b>	<b>7</b>	
Kid's bike track enlarged	1	
<b>ORGANISED SPORT</b>		
<b>Organised sport</b>	<b>5</b>	
Night soccer	1	
Net at Auluba Road end of field to stop balls going onto the Road	1	
Baseball field levelled	2	

Netted area for baseball and softball hitting practice	1	
Batting cage(s) for baseball	1	"Using club's pitching machines."
Softball diamonds	1	Kissing Point Softball
Softball area pitching wall	1	Kissing Point Softball. Could also be used for tennis (squash) and soccer
Seating for baseball area	1	Shelters for teams to sit under at each diamond and updated benches
New oval at Chisholm Street where housing proposed and maintain Oval 3 as a natural field.	2	
<b>Clubhouse - improved facilities</b>	<b>10</b>	<b>"Improved facilities." "Additional floor" (2) "Additional storage." (3) "As meeting venue." (2) "To include youth activities." (2)</b>
Seating around oval for spectators	2	
Improved toilet maintenance	1	"Lockable toilets for use by the teams on Saturdays and at training sessions is a must. The current toilet block is disgusting and always filthy. A cleaner should also be engaged to clean the facility early on Saturday mornings before games commence. This is similar to what occurs at the Loftberg Road netball courts during winter for netball players."
Improved lighting	1	"Current lighting poor."
<b>ADDITIONAL FACILITIES</b>		
Small café/stall	2	
Pool	1	
Footpath upgrade		"From no 2 Auluba Road to the oval - people can be seen walking along the road between the oval, kindergarten and shops this would help access the doctor at no 4 and kindergarten at 10a as they can be accessed by footpath from the oval, around the baseball diamond."
Paved parking along Kissing Point Road	1	
Paved parking along Vernon Street	1	"What is intended with the parking opposite The Village Green?"
<b>KISSING POINT SPORTS CLUB' (KPSC)</b>		
<b>Practice and game facilities</b>	<b>KPSC</b>	<b>"Upgrade Auluba 1, 2 and 3. Prefer Auluba 3 shared with softball as similar codes and main seasons are complimentary, rather than sharing with soccer (same season) and different needs."</b>
<b>Safety nets at Auluba 3</b>	<b>KPSC</b>	<b>"Extend nets for fly balls."</b>
<b>Lighting for small balls</b>	<b>KPSC</b>	
<b>Repositioning of soccer field and cricket pitch</b>	<b>KPSC</b>	<b>Auluba 1 and 2 for maximum use - at least one championship soccer field.</b>
<b>Storage</b>	<b>KPSC</b>	<b>For equipment and garbage bins (currently housed in club change rooms due to vandalism.</b>
<b>Practice nets</b>	<b>KPSC</b>	<b>for cricket, softball and baseball</b>
<b>Practice wall</b>	<b>KPSC</b>	<b>for kicking and pitching balls with good lighting</b>
<b>Gas connection to clubhouse</b>	<b>KPSC</b>	<b>for heating and BBQ</b>
<b>All weather courts for practice</b>	<b>KPSC</b>	
<b>Jogging, walking track with exercise stations</b>	<b>KPSC</b>	<b>From Auluba 1 &amp; 2 to Auluba 3</b>
<b>BBQ shelter with chess table for elderly residents</b>	<b>KPSC</b>	
<b>Spectator seating and shade for Auluba 1,2 and 3</b>	<b>KPSC</b>	
<b>Parking</b>	<b>KPSC</b>	<b>Angle parking at clubhouse area of Auluba Road and along Kissing Point Road.</b>
<b>KISSING POINT BASEBALL CLUB (KPBC)</b>		
<b>Levelling of the field</b>	<b>KPBC</b>	<b>"This is without doubt our major concern ..."</b>
<b>Lighting of the field</b>	<b>KPBC</b>	
<b>Parking</b>	<b>KPBC</b>	<b>Angle parking from the main diamond to Vernon Street with the footpath relocated inside the Reserve for walking, jogging.</b>
<b>Shaded areas</b>	<b>KPBC</b>	<b>The club has applied for a government grant to build a shaded area next to the junior diamond, but a shaded area next to the main diamond is also needed.</b>

<b>Are there any activities that you would NOT LIKE to see happening at the Reserve?</b>		
<b>ISSUE</b>	<b>RESPONSES</b>	<b>COMMENTS</b>
Over development	2	"Commercialisation." "Not too much development, keep bush feel." "Not another Bicentennial Park look - no concrete paths or lights - keep bush feel."
Formal/manicured appearance	1	
<b>NATURAL ENVIRONMENT</b>		
<b>Destruction of bushland</b>	<b>4</b>	<b>"More cleared areas for passive recreation." "Youth 'hang-out' in bushland - damaging bush."</b>
Visual pollution - signs	1	
Concrete paths through bush	1	"Prefer timber edged, mulched paths."
Cycle paths combined with walking paths	1	"Exception young children's playground."
More hard surfaces	1	
Expansion of dog area	1	
<b>ACTIVE RECREATION</b>		
<b>Trail bikes, motorised vehicles, mountain bike tracks</b>	<b>5</b>	
Bike riding in dog off-leash area	1	
Horse riding	2	
Skateboard activities	8	"Encourages anti social behaviour, graffiti, litter, consumption of alcohol, attracts undesirable elements."
Golf practice	4	
<b>ORGANISED SPORT</b>		
More sporting activities	5	"Currently used to its optimum, Canoon Road complex nearby." "No more soccer." "All weekend."
Night/evening sports activities	6	"Other than properly organised training sessions." "Soccer practice is noisy." "No activities after 9 pm." "No night baseball etc - no floodlights please."
Any sport that increases traffic	1	
<b>FACILITIES/MISC ACTIVITIES</b>		
No more buildings/clubhouses	2	
Parking	3	"No car parking within the Reserve." (2) "No car parking along Kissing Point Road - current problem due to new paths that prevent cars parking adjacent to baseball field. Cars park on cycleway on both sides of Kissing Point Road. Why not relocate the path inside the park fence and reinstate parking with bays and use logs/stumps and create permanent, screened parking at 2 Vernon St?"
Elements that attract graffiti or vandalism	2	
<b>Noisy activities</b>	<b>6</b>	<b>"No parties." "No model aircraft." (2)</b>
Pot smoking	1	
Activities that lead to increased alcohol consumption	4	"No booze-ups." "No pub." "It seems baseball requires lots of drinking late into the evenings and occasionally throwing up."
<b>Skateboard ramp</b>	<b>KPSC KPCC</b>	
<b>Further dog off-leash areas</b>	<b>KPSC KPCC</b>	
<b>Anything that reduces the availability of the grounds</b>	<b>KPSBC</b>	

<b>What do you value MOST about the Reserve?</b>		
<b>ISSUE</b>	<b>NO OF RESPONSES</b>	<b>COMMENTS</b>
<b>NATURAL ENVIRONMENT</b>		
<b>Bushland</b>	<b>20</b>	"Rustic, wild." "Bush ambiance." "Sense of being in the bush." "Trees, trees, trees." "Flora and fauna." "Trees." "Nature and space in suburbs." " Access to bushland."
Quiet atmosphere	3	Serenity
<b>Local character</b>	<b>7</b>	"Casual, informal character, clear of motor vehicle pollution." "No boundaries/gates around Reserve." "Pleasant place." "Close proximity to home."
Proximity to residents	1	
Bushland, but there could be less as we live in bushy area	1	
Bush regeneration	1	"Very impressed with bush regeneration going on."
<b>Open space</b>	<b>17</b>	"Walking across the ovals and seeing how big the Aussie sky is." "Break in urbanism." "Open space for playing with children."
<b>ACTIVE RECREATION</b>		
Walking/jogging areas	3	
Variety of activities	2	
Fun-type activities that happen in the Reserve	1	
Seeing people enjoying picnicking	1	
<b>PASSIVE RECREATION AND KISSING POINT VILLAGE GREEN</b>		
Village Green - excellent	2	"Safe, shady area to meet friends."
<b>Social opportunities</b>	<b>5</b>	"Good place to take visitors." "Good place to take children."
BBQs	3	
Dog area	4	
Toilet facilities	3	No need for more. Cleaner.
Close proximity to residences, schools and shops	1	
Bike track	1	
<b>Playground</b>	<b>7</b>	"Enclosed." "Good." "It's great."
Opportunities for children's play	2	Safe area.
Fences	1	
<b>ORGANISED SPORT</b>		
<b>Sporting fields and facilities</b>	<b>7</b>	"For youth." "Available all year round."
Cricket	1	
Well maintained	1	
Clubhouse	4	"Related social opportunities." (2) "Ideal clubhouse."
Lighting for night time sports activities	1	
<b>Open space, clubhouse, playground, bushland</b>	<b>KPSC</b>	"We place great value on the large open space, the clubhouse and its home fields, the children's playground and the bush area. We value the whole area enormously and are very aware that the Kissing Point Sports Club, the clubhouse and the surrounding grounds form an integral part of physical development of young and old and the social and community life in South Turramurra and the surrounding suburbs."
<b>Large open space areas - flexibility of use, location, community feel and sense of ownership</b>	<b>KPCC</b>	"...the focus of the Reserve as a place of community interaction (given the location of the shops nearby) is extremely important."
<b>Large space and clubhouse</b>	<b>KPSBC</b>	

**What do you least like about the Reserve?**

ISSUE	NO OF RESPONSES	COMMENTS
<b>NATURAL ENVIRONMENT</b>		
		"Insufficient management." (3). "Degradation." (3). "Weeds." (3). "Not fenced for protection." "Burning the bush for fuel reduction, should be manual rather than by fire." (3) "Dead, burnt trees in area where fire has been." "Dangerous dead trees."
<b>Negative impacts on bushland</b>	<b>10</b>	
Too many tracks through bushland	2	
Tracks not clearly defined and people walking in bushland	1	
No track between Chisholm St and Ovals 1/2 and 3.	1	
Lack of cohesion - add-hoc nature of park design	1	
Negative impacts of fencing	2	"Awful fencing." " Fencing around baseball oval."
<b>PASSIVE RECREATION AND KISSING POINT VILLAGE GREEN AREA</b>		
Seating	2	
Not enough bins in park and dog area	1	
		"Not enough." "Poorly maintained." "Always dirty." "Locking the toilet building is a problem due to constant use by families who use the park - please discuss with contractors."
<b>Toilets</b>	<b>3</b>	
BBQs	1	
		"Not enough bins." "Not enough bins in park or dog-off-leash area." "Bins overflow on weekends." "Alcohol bottles."
<b>Litter/rubbish</b>	<b>3</b>	
Lack of shade	1	
<b>ACTIVE RECREATION</b>		
Not enough open space for informal activities when sport is on.	1	"Need more - maybe 2 more and can be uncovered." "Too slow to heat."
<b>Dog off-leash area not fully fenced</b>	<b>3</b>	
Poor surface in dog off-leash area	1	
Children driving golf balls onto neighbouring houses	1	
Soccer players entering neighbouring properties to retrieve balls	1	"And not asking permission."
Baseball field not level	1	
Hard ground and poor grass cover	2	
Fallen trees around Auluba oval (left)	1	
		"Muddy surrounds of the baseball ground, boggy areas." "Poor drainage areas near cricket nets." (KPSftball)
<b>Poor drainage</b>	<b>5</b>	
Lack of water retention on site	1	
Inadequate fencing	1	
Name of baseball oval. 'Field of Dreams' too American	1	
Buildings such as club houses	1	"But they are necessary."
		"Substandard." "Ugly." (x 2) "Poor landscaping around clubhouse."
<b>Clubhouse</b>	<b>3</b>	
Not enough storage for sports club	2	
Litter around sports clubhouse and baseball diamond	1	
Night lights	2	"Unnecessary use of lights (high energy consumption) time switches needed."
Lights - lacking	2	
Poor maintenance of sportsgrounds by council	3	"Sportsgrounds in winter, cricket nets."
Uneven playing surface sportsfields	1	
Inadequate toilet facilities	1	
Traffic generated by sport	2	

Parking congestion by sporting activities	2	"Auluba Road dangerous with cars on both sides and impatient parents turning in driveways."
Lack of vehicular parking	2	
Lack of traffic control	1	
Disused parking area cn. Vernon St	2	"Dislike parking along Kissing Point road, suggest permanent parking at 2 Vernon St, with vegetation to screen car park."
Driving behaviour of parents at Saturday sports which can be careless	1	
<b>Noise</b>	<b>4</b>	<b>"Noise generated by soccer spectators." (2) "Noise from night time practice."</b>
Vandalism/graffiti	3	"Night."
SPORTS GROUPS		
<b>Facilities</b>	<b>KPSC</b>	<b>"We least like the dilapidated ageing facilities."</b>
Playing surface	KPCC	Particularly the two smaller soccer fields which do not cope with intensive use. Better management could lessen their recovery time.
Cricket nets in current condition	KPSBC	Upgraded with lighting

<b>Your vision</b>		
<b>SHORT TERM (NEXT 5 YEARS)</b>		
<b>SUSTAINABILITY AND THE NATURAL ENVIRONMENT</b>		
<b>Sustainability</b>	<b>Schools</b>	<b>The Public School has implemented sustainable principles and is interested in using the Reserve for environmental studies.</b>
<b>Support for water recycling project</b>	<b>8</b>	<b>"Water retention to prevent stormwater run off into neighbouring properties."</b>
<b>Water retention system</b>	<b>KPBC</b>	<b>"...need to be installed to ensure the grounds can be maintained in times of drought."</b>
<b>Remain relatively unchanged</b>	<b>5</b>	<b>"Kept clean and tidy, Not too much development." "Casual, community feel." "Don't light up bush areas at risk of disturbing native animals."</b>
<b>Bushland protected and enhanced</b>	<b>14</b>	<b>"Nature reserve with bushland protected and enhanced for passive recreation." "Flannel flowers and Christmas Bells exist to the east." "Bushland cleaned up." "Remove weeds and plant indigenous." "Remove dead timber in the freeway corridor." (2) "More native trees." (2) "Trees for shade."</b>
Improve drainage	1	
<b>ACTIVE RECREATION</b>		
<b>Walking tracks through bushland</b>	<b>10</b>	<b>"Walking tracks identified and remove logs beside path." (2). "Walking tracks." (2) "Walking tracks through bush." (3) "Define access from Chisholm St to Auluba 1 and 2 x 1." "Walking tracks designed to protect bushland (4) particularly from youth activities." (1)</b>
Lights for tracks	1	
Jogging track	1	
Bicycle track and related facilities	2	"Bike track around entire Reserve."
Exercise equipment	1	Similar to Loftberg, for adult use, at located at the Village Green area."
<b>Maintain dog area and complete of fence</b>	<b>7</b>	<b>"Contain dogs so they don't go into the bush."</b>
Boules area	1	
Playground upgraded	2	"Playground upgrade for 18 months old and up." "Bike path fenced and similar to Bicentennial Park, Pymble."
Bigger bike track around playground	1	Playground at Clontarf near Clonnies Restaurant.
Cycle tracks	1	"Cycle tracks are needed for older children as the current facility is only suitable for children under 5 years of age."
<b>Walking/jogging track with exercise stations</b>	<b>KPSC</b>	
<b>Activities/area for older children (outgrown existing playground)</b>	<b>4 plus school</b>	<b>"Skate park." (x 2). "Bike tracks." "Basketball half-court similar to the Glade with seating/tables." "Kicking wall."</b>
Friday night competition sport	1	
<b>PASSIVE RECREATION</b>		
<b>More seating</b>	<b>6</b>	<b>"More tables and chairs." Quiet areas for sitting." " Double length table with bench seats and roof for larger group picnics."</b>
Café	1	
<b>Social opportunities for youth</b>	<b>Schools</b>	<b>"Meeting places where youth can meet and talk (near facility such as basketball half courts)."</b>
<b>GROUNDS AND FACILITIES</b>		
<b>Improved sports field condition</b>	<b>Schools</b>	<b>Public school: Improved condition of fields for best use. High School: Good quality open space for sport. Additional cricket nets but not at the expense of sports field area.</b>
Level playing fields	2	"Level Auluba 3." "Join Auluba fields 1, 2 with 3 as joint playing area."
Better playing surface/ all-weather surface	2	"Major upgrade of playing surfaces."
Grass area	1	"Better grass."
Better ground surfaces	1	
Fence baseball area	1	
Lighting generally	3	"Improve lighting at Village Green." (2) "Provide limited lighting (at dog area)."
Lighting of sports fields	4	Additional lighting: " For Auluba 1 and 2 for small balls." "Night lighting for all sport." "Better small ball lighting for Field of Dreams so it can be used all year round." "Lighting for Auluba 1, 2 and 3."
Lighting concern	1	"Limit use to minimum required with time switches."

Toilets	1	"Improve maintenance - clean more frequently." "Soap dispensers."
No/less vandalism	1	
<b>Improve/upgrade club house</b>	<b>8</b>	<b>"Improve/upgrade clubhouse." (3). Ugly." "Add second storey." (2) "Storage at club house." (3)</b>
Social area, BBQ near clubhouse	1	
<b>Parking</b>	<b>4</b>	<b>"Parking moved from along Kissing Point Road to 2 Vernon Street." (2)</b>
Traffic controls	1	"Control speed limits with physical barriers."
No/less vandalism	1	
<b>SPORTS GROUPS</b>		
Upgrade and refurbish Auluba 1,2 and 3	KPSC	
Watering system	KPSC	
Practice nets and wall	KPSC	
Storage for clubhouse	KPSC	
Small ball lighting	KPSC	
Safety netting at Auluba 3	KPSC	
Spectator seating/shade and some passive recreation areas	KPSC	
Renovate and maintenance of all fields	KPCC	
Rotation of the two junior fields mid season	KPCC	
<b>Parking</b>	<b>KPSC</b>	<b>"Parking needs improvement as the upgraded pathway has greatly restricted parking."</b>
Toilets	KPBC	"Toilet facilities are poorly maintained and need an upgrade and a proper maintenance program as currently they are filthy when the majority of users are in the park i.e. weekends."
Auluba 3 upgrade	KPSBC	"...two diamonds that are usable during the daylight all day on Saturdays. On Friday and Saturday nights it could be used for competitive games. During week evenings it could be used Monday to Thursday for training under appropriate small ball floodlights."
<b>MEDIUM TERM (5-10 YEARS)</b>		
<b>SUSTAINABILITY AND THE NATURAL ENVIRONMENT</b>		
Remain relatively unchanged	3	
Water storage and recycling	4	
Nature reserve with bushland protected and enhanced for passive recreation	2	
<b>Maintenance of bushland</b>	<b>6</b>	
Education for bushland and native animals	1	
More trees/vegetation	1	
Hazard reduction	1	
<b>ACTIVE RECREATION</b>		
Exercise equipment	1	
Area for older children who have outgrown playground	4	"Skate park."(2) "Bike tracks." "Facilities e.g.. flying fox, climbing wall etc."
Extend bicycle tracks	1	
Link up bush corridor with future sports grounds across from Chisholm St	1	
Improved drainage	1	
Maintain and fence dog area	1	
Improve entrance gate at Auluba	1	"Better surfaced and planted."
Lighting	1	"Lighting for Village Green." "Lighting for Field of Dreams."
Level playing fields	2	Join Auluba fields 1 2 with 3 as joint playing area. Level Auluba 3.
Friday night competition sport	1	

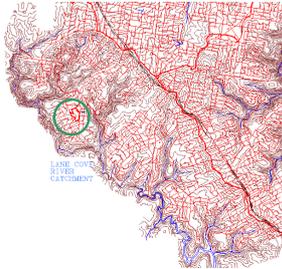
<b>PASSIVE RECREATION</b>		
Additional seating for sports groups	1	
Café	1	
<b>GROUNDS AND FACILITIES</b>		
Upgrade clubhouse	3	Clubhouse to have second story. (Kissing Point softball)
Extra storage for clubhouse	1	
Aquatic centre	1	
Toilets updated	2	
Upgrade sports ovals	2	Better playing surface for all weather sports
Facilities for viewing sport	1	
Bubblers	1	
Improved parking for Aulbua 3	2	Better parking facilities
Parking barrier along Kissing Point Road (particularly on Saturdays) to prevent cars from angle parking over footpath	1	Dangerous situation as pedestrians forced onto the road
No/less vandalism	1	
New turf wicket	KPSC	
Upgrade clubhouse facilities	KPSC	
Upgrade facilities (clubhouse)	KPCC	
Relocate cricket training facilities	KPCC	
Oval 3 used for multi-purpose sport	KPCC	
<b>LONG TERM (10 YEARS PLUS)</b>		
<b>SUSTAINABILITY AND NATURAL ENVIRONMENT</b>		
Remain relatively unchanged	3	Kept clean and tidy, Not too much development. Casual, community feel.
Water storage and recycling	4	
<b>Protect and enhance bushland</b>	<b>7</b>	<b>Nature reserve with bushland protected and enhanced for passive recreation. Remove weeds.</b>
More trees/vegetation	4	More shade
Hazard reduction	1	
Healthy oval complex surrounded by healthy bush with strong biodiversity	1	
<b>ACTIVE RECREATION</b>		
Additional walking tracks	1	
Update playground	1	
Improved facilities for youth	1	
Exercise equipment	1	
Aquatic centre	1	
<b>PASSIVE RECREATION</b>		
More seating	1	
Better grass areas	1	
Community functions/gatherings	1	
Café	1	
<b>GROUNDS AND FACILITIES</b>		
Improved drainage	1	
Better playing surface for sport	1	All-weather surface
Possible public seating for ovals	1	
No/less vandalism	1	
Use of facilities as registered or licensed club	KPCC	
Realignment of fields for soccer and cricket	KPCC	
Installation of a turf wicket strip for ovals 1 and 2	KPCC	

# APPENDIX B – SITE ANALYSIS



## Topography

Sir David Martin Reserve is located 100m above sea level and sits on the flat ridge top area above the Lane Cove Valley.



## Water catchment

Sir David Martin Reserve is located in the Lane Cove River Catchment.



## Location map

## Description of the existing environment

Sir David Martin Reserve covers an area of 105.734ha. The site consists of developed sport and recreation areas - Auluba Ovals 1, 2 and 3, Kissing Point Village Green, and undeveloped remnant bushland.

## Location

Sir David Martin Reserve is located at Kissing Point Road, through to 10B Auluba Road and Chisholm Street, South Turramurra.

## Geology and soil

**Geology:** Mittagong formation which contains embedded shale, fine to medium quartz sandstone with an absence of rock outcrop.  
**Soils:** Lucas Heights derived from sandstone and shale. A stony soil with low fertility and low available water capacity. Lateritic topsoils are hard setting and stony subsoils can be sodic and impermeable.  
 The ovals have been filled with imported subgrade material.

## Vegetation

Remnant 'Duffys Forest' Ecological Community (Tall Open Forest) is located at the centre of site with small areas at the park edge and along Kissing Point Road. This area is listed on Schedule 1 Part 3 of the *Threatened Species Conservation Act 1995* as an endangered ecological community.

## Native animals

*Ninox strenua* (Powerful owl) which is 'vulnerable'. (Recovery plan prepared Local Gov Act 1993 Sections 36A-36D)

Wildlife sightings recorded by local residents include owls, echidnas, blue tongue lizards, green tree frogs, goannas, crested hawk. Terrestrial macro invertebrate surveys are currently underway.

## Hydrology

Much of the surface run-off is currently directed towards the bushland areas at the centre of the site.

## Climate/microclimate

Auluba 1 and 2 sports fields are warm and sunny, with tall trees providing some shelter from hot and cold westerly winds and southerly busters along with some cooling north-easterly breezes in the evenings.



Source: Soil Landscapes of the Sydney Region 1:100,000 Sheet (Chapman & Murphy 1989)

## Soil landscapes

### Local soil types

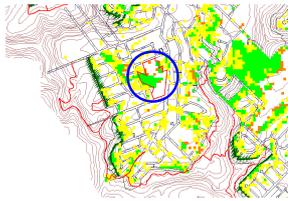
- Gymea (Gy)
- Glenorie (Gn)
- Lucas Heights (Lh)
- West Pennant Hills (Wph)



## Vegetation

### Local ecological communities include:

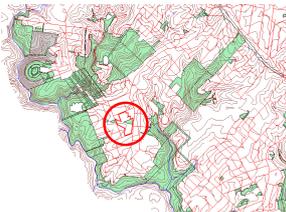
- Duffys Forest Ecological Community
- Sydney Sandstone Ridgtop Woodland
- Sydney Turpentine Ironbark Forest
- Coastal Sandstone Heath
- Sydney Blue Gum High Forest



## Fire

Sir David Martin Reserve has been identified as fire prone land. A hazard reduction burn within the Reserve was last carried out in September 2003.

- Fire break
- Tree canopy
- Fire buffer zone



## Natural areas

Shows the proximity and potential links of Sir David Martin Reserve with natural areas

- Lane Cove National Park
- Bushland in parks and reserves



- KEY
- Overland water flow
  - Embankment cut
  - Embankment fill

## Ecology

# Sir David Martin Reserve

District Park Master Plan - Site Analysis

Ku-ring-gai Council

# APPENDIX B – SITE ANALYSIS

## Local History

The indigenous inhabitants of South Turrumurra are the Terramerragal tribe, which is a sub-group of the Ku-ring-gai tribe.

Source: Kissing Point Progress Assoc. 1998

Subdivisions began in the Kissing Point Road area of South Turrumurra in 1927 and did not result in major settlement but farms and market gardens. In 1958 the population reached 800 and the area was designated as rural, virgin bush or difficult terrain.

Development in the 1950s provided homes for young families. The most significant landscape items are the remnant eucalypts that define Kissing Point Road and Auluba Reserve.

Source: Ku-ring-gai Heritage and Neighbourhood character Study Golden Mackay Logan Keys Young, 2001



## Current land use

The area around the park is zoned 'Residential 2c' and the local shopping centre is zoned 'Commercial 3a and 3c'.

The park itself is zoned 'Recreation 6a' and classified as Community Land.



## Walking tracks

- Walking tracks link to the 'Step Track' and to the National Park 'Great North Walk'.
- Bushcare sites



## Sports reserves

- Sports reserves in the local area

<h3>Strengths</h3> <ul style="list-style-type: none"> <li>Three sports fields with good spatial qualities – scale, bushland views and sense of enclosure</li> <li>Remnant forest</li> <li>Good connections – shady paths within Reserve</li> <li>Potential to improve wildlife habitat to enhance forest</li> <li>Good shade and sunny areas</li> <li>Attractive picnic area with shelters and playground</li> <li>New landscaped dog off-leash area</li> </ul>	<h3>Weaknesses</h3> <ul style="list-style-type: none"> <li>Vandalism</li> <li>Access to Reserve not defined</li> <li>Building unattractive</li> <li>Poor landscaping around building</li> <li>Stormwater runoff not captured</li> <li>Bushland weeds and areas of erosion</li> <li>Most signage unattractive and no interpretative signs for park facilities</li> <li>Unattractive old fences</li> <li>Minimal parking</li> </ul>



- Path
- Path junction
- Cricket nets
- Lights
- Baseball

## Community



## Aesthetics

# Sir David Martin Reserve

District Park Master Plan - Site Analysis

Ku-ring-gai Council

# APPENDIX B – SITE ANALYSIS

**Area** – 10.57 ha

## Landscape Character

The Reserve contains a remnant forest of 'Duffys Forest Ecological Community' and the associated ecological benefits associated with the forest.

## Formal sports activities

- Football (soccer)
- Cricket
- Softball/Baseball
- Public Schools Sports Association

## Informal Activities

- Children's playground
- Dog off-leash area
- Two cricket nets
- Recreational walking, jogging, cycling
- Socialising – picnics and youth 'hang-out'
- Informal sports
- Local group uses – for example uses by the neighbouring church

## Park Infrastructure

The Reserve contains 3 of Ku-ring-gai's 46 sportsfields

### Auluba Ovals 1 and 2

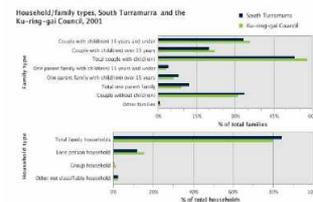
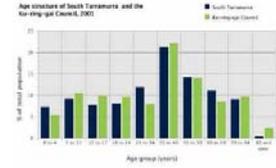
- Sportsfields – 1 Senior, 2 Junior
- Clubhouse/Amenities building
- Grounds shed
- Sports field lights
- Water tank for irrigation
- Cricket nets with 2 bays

### Auluba Oval 3

- Two softball/baseball areas with back-nets
- Bunkers at senior area

### Kissing Point Village Green

- Children's playground
- Children's bicycle track
- Amenities building – disabled toilet, family toilet, small storage and kiosk
- Picnic facilities - shelters and 2 electric BBQs
- Dog off-leash area fenced from the road



2001 Census of Population and Housing published by the Australian Bureau of Statistics.

## Facts & figures

## Opportunities

- Large and diverse site
- Relatively flat
- Close to schools and shops
- Valuable bushland to enhance and protect
- Multiple entry points – linking neighbourhoods
- Close proximity to Lane Cove National Park
- Potential to improve circulation
- Potential to increase activities and facilities
- Better use of sportsfields
- Interpretation and education
- Improve amenities
- Co-ordinate palettes of colours materials and furniture/fittings over the whole site
- Community meeting place

## Constraints

- Residential area – impact of activities at the Reserve on local residents
- Endangered Ecological Community
- Significant trees
- Fire break clearing behind houses
- Weeds
- Multiple users
- Conflicts between formal and informal uses
- Limited parking
- Vandalism
- High demand for sportsfields

## Opportunities & Constraints

## Social

- Provide access and amenity to all residents
- Offer opportunities for a range of recreational activities, both formal and informal, active and passive
- Preserve open space, recognising its value as an important community asset
- Minimise impacts on neighbours such as traffic, parking, noise, light and litter

## Environment

- Protect and enhance native plants and habitat
- Provide corridors to link bushland areas
- Incorporate water sensitive urban design principles
- Reuse, recycle and reduce waste
- Manage off-site impacts such as noxious weeds and encroachments

## Economic

- Implement programs to reduce energy and water consumption
- Improve Council operations and maintenance practices within the budget
- Work with community groups to improve facilities
- Make improvements to reduce public liability and insurance claims
- Work with hirers and lessees for mutual benefit

## Sustainable principles

## APPENDIX C

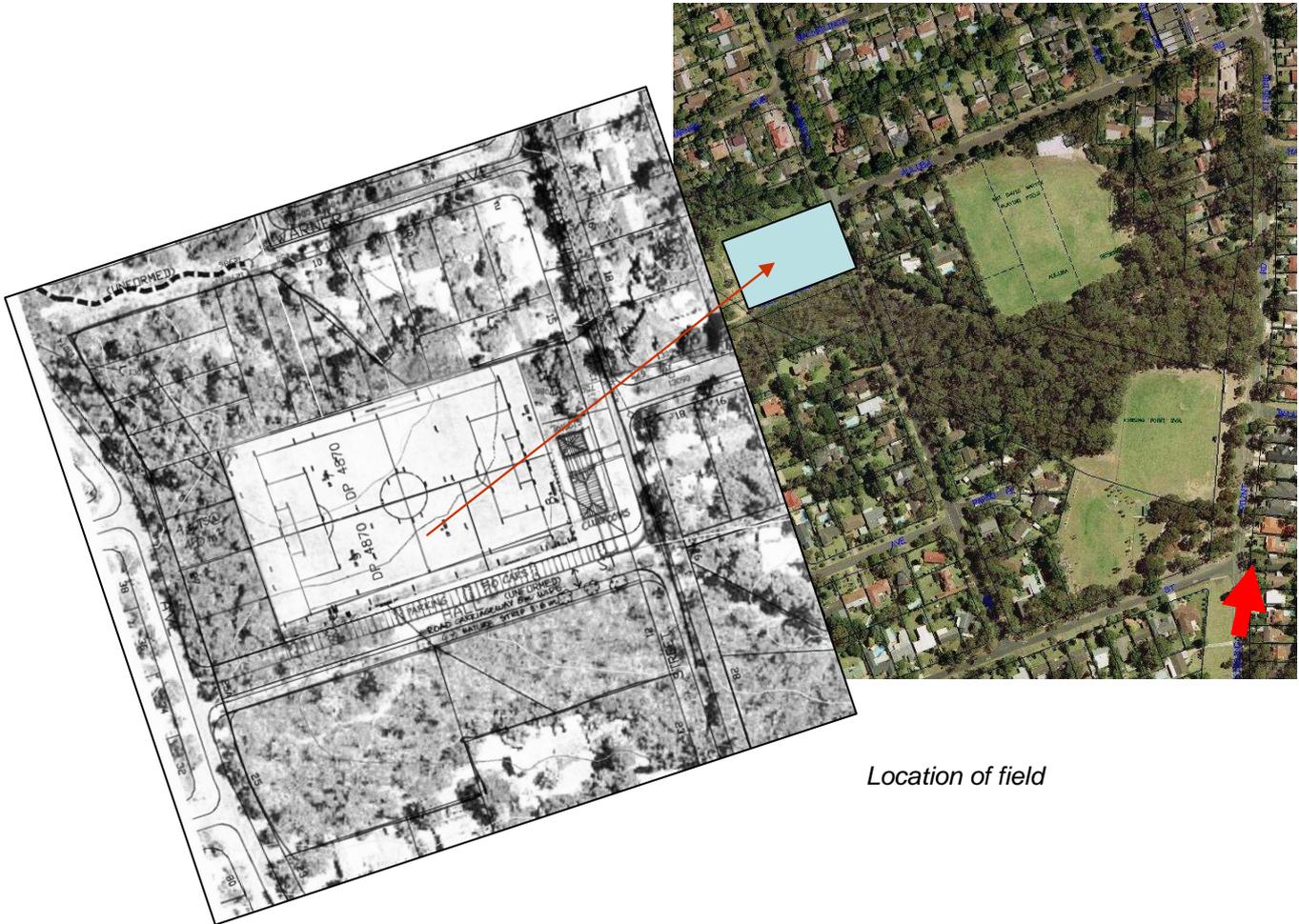
### ***Properties to consider for future extension to this District Park as suitable for community facilities***

The additional space, as highlighted, is not necessarily suitable for extensions to the fields, some areas are better suited as parklands.



# APPENDIX D

## Additional sportsfield at Chisholm Street



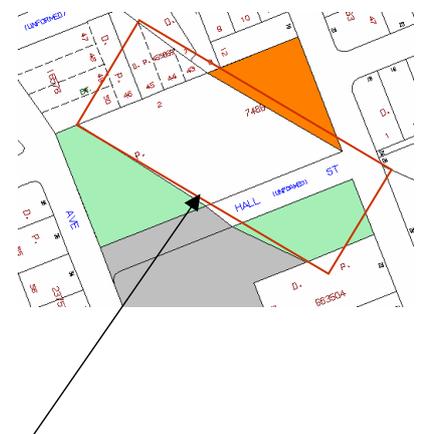
Location of field

### Strengths

- New purpose-built field
- New purpose-built toilets, storage and community/club room
- Parking for up to 50 cars at 90° angle off Hall Street
- Some space for alternative housing

### Weakness

- Small run out and limited spectator space around field
- Field orientated east/west
- No existing infrastructure services
- Housing land only allows 4 blocks at 450m<sup>2</sup>
- Removal of existing bushland
- Cost to purchase land



Land owned by the Department of Planning



3/0.4/7 104.93 TELSTRA PIT 2/0.2/3

149.32 O/A  
PARK BENCH  
WATER MAIN  
WATER VALVE  
CONC GRATE  
NEW RUBBLER  
NEW BITUMEN PAVING OVER

ADDITIONAL PLANTING  
PARK INFO SIGN  
GARDEN BED AND TREES  
CONCRETE PAD AND RUBBLER

BRICK BUILDING INCLUDING W/C'S  
EXISTING COMMUNITY BUILDING  
CONCRETE VERANDAH METAL ROOF

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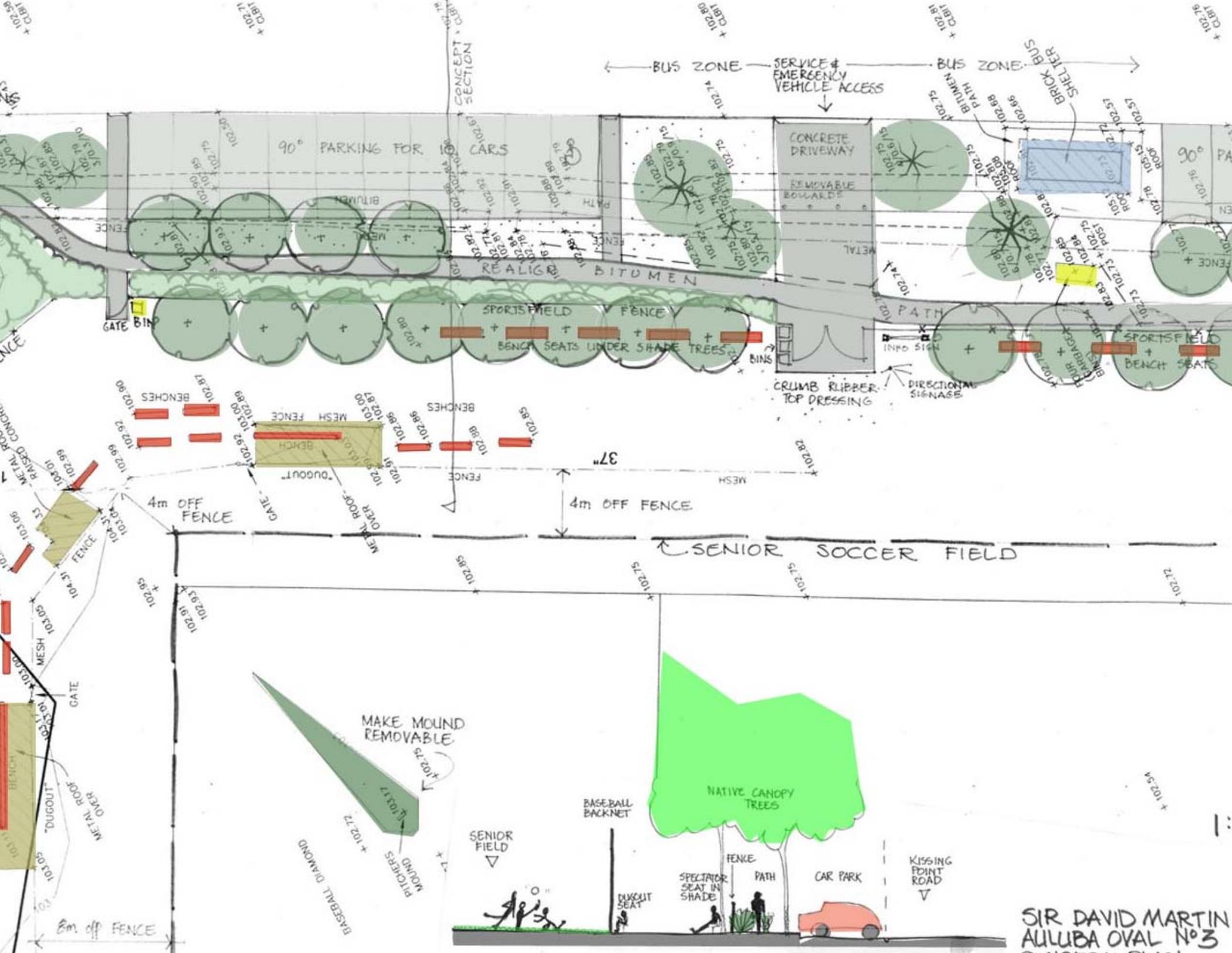
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REALIGN JUNIOR SOCCER FIELD NORTH SOUTH

SYNTHETIC GRASS COURT AREA FOR BALL KICKING

ACRYLIC COURT SURFACE MARKED FOR BASKETBALL HOOP & BALL GAMES

EXISTING NETS FOR BASKETBALL

SIR DAVID M RESERVE



90° PARKING FOR 10 CARS

BUS ZONE SERVICE & EMERGENCY VEHICLE ACCESS BUS ZONE

CONCRETE DRIVEWAY

REMOVABLE BOWARDS

BRICK BUS SHELTER

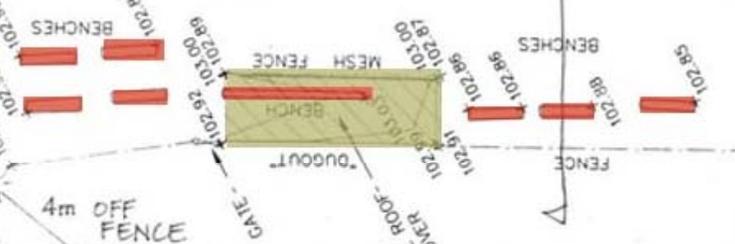
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BENCH SEATS UNDER SHADE TREES

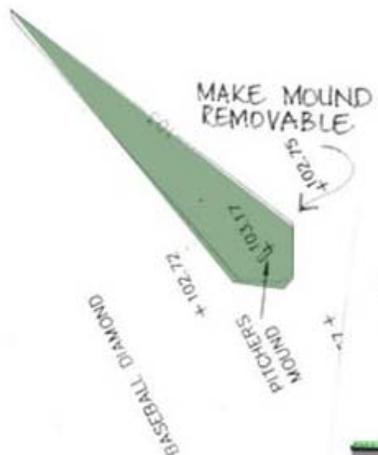
CRUMB RUBBER TOP DRESSING

DIRECTIONAL SIGNAGE

SPORTSFIELD + BENCH SEAT



SENIOR SOCCER FIELD



SIR DAVID MARTIN AULUBA OVAL No 3

**SIR DAVID MARTIN RESERVE - DRAFT LANDSCAPE MASTERPLAN  
SUMMARY OF SUBMISSIONS AND COUNCIL RESPONSES**

ISSUE	No. OF SUBMISSIONS	SUMMARY OF COMMENTS	SIGNATORIES	COUNCIL RESPONSE
<p><b>LETTER A Opposition to increasing sportsfields in South Turramurra from developing the 'horse paddocks' in Chisholm Street or extending Sir David Martin Reserve.</b></p>	<p>92 submissions representing 75 households</p>	<p>Opposition to increases in the large amount of recreational open space including the development of the 'horse paddocks' as additional playing fields and any future extensions to Sir David Martin Reserve for the purpose of community facilities because the area already suffers from significant traffic problems. During the soccer and netball season the streets become gridlocked with cars. Acknowledgement that aspects of the masterplan enhance and maintain the aesthetics of Sir David Martin Reserve.</p>	<p>Ron Atkin, Kristin Austin, Elizabeth Baird, Joan Ball, Robert Bannister, Pamela Bird, Ted Blackman, Jean Bush, Kate Butcher, Robyn Carmichael, Kenyon and Ishbel Castle, Deirdre Clift, Val Cobcroft, Edward and Phyllis Cohen, Barbara Coleman, Flora Dean, Caroline Drummond, Gail English, H B Fallows, Roger Foy, Harminder Kaur Garewal, Sharon Geyer, Joan Gibson, Dianne and Douglas Gordon, M Gorzkos, Douglas and Greta Greening, G Holmes, Jonquil Hoskinson, Christine Ironside, H. Jack, Bruce Johnson, Chris Kelly, Margaret Kent, Samantha and William Kingdom, William Koh, Fred Kohlmayer, Gilbert Lam, Samantha La Rosa, Leon family, Peter and Jodi McNeil, Darryl McGuire, A and G Mathers, Bronwyn Maurer, James Mead, Patricia Michael, Allan and Patricia Miller, Janie Moore, Brad Morgan, Rachael Murrie, J. Olliffe, Greg &amp; Michelle O'Donnell, Michelle Overall, Michael Peterson, J Rae, Nigel Randall, Linda Reiter, Kevin and Cecily Rhodes, Katie Rhys-Jones, Ken Robertson, Pamela Salmon, Leo Sawicki, Tanya Seabrook, John &amp; Jacqueline Shrimski, Barbara and Brian Simpson, Brian Angus Stanway, Brian Staples, Matthew Stewart, Thomas Irina and Frank Tierney, Samantha and Ronald Vollema, Graeme Warren, Olive Williams, Janet Williamson</p>	<p><i>Appendix D Additional sportsfield at Chisholm Street</i> - The site in Chisholm Street, known as "the horse paddocks" is composed of the redundant B2 freeway corridor which is owned by the Department of Lands, and surrounding lands which are owned by Council. Council has been negotiating with the Department of Lands to develop the site as a sportsfield and/or housing. The sportsfield option has been included in the draft Plan as an opportunity to inform the local community that Council would like to consider dedicating this land for sportsfield if it is able to acquire the land. Council has no intention of increasing the size or number of sportsfields within Sir David Martin Reserve by acquiring adjoining properties. These properties would only be acquired for new parkland.</p>

**SIR DAVID MARTIN RESERVE - DRAFT LANDSCAPE MASTERPLAN  
SUMMARY OF SUBMISSIONS AND COUNCIL RESPONSES**

ISSUE	No. OF SUBMISSIONS	SUMMARY OF COMMENTS	SIGNATORIES	COUNCIL RESPONSE
<p><b>Opposition to developments that may lead to increased local traffic and parking at all times including development of land in Chisholm Street, additional space at Sir David Martin Reserve or lighting fields.</b></p>	<p>Petition 41 submissions representing 34 households</p>	<p>Petition opposition to those aspects so the Plan will lead to increased traffic and parking congestion at all times in South Turramurra, lighting to playing fields, utilising open space in Chisholm Street and amalgamating or acquiring adjacent properties to Sir David Martin Reserve.</p>	<p>Pamela Bird, Sandra Blakeley, Margaret Booth, Raymond and Sarah Brennan, Roger and Roz Carlsson, Leah Foy, Ann Hardy, Dorothy Horne, J. Hoskinson, Helen Ingram, Jackie Issenegger, J S Kenyon, Kathryn Langham, Fred and Yvonne Langshaw, Michael Lim, Lynne McRae, David, Julie and Kate Mills, Gregory O'Donnell, David, Jean and Diana Olive, Robert Parfett, John and Karen Perry, Jane Rennie, E J Prynor, James Robertson, Barbara Robertson, Peter Schwartz, Peter Shappe, Jenny Shipley, Shelley Skiner, Margaret Sutch, Carolyn O'Shea, C. Vogel, Sarah Walker, Geoff Weston.</p>	<p>Council's Section 94 Contributions Plan 2004-2009 specifies the acquisition and embellishment of recreation facilities and open space to meet the growth and demand of the new population. Local open space acquisition requirements have been identified over the eight precincts, with Acquisition Priority rankings determining the amount of additional open space required within each precinct. The properties outlined in appendix C have been identified by Council as an extension of parklands or forest and suitable for recreation. The position and dimensions of the properties does not provide enough space for additional sportsfields at Sir David Martin Reserve.</p> <p>Council's method of acquiring residential properties in the Ku-ring-gai area for open space is still to be decided as part of the Open Space Acquisition Strategy, therefore Council could only advise owners of identified properties and that it was highly unlikely that Council would seek to acquire their properties through compulsory means. This undertaking was not enough for the property owners or other residents, who felt that if sportsfields were extended it would depreciate their property values and their ability to sell would be affected if Council persisted with the identification of these properties in the Masterplan. Therefore, so that the adoption of this Masterplan can proceed without waiting for the Open Space Acquisition Strategy to be adopted by Council, it is recommended that Appendix D be deleted from the Masterplan.</p>
<p><b>Appendix D Opposition to additional playing field at Chisholm Street</b></p>	<p>18 households less three who also signed petition for same issue 15 households</p>	<p>Appendix D - opposition to its use as a sportsfield as confirmed by a resident survey conducted by KPPA last year. Grounds for opposition are traffic density, parking, noise and a sense that South Turramurra is being asked to carry more than its share of the sporting field load for Ku-ring-gai.</p>	<p>Don Woolley (KPPA)</p>	<p>Recommend removal of Appendix D from Masterplan.</p>
		<p>Concern about Appendix D.</p>	<p>David and Julie Mills (2 separate letters)</p>	<p>Noted, see previous comments.</p>
		<p>Objection to additional fields at the 'horse paddocks'.</p>	<p>Greg and Michelle Smith</p>	<p>To be considered as a separate process. Please note recommendation to remove Appendix D.</p>
		<p>Objection to expanding sporting facilities.</p>	<p>Greg and Michelle Smith</p>	<p>Sporting facilities are not being proposed for expansion within this plan. Chisholm Street proposal has been recommended for removal from the Masterplan.</p>
		<p>Objection to additional fields at the 'horse paddocks'. Suggest area is used for a small aged care facility enabling people to retire/go into assisted living in their known community.</p>	<p>Sarah and R. S. Walker</p>	<p>Recommend removal of Appendix D from the Masterplan.</p>

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<i>Concentration of sporting facilities in area</i>		Oppose a sportsfield in the "horse paddock" area, enough impact in area from sportsfields.	Margaret Booth	Appendix D is recommended for deletion.
		Opposition to further sports fields in this area due to extreme concentration of sporting facilities in this small area.	Judith Ekins	Comments noted. Staff recommend removal of Appendix C from document.
		Opposed to expansion of sporting facilities in South Turramurra.	Michael Phoebus	Noted, see previous comments.
		Opposition to further sporting fields in this area and perhaps consider serving some of the older members of the community who have lived in the area all their lives.	Sarah and R. S. Walker	A number of facilities are identified within the Masterplan to appeal to a wide range of users. Further sporting fields within this area are not identified within the final Masterplan recommended to Council.
		Opposition to sportsfield in Chisholm Street due to traffic being regularly gridlocked on weekends, and parking congestion on Auluba Road and Balmaringa Avenue from sport at Canoon Road. Prefer housing at Chisholm Street, in keeping with current density. Opposition to private properties providing extensions to Sir David Martin Reserve.	Kevin Hill	Note comments in report recommending that Chisholm Street be considered as a separate process and also the deletion of Appendix C from the report.
		Opposed to development of sporting fields and further housing unless with improved public transport.	Massud Zhouand	No increased housing is proposed in the Masterplan. Recommend that proposal to develop sportsfield at Chisholm Street be considered as part of the redevelopment of the site at a later date.
		Appendix D retain 'right of way' beside the horse paddocks for pedestrians. One way traffic only. Concern for access for emergency vehicles.	Janne Rennie	Comments noted for further consideration in the future planning for the "horse paddocks".
		Opposition to further development including sportsfields because of traffic problems.	Joan Ball, Cathy Black, John and Mary Loo Briggs, Doug Brown, Janet and Alan Catford, Yvonne and Fred Langshaw, Tanya Seabrook	Noted, see previous comments.
		Opposition to development of the "horse paddock" as a sportsfield and urge Council to zone land near Hall Street as Residential (2C)	Vic Winterfeldt	Land is zoned 2 (C). Development of this land recommended to be considered separately.
		Opposed to extra sports fields because of increased traffic. Already suffer from traffic overload on Kissing Point Road and Maxwell Street. Two sports fields, netball courts, tennis courts all generate traffic with only two road outlets.	Ann Hardy	Noted, see previous comments.
<i>East/west orientation</i>		Opposition to the proposed sportsfield in Chisholm Street having a east/west orientation and the possibility of a wire mesh fence behind the goal at Chisholm Street boundary.	Yvonne and Fred Langshaw	Comments noted regarding field location, this will be considered when Council determines the future use of the field.

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<i>Prefer extension to Duffy's Forest</i>		Opposition to funding for sportsfield when, many would argue, an extension to Duffy's Forest would be more desirable.	Yvonne and Fred Langsaw	Noted, any development of the "horse paddocks" will consider the ecology of the site and its impact on the catchment and Duffys Forest vegetation around any development will be protected and enhanced where possible.
Agree to developing 'horse paddocks' in Chisholm Street into playing field		Agree to turning the "horse paddock's" into a playing field	Harvey Dillon & Fiona Macaskill	Noted, the report however recommends that this matter is considered separately as part of the future use of the "Horse Paddocks".
<b>OPPOSITION TO APPENDIX C</b>	18 households less three who also signed petition for same issue = 15 households	Delete Appendix C from report and all references to it. Re-examine the Open Space Acquisition Policy and its ramifications, clarify its objectives and circulate the outcome widely to residents.	Don Woolley (Kissing Point Progress Association (KPPA))	Appendix C is recommended for deletion from the Masterplan and an insertion of words that support future opportunities to extend the Reserve.
		Oppose the inclusion of Appendix C and urge a more structured approach to alerting the community. Concern for residents.	Margaret Booth	A well structured and responsible approach was undertaken in informing the community. Concern for residents noted.
		Oppose expansion of Sir David Martin Reserve and methodology for open space strategy at the Reserve.	Raymond Brennan	Opposition noted. Appendix C deleted.
		Strong opposition to resuming any houses to further increase the number of playing fields.	Harvey Dillon & Fiona Macaskill. Tanya Seabrook	The Plan does not suggest additional playing fields at Sir David Martin Reserve, rather extensions to the Reserve for passive use such as parkland or forest.
		Oppose any chance of future resumption of resident's land.	Michael Phoebus	The plan does not suggest "resumption" of resident's land.
		Appendix C of the plan is completely unacceptable	Mike & Caroline Clare	Noted - Appendix C deleted.
<i>Perceived impact on home owners of relocation, displacement, reduced property values</i>		Opposition to "compulsory resumption" of many properties. The cost would be enormous. Residents affected would lose their homes.	Doug Brown	The Plan does not suggest "compulsory resumption", rather acquisition funded by Section 94 contributions.
		Appendix C - concern over "removing St Andrews church and grounds" Long history in community of meeting, socialising and learning here. Also concern over removal of homes along Kissing Point Road and Auluba Road. Please remove this from the Masterplan.	Tanya Seabrook	The church will not be removed, rather if the church ever decides to sell their property would be suitable for an extension to Sir David Martin Reserve.

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		Opposition to reclaimed homes to expand Sir David Martin Reserve due to decreased property values.	Ian Wilkins and family	Noted - property values would not decrease because Council does not intend resuming properties.
		Appendix C - concern over devaluation of properties. Remove Appendix C.	Dariel Larkins	Noted - removal of Appendix C from report.
		Delete Appendix C Please advise the future use and benefit to the community from this.	Janne Rennie	Noted - removal of Appendix C. The additional space would provide parkland for the community's use and enjoyment and forest for ecological conservation.
		Opposition to houses being displaced to acquire land for future use considering there is already vacant land available.	Ann Hardy	Noted - removal of Appendix C.
		Opposition to Appendix C and the lack of information on what the land for additions to Sir David Martin Reserve will be used for and how it will be funded. Removal of: Appendix C; page 2 phrase "Consider adjoining properties for future extension to the Reserve (see Appendix C)"; Orange lines around selected properties in Concept Plan, page 17.	Yvonne and Fred Langshaw	Any acquisition of neighbouring land will be for passive use - parkland and ecological conservation. Parkland acquisition is funded from Section 94. Note removal of Appendix C from Plan, but recommend retain wording which suggests that future opportunities to increase the size of the Reserve should be supported.
		Opposition to extension of the reserve by acquisition of neighbouring properties because it will be difficult to sell properties and they will be undervalued. Opposition to lack of consultation by Council with property owners.	Bernie and Maryanne Galletti	Extensive notification and consultation has been undertaken in the development of this draft plan. Final recommendation accords with the Galletti's submission in that Appendix C is to be deleted.
		Opposition to Appendix C Incensed that Council would undertake such a deliberate action, potentially devaluing properties. This is without attention to any of the real and significant issues additional development would bring to this area.	Katrina Horman	Opposition noted - the intent is not to devalue properties.
<b><i>Benefits people outside South Turramurra</i></b>		Appendix C threatens this community for the benefit of unit dwellers along the Pacific Highway. It is a violation of my right to remain in my home.	Jennifer McPhail	Appendix C outlines a desire to extend passive parkland for the benefit of all in the community. Compulsory acquisition has not been presented as an option. Nevertheless Appendix C has been recommended for removal.
<b><i>Cost to broader community</i></b>		Opposition to "acquisitions" (with owner consent) of adjacent properties due to cost. Prefer we spend money extending Dalrymple-Hay for Blue Gum High Forest.	Janet and Alan Catford	Section 94 funds would be used for this local open space acquisition and the funds cannot be used for acquisition of Dalrymple Hay Blue Gum High Forest.

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<i>Council does not manage current assets</i>		Removal of Appendix C and reference to it on page 2. Opposition to Council's failing to manage the impact of the current facility on local residents - issues with noise, particularly soccer spectators, lighting, objection to upgrades, trespassers - balls go over fence into this property and players climb fence to retrieve, traffic and parking - upgrading facilities without adequate parking. Retaining kerbside parking along both sides of Auluba Road is a dangerous situation.	Roger and Rosalind Carlsson	The development of the Masterplan is a specific initiative to manage this asset in terms of existing issues and challenges into the future. The issue of parking is acknowledged and should be subject of further work. This is included in recommendations within the report. Appendix C is to be removed from the Masterplan.
<i>Additional traffic</i>		Opposition to additional traffic from additional development from Appendix C.	Katrina Horman, Yvonne and Fred Langshaw, Jennifer McPhail	Appendix C provides for the extension of passive parkland areas which will likely reduce traffic impact, given existing land uses in the identified properties.
<i>Church does not want to sell</i>		Confirmation that the Uniting Church of Australia has no plans to sell its property, St Andrews, at South Turrumurra.	Bob Hinchcliffe, Secretary, St Andrews Church Council	Comments noted and supported. The Plan does not desire owners to sell, merely indicates potential areas of open space.
<i>Objection to removal of church</i>		Removal of the church for a carpark is ludicrous.	Judith Ekins	There is no suggestion of removing the church for a carpark, rather if the church ever decides to sell the site would be suitable for additional local open space in the longer term.
		Objection to acquiring church land.	Vic Winterfeldt	Noted - Acquiring any land for extensions to the Reserve is dependent on property owners wanting to sell.
<i>Prefer housing to sportsfields</i>		Opposition to the development of the 'horse paddock' into playing fields, prefer housing.	Bernie and Maryanne Galletti	Comments noted. Staff recommend this matter be considered separately.
<i>Property values, traffic</i>		Opposition to Appendix C impacting on value of properties. Opposition to increasing playing areas by acquiring adjoining properties to Sir David Martin Reserve, developing Chisholm or allowing more games to be played concurrently.	Diana Olive	Property values are unlikely to be affected by Appendix C which does not purport to provide additional areas for sporting use, but as parkland. Future use of Chisholm street site is to be determined separately to this report.
<b>PARKING AND TRAFFIC</b>				
<i>Traffic</i>	9 submissions from 6 households	Opposition to Plan's lack of consideration to traffic issues and safety.		Comments noted. The Plan has considered current traffic issues and the proposed facilities at Sir David Martin Reserve will not generate significant extra traffic.
		Council can not manage current traffic issues.	Diana Olive	Considerable effort and success has been achieved in the management of weekend traffic in this precinct.
		Objection to traffic in winter and cars turning in our driveway.	Greg and Michelle Smith	Comment noted, Council has initiated a number of measures to improve traffic issues locally over the last few years during winter sport. As will be recommended to Council that the Masterplan should not result in significant increase in traffic.

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		Current proposal will double current traffic problems. Increased fields will lead to lessened property values for residents of the 'Point'. Traffic consideration - only two exits - Maxwell Street and Kissing Point Road with 3,000 movements from local traffic alone. This would double on Saturdays in winter.	Vic Winterfeldt	The Masterplan does not suggest an increase in the number of fields at Sir David Martin Reserve. Increasing the use of Auluba 3 would only create only a minor increase in traffic. The proposal for a sportsfield at Chisholm Street is to be considered as a separate matter.
		Existing traffic conditions compromises safety - medical emergencies, bushfires, storms, and pedestrian safety.	Vic Winterfeldt	Recent improvements to traffic and parking have resulted in major improvements to the traffic in South Turrumurra during the netball season which does not occur during bushfire season. Pedestrian safety will be enhanced by improved access to the Reserve, the new pathways and formalised entrances. Many of these issues are outside the influence of a park masterplan.
		Objection to high traffic patterns in area now and difficulty accessing driveways.	Ian Wilkins	Comments noted - see responses above.
		Congested traffic/child safety- currently weekend traffic caused by sport usage - children are in danger because of the speed used by parents exiting the area including our driveway.	Michael Phoebus	Recent improvements to traffic and parking have resulted in major improvements to traffic and parking in South Turrumurra. The Plan provides options for formalising parking around the Reserve to improve safety.
		Increased traffic chaos during weekends due to lack of access roads. Difficult for residents to safely exit properties.	Cathy Black	Comments noted - see responses above.
		Suggest Council place pressure on netball association to stagger start and finish times of matches to prevent high peaks in traffic movement	Harvey Dillon & Fiona Macaskill	A number of improvements have been made with regard to the traffic.
<b>Agree to formalise parking</b>	3 submissions from 3 households/ groups	Agree with angle parking along Kissing Point Road.	Cathy Black	Investigate the suitability of the road verge west of the amenities building in Auluba Road for 45-degree angle parking.
		Agree to formalise existing angle parking along Vernon Street.	Cathy Black, Doug Brown	Support noted.
		Agree with option to establish a parking area on the SW corner of Vernon Street and Kissing Point Road.	Harvey Dillon & Fiona Macaskill	Support noted - investigations to follow.
		Agree with angle parking along Auluba Road.	Cathy Black, KPSC	Support noted - investigations to follow.
		Opposition to increased sporting traffic in South Turrumurra area. With recent relocation of netball games to other areas in Ku-ring-gai in response to traffic congestion, planning to increase sporting traffic appears to be in opposition to this decision. South Turrumurra does not have the safe road access to accommodate any more Saturday games.	Sarah and R.S. Walker	Comments noted. The Masterplan does not suggest development of Sir David Martin Reserve will generate large increases in local traffic. Note deletion of Appendix D - development of the 'horse paddocks'.

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<i>Concerns with existing parking</i>	8 submissions from 9 households	Opposed to additional parking because it will bring more traffic.	Janet and Alan Catford	Comments noted.
		At present car parking is a safety issue. Streets and footpaths are blocked by vehicles causing visibility issues. Suggest car parks/designated parking bays are needed.	Cathy Black	Comments noted. The Plan provides an option for angle parking along Kissing Point Road beside Auluba 3 , and relocates the pedestrian path inside the Reserve to provide pedestrians with a separate and safe space.
		Opposition to illegal parking around Chisholm Street and Auluba Road. Request parking restrictions similar to Canoon Road.	Diana Olive	Comments and suggestions noted. Parking options provided in the Plan will be investigated further.
		Parking - present parking is unacceptable - parked out now and Plan will worsen this situation.	Vic Winterfeldt	The Reserve does not include space suitable for parking on-site, however the Plan includes parking options that are intended to improve parking in the streets adjacent to the Reserve.
		Parking - during netball season cars are parked outside my house and on the corner of Canoon and Barwon Roads. Concern regarding traffic congestion caused by any development. Concern that the only exit is Kissing Point Road concern for ambulance access to area.	Pamela Salmon	The Plan includes parking options to formalise parking in the streets adjacent to the Reserve. Ambulance access to area is retained.
		Concern that there is an existing traffic problem which will increase if the Plan is implemented. Preferred use for the horse paddock is housing or a carpark for existing facilities because Auluba Road is too narrow for angle parking.	Daniel Larkins	See comments above.
		Parking - this is not sufficient to cope with demand and cars are parked across our driveway.	Michael Phoebus	The Plan considers various parking options aimed at improving parking for the Reserve.
		Parking - Council to erect signage to carpark in Vernon Street, Explanation of Car Parking Development Control Plan No 43.	Janne Rennie	Car Parking Development Control Plan No 43 provides guidelines for car parking in Ku-ring-gai local government area. Planning requirements for parks and reserves are to be determined on merit, preferably with a traffic impact assessment submitted with the application p. 14
		Loss of amenity - South Turramurra bears the brunt of Council's sporting facilities resulting in loss of quality of life with traffic and parking issues from existing sports fields. Walking is unpleasant and dangerous.	Vic Winterfeldt	Comments noted. The Plan addresses parking issues for the Reserve, including a new pedestrian pathway along Kissing Point Road which is located inside the Reserve, separate from parked cars and away from traffic.
		Parking - this is not sufficient to cope with demand and cars are parked across our driveway. Opposed to expansion of sporting facilities in South Turramurra.		Comments noted - see responses above.

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	2 submissions	Concerned that Council is complying with Car Parking Development Control Plan 43.	Dariel Larkins (and another)	Car Parking Development Control Plan No 43 provides guidelines for car parking in Ku-ring-gai local government area. Planning requirements for parks and reserves are to be determined on merit, preferably with a traffic impact assessment submitted with the application p. 14
<i>Curb and guttering</i>	2 submissions for upgrades of local footpaths and roads	Storm water management - curb and guttering.	Cathy Black	Management issues, such as stormwater and curb and guttering will be addressed with site works when implementing the Masterplan. Improvements to roads generally is not part of the Masterplan project but comments are noted.
<i>Local footpaths</i>		Footpaths "constructed in Eustace Av, Manning Rd, Frederick Rd, Anembo Cr and Blaxland Rd,.. And that is just for starters",	Doug Brown	Comments noted. These suggestions are outside the issues covered in the masterplan.
<b>NEW FACILITIES</b>				
<i>Support for aspects of the Plan that enhances the Reserve</i>	1 submission from Kissing Point Progress Association comprising a Standardised letter "A" plus 92 signatories from 75 households plus 8 signatories from 6 households.	Approval of improved features for Sir David Martin Reserve.	Don Woolley (KPPA)	Support noted.
		Acknowledgement that aspects of the masterplan enhance and maintain the aesthetics of Sir David Martin Reserve.	LETTER A	Comments and support noted.
		Agree with new buildings and facilities, paths, planting etc relating to existing sportsground and bushland.	Janet and Alan Catford	Comments and support noted.
		Improvements to existing amenities appear well thought out and I believe would enhance the area. Agreement with improved parking. No comment on new field at Auluba 3, but please advise how many more cars are likely to come.	Tanya Seabrook	Comments and support noted. The new field at Auluba No 3 would increase field use only at some times, eg. when the current area is not used. 30 to 40 cars is the maximum demand which is already occurring. Proposed formalisation of parking should reduce current impacts as well as future issues.
		Agree with construction of walking paths and seating.	Doug Brown	Comments noted.

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		am in favour of improving the facilities of the area, e.g. a half-basketball court for casual rather than team use for the benefit of local teenagers, perhaps with an adjoining BBQ area.	Elizabeth Baird	Comments and suggestion noted.
		Agree that Council provide safe areas for children to participate in outdoor recreational activities.	Mike and Caroline Clare	Comments noted.
		In favour of improvements to Sir David Martin Reserve including lighting, but would prefer local roads repaired with some of the funds.	Kevin Hill	Mr Hills priorities are noted. Council will spend \$4-5 million on road works this year. Total fund allocations for Sir David Martin Reserve over the next ten years is approximately \$300,000 at this stage.
<b><i>Objection to new facilities at Sir David Martin Reserve</i></b>	1 submission concerned about shared pedestrian/cycleway	Concern shared pedestrian/cycleway will be used by skateboarders a problem for elderly walkers and mothers with prams. Would prefer rammed earth and boardwalks. Concern for orchids and prostanthera if tracks in Reserve are upgraded.	Darial Larkins	The new path network throughout the Reserve is specifically designed for all age groups. The sealed path is the main access route and connects the Village Green area with the local shops, it provides youth with a safe place to cycle etc and will be wider than a 'pedestrian' path to accommodate 'shared' use. It is envisioned that the path will be available for adult-only use during school hours. Two additional paths of crushed sandstone are included in the forest area with seating to specifically provide for older people or those who want a quiet place to walk.
<b><i>Concern that the new facilities will provide a place for youth with anti-social behaviour.</i></b>	5 submissions	New Youth activities - concerned structure will damage nearby tree. Concerned about noise and young people drinking in the gazebos at night.	Darial Larkins	The new youth facility is on the playing field and the tree is on the bank above. Tree roots are in the top 500mm of the soil and any works will be nowhere near the root system of the tree. Concerns regarding anti-social behaviour noted, see comments below on how the gazebos are designed to be used.

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		<p>New Youth area - Concern the acrylic court will damage the Angophora and that the rebound wall and spectators could be a casualty of the tree. Concern of noise from these facilities. Prefer moving to the NW or SW corners of Auluba 3. Objection to batting cage for noise and dangerous location because of nearby tree. Opposition to rebound wall and half-court - relocate to Village Green.</p>	<p>Janne Rennie</p>	<p>The new facility has been designed to cater for a range of uses: The location of the youth facilities provides younger children with a choice of activities while their parents/carers are watching their other children play sport or while families are picnicing at the larger shelter. The youth facility has been located in an area that places children using the facility within view of the parents/carers in these situations. The youth activity area is designed for the youth of South Turrumurra in particular and addresses current research. Children/young people need 1.5 hours of physical activity a day (World Health Organisation) but physical activity is declining, generally due to lifestyle changes, particularly small screen recreation. Not only are our children becoming obese, through excessive computer, new concerns are arising that young people may be in danger of relating to machines rather than each other. The youth activity area provides interactive elements as a means of providing impromptu activities for local youth – both boys and girls.</p> <p>The shared pedestrian path/cycleway is a critical element of the shelters, half-basketball court/rebound wall and additional seating. It has been designed specifically to create both an interactive and a comfortable area that will promote social interactions between all young people, as well as catering for the broader community. The youth facility is also suitable for young families, grandparents with their grandchildren and elderly people, who can sit in comfort, elevated above the sportsfields and watch the activities on Auluba 1 and 2. Council is concerned about antisocial behaviour including alcohol consumption and the provision of spaces designed to provide enjoyment for young people will help reduce antisocial behaviour.</p>
		<p>Concern that proposed youth facility will create youth hang-out, particularly due to its close proximity to the bottle shop.</p>	<p>Raymond Brennan</p>	<p>Please note comment above.</p>
		<p>Objection to the location of two picnic shelters (near the rebound wall) because its behind my fence and will impact on other residents, visitors and spectators.</p>	<p>Ian Wilkins - Janne Rennie</p>	<p>The rationale behind the location of the two small picnic shelters is provided above.</p>
		<p>Concern regarding youth area due to youth night activities - broken bottles and fires to bins.</p>	<p>Ian Wilkins</p>	<p>See above comments.</p>

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		New facilities - youth hang out - strenuously oppose the gazebo that looks like a bus shelter directly opposite our property (Auluba Rd) because its ugly and blocks our views of the park and may need lighting. It will encourage youth hangout - bottle shop nearby. Would like structure moved to behind the soccer posts.	Michael Phoebus	The picnic shelter was selected from a range of park structure manufacturers, as the most appropriate design for the site. South Turramurra was settled post WWII, and the modern-style skillion-roof light-weight design is in keeping with this era and, its location adjacent to the flat-roof 1960s amenities building. (A pitched-roof will not 'fit' in this location).
		Objection to ugly bus looking type shelter (Auluba Rd) because it will encourage late night noise from teenagers drinking. (Resident lives opposite the shelter).	Greg and Michelle Smith	The picnic shelter was selected from a range of park structure manufacturers as the most appropriate design to complement the existing amenities building.
<b><i>Suggestions for additional facilities</i></b>	would like additional facilities	Lighting for dog park	Massud Zhouand	This matter can be considered further.
		Community gardens	Massud Zhouand	Recommend that Council Park Care programme be implemented at the Reserve.
		A Skate park or a bike park for BMX and mountain bikes.	Ron Dupen	This is being looked at separately. These facilities were not well-supported during initial consultations for Sir David Martin Reserve and are being assessed separately following recent Council resolution.
		Playground, picnic facilities, skateboard ramp and a dirt bike track at the horse paddocks.	Cathy Black	The Masterplan incorporates many of these facilities at Sir David Martin Reserve. See above comment regarding youth facilities.
<b><i>Sealed surface paths</i></b>		Object to path in area of Duffy's Forest being concrete or bitumen.	Massud Zhouand	The Plan has one concrete path which formalises the existing dirt pedestrian route that is the main pathway within the Reserve and provides access to the various areas and facilities. The path is intended to keep traffic out of the forest.
<b>VEGETATION</b>				
<b>Support for planning that enhances Duffys Forest.</b>	2 submissions	Support planning that enhances the future survival of Duffy's woodland.	Margaret Booth	Comments noted.
		Concern for orchids and prostanthera if tracks in Reserve are upgraded.	Dariel Larkins	The Plan has taken into consideration the impact of all development on the vegetation and taken measures to lessen the impact as well as including additional measures to enhance the vegetation.

**SIR DAVID MARTIN RESERVE - DRAFT LANDSCAPE MASTERPLAN  
SUMMARY OF SUBMISSIONS AND COUNCIL RESPONSES**

ISSUE	No. OF SUBMISSIONS	SUMMARY OF COMMENTS	SIGNATORIES	COUNCIL RESPONSE
<b>Concern that Council is planting in fire prone area</b>	2 submissions	Concern we are planting fire prone vegetation.	Dariel Larkins, Raymond Brennan	The vegetation in the Reserve, Duffys Forest Ecological Community, is an endangered plant community and a valuable resource for present and future generations. The Masterplan is a 10 year plan, and over this period vegetation will require replanting to ensure its health and to provide a continuous and more integrated landscape. However, Council will not increase trees behind homes.
<b>Arguing for tree reduction and removal of burnt and dead wood</b>	3 submissions	Opposition to plan's lack of tree removal and reduction.	Mike and Caroline Clare	Appropriate tree removal of dangerous trees is supported. Removal of dead or burnt branches is a key threatening process to this endangered ecological community and is not supported.
		Concern about dead and burnt trees at the Reserve. Concern over 'bad' drainage near cricket nets.	Dariel Larkins	Note above comments in relation to trees. Drainage near nets will be addressed as part of improvements identified within the Reserve.
		Remove dead and burnt trees.	Janne Rennie	See comments above.
<b>LITTER, RUBBISH</b>	5 submissions	Concern rubbish build up and request for more bins, would like additional toilet for baseball.	Dariel Larkins	The lack of bins and rubbish removal was raised by the residents during the consultation process, and has been addressed in the draft Plan. Refer to page 4, Council's response: "introduce recycling bins and improve service." This request has been forwarded to Operations Department to consider more bins and/or more frequent collection of rubbish and recycling.
		Litter - Council is not managing litter that is being dumped in the park.	Michael Phoebus	This concern has been forwarded to Operations Department to consider more bins and/or more frequent collection of rubbish and recycling.
		More rubbish bins and fines for rubbish left around.	Cathy Black	See above.
		Objection to litter at fields.	Ian Wilkins	See above.
<b>LIGHTING</b>				
<b>Oppose lighting</b>	Petition 41 submissions representing 34 households	Oppose "lighting to playing fields."		The proposed floodlight upgrade will not change existing usage patterns at Auluba 1 and 2. The lighting of the facility will simply be upgraded to meet Australian Standards. Proposed floodlights at Auluba 3 are intended to take some of the softball and soccer training off Auluba 1 and 2 to share the wear and tear on the ovals and allow softball to train safely as the two sports are not compatible for training at the same time.

**SIR DAVID MARTIN RESERVE - DRAFT LANDSCAPE MASTERPLAN  
SUMMARY OF SUBMISSIONS AND COUNCIL RESPONSES**

<b>ISSUE</b>	<b>No. OF SUBMISSIONS</b>	<b>SUMMARY OF COMMENTS</b>	<b>SIGNATORIES</b>	<b>COUNCIL RESPONSE</b>
<b>Opposed to new lighting at Auluba 1 and 2</b>	1 household	Opposition to lighting upgrade by neighbours who would like two light poles relocated further along the boundary - away from their backyard. Further objections the visual impact of the poles and impact on their property as well as the cost to the community.	Bernie and Maryanne Galletti	Issue to be dealt with during DA process. Unfortunately light poles cannot be moved without effecting the lighting design, which has been done to meet Australian Standards for lighting levels and light spill.
<b>Support for lighting at Auluba 1 and 2 but not intensified</b>	2 submissions from 1 Progress Association	Upgrade lighting at Auluba 1 and 2 - agreement but not intensified night use of these fields such as night competition.	Don Woolley (KPPA)	It is intended that night use will remain at current levels.
<b>Support for lighting</b>	1 submission	Support for lighting of sportsfields, but respect for residents who object.	Reverend John Pender	Comments noted.
<b>Oppose lighting for Auluba 3</b>	2 submissions	Auluba 3 opposed to lighting due to traffic and noise.	Don Woolley (KPPA), Margaret Booth	Proposed floodlights at Auluba 3 are intended to take some of the softball and soccer training off Auluba 1 and 2 to share the wear and tear on the ovals and allow softball to train safely as the two sports are not compatible for training at the same time
<b>FIELDS</b>				Communicate with KPSC prior to installing youth area to evaluate its impact on the field - consider reconfiguring the youth area and adjacent nets.
<b>Auluba 1 and 2 sportsfield</b>	1 submission KPSC	Kissing Point Sports Club has raised concerns that the new youth area may impact on cricket and soccer fields. They have requested that the management plan acknowledge the required football fields and the full dimensions of the Small Sided Game fields and spectator spaces and the planned locations of the active recreation facilities and batting nets reflect this constraint.	Kissing Point Sports Club (KPSC)	In response to these concerns it is recommended that the following words be inserted in to the Masterplan: Undertake upgrade works at Auluba 3 playing field with the design aimed at maximising opportunities for multiple sporting use such as baseball, softball and football by maintaining the existing field dimensions. Works may include changes in level requiring retaining walls, batters and possibly relocation of baseball diamonds and fences. Planning for this project will involve consultation with the sports user groups.
<b>Auluba 3 field dimensions</b>	1 submission	Kissing Point Sports Club has raised concerns that the proposal to level Auluba 3 sportsfield could see the fence on the western side of the field moved in when the field level is raised and the batter is constructed. This would be unsatisfactory for the Kissing Point Baseball Club as the distance from the baseball diamond to the western fence is already small and should not be further reduced.	KPSC	Council does not 'target' areas for sportsfield development, rather facilities are located where enough land is available and affordable. It is extremely difficult to obtain a site large enough for a new sportsfield. Many councils, including Ku-ring-gai, have been investigating joint ventures with schools to develop and provide their fields for local sports groups, because most areas of Sydney have an acute shortage of sportsfields and as development increases the lack of facilities will become critical.

**SIR DAVID MARTIN RESERVE - DRAFT LANDSCAPE MASTERPLAN  
SUMMARY OF SUBMISSIONS AND COUNCIL RESPONSES**

<b>ISSUE</b>	<b>No. OF SUBMISSIONS</b>	<b>SUMMARY OF COMMENTS</b>	<b>SIGNATORIES</b>	<b>COUNCIL RESPONSE</b>
<i><b>Suggestion locations for new playing fields</b></i>	2 submissions	Construction of soccer fields at North Turramurra Golf Course site instead.	Michael Phoebus	A masterplan has been developed for North Turramurra Golf Course to incorporate playing fields.
		New facilities should be closer to other areas of Ku-ring-gai not as well endowed with sporting and bushland areas as South Turramurra.	Janne Rennie	Comments noted.
		That Council purchase land between Fox Valley Road and Pennant Hills Road from the Seventh Day Adventist Church for their new soccer fields.	Michael Phoebus	Comments noted.
<i><b>School fields be available for public use</b></i>	3 submissions from 2 households	Council to use school's fields for additional sports.	Janne Rennie	Using school fields for weekend sport by the community is being investigated currently by Council.
		Local schools to upgrade their sports facilities for public use.	Janet and Alan Catford	Comment noted., see above response
<i><b>Issues with fields</b></i>	3 submissions from 2 households	Consider Auluba Oval 1 for a turf cricket wicket.	Michael Phoebus	Comment noted.
		Opposed to the condition of fields - dust bowl due to over usage and Council has no control over the soccer association.	Michael Phoebus	The masterplan includes resurfacing playing fields in the longer term.
		Field usage - concern over usage by out of area teams.	Michael Phoebus	All fields in the LGA are used by teams from other suburbs on weekends. Midweek training is for the local K.P.S.C..
		Objection that half of the soccer clubs using Auluba are from out of area.	Greg and Michelle Smith	All fields used by soccer teams are shared with clubs from out of the area.
<b>SOCIAL ISSUES</b>	4 submissions from 3 households	Concern that the Reserve could be used for golf practice or model aeroplane uses or for the use of loud speakers and music.	Dariel Larkins	This is a concern applicable to all public and private spaces. Please report to Council, anyone behaving inappropriately on Council managed sites, particularly unsafe activities such as golf.
		Ban golf practice	Janne Rennie	Golf practice is prohibited on all public lands (except golf courses) due to danger. Please report any cases.

**SIR DAVID MARTIN RESERVE - DRAFT LANDSCAPE MASTERPLAN  
SUMMARY OF SUBMISSIONS AND COUNCIL RESPONSES**

ISSUE	No. OF SUBMISSIONS	SUMMARY OF COMMENTS	SIGNATORIES	COUNCIL RESPONSE
		Opposed to visitors to any area who generally lack respect and community spirit e.g. liquor licence at South Turramurra shops and possible sale of liquor to underage drinkers - liquor related littering and poor policing of liquor consumption. Objection to negative influence of these people on young people of South Turramurra.	John and Mary Loo Briggs	Council is aware of and concerned about antisocial behaviour including alcohol consumption by youth and drivers exceeding the speed limit in the South Turramurra area. Providing youth with activities including sport is an essential component of counteracting negative behaviour.
		Concern over cars speeding along Kissing Point Road and difficulty reversing cars.	Daniel Larkins	The matter of parking is highlighted for further work. Cars speeding on Kissing Point Road cannot be addressed by a park masterplan.
		Young drivers speeding in area causing damage to this resident's property. Objection to negative influence of these people on young people of South Turramurra.	John and Mary Loo Briggs	Not a matter that a park masterplan can address.
		Objection to the clubhouse use as registered licensed club on page 14 of the Plan. Would like the Reserve declared an alcohol free zone for the club's members.	Janne Rennie	Licensed area of the clubhouse is only indoors. Outdoor areas at the Reserve could potentially be declared alcohol-free zones, but this would need to be explored through a separate Council planning process.
<b>CONSULTATION</b>				
<i>Consultation - lack of notification for project</i>	3 households	Lack of community consultation - lack of advertisements, public meetings, Council front line staff - Smacks of a 'backdoor' attempt of the sporting interests to gain facilities.	Vic Winterfeldt	Public involvement commenced at the conceptual stage of the project with residents given three opportunities to hear about the project, discuss their ideas and concerns with Council staff and to provide written feedback to Council. A community workshop was held on 27 September 2006 and staffed displays at the site on 29 and 30 September, 2006. Invitations to the residents were advertised by posters at South Turramurra shops, Coles, Turramurra and at Sir David Martin Reserve.
		Opposed to the views of sports groups rated the same or higher than local residents.	Massud Zhouand	The masterplanning process aims to address five areas, two of which are concerned with equity: 1. Incorporate elements that are important to the community and user groups, and 2. Balance the concerns of all community groups. The masterplan directly responds to community responses during the consultation process. Compare Appendix A Worksheets with Council's responses throughout the document.

**SIR DAVID MARTIN RESERVE - DRAFT LANDSCAPE MASTERPLAN  
SUMMARY OF SUBMISSIONS AND COUNCIL RESPONSES**

ISSUE	No. OF SUBMISSIONS	SUMMARY OF COMMENTS	SIGNATORIES	COUNCIL RESPONSE
		Objections to survey response of 34 people representing community. Objection to our lack of involvement in the process.	Ian Wilkins	The initial consultation process included three community workshops, which were available to all residents.
<i>Consultation - inadequate consultation with residents regarding Appendix C</i>	1 household	Opposed to inadequate engagement of affected residents ahead of publishing draft document.	Mike and Caroline Clare	Council advised owners of identified properties that it was highly unlikely that Council would seek to acquire their properties through compulsory means.
<b>GENERAL COMMENT</b>	1 household	Opposition to turning Sir David Martin Reserve into a district park when Bicentennial Park is nearby.	Michael Phoebus	District Parks have unique features or attract people from outside the area. Sir David Martin Reserve is managed as a District Park because of the endangered forest and the sportsfields and interest to a number of people outside the immediate catchment. Councils planning aims to provide this level of facility at a number of locations across the local government area.

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## TENDER FOR SEWER MINING PROJECT, GORDON GOLF COURSE

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### EXECUTIVE SUMMARY

<b>PURPOSE OF REPORT:</b>	The purpose of this report is to award a contract to Econova Operations Pty Ltd for the design, construction and operation of the sewer mining and irrigation works at Gordon Golf Course.
<b>BACKGROUND:</b>	On 30 July 2006 Council resolved to use an expression of interest and selective tender process to identify and recommend a suitably qualified organisation to implement the Gordon golf course water sustainability project. The outcome of the selective tender process was reported to Council on 1 May 2007. A further report considered on 24 July 2007 led to a resolution to commence discussions with a preferred tenderer as to the final scope, price, security and contract for the project. This report provides a recommendation to award a contract.
<b>COMMENTS:</b>	Following the report to Council on 24 July 2007 the tender evaluation panel revised the project scope and developed a process for further discussion and clarification as to the final price with the preferred tenderer. This followed the NSW Government procurement guidelines and draft NSW Department of Local Government tendering guidelines. An evaluation of the final tender and price against the predetermined criteria supports the awarding of the project to Econova Operations Pty Ltd for the design, construction and operation of the sewer mining plant associated works.
<b>RECOMMENDATION:</b>	That Council award the contract for the sewer mining project and associated works to Econova Operations Pty Ltd in accordance with the contract, tender submission dated 8 October 2007 and price.

## PURPOSE OF REPORT

The purpose of this report is to award a contract to Econova Operations Pty Ltd for the design, construction and operation of the sewer mining and irrigation works at Gordon Golf Course.

## BACKGROUND

On 30 June 2006 Council resolved to use an expression of interest and selective tender process for the implementation of a sustainable water options project for Gordon Golf Course. At the time, Council also resolved to commence formal discussions with Killara Golf Course in relation to their participation and potential partnership to the project. This project followed two studies into the sustainable water options for Council's two golf courses and a separate study focusing on the potential use and reliability of stormwater to meet the irrigation needs of Gordon Golf Course.

Following discussions with Killara Golf Club Ltd a feasibility study was undertaken to assess the capacity of stormwater reuse and water recycling to meet the irrigation and other non-potable needs of Gordon and Killara golf courses. Details of this study were reported to Council on 1 May 2007 along with the outcomes of a risk planning workshop for the project.

Following the tender evaluation, Council resolved in May 2007 to among other things enter into discussions with all tenderers as to their bids for the project. This followed the outcomes of the tender evaluation panel and separate reports dealing with the sewer mining technologies, an assessment of the tenders by a quantity surveyor and financial analysis. At the conclusion of these discussions, Killara Golf Course withdrew from the project.

Most recently on 14 August 2007 Council resolved:

- A. *That following the technical assessments, Council not proceed with tenders submitted by MPI and 2G Water.*
- B. *That Council delete all works specifically related to water supply for Killara Golf Course including the storage at Killara, transfer line from Gordon to Killara and, additional storage at Gordon Golf Course.*
- C. *That Council delete the stormwater harvesting with associated storage at Gordon Golf Course from the current scope of works.*
- D. *That Council reduce the storage volume for treated water to between 1 and 2ML, to be defined during project negotiation.*
- E. *That Council commence negotiations with Econova Operations Pty Ltd as to the final scope, price, security and contract of the project.*
- F. *That Council finalize the legal advice, given the change in scope of the project.*
- G. *That a report be brought back to Council recommending the final scope, price and contract for the project.*

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This report primarily deals with the resolution E, though comment has also been provided to the other parts of the resolution.

## COMMENTS

### Technology

The tender by Econova Operations Pty Ltd proposed to utilise a membrane bioreactor (MBR) as the primary treatment technology. This uses a biological treatment process to reduce the pollution load in the sewage with advanced filtration using membranes to clarify the effluent. The treated water is then passed through an ultraviolet then chlorine disinfection process to ensure the final effluent meets the required standards. The Econova treatment technology proposed is a scaled up version of their patented miniaturised treatment system (Patent Number 1144797, NovaClear). Econova has constructed and is currently operating a number of similar treatment plants up to and including the scale of that proposed at Gordon and has recently been awarded contracts for larger treatment systems.

### Tender negotiation process

Prior to negotiations with Econova Operations Pty Ltd as to the final scope, price, security arrangements and contract conditions, a review of relevant guidelines and process for the negotiations was developed by the Tender evaluation committee. A summary and rationale for this is provided below.

Under the NSW Government Procurement Guidelines - Tendering Guidelines, tender negotiations can occur "where there are no acceptable tenders.... Negotiations may be conducted with the tenderer submitting the least unacceptable tender, or the tender which conforms most closely to the requirements and provides best value for money (the 'best tender'). Where tenders are ranked by a systematic method, for example, by scoring tender prices and other evaluation criteria, the tender with the best ranking would normally be regarded as the best tender."<sup>1</sup> Council's Code of Practice for Procurement also supports this approach.

In the expression of interest and following selective tender processes, Econova Operations Pty Ltd was identified as the highest ranked company according to the predetermined criteria, in effect the "best tender" or "preferred tenderer". The evaluation ranked the highest in all critical criteria with the exception of the financial risk, as discussed in the reports to Council in May and July 2007. The Guidelines also state that negotiations may be appropriate where this may lead to an improved outcome. Noting however that "*any negotiation process should be transparent, recorded and conducted in a manner that does not disadvantage other tenderers.*"<sup>2</sup>

The Guidelines allow for an improved outcome and value for money. These should be read in conjunction with and would include evaluating such factors as: price with whole-of-life costs; experience; quality; reliability; timeliness; delivery; innovation; product servicing; fitness for purpose; and value adding components such as meeting the government's economic, social and environmental objectives where relevant.<sup>3</sup> The tender evaluation criteria included many of these criteria.

The NSW Local Government draft Tendering Guidelines state that "if after the tendering process none of the tenders are acceptable, either due to the level of non-conformance or because they do not represent sufficient value for money, the council may, under clause 178 of the Regulations,

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decide by resolution to enter into negotiations with any person with the intention to enter a contract.”<sup>4</sup> Further the Guidelines state that “as a general rule direct negotiations should be avoided due to the risks associated with the process.”<sup>5</sup>

The two council reports and resolutions provide clear advice on the relative merits of the tenders. The confidential attachments to these reports cover specific strengths and weaknesses of each of the briefs. While the resolution of Council did not contain the specific reasons outlined above, the reports nevertheless explained the rationale leading to the resolution.

The Independent Commission Against Corruption (ICAC) guidelines related to direct negotiations was also referred to. These define “direct negotiations” as being “exclusive negotiations between an agency and a proponent without first undergoing a genuine competitive process.”<sup>6</sup> As this project used both an expression of interest and competitive selective tender process prior to post tender clarification were undertaken, the negotiations proposed do not fall within this ICAC definition.

The negotiation process followed the following steps:

1. Revision of the tender documents including proposed amendments to the contract. This was undertaken with the Department of Commerce as the basis for the contract and associated Deeds followed the NSW Government General Contract 21 and ..... The revisions reflected the change in scope to the project as resolved by Council (B, C and D above), sought specific responses to the issues raised in the technical and financial review, sought new lump sum prices for the design and construction stages of the project. The revised tender document also sought schedule of rates for the operation of the plant. The schedule includes a base operational rate for the sewer mining plant and a per kL charge for excess volumes not included in the base rate.
2. Sent a copy of the revised tender documents to the preferred tenderer. This was to clearly identify changes and ensure they are clearly understood.
3. Formally request the tenderer to respond to the revised tender in accordance with Council’s tendering processes. As part of this process a meeting was held between Econova Operations Pty Ltd and its consortium partners and the tender evaluation panel on the 13 September 2007. This meeting sought to formally discuss changes to the tender and respond to questions regarding the revised scope. A site meeting was also held on the 25 September 2007 to clarify the preferred location of the sewer mining plant and configuration of the irrigation systems. Similar tender and site meetings were previously held with all tenderers as part of the original tender process.
4. Evaluation of the revised tender by the tender evaluation panel. This had a specific focus on the tender price and those items requiring additional information. As part of this process it was determined prior to the evaluation that should the total price tendered vary more than 15 per cent or less than 20 per cent from the estimated figure reported to Council on 14 August, based on Econova’s earlier tender, an independent review of the estimate and prices and rates tendered would be undertaken. Details of how this evaluation would be undertaken was subject to a separate memo to the General Manager dated 28 August 2007.

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5. Prepare a report to Director Strategy on the evaluation then report the outcomes to Council for its decision.

**Contract and risk management**

As part of the tender evaluation process a financial assessment rating was undertaken on all tenderers. This has been reported to Council previously as confidential attachments. As part of the recent negotiations with Econova Operations Pty Ltd a financial assessment was undertaken on Henry and Hymas Consulting Engineers Pty Ltd. This was in response to this company being nominated by Econova Operations Pty Ltd as Guarantor for the design and construction aspects of the project. Confidential attachment 1 provides a copy of this assessment.

Econova are currently in contract with Henry & Hymas for a number of large projects in New South Wales, Queensland, the ACT and Tasmania. The largest project for which the contract has been awarded to Econova includes a treatment plant with a capacity of 1,600 kL per day, located near Hobart International airport, Tasmania. Value of contract is approximately \$5.5 million.

The Deed between the Guarantor and the Principal was developed for the NSW Department of Commerce. In compliance with NSW Government Procurement and Tendering guidelines it is common practice by NSW Department of Commerce to obtain a Guarantee from a third party when the preferred tenderer is deemed to not have sufficient financial capacity to undertake the contract. The Department accepts guarantees from other companies associated with the tenderer provided that the guarantor satisfactorily passes a financial assessment.

The deed as agreed to by Econova and Henry & Hymas has been reviewed by the Director of Contract and Procurement from the NSW Department of Commerce and is deemed satisfactory.

In response to the assessment of the sewer mining technologies, the revised contract sought further consideration on noise generation and odour management as part of the operation of the sewer mining operation. In response, the method of extracting sewer (off-take) has been modified to reduce odour. The treatment process remains fundamentally the same, being an aerobic system releasing carbon dioxide (an odourless gas). The aerobic system avoids the most common odour issue with sewerage treatment plants that is arising from the anaerobic digestion and release of hydrogen sulphide. In terms of noise, the blowers proposed are side channel blowers that are the lowest noise generating air blower type. The treatment plant has been relocated so that it is more central to the golf course. The new position is approximately 500 south of the club house and approximately 160m away from the nearest residential property. In terms of wind direction, affecting both odour and noise, Southerly to Northwest winds dominate morning breezes and Southerly and North-easterly winds that dominate evening breezes (based on wind frequency analysis for Sydney Airport). In most situations, as reflected by the wind frequency analysis the fetch to the nearest neighbouring property would exceed 200 metres. For Gordon the local topography would strongly influence wind direction and it is foreseeable that the dominant winds would be either from the North or South following the valley. Based on both local conditions and Sydney wind analysis should an odour be present, significant mixing or dilution would occur, hence impact should be minimal. Further details on this would be included as both part of the contract and the development application (and consent) process.

As part of the reference checking against technology tendered by Econova, 2 customers were contacted, Noosa North Shore Resort and O'Reilly's Guesthouse. Both plants are maintained and operated by Econova, with support by on ground resort staff.

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The plant at Noosa North Shore Resort treats a total of 220kL per day, after a second stage was constructed, the first stage treating a total of 110kL/day. The plant is housed in a similar shed as proposed for Gordon golf course. The treated effluent is reused for irrigation, and will be plumbed into a new development for use as toilet flushing, horse bay wash downs and car washing. The system was commissioned about two years ago. The maintenance manager at Noosa North Shore Resort reported no complaints of noise or odour during his employment (the past 18 months). The plant is located about 60m from the closest accommodation. Maintenance staff can hear some noise from the blowers if standing close to the building.

O'Reilly's Guesthouse installed a treatment plant 6 months ago, with a capacity of 110kL/day. The plant is not enclosed in a shed, and is located about 100m from one of the resort restaurants. Treated effluent is reused locally at the resort for irrigation and toilet flushing. The project manager involved with the construction and upgrade was only aware of one incident where a small amount of odour was noticeable on site. This was a result of a power outage after which one system did not reboot properly after power was returned. Normal operation was returned within 1 day. The plant is odour free under normal operation.

The plumber at O'Reilly's Guesthouse has not reported any noticeable odour at the plant when operating under normal conditions. He was not aware of any odour or noise complaints except the incident referred to by the project manager. Water samples are collected by a private contractor for testing in a certified laboratory to ensure compliance with standards set by Queensland EPA. The visual impact of the sewer treatment plant has also been addressed in greater detail as part of the negotiation process. The proposed shed is similar to a maintenance shed typical for golf courses and will be approximately 20 metres by 27 metres. The location will utilise existing topography and vegetation to act as a screen for players and neighbouring properties. Supplementary planting would also be undertaken that would be developed as part of the landscape plan attached to the development application. This planting will also be identified within the specification and contract.

The contract requires operational risk management procedures to be in place to reduce the economical, social and environmental risk to Council. As part of their strategy the tenderer will utilise a fully remotely operated SCADA system (Supervisory Control And Data Acquisition) monitoring and control system. Critical components of the treatment plant such as pumps will be duplicated to reduce system failure, and in the case of an emergency, the system is designed to shut down so that no further untreated sewage is pumped to the treatment plant, eliminating the risk of overflows of untreated water. All alarms and emergency systems are equipped with battery backup and will remain functional even in the event of a power failure. SCADA systems are widely used in the water and waste water industry in similar applications. Council can be provided with access to remotely view the SCADA monitoring system, should this be deemed beneficial to Council.

**Financial**

The current cost of Council's water consumption for the Gordon golf course is approximately \$20,000 per annum, exclusive of staff costs. The annual consumption at the site has reduced since the introduction of water restriction during the 2004 financial year. The reduction in irrigation is also likely to contribute to the declining standard of the course, with increased maintenance requirements as a result. During 2007 major renovation work was carried out on greens in an attempt to increase the standard of the course to an acceptable level. In the long term this will require greater water. Playing numbers in 2007 are so far lower than previous years, and the predicted total numbers of players for 2007 is expected to be the lowest in 5 years (See Figure 1).

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If the course could be irrigated to the level where the optimum conditions for course quality, player comfort and ease of maintenance could be produced, Council would expect an annual water consumption of 56,000kL. Using potable water, this would equate to an annual cost of \$75,700 by 2008, increasing to \$162,000 by 2023 (refer confidential attachment 2). These figures are based on the assumption that the current Sydney Water submission to IPART will be accepted and implemented. The IPART report only provides specific costs up until 2012, from which point the graph predicts a 3% increase in costs above CPI projections. By implementing the proposed sewer mining project, Council will be able to reduce its current use of potable water supplied by Sydney Water by approximately 90%. The use of recycled water will further allow Council to increase the standard of the golf course for a significantly lower cost than if potable water was to be used (see confidential attachment 2).

Having a reliable supply of alternate water will also allow Council to irrigate independently of any Sydney Water imposed water restrictions. A higher standard of golf course would increase the potential for higher visitation rates and associated increase in income to Council.

The capacity of the sewer mining plant allows production of water in excess of the irrigation demands for Gordon golf course. Under the proposed contract proposed, Council has the option to purchase water in excess of that included in the base rate at a per kL rate. There is the potential for Council to on-sell this water at a higher rate to create an additional income source. If Council was to on-sell the water at the same rate as Sydney Water charges (the benefit for the purchaser being the ability to irrigate irrespective of Sydney Water restrictions), Council could potentially offset a significant portion of its annual cost for operation and maintenance.

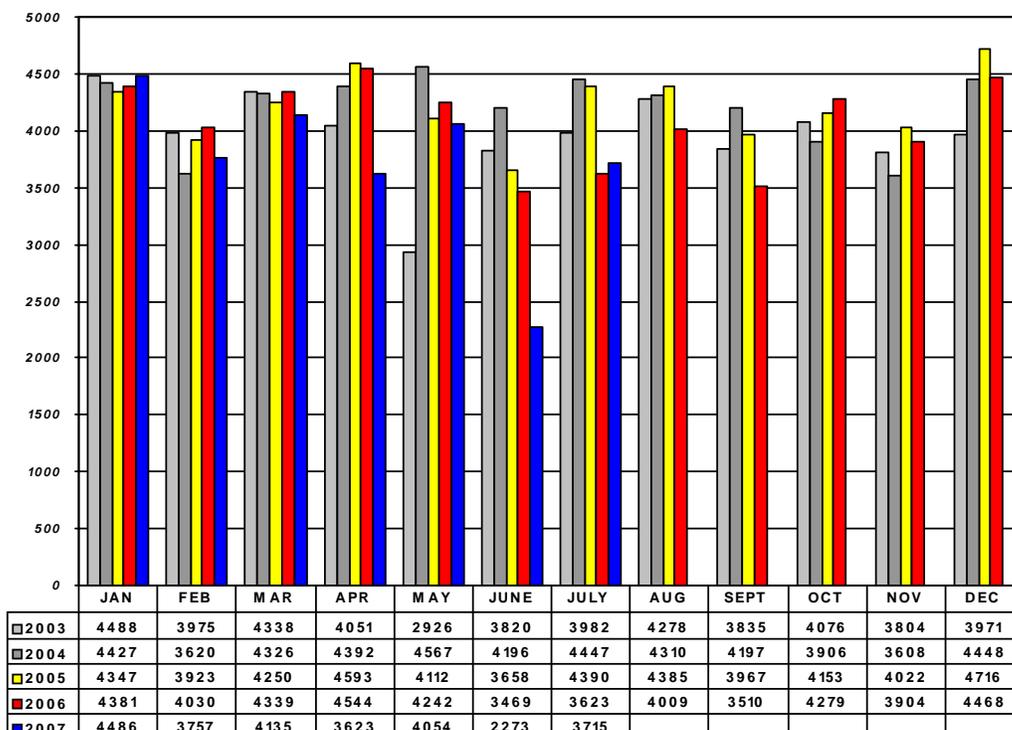


Figure 1: Player numbers for Gordon golf course by months 2003-2007. 2007 is represented by the fifth column with figures available to July.

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The tender requires the contractor to obtain all necessary approvals. These include development approval from Council and concurrent approval from the Department of Water and Energy and various approvals from Sydney Water Corporation in relation to their Sewer Mining policy.

In relation to the Development Application this would be assessed in accordance with the requirement of the *Environmental Planning and Assessment Act 1979* and relevant council plans and policies. Further, as this water recycling scheme would be owned by Council and operated for Council, concurrent approval would also be necessary from the Department of Water and Energy (DWE) pursuant to section 60 of the *Local Government Act 1993*. The approval process would need to focus on, but not be limited to, the storage tanks, structures and associated building for the sewer mining plant. In terms of residential amenity this would place significant emphasis on visual impact of the shed, noise and odour (as discussed in the section Contract and risk Management). A key element of this process will be consultation with residents, users of the golf course and other stakeholders. This consultation will follow from earlier survey work undertaken by Council and the Cooperative Research Centre for Irrigation Futures in 2006 and will involve on going support with Council staff.

Approvals from Sydney Water will involve three elements: a works agreement covering construction of the connection point; sewer mining agreement outlining the terms and condition of the sewer mining connection and operation; and a trade waste agreement allowing discharge of by-products to the sewerage system.

Assisting the approval process, the NSW Government recently released its "Interim NSW Guidelines for Management of private recycled water schemes" (October 2007). This guideline represents a move towards a nationally consistent approach to the management of the use of recycled water from sewage, greywater and stormwater sources. The water quality standards reflect the recently developed Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 1) 2006. This guideline adopts the principles of hazard analysis and risk assessment to manage the use of recycled water. This will not affect the water quality standards set for the project as part of the Tender as it has taken a conservative risk approach that recognises the unrestricted access to and residential and other use adjoining the golf course.

It is important to note that the Interim Guidelines specifically relate to approvals process for private recycled water schemes pursuant to Part C of section 68 of the NSW *Local Government Act 1993*. While this guidelines do not introduce new approval requirements, it provides practical advice about obtaining approval to install and operate private recycled water schemes. In the absence of a similar guidelines for publicly owned schemes it would also guide the determination by the DWE as part of its concurrent approval role and conditions.

**References:**

- 1 NSW Government Procurement Guidelines – Tendering Guidelines (December 2006), published for the Treasury by NSW Department of Commerce, p40
- 2 NSW Government Procurement Guidelines – Tendering Guidelines (December 2006), published for the Treasury by NSW Department of Commerce, p40
- 3 NSW Government Procurement Guidelines – Tendering Guidelines (December 2006), published for the Treasury by NSW Department of Commerce, p55
- 4 Tendering Guidelines for NSW Local Government Consultation draft (January 2006) DLG p 36

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<sup>5</sup> Tendering Guidelines for NSW Local Government Consultation draft (January 2006) DLG p 36

<sup>6</sup> ICAC Direct negotiations – guidelines for managing risks in direct negotiations May 2006 p10

**Director Comments**

Having reviewed the tender and evaluation process and subsequent negotiations and clarifications with the preferred tenderer, I am satisfied that the outcome and recommendation within this report provides for the long term direction and security for the future of the Gordon Golf Course, is financially viable and consistent with the direction of Council's long term financial model.

The initial outcomes sought from this project were to provide for a sustainable supply of water and to install full irrigation across the golf course. These outcomes will be met from this project.

The design, capacity and standard of water treatment enables Council to on-sell surplus treated water that could offset some on the ongoing operational costs. This will continue to be explored by Officers and will include ongoing discussions with Killara Public School and Killara Golf Club Limited amongst others.

In terms of the golf course and club, the project will address a major deficiency that is to have a fully irrigated course (including as a result of this project, a comprehensive automated irrigation system) enabling a higher standard of course and player experience. It would be expected that the outcomes of this project would increase (or at least maintain) player numbers and hence return to Council.

Funding for the project comes directly from the golf course reserve and a NSW Government grant. The golf course reserve was specifically established to fund larger projects such as this and others as identified in the golf course master plan. For some years this reserve has been allowed to accumulate for the specific purpose of funding this project. Similarly once this has been completed it is proposed that the reserve again be allowed to accumulate to assist in the funding of similar works at North Turrumurra golf course. Complementary funding via government grants would also be pursued.

Finally in the light of water shortages and restriction, this project would overcome these barriers whilst positioning the Council as a leader in water management.

**CONSULTATION**

No consultation has occurred in the preparation of this report.

**FINANCIAL CONSIDERATIONS**

**Price**

The contract was originally a Lump Sum Contract. This was determined to be difficult to administer because this could not adequately accommodate the progressive payments for the operation of the system over a 15 years period. With the withdrawal of Killara Golf Club, the contract documents were revised to delete all the works related to Killara Golf Course and those related to the stormwater harvesting component. This provided an opportunity to restructure the

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contract into a Schedule of Rates Contract with all Design and Construction Items as Lump Sum items with Rates for operation of the system and quantity of water delivered. This form of contract is deemed more appropriate for a long term operation and maintenance project.

Additional information in relation to price is addressed within confidential attachment 2.

## CONSULTATION WITH OTHER COUNCIL DEPARTMENTS

Consultation has been undertaken with Operations, Corporate Services and Council's Corporate Lawyer.

## SUMMARY

The sewer mining project at Gordon golf course has followed a process of Expression of Interest and Selective tender, followed by negotiation. This process is in accordance with current codes of practice. A preferred tenderer was identified following the expression of interest and tender stages. Some issues were identified with the preferred tenderer, which has now been resolved, as outlined in this and preceding reports to Council.

The outcome of this process is fair and represents best value for money to Council. It also ensures that the sustainable outcomes, forming the original basis for this project, are achieved.

## RECOMMENDATION

- A. That Council enters into a contract with Econova Operations Pty Ltd based on the revised tender and contract dated 8 October 2007.
- B. That the Mayor and General Manager be authorised to execute all necessary documentation in relation to the contract.
- C. The Common Seal of Council be affixed to all necessary documentation.
- D. The implementation and performance of the project be reported to Council annually as part of the Annual Report.

Jay Jonasson  
Environmental Engineer

Peter Davies  
Manager Corporate Planning  
& Sustainability

Steven Head  
Director Strategy

**Attachments:**  
1. Kingsway Financial Assessment - Confidential  
2. Cost and Financial Report - Confidential

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**PROPOSED LOT 1, WATER STREET  
(AKA LOT 1, 134 TO 136 EASTERN ROAD,  
WAHROONGA) - PROPOSAL TO ACQUIRE**

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**EXECUTIVE SUMMARY**

**PURPOSE OF REPORT:**

For Council to consider the acquisition of proposed Lot 1, Water Street (aka Lot 1, 134 to 136 Eastern Road) Wahroonga.

**BACKGROUND:**

On 25 September 2007, Council resolved that the General Manager immediately contact the land owner and seek their level of interest for the sale of Lot 1, on the corner of Mona Street and Water Street, Wahroonga.

**COMMENTS:**

The site is a residential building block approximately 1,046sq m. with street access from Water Street, Wahroonga. The site directly adjoins a Council drainage reserve and Turiban Reserve (Crown Land). Both these reserves are densely vegetated and contain remnant Blue Gum High Forest.

**RECOMMENDATION:**

That Council determine its course of action in relation to the acquisition of Lot 1.

## PURPOSE OF REPORT

For Council to consider the acquisition of proposed Lot 1, Water Street (aka Lot 1, 134-136 Eastern Road) Wahroonga.

## BACKGROUND

On 25 September 2007, Council resolved that;

1. *The General Manager immediately contact the land owner and seeks their level of interest for the sale of Lot 1, on the corner of Mona and Water Streets, Wahroonga.*
2. *The General Manager source valuations.*
3. *Confirmation that S94 funding could be used to obtain this land*

Council has commenced discussions with the owners of the Lot to ascertain their interest in divesting the land to Council prior to construction. These discussions have indicated that the owners are willing to sell subject to further negotiations.

Council instructed BEM Property Consultants Pty Ltd, to determine a valuation range for the land.

## COMMENTS

The site is a residential 2(c) vacant building block approximately 1,046 sqm, with street access from Water Street, Wahroonga. The site directly adjoins a Council drainage reserve and Turiban Reserve [Crown Land] both these reserves are densely vegetated and contain remnant blue gum high forest.

The proposed Lot 1 forms part of a larger 2 (c) residential development containing 17 lots, with access to those lots from Eastern Road Wahroonga. The owners of the land are proposing to subdivide Lot 1 from the adjoining Community Title Scheme development as it does not interface with the adjoining development and it will not benefit from any community infrastructure. To date, the Plan of Subdivision has not been registered with LPI NSW and is currently in draft form **(Attachment 1)**.

The valuation determined the price range for negotiations **(Confidential - Attachment 2)**. The valuation also analysed constraints and opportunities associated with the site and specifically refers to issues pertaining to site topography, overshadowing and access [refer to valuation SWOT Analysis].

### Purpose of Acquisition

Whilst Council's Notice of Motion [NOM] to investigate the purchase of the site is not specific in regard to the purpose of acquisition, given the location of the site and the adjoining residential development and bushland reserve, it is feasible to consider the future use of the site will be either

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to consolidate that land with the adjacent bushland reserve or to provide passive open space. A site inspection with Council technical staff was undertaken to further consider these options.

Bushland

The site inspection revealed native canopy species of blue gum high forest vegetation with an understorey of planted shrubs and ground covers. The site has been excavated to provide a building platform, creating a now altered terrain which would hold little if any regeneration potential. The planted shrubs and ground cover areas may have potential to be brought back to blue gum high forest community if subjected to an intensive regeneration program.

Adjacent to the site is a degraded piece of bushland known as Turiban Reserve, which contains Blue Gum High Forest and where contractors have been engaged to remediate the vegetation through bush regeneration over a seven year period which is funded through the Environmental Levy. Adjacent to Turiban Reserve is the Wahroonga Bush School which consists of a large area of blue gum high forest vegetation.

Lot 1 would be complimentary to the linear and fragile piece of land known as Turiban Reserve and could be included with the school's land as a significant area of bushland.

Technical staff indicated that maintenance for the proposed acquisition site will need to be considered to remediate and regenerate the site. Included in the cost would be a long term commitment of approximately \$10, 000 per annum for a period of five years. Areas where soil has not been altered may have natural regeneration potential with reduced maintenance costs.

If acquired technical staff have recommended that a portion of the adjacent pathway [unformed road] which provides the pedestrian access between Eastern Road and Mona Street, could be consolidated with Lot 1, as the unformed road has potential to regenerate at a greater pace and with more sustainability. Additionally, the site is identified as bush fire prone category 1 land.

Open Space

The site inspection ascertained that the site could provide a small passive [pocket] park. However, due to site topography and location, user access to the site could be constrained, combined with useable site area, the location would be considered a low quality park. There is no proposed access to the site from the adjoining new residential development, and there are no formed footpaths along Water or Mona Streets. There is a pathway that leads from Eastern Road to the junction of Water and Mona Streets which can provide the only reasonable pedestrian access to the site. On street parking is available, but limited due to the curvature and width of both streets.

Lot 1 has been excavated to provide a future building platform and contains a 3 metre high retaining wall to the rear of the site which supports the higher adjoining building platform. The site adjoins a creek [drainage reserve] which is densely vegetated with degraded bushland. Due to the adjoining bushland and site orientation solar access to Lot 1 is also limited.

Given the current condition of the site it would require substantial embellishment in terms of landscaping, plantings, park furniture, play and recreation equipment along with providing reasonable access to the site. This development may well compromise ecological values associated with the site, which is not a desirable outcome. On a site this constrained, jointly managing conservation and recreation will be difficult.

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On 30 November 2007, Council adopted this strategy as the overarching strategy to proactively identify future open space and justifying acquisitions utilising Section 94 Reserve funds. The purpose of the Strategy is to establish a series of principles for acquisition of open space in Ku-ring-gai. This Strategy supports the findings of Council Open Space Strategy 2005, which identified that the LGA has a relatively low distribution of local and district open space and particularly notes the shortfalls given the potential increased demand in provision of open space for new populations.

The Strategy's objectives assist Council to:

- Develop strategies that Council can use now and into the future to guide decision making in relation to acquisition of open space
- Acquire open space as efficiently as possible in term of investment versus open space area, location and quality of space acquired
- Assess existing open space system and identify implications of increased population
- Assess priorities based on new population and development trends identified in Council planning
- Develop a decision making rationale that will ensure that acquisition of open space will meet the needs of the new population without further exacerbating deficiencies in the open space system
- Identify priorities including 'hot spots' for acquisition
- Ensure provision of quality open space – not solely based on quantity
- Examine potential of other open space improvements such as enhancement of existing open space as a mechanism to improve open space provision and quality
- Make recommendations regarding embellishment of open space in terms of facilities and recreation opportunities
- Be able to respond appropriately to opportunities to acquire specific sites for open space

The proposed purchase of Lot 1 has been considered against the Open Space Acquisition Strategy's acquisition principles and priorities. These principles provide a checklist for evaluating priorities and targets when analysing specific acquisition opportunities.

The open space acquisition process entails two tiers of assessment. The first concerns the location of the site and whether or not they are in identified priority locations and the second analyses particular attributes to the site such as their suitability for acquisition in terms of size, terrain shape, neighbouring land uses and other qualities. The following is an assessment of Lot 1 against the criteria;

Assessment of suitability of location as local open space - Lot 1, Water Street, Wahroonga

A preliminary analysis of the site has been undertaken in relation to the Open Space Acquisition Strategy (OSAS) the work is presented in **(Attachment 3)**. In summary the following points are noted:

- The site is located in an area currently not well serviced by local parks;

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- Wahroonga Park and Karuah/Turramurra Park are approximately 800 metres away, both are high quality district scale parks;
- The site is more than 1000 metres from the major growth areas although it is acknowledged that there has been considerable SEPP 53 and dual occupancy development in the surrounding area;
- The site is located within a priority 5-6 area as defined in the OSAS;
- Closest medium density sites (2d3) at Woniora Avenue, Wahroonga which is more than 800 metres away or on the Pacific Highway between Hayden Street and Cherry Street, which is more than 1000 metres away and separated by major barrier of the railway;
- The proposed site will only service a small number of residences in Water, Mona and Hillcrest Streets and Eastern Road;
- The site is 1,046 sqm in size which is less than the minimum requirement of 3,000sqm as defined in the OSAS. There is no potential to expand the area in the future due to ecological constraints to the west and approved development site to east;
- Total 5 year open space requirement under the 2004-2009 Plan for Wahroonga as a whole is about 2,700sqm. The subject site represents more than 30% of this total;
- From a strategic point of view the location of the site is not suitable for local open space;
- It is noted that Council has resolved that a report, documenting potential sites for acquisition as local open space within the priority one and two areas, is to be submitted for Council's consideration in April 2008.

Assessment of suitability of site attributes for local open space - Lot 1, Water Street, Wahroonga

A detailed assessment of the site values has been prepared in the following table (**Attachment 4**). The assessment is against the objectives and criteria set out within the OSAS. In summary staff's assessment found that the site is only suitable in terms of 2 objectives out of a total of 10. The site is therefore not an ideal purchase as local open space.

## CONSULTATION

Staff have discussed the proposed acquisition with the current owners, who have indicated the owners are willing to sell subject to further negotiations.

## FINANCIAL CONSIDERATIONS

### S94 Funding

Council's resolution specifically requested the confirmation that S94 funding could be used to obtain this land. In this regard it is important to consider the purpose of acquisition to justify the use of Section 94 reserves and to accord with the S94 Plans.

Both the Ku-ring-gai Section 94 Contributions Plan 2000 – Residential Development and Ku-ring-gai Section 94 Contributions Plan 2004-2009 – Residential Development identifies the acquisition of open space for parklands. However, only the 2004-2009 Plan provides for acquisition and embellishment of open space.

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Ku-ring-gai Section 94 Contributions Plan 2004-2009 – Residential Development, purport open space acquisition and embellishment costs allocated to Wahroonga based on a per capita ratio. The additional local open space required for Wahroonga under this Plan is 2,739.99 sqm.

Acquisition of the site via S94 can be undertaken if the area can be utilised to satisfy local open space requirements. Council's Section 94 Plan and recently adopted Open Space Acquisition Strategy further detail those requirements.

Local Open Space

Due to the current site condition the site would require substantial embellishment in terms of landscaping, plantings, park furniture, play and recreation equipment along with providing reasonable access to the site – both pedestrian (including disabled access) and vehicular. The current S94 Plan nominates park embellishment costs at approximately \$88 per sqm, which would equate to \$92,048 for embellishment of the site if it were acquired for local open space.

The staff assessment in this report outlines that the use of S94 funds for this land can be undertaken and would represent poor utilisation of these funds.

Bushland

Should the site be acquired for consolidation with the adjoining bushland, in addition to acquisition costs, technical staff have indicated that maintenance of the site will need to consider the remediation and regenerate of the site. This would require a long term funding commitment of approximately \$10, 000 per annum for a period of five years. Subject to consultation the Environmental Levy may be an appropriate source of funds.

The source of funding for the acquisition of this site as bushland is more problematic than the acquisition of quality local open space.

The Section 94 Contributions Plans do not provide for the purchase of additional bushland. The current CP is specifically designed to maintain a comparable per capita rate of accessible, useable local and district open space as the population increases.

Accordingly, the appropriate source of funds for acquisition of this site as bushland is the New Facilities Reserve. The current balance of the reserve is approximately \$6.3 Million dollars.

**Refer to Confidential Attachment 5**

## **CONSULTATION WITH OTHER COUNCIL DEPARTMENTS**

Council technical have staff conducted site inspections to evaluate various aspects of the land. Council's Strategy, Corporate and Community Departments have provided information and contributed to the development of this report.

## SUMMARY

Council has commenced discussions with the owners of Lot 1 to ascertain their interest in divesting the land to Council. These discussions have indicated that the owners are willing to sell subject to further negotiations.

Council instructed BEM Property Consultants Pty Ltd, to determine a valuation range for negotiations to acquire the site based on two criteria. Firstly, for the purpose of open space and secondly at market value for the highest and best use under a residential 2(c) zoning.

The site is a residential building block approximately 1,046 sqm, with street access from Water Street, Wahroonga. The proposed Lot 1 forms part of a larger residential development containing 16 lots with access to those lots from Eastern Road Wahroonga. The site directly adjoins a Council drainage reserve and Turiban Reserve [Crown land], both these reserves are densely vegetated and contain remnant blue gum high forest.

Whilst Council's resolution to investigate the purchase of the site is not specific in regard to the purpose of acquisition, given the location of the site and the adjoining residential development and bushland reserve, it is reasonable to consider the future use of the site will be either to consolidate that land with the adjacent bushland reserve or to provide local open space.

Technical staff conducted a site inspection to assess the proposed acquisition for both bushland and passive open space. The site inspection revealed native canopy species of blue gum high vegetation with an understorey of planted shrubs and ground covers, and that the planted shrubs and ground cover areas may have potential to be brought back to blue gum high community if subjected to an intensive regeneration effort. It is adjacent to a degraded piece of bushland known as Turiban Reserve where contractors are engaged to remediate the vegetation through bush regeneration over the next seven (7) years, which is being funded through the Environmental Levy.

Lot 1 would be complimentary to the linear and fragile piece of Turiban Reserve along with the Wahroonga's Bush School significant area of bushland.

For reason outlined in this report, the purchase of bushland through S94 Reserves is not permissible and as such an alternative funding source would be required to acquire the site i.e. the New Facilities Reserve. This then poses the question as to whether other significant parcels of bushland are of higher priority to acquire, such as 102 Rosedale Road, St Ives, or other priorities such as new facilities.

In regard to providing additional open space for the catchment area, Council technical staff noted that the site could provide a small pocket park, and that due to site topography, location, orientation and user's access, the site would be considered of low merit park. Additionally, the site has been excavated to provide a building platform and contains an unsightly 3 metre high retaining wall at the rear of the site. Due to the current site condition it would require substantial embellishment.

Further assessment of the site as a potential local park was undertaken inline with Council's adopted Open Space Acquisition Strategy, which recognised the site within priority 5 - 6 areas, and are deemed the lowest priority areas within the LGA.

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Given the above information it is likely that the acquisition of Lot 1 would be for potential bushland of which S94 reserves cannot be utilised to fund the purchase, Council will be required to nominate another funding source should it wish to pursue the acquisition. Should the site be purchased as local open space, the presence of Blue Gum High Forest would likely mean that only a portion of the site could be so used.

This combined with the site's overall inability to reach a reasonable threshold size renders it as a poor use in Section 94 Reserves.

In the event that Council determines to proceed with the acquisition of the land for the purpose of ecological conservation a suggested course of action is outlined below;

1. A funding source should be nominated, which encompasses acquisition, and ongoing regeneration and rehabilitation costs required at the site.
2. Council determine a range for the purposes of negotiation.
3. That the General Manager commence negotiations within the determined price range for the land.
4. That if negotiations result in a purchase price, the Mayor and General Manager are delegated authority to execute all documentation associated with the purchase of Lot 1.

## RECOMMENDATION

That Council determine its course of action in relation to the acquisition of Lot 1.

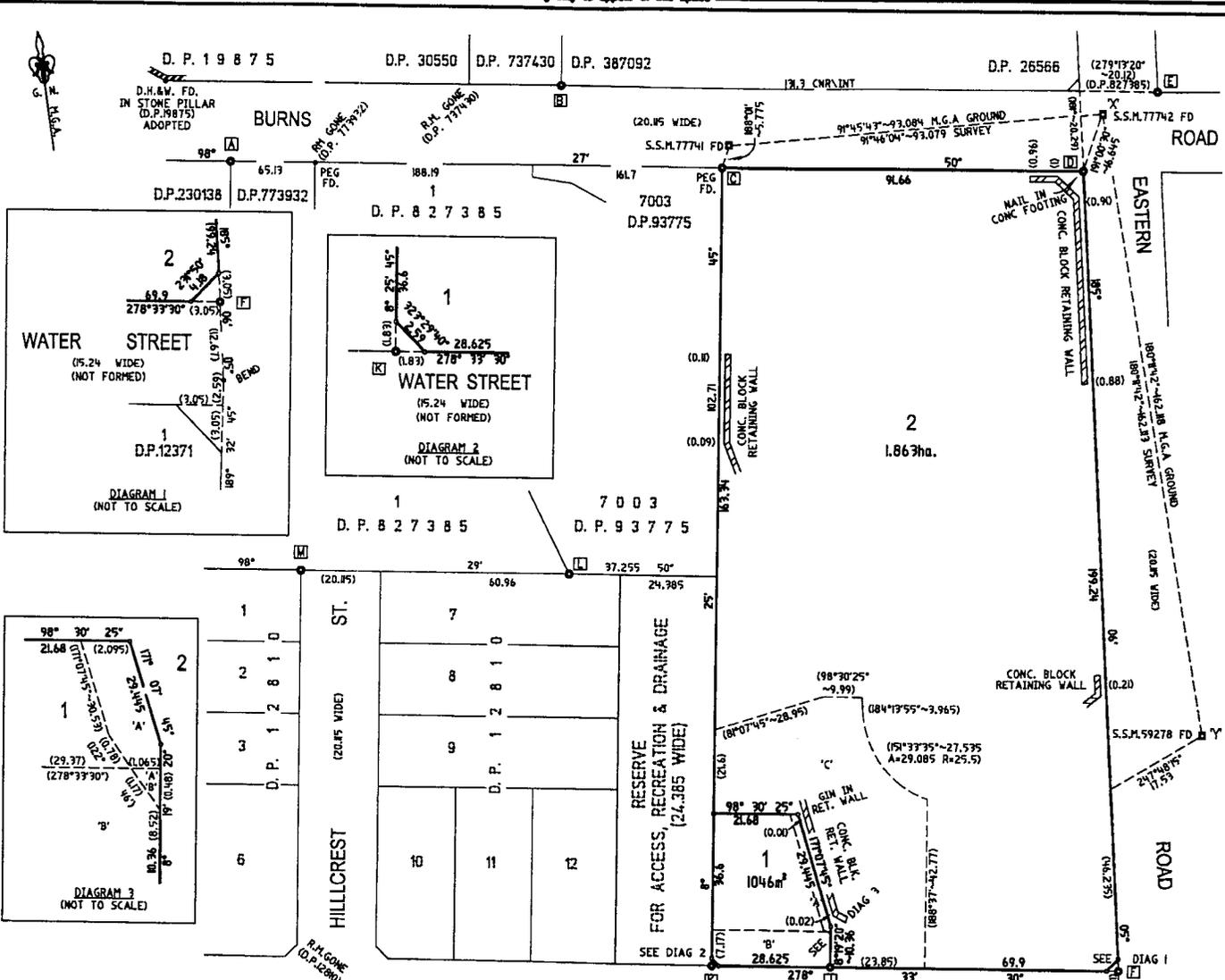
Deborah Silva  
Commercial Services Coordinator

Steven Head  
Director Strategy

**Attachments:**

1. Draft Plan of Subdivision, Lot 1, Water Street, Wahroonga - 850244
2. BEM Property Consultants Pty Ltd, Valuation - Confidential
3. Open Space Acquisition Strategy Assessment Sheet - 850239
4. Detailed Assessment - 850238
5. Confidential Financial Information

SIGNATURE, SEALS AND STATEMENTS of intention to dedicate public roads or to create public reserves, drainage reserves, easements, restrictions on the use of land or positive covenants.



Register: TORRENS  
 Title System: TORRENS  
 Purpose: SUBDIVISION  
 Ref. Map: U0967-74  
 Last Plan: D.P.12810 & D.P.186622

PLAN OF SUBDIVISION  
 LOTS 13-15 D.P.12810  
 & LOT 1 D.P.186622  
 Lengths are in metres. Reduction Ratio 1:800

LGA: KU-RING-GAI  
 Locality: WAHROONGA  
 Parish: GORDON  
 County: CUMBERLAND

This is sheet 1 of my plan in sheets (state if applicable)  
 Surveying Regulation 2001  
 CRAIG ANTHONY TURNER  
 of CRAIG & RHODES PTY LTD  
 LEVEL 4, 16-18 CAMBRIDGE STEPPING 2121  
 a surveyor registered under the Surveying Act 2002, hereby certify that the survey represented in this plan is accurate, has been made in accordance with the Surveying Regulation 2001 and was completed on 15th JUNE 2008  
 The survey relates to LOT 1 & 2 ONLY.  
 I specify the land actually surveyed, or specify any land shown in the plan that is not the subject of the survey

Signature: \_\_\_\_\_ Date: 29/06/2008  
 Surveyor registered under the Surveying Act 2002  
 Detail Line: X-Y Type: Urban/Rural  
 Please used in preparation of survey / completion  
 D.P.12371 D.P.1045493  
 D.P.12810  
 D.P.186622  
 D.P.648809  
 D.P.737430  
 D.P.827385

PANEL FOR USE ONLY for statements of intention to dedicate public roads or to create public reserves, drainage reserves, easements, restrictions on the use of land or positive covenants.

- 1. 'A'-EASEMENT FOR SUPPORT 2 WIDE & VARIABLE
- 2. 'B'-RESTRICTION ON USE OF LAND
- 3. RESTRICTION ON USE OF LAND
- 4. POSITIVE COVENANT

Department of Lands Approval

I, \_\_\_\_\_, in approving this plan certify that of necessary approvals in regard to the allocation of the land shown hereon have been given.

Signature: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 File Number: \_\_\_\_\_  
 Office: \_\_\_\_\_

Subdivision Certificate

I certify that the Provisions of s.106J of the Environmental Planning and Assessment Act 1979 have been attached in relation to the proposed \_\_\_\_\_ set out hereon \_\_\_\_\_ set out hereon

in Authorized Person/General Manager/Authorised Officer

Consent Authority: \_\_\_\_\_  
 Date of Endorsement: \_\_\_\_\_  
 Authorisation as: \_\_\_\_\_  
 Subdivider Certificate as: \_\_\_\_\_  
 File no: \_\_\_\_\_

Note: When this plan is to be lodged electronically in the Land Titles Office, it should include a signature in an electronic or digital format approved by the Registrar-General.  
 Delete whichever is inapplicable

SCHEDULE OF REFERENCE MARKS

KNR	BEARING	DISTANCE	DESCRIPTION
A	188°27'50"	1.42	D.H.&W. FD. IN PATH (D.P.777392)
B	9°57'50"	5.975	D.H.&W. FD. TOP KERB (D.P.737430)
C	160°05'30"	5.39	D.H.&W. PLACED TOP KERB
D	188°0'	5.775	S.S.M.77742 FD TOP KERB
E	19°00'30"	16.645	S.S.M.77742 FD TOP KERB
F	101°39'	0.305	G.L.P. FD. (D.P.17407) (DOWN 0.3)
G	300°58'30"	17.72	D.H.&W. PLACED TOP KERB
H	279°19'15" BY ME	1.065	D.H.&W. FD. IN PATH (D.P.1045493)
I	278°19'15"	1.065	D.H.&W. FD. IN PATH (D.P.1045493)
J	98°35'15"	1.065	C.B. FD. (D.P.12371)
K	66°49'30"	23.565	D.H.&W. PLACED TOP KERB
L	325°09'	8.64	D.H.&W. PLACED TOP KERB
M	16°19'	0.955	G.L.P. FD. (M47-3000) (DOWN 0.2)
N	278°29'40"	1.065	C.B. FD. (D.P.12810)

'A'-EASEMENT FOR SUPPORT 2 WIDE & VARIABLE  
 'B'-RESTRICTION ON USE OF LAND-BUILDING SETBACK  
 'C'-BENEFIT BY EASEMENT FOR SUPPORT 2 WIDE & VARIABLE

SURVEYING REGULATION 2001 CLAUSE 32(2)  
 M.G.A. COORDINATES

MARK	EASTING	NORTHING	ZONE	CLASS	ORDER
S.S.M.59278	326889.846	6267709.980	56	B	2
S.S.M.77741	326797.364	6267874.949	56	B	2
S.S.M.77742	326890.398	6267872.087	56	B	2

COMBINED SCALE FACTOR 0.999940  
 SOURCE: S.C.I.H.S. DATED 19th MAY 2006

SIGNATURES, SEALS AND STATEMENTS of intention to dedicate public roads or to create public reserves, drainage reserves, easements, restrictions on the use of land or positive covenants.

- 11. 'K' - POSITIVE COVENANT
- 12. RESTRICTION ON USE OF LAND
- 13. RESTRICTION ON USE OF LAND
- 14. 'M' - RESTRICTION ON USE OF LAND

Plan Drawing only to appear in this space

OFFICE USE ONLY

DRAFT

Registered:  
C.A.  
Title System:  
Purpose:  
Ref. Map:  
Last Plan:

PLAN  
OF SUBDIVISION OF PART LOT 13,  
PART LOT 14 & LOT 15, D.P.12810  
& LOT 1 D.P.18662

Lengths are in metres. Reduction Ratio 1:500

LGA: KU-RING-GAI  
Suburb/Locality: WAHROONGA  
Parish: GORDON  
County: CUMBERLAND

This is sheet 2 of my plan in 4 sheets  
(Delete if inapplicable)

Surveyors (Practise) Regulation 2001  
ANDREW RICHARD THOMAS  
of CRAIG & RHODES PTY LTD

A surveyor registered under the Surveyors Act 2002, hereby certifies that the survey represented in this plan is accurate, has been made in accordance with the Surveying Regulation, 2001 and was completed on: \_\_\_\_\_

The survey relates to: \_\_\_\_\_  
Herein exactly the land actually surveyed or specified any land shown in the plan that is not the subject of the survey

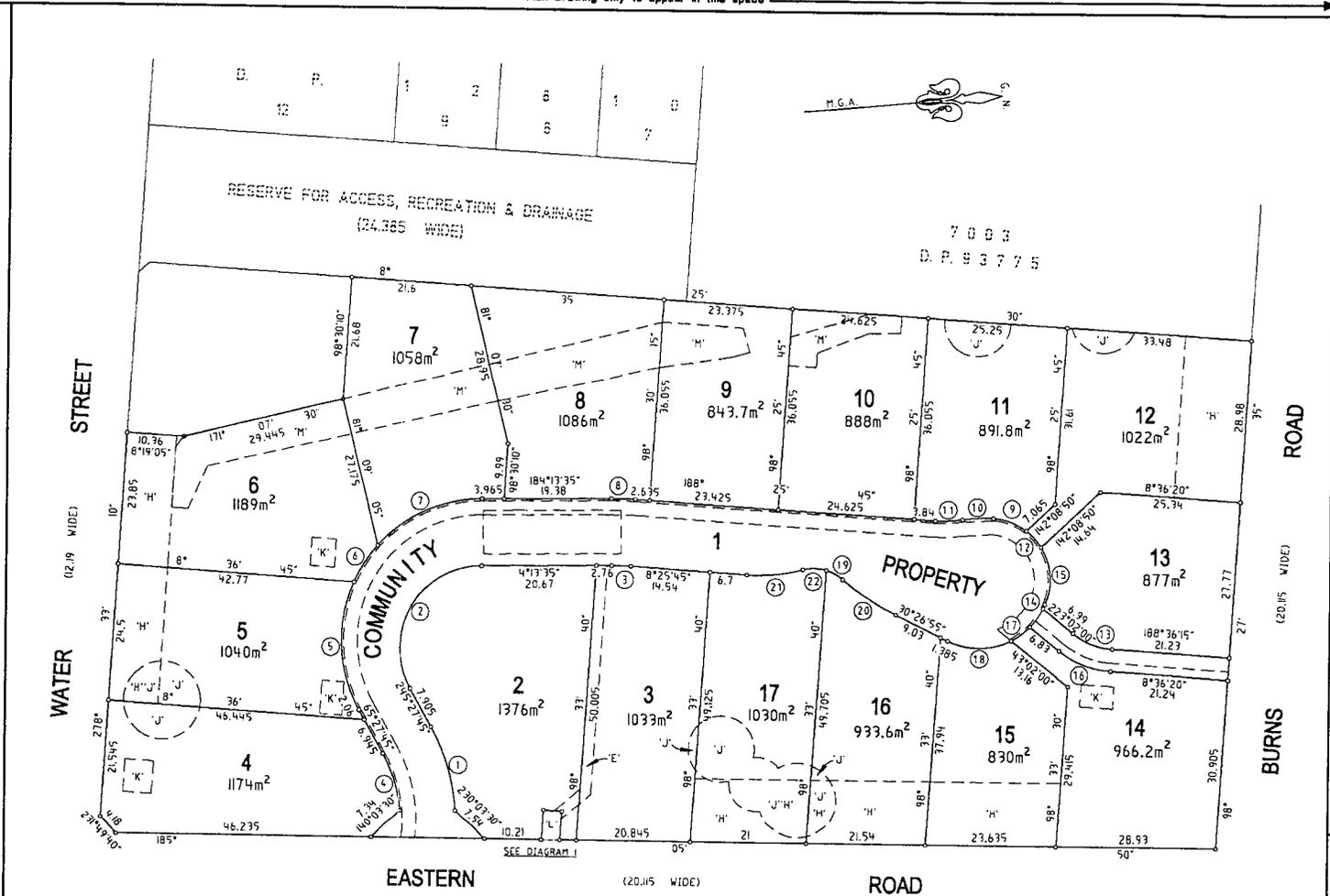
Signature: \_\_\_\_\_ Dated: \_\_\_\_\_  
Surveyor registered under the Surveying Act, 2002  
Datum: \_\_\_\_\_  
Type: Urban / Rural

Plans used in preparation of survey / compilation:  
D.P.12810  
D.P.18662  
D.P.

PANEL FOR USE ONLY for statements of intention to dedicate public roads or to create public reserves, drainage reserves, easements, restrictions on the use of land or positive covenants.

PURSUANT TO SECTION 88B OF THE CONVEYANCING ACT 1919 AS AMENDED AND IN TERMS OF THE ACCOMPANYING INSTRUMENT IT IS INTENDED TO CREATE:

1. 'A' - EASEMENT FOR ELECTRICITY PURPOSES 4 WIDE, 10 WIDE, 12 WIDE & VARIABLE (WHOLE OF LOT)
  2. 'B' - RIGHT OF WAY 4 WIDE, 10 WIDE, 12 WIDE & VARIABLE (WHOLE OF LOT)
  3. 'C' - EASEMENT FOR WATER SUPPLY PURPOSES 2.5 WIDE
  4. 'D' - EASEMENT FOR ACCESS & DRAINAGE PURPOSES 4 WIDE, 10 WIDE, 12 WIDE & VARIABLE (WHOLE OF LOT)
  5. POSITIVE COVENANT
  6. 'E' - EASEMENT FOR ELECTRICITY PURPOSES 2 WIDE
  7. 'F' - RIGHT OF WAY 10 WIDE, 12 WIDE & VARIABLE
  8. 'H' - RESTRICTION ON USE OF LAND
  9. 'J' - RESTRICTION ON USE OF LAND
  10. 'K' - RESTRICTION ON USE OF LAND
- SEE LEFT PANEL FOR CONTINUATION



7 0 0 3  
D. P. 1 2 8 1 0  
D. P. 1 8 6 6 2

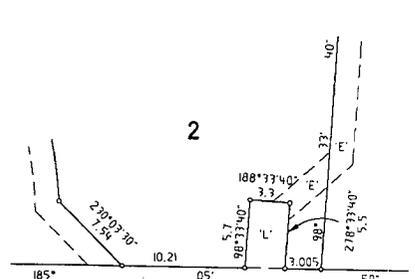


DIAGRAM 1  
(SCALE 1:300)

- 'E' - EASEMENT FOR ELECTRICITY PURPOSES 2 WIDE
- 'G' - EASEMENT FOR SUPPORT 2 WIDE VIDE D.P.
- 'H' - RESTRICTION ON USE OF LAND - BUILDING SETBACK
- 'J' - RESTRICTION ON USE OF LAND - TREES
- 'K' - RESTRICTION ON USE OF LAND & POSITIVE COVENANT - ON SITE DETENTION TANKS
- 'L' - ROAD WIDENING 3.3 WIDE
- 'M' - RESTRICTION ON USE OF LAND

DETAIL PLAN

SCHEDULE OF CURVED BOUNDARIES

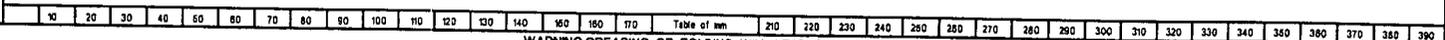
No.	BEARING	CHORD	ARC	RADIUS
1	258°37'20"	15.935	16.08	35
2	304°50'40"	25.475	30.68	14.8
3	6°18'40"	3.52	3.52	4.8
4	78°06'45"	10.95	11.04	25
5	92°10'15"	22.92	23.775	25.5
6	127°41'40"	7.815	7.85	25.5
7	160°22'10"	20.63	21.235	25.5
8	185°19'40"	4.4	4.4	60
9	204°48'05"	6.385	6.48	11
10	182°02'05"	5.545	5.55	27
11	182°17'10"	4.92	4.93	23
12	232°09'15"	4	4.02	11
13	205°49'20"	7.695	7.81	13
14	300°00'15"	0.845	0.845	13
15	270°24'05"	10.25	10.665	11
16	25°49'20"	10.06	10.215	17
17	328°48'40"	4.155	4.175	13
18	4°13'45"	11.485	11.9	13
19	33°24'20"	3.37	3.395	8
20	38°00'30"	11.55	11.585	43.9
21	359°20'05"	10.12	10.165	32
22	5°44'10"	4.28	4.33	8

PLAN FORM 2

Department of Lands Approver  
In approving the plan certifies that all necessary approvals in regard to the allocation of the land shown herein have been given.  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
File Number: \_\_\_\_\_  
Office: \_\_\_\_\_

Subdivision Certificate  
I certify that the Provisions of s.109J of the Environmental Planning and Assessment Act 1979 have been satisfied in relation to the proposed: \_\_\_\_\_  
(insert subdivision or new road) set out herein  
Authorised Person/General Manager/Accredited Certifier  
Consent Authority: \_\_\_\_\_  
Date of Endorsement: \_\_\_\_\_  
Accreditation no.: \_\_\_\_\_  
Subdivision Certificate no.: \_\_\_\_\_  
File no.: \_\_\_\_\_  
(Delete whichever is inapplicable)

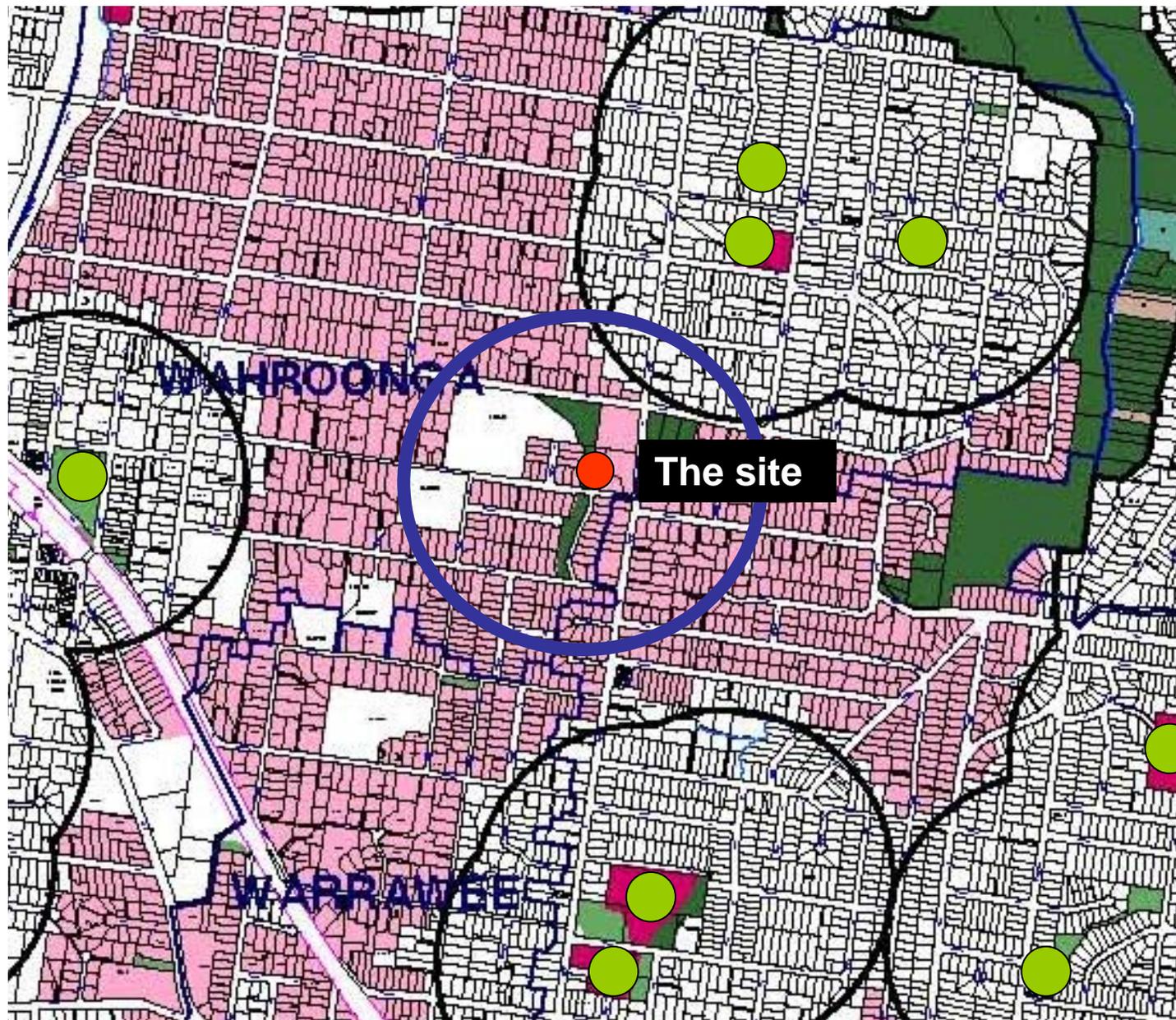
SURVEYOR'S REFERENCE: 311/02



WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION

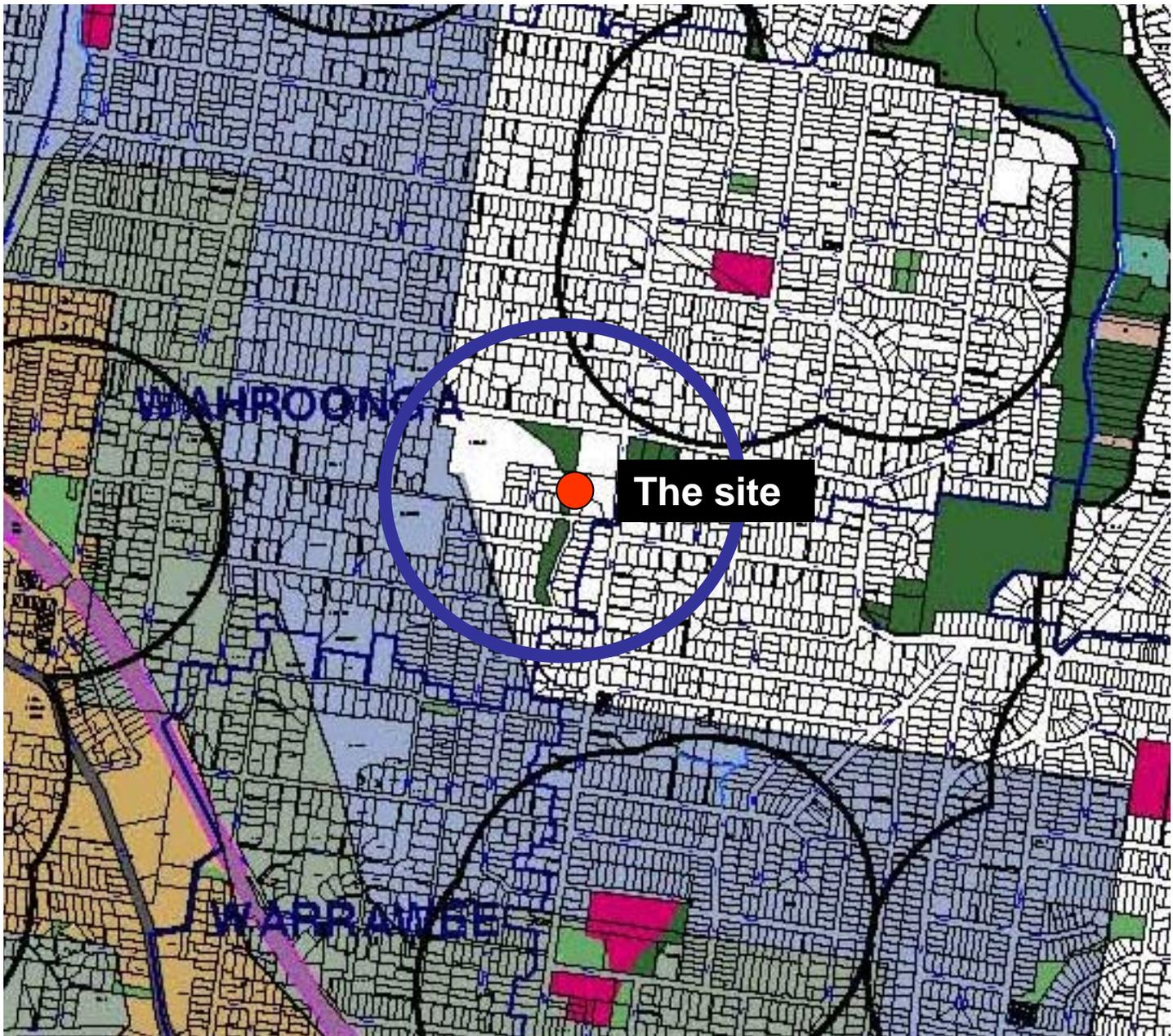
IT IS INTENDED TO DEDICATE TO THE PUBLIC AS PUBLIC ROAD THE ROAD WIDENING 3.3 WIDE

CAD REF.: 3110252



Lot 1 Water Street – existing parks

● Existing local parks

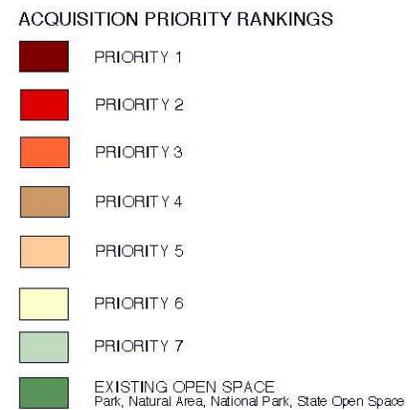


PROXIMITY TO GROWTH AREA

- 200m
- 200-500m
- 500-1000m

Note: The majority of Stage 1 growth (18,377 people) is expected in the 2(c3) zone. Stage 2 growth (8,290 people) is anticipated in the new B2 (Local Centre) zone.

Lot 1 Water Street, Wahroonga – proximity to growth areas



Lot 1 Water Street, Wahroonga – priority ranking



Lot 1 Water Street, Wahroonga – context

Lot 1, Water Street Wahroonga - Assessment

Principles	Acquisition Objectives	Acquisition Criteria [screening process]	Rationale	Initial Screening	Detailed Assessment
Open Space provision and distribution	<ul style="list-style-type: none"> <li>• A balanced open space system</li> <li>• Equitable distribution</li> </ul>	<ul style="list-style-type: none"> <li>• The land does not provide for a type of space that is unprovided for in the LGA.</li> </ul>	The site contains remnant bushland and some understorey, and adjoins BGHF bushland. The site topography is steep both of which there is adequate supply in the LGA reserve system	Not suitable	n/a
Recreation provision	<ul style="list-style-type: none"> <li>• diversity of recreation opportunities</li> <li>• open space suitable for their intended uses</li> <li>• minimal negative impacts on adjoining uses</li> </ul>	<ul style="list-style-type: none"> <li>• The site does not cater for the recreation needs of the new population as it is too far away</li> <li>• The site is too small to function as a local park</li> <li>• The site is too steep to maximise recreational opportunity</li> </ul>	The land is not suitable for intended use a local park or passive recreation. At best the site would provide a small pocket park.	Not suitable	n/a
Natural systems	Protection and enhancement of bushland and environmental values	<p>The land provides good opportunity to protect and enhance remnant vegetation</p> <p>The sites ecological values are likely to conflict with the recreation value of the park due to the size</p>	The sites ecological values are likely to conflict with the recreation value of the park due to the size and inability for potential augmentation.	Suitable	n/a
Cultural Heritage	Protection and enhancement of historic or cultural values	Based on preliminary analysis the site has no cultural or heritage value		Not suitable	n/a
Visual/landscape quality	Protection and enhancement of visual or scenic values	The site has some potential for visual quality as forest type environment However it is currently in very poor condition	The sites ecological values would improve with consolidation with adjoining bushland reserves and a structured regeneration program.	Suitable	n/a

Principles	Acquisition Objectives	Acquisition Criteria [screening process]	Rationale	Initial Screening	Detailed Assessment
Accessibility	Optimal physical and visual access to parks	The grade and topography of the site makes access difficult  The site only has one street access and limited pedestrian access		Not suitable	n/a
Connectivity	Extensive and comprehensive open space system connectivity	The site may provide an opportunity to provide a pedestrian and cycle link from Water Street to Burns Road.	The 2-3 metre wide concrete path is likely to conflict with the ecological constraints of the site	Not suitable	n/a
Carrying capacity	Improved capacity of the open space system to accommodate recreation, sport and social activities	The land will not reduce pressure on nearby heavily used parks  The land does not enable extension of existing facilities  The land has very low carrying capacity due to natural values		Not suitable	n/a
Economic viability / efficiency	Maximum return on acquisition/site development investments	The site will require high capital cost due to steepness of land and weed infestation  The site is in a priority 6 area and does not represent an efficient use of funds	It is preferable to buy better located land closer to the new population although acquisition costs will be higher or alternatively acquire land that may be augmented over a period of time	Not suitable	n/a
Management & maintenance	Optimal maintenance efficiencies  Acceptable risk profile	The land is currently heavily degraded and will require ongoing maintenance budget on top of normal park maintenance.  The steepness of the site and large retaining wall would require risk assessment	The site is not optimal in terms of risk management	Not suitable	n/a

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## HERITAGE ADVISORY COMMITTEE - MINUTES OF MEETING HELD 21 AUGUST 2007

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### EXECUTIVE SUMMARY

**PURPOSE OF REPORT:**

To report to Council the Minutes from the Heritage Advisory Committee meeting held on Tuesday, 21 August 2007.

**BACKGROUND:**

Council's Heritage Advisory Committee (HAC) met on 29 October 2007. The Minutes taken at the 21 August 2007 meeting were confirmed and accepted at the meeting of 29 October 2007.

**COMMENTS:**

A range of heritage issues were discussed at the Committee meeting and a number of issues were raised for further consideration.

**RECOMMENDATION:**

That Council receive and note the Minutes from the Heritage Advisory Committee meeting held on Tuesday, 21 August 2007.

## PURPOSE OF REPORT

To report to Council the Minutes from the Heritage Advisory Committee meeting held on Tuesday 21 August 2007.

## BACKGROUND

On 29 October 2007 Council's Heritage Advisory Committee (HAC) held their meeting and confirmed the HAC Minutes of the meeting on Tuesday 21 August 2007.

## COMMENTS

### Tuesday 21 August 2007 meeting

#### Aboriginal Heritage Office – Phil Hunt Archaeologist

A presentation was conducted by Phil Hunt Archaeologist with the NSW Aboriginal Heritage Office (AHO) regarding work being undertaken by the AHO in Ku-ring-gai Local Government Area (LGA).

#### Tulkiyan 707 Pacific Highway, Gordon.

The Tulkiyan sub-committee report was tabled. It was noted that the HAC recommend to Council that the Tulkiyan's Conservation Management Plan (CMP) is outdated in light of Tulkiyan's State Heritage listing, which includes the house, the grounds and the collection.

#### Comment

The funding for a revised CMP requires further research and costing. There may be NSW Heritage Office funding as this is now a State listed heritage item and a funding application is being prepared by staff.

#### Cavalcade of History and Fashion Inc.

Councillor Anderson provided the Committee with a brief on Cavalcade History and Fashion Inc. showcased products and photos. The heritage fashion items are not listed as a heritage item and are the only collection of its kind in New South Wales. The HAC records support for the work of Cavalcade and Council should assist them as an important local community group.

#### Comment

Noted

#### Plaque on old Lane Cove Post Office

Councillor Anderson followed up a request from the Ku-ring-gai Historical Society regarding the plaque on the Pacific Highway, Gordon frontage of the Lane Cove Post Office cottage, more

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commonly known as the Gordon Post Office. The sight lines to the plaque are currently being blocked by hedging and overgrown vegetation.

A request to have this vegetation trimmed was supported by the Committee. It was noted that this site is not on public land and Council have very limited authority over the management of the garden or vegetation.

Comment

Noted – a letter will be forwarded to the owners of the cottage advising the request of the Committee to have the garden vegetation trimmed to allow clear sight lines for the public.

Heritage Assistance Annual Fund - Update

The HAC was given a brief update by the Manager, Urban Planning. This year the theme will be on maintenance of heritage items and \$22,000 will be allocated to the Heritage Assistance Annual Fund, including a fund for minor maintenance component of \$2,000.

Comment

Noted. Council's Strategy Department Capital Works Programme for the 2007/2008 financial year budget has allocated a maximum of \$22,000 for the Heritage Assistance Annual Fund.

"80<sup>th</sup> Anniversary of Council Chambers Building, Gordon 2008"

Research has been undertaken to identify who the actual architect for the Ku-ring-gai Council Building was. An old photograph of the Council façade reveals a signature on the photo reading '*Neave Architects*'.

The Committee considers that the current plaque for the Ku-ring-gai Council building stating '*Wilson Neave & Berry*' as the Architects is in fact incorrect and should be replaced with "*Neave Architects*".

The HAC notes the presentation of the Ku-ring-gai Council Chambers to the Pacific Highway, is highly significant as it contains the original fabric, and the most tangible evidence of the building including the forecourt. It is important to ensure this area remains intact and is considered significant in any future decisions affecting the building.

Comments

Noted. The Council Chambers at 818 Pacific Highway, Gordon is listed as a Heritage Item under the Ku-ring-gai Planning Scheme Ordinance (KPSO) and any development applications for the site are subject to the assessment against the heritage provisions under the (KPSO). A Conservation Management Plan should be considered as part of any future redevelopment, redecoration or extension of the building.

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Other General Matters

*8 & 10 Woniora Avenue, Wahroonga.* - These sites are located on the corner of Woniora Avenue and Neringah Avenue North. The HAC noted that No 8 Woniora Avenue is listed as a heritage item under the KPSO, whilst No 10 Woniora Avenue is not heritage listed but forms part of the original cottage garden.

These properties were previously owned by a single owner and have links to Sidney Nolan. It is understood that these properties have recently been sold as two separate lots.

The listing information is scant and the cottage was apparently listed as part of a group of timber cottages in Woniora Avenue (not for its connection to Nolan). The remaining cottages have since been demolished. There has been no attempt by Council to list the remaining site at No. 10. It is not clear as to the level of research or documentation on the heritage listing. The Committee considers that the garden could be purchased by Council as open space via Section 94. It was noted when LEP 194 was made by the Minister on 28 May 2004, and that No. 10 Woniora Avenue, Wahroonga was removed from the plan on advice from the Heritage Office.

The Committee recommend the garden needs to be kept as curtilage with the house.

The HAC support the listing of No. 8 as including the garden at No 10. Woniora Avenue, Wahroonga. This matter should be investigated further.

Comments

Noted. Further research and assessment are required to establish the heritage significance of the sites. In relation to Section 94 funding for the potential purchase of the site, this would be subject to the principles set out in the current 2004- 2009 Section 94 Plan and the principles of Council's adopted Open Space Acquisition Strategy. A further report on prioritised areas for acquisition will be reported to Council in April 2008.

## **CONSULTATION**

The Heritage Advisory Committee includes representatives from the community and nominated heritage organisations.

## **FINANCIAL CONSIDERATIONS**

The cost of running the Committee is covered by the Strategy Department budget.

## **CONSULTATION WITH OTHER COUNCIL DEPARTMENTS**

Consultation with other departments has not occurred in the development of this report.

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## SUMMARY

The Heritage Advisory Committee Meeting was held on Tuesday 21 August 2007. A range of issues as listed above in "Comments" were discussed with a number of issues reserved for further review.

## RECOMMENDATION

That Council receive and note the Minutes from the Heritage Advisory Committee Meeting held on Tuesday 21 August 2007.

Antony Fabbro  
**Manager Urban Planning**

Steven Head  
**Director Strategy**

**Attachments: Minutes of the Heritage Advisory Committee Meeting held 21 August 2007 - 847806**

**MINUTES**  
**HERITAGE ADVISORY COMMITTEE MEETING**  
**TUESDAY 21 August 2007**  
**Council Chambers**  
**818 Pacific Highway, Gordon**

**MEETING OPENED:** 6:30 pm

**WELCOME BY THE CHAIR**

1. **APOLOGIES:** Mr Holman, Ms Mack

2. **ATTENDANCE: Community Members:** Mr Moore (National Trust),  
Mr Stutchbury (RAIA), Ms Harvey (Ku-ring-gai Historical  
Society)

**Councillors:** Councillor J Anderson, Councillor I Cross

**Council Officers:** Mr A Fabbro, Manager Urban Planning,  
Mr P Dignam, Heritage Advisor, Mr D Barber, Student Planner.

3. **DECLARATIONS OF PECUNIARY INTERESTS:**

Mr Moore declared a pecuniary interest involving 16 Stanhope Road, Killara and was absent from the meeting during the discussion of this item.

4. **ABORIGINAL HERITAGE OFFICE – PHIL HUNT ARCHAEOLOGIST**

A presentation was made by Phil Hunt Archaeologist with the NSW Aboriginal Heritage Office (AHO) regarding the work of the AHO in our region including Ku-ring-gai Local Government Area (LGA).

Topics included the type of aboriginal sites, issues with identification, mapping and management. The role of the AHO in local awareness and education- eg bushland officers, Development Application assessment staff and local schools regarding Aboriginal heritage – there are sites of 1,000 to 4,000 years old in Ku-ring-gai.

There are about 92 recorded sites in Ku-ring-gai, including art sites engravings, rock art, middens and grinding groove sites. The AHO is doing additional work to establish the location and to assist with the future management and protection of the sites.

Further information see [www.aboriginalheritage.org](http://www.aboriginalheritage.org)

The HAC committee would like to record its thanks to Phil Hunt, and the Committee to place on a future agenda ways Council can progress the aims of conservation of Aboriginal heritage in Ku-ring-gai.

## **5. TULKIYAN**

The Tulkian sub-committee report was tabled and an amendment was made to correct the report in the summary section under dot point 3, the words “in lieu” should be replaced with the words “ahead of “.

It was noted that the HAC recommend to Council that Tulkian’s Conservation Management Plan (CMP) is outdated in light of Tulkian’s State Heritage listing, which includes the house, the grounds and the collection.

## **6. MINUTES OF PREVIOUS MEETING 16 JULY 2007**

The HAC made a small number of alterations to the content of the previous minutes:

- Mr Stutchbury clarified that the Tulkian plan of management was ‘adopted in 2001 which was written several years ago’. Mr Stutchbury also noted that the HAC find the original plans and the word ‘*sign*’ be replaced with “*sight*”.
- It was noted by the Committee that the HAC could also offer advice about alterations, additions and extensions, as an alternative to demolition.
- Update on 16 Stanhope Road, Killara provided a reference to the report to Council dated 17 July, 2007. A discussion was held on this property. It was identified as a contributory item within an Urban Conservation Area as identified in the Godden Mckay Logan Study.

Clarification of 16 Stanhope Road, Killara:

- In the 2000 Godden Mckay Logan Study RDS Baseline Study - 16 Stanhope Road, Killara was identified as a potential heritage item.
- The 2005 Godden Mckay Logan Study- Area 10 review which was concerned with the management of the proposed conservation area and not concerned with new individual listings, in accordance with the brief. This study shows 16 Stanhope Road Killara as a contributory item.
- The Perumal Murphy Alessi Report 2006 also identifies 16 Stanhope Road Killara as potential heritage item.

## **7. CAVALCADE OF HISTORY AND FASHION INC.**

- Councillor Anderson presented photographs of the Cavalcade History and Fashion Inc showcased products and gave a briefing to the HAC.
- Councillor Anderson noted the Cavalcade collection was not listed as a heritage item, and that they are the only type of collection noted in NSW.
- Councillor Anderson also advised that she has arranged a meeting with Mayor Ebbeck, regarding the current facility housing the collection within a Council owned building that does not have a fire alarm or security system.
- Councillor Anderson noted that Cavalcade had thoughts about relocating to Parramatta because the current hall is inadequate in size to display all the collection.

The Committee recorded its support for the work of Cavalcade and Council should assist them as an important local community group.

## **8. PLAQUE ON THE OLD LANE COVE POST OFFICE**

Councillor Anderson was following up a request from the Ku-ring-gai Historical Society regarding the plaque on Lane Cove Post Office. The old Lane Cove Post Office is a small cottage. View of the plaque and the building ‘former Lane Cove Post Office’ is currently blocked by hedging and overgrown vegetation.

- Councillor Anderson requested the vegetation be managed i.e trimmed to provide a view to the plaque and heritage building.
- It was noted this site is not on public land and Council has very limited control (if any) over the existing state of the garden.

The Committee support the vegetation to be trimmed to enable the plaque and building to be seen by the public.

## **9. HERITAGE ASSISTANCE FUND-UPDATE**

The HAC was given a brief update by Mr Fabbro on the Heritage Assistance Scheme. This year the theme will be on maintenance of heritage items.

Mr Fabbro, Mr Dignam and Mr Barber have previously conducted research and presented the conceptual plans for the Heritage Assistance Scheme:

- Heritage Assistance Grants for ‘Dollar for Dollar’ restoration of heritage items are available up to the value of \$4000.
- \$20,000 will be dedicated to the Heritage Assistance Annual Fund.

- A fund for minor maintenance such as paint will be available to the value of \$2,000 annually. For minor maintenance work on heritage items, the signature of three of the HAC Members will be required.
- An open register will be available for heritage assistance grant applicants for two months eg (September to November). A heritage open register may also be available at the beginning of next year if there are still funds available in the Annual Heritage Assistance Fund.
- Equity needs to be considered in approving Heritage Assistance funding, in regards to ability to fund heritage maintenance.
- HAC members interested in the sub-committee for the small grants are Mr Stutchbury, Mr Dignam and Councillor Anderson.

#### **10. “80TH ANNIVERSARY OF COUNCIL CHAMBERS BUILDING, GORDON 2008”**

Research has been conducted regarding the actual architect for the Ku-ring-gai Council Chambers Building.

- In addition to the research of the archives by Councillor Anderson, an old photograph of the Council façade was found, with a signature on the photo reading ‘Neave Architects’.
- The current Plaque for the Ku-ring-gai Council building is not correct and should not state ‘Wilson Neave & Berry’ as the architect for the building.
- The Committee noted the presentation of the Ku-ring-gai Council Chambers to the Pacific Highway; this is highly significant, original fabric, and the most tangible evidence of the building including the forecourt. It is important to ensure this area remains intact and is considered significant in any future decisions affecting the building.

#### **11. OTHER GENERAL MATTERS - 8 & 10 WONIORA AVENUE, WAHROONGA**

These sites are located on the corner of Woniora Avenue and Neringah Avenue.

8 Woniora Avenue, Wahroonga is listed as a heritage item under the Ku-ring-gai Planning Scheme Ordinance (KPSO). 10 Woniora Avenue, Wahroonga is not listed but forms part of the original cottage garden. The properties were always owned by a single owner. The site has links to Sidney Nolan. It is understood to have recently been sold as two separate lots.

The listing information is scant and the cottage was apparently listed as part of a group of timber cottages in Woniora Avenue (not for its connection to Nolan) the remaining cottages have since been demolished.

There has been no attempt by Council to list the remaining site at 10 Woniora Avenue, Wahroonga. It is not clear as to the level of research or documentation on the heritage listing. The garden could be kept via Section 94 and purchased by Council as open space. It was noted that when LEP 194 was made by the Minister on 28 May 2004 10 Woniora Avenue, Wahroonga was removed from the plan on advice from the NSW Heritage office.

The Committee recommend the garden needs to be kept as curtilage with the house.

The HAC support the listing of 8 Woniora Avenue, Wahroonga and should include the garden at 10 Woniora Avenue, Wahroonga. This matter should be investigated further.

## **12. NEXT MEETING AND CLOSE**

**Next Meeting** - The next meeting will be held at the Council Chambers commencing at 6.30pm on a date to be advised.

The meeting closed at 9:35 pm.

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## **4 MUNDERAH STREET, WAHROONGA - TO ALTER TERMS OF COUNCIL'S DRAINAGE EASEMENT AND CONNECTION TO COUNCIL PIPELINE**

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**Ward: Wahroonga**

### **EXECUTIVE SUMMARY**

**PURPOSE OF REPORT:**

To consider a request by owner of No 4 Munderah Street, Wahroonga to alter the terms of the Council drainage easement over downstream properties to permit connection and discharge into a Council pipeline.

**BACKGROUND:**

On 27 May 2003 Council granted a Deferred Commencement for DA532/02, for a Torrens Title Subdivision of a heritage listed property into two (2) lots at 4 Munderah Street, Wahroonga. The approval was subject to conditions in Schedule "A" of the deferred commencement which require the applicant to obtain Council's approval to amend the terms of the drainage easement downstream of the development site and connection to the underground drainage pipe.

**COMMENTS:**

A signed legal document in the form of Transfer Granting Easement by the relevant downstream owners was submitted with the application. Correction of the easement is considered warranted and beneficial to both the owner and Council.

Hydraulic study submitted with the application indicated the existing council stormwater system has sufficient capacity to accept the additional stormwater discharge from the proposed development site. The study is considered satisfactory.

**RECOMMENDATION:**

That the proposal be approved subject to Conditions A to C noted in the recommendation.

## PURPOSE OF REPORT

To consider a request by owner of No.4 Munderah Street, Wahroonga to alter the terms of the Council drainage easement over downstream properties to permit connection and discharge into a council pipeline.

## BACKGROUND

A deferred commencement was granted by Council on 27 May 2003 for DA 532/02 comprising a Torrens Title Subdivision of a heritage listed property into two (2) lots. Granting of the development was subject to conditions in **Schedule 'A'**:

### SCHEDULE A

1. The applicant to obtain and submit to Council written consent from the owners of the downstream properties (as far as the public drainage system – in this case, Gilda Avenue) to amend the terms of the easement on their title, or to register an easement where none exists.).
2. Request and obtain Council approval to amend the terms of the easement over its piped drainage system. This requires the payment of \$504 fee for a report to Council prepared by Council's Technical Services Department. Approval cannot be guaranteed.

The applicant has submitted a signed legal document in the form of Transfer Granting Easement from the downstream property owners and consenting to amend the terms of the existing drainage easement over the property.

The applicant also submitted a "Trunk Drainage Capacity Report" reference No.333133-20030302 prepared by the engineering consultant AFCE Environment and Building.

## COMMENTS

### Current situation

An existing easement 1.83 m wide downstream from the subject property indicated by LD 1085, LD 2328 and LD 772 as shown in **Attachment A**, traverses the properties Nos.1580 to 1596 Pacific Highway; No.5,7,9 Rhonda Close and No.17, 19 Gilda Avenue. According to the legal documents, the easements were created for the purpose of conveying and carrying off surface and stormwater only from Munderah Street. The terms of easement do not allow for the connection of stormwater by the applicant.

On 26 April 2005, Council approved the altering of the terms of easements downstream of 1580 to 1596 Pacific Highway, as conditions of approval for DA 1081/04. The terms of the drainage easement contained within LD2328 and LD772.were amended under 88B instrument of the Conveyancing act 1919. As a consequence, only the terms of easement located downstream of No.4, Munderah Street and within 1580 to 1596 Pacific Highways needed to be amended.

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The applicant has submitted a signed legal document in the form of Transfer Granting Easement by the downstream owner consenting to the alteration of the terms of the drainage easement within 1580 to 1596 Pacific Highways.

**Proposal**

The applicant proposes to connect to Council's easement with an interlotment drain along the southern side boundary of No. 4 Munderah Street as shown in **Attachment B**

**Extinguishment and creation of new easement to drain water**

The deferred commencement conditions required that the existing easements indicated by LD 1085 be amended to grant legal benefit for the property to discharge stormwater into the system. The applicant has submitted documentary evidence of owner's consent to amend the existing terms of drainage easement.

Of mutual benefit to Council and the applicant is a requirement to extinguish the existing easement and create a new easement of similar width of 1.83m, pursuant to Section 88B of the Conveyancing Act 1919.

**Assessment of proposed stormwater drainage**

Based on the hydraulic report No.333133-20030302 submitted by the engineering consultant AFCE Environment and Building, the capacity of the existing council stormwater system is considered adequate and able to accommodate additional flow from the proposed site at No.4 Munderah Street, Wahroonga.

**CONSULTATION**

No public consultation has been undertaken in the preparation of this report apart from discussion with the applicant.

**FINANCIAL CONSIDERATIONS**

All cost associated with legal matters for the alteration of terms of drainage easement are to be borne by the applicant, who benefits from this work.

**CONSULTATION WITH OTHER COUNCIL DEPARTMENTS**

Operations has consulted with the Engineering Assessment Unit in Development and Regulatory Services on matters relating to the catchment study and legal documentary evidences of the easements located downstream of the subject property.

**SUMMARY**

A deferred commencement was granted by Council on 27 May 2003 for DA 532/02 comprising a Torrens Title Subdivision of a heritage listed property into two (2) lots. Prior to the operation of the consent, the applicant is to obtain a resolution from Ku-ring-gai Council to give consent for the

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alteration of terms of the existing Council easement downstream of the subject property and approval for the connection to Council's stormwater system.

The relevant downstream easement indicated by LD 1085 does not allow for the connection or discharge of stormwater by the applicant. The easement was created for the purpose of conveying and carrying off surface and stormwater only from Munderah Street.

The downstream easements traversing No.5, 7, 9 Rhonda Close and No.17, 19 Gilda Avenue were amended under 88B instrument of the Conveyancing Act 1919, as conditions of approval for DA 1081/04 on 26 April 2005 for property at NO.1580 to 1596 Pacific Highway. The deferred commencement required that the easement within No.1580 to No.1596 be amended pursuant to Section 88B of the Conveyance Act 1919.

Of mutual benefit to Council and the applicant is a requirement to extinguish the existing easement and create a new easement of similar with of 1.83m over No.1580 to 1596 Pacific Highway, Wahroonga, pursuant to Section 88B of the Conveyance Act 1919.

The "Trunk Drainage Capacity Report" reference No.333133-20030302 prepared by the engineering consultant AFCE Environment and Building concluded that the capacity of council stormwater system downstream of No.4 Munderah Street, Wahroonga is adequate to accept additional flow from the development site. The report is considered satisfactory.

## RECOMMENDATION

- A. That Council grants approval for the extinguishment of the existing easement over 1580 to 1596 Pacific Highway, Wahroonga and creation of a new drainage easement 1.83m wide over the existing pipeline.
- B. That authority be given to affix the common seal of the Council to the instrument for release and creation of new easements.
- C. That the cost of altering the terms of said Easement for drainage including release and creation and Council's legal costs and disbursements be borne by the applicant.

Eng Tan  
Drainage Assets Engineer

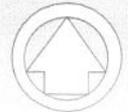
Roger Guerin  
Manager Projects & Design

Greg Piconi  
Director Operations

**Attachments:**      **A. Location of stormwater pipe and easement - 845809**  
                             **B. Location for connection to Council pipeline - 845812**

# No.4 MUNDERAH STREET, WAHROONGA – TO ALTER TERMS OF COUNCIL DRAINAGE EASEMENT.

Attachment A



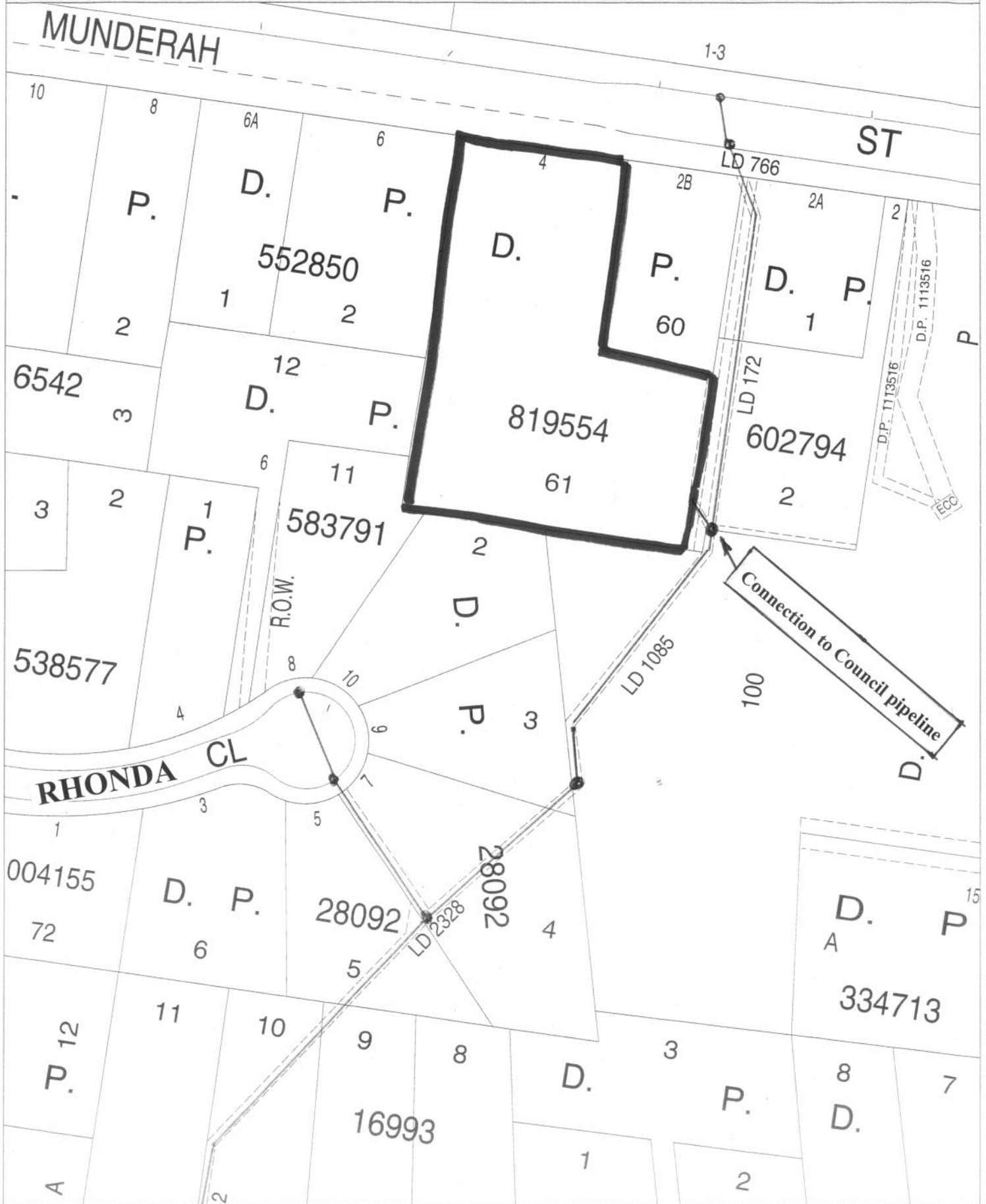
SCALE: 1:1500  
DATE: 16-08-2007

Location plan for existing drainage easement



# NO.4 MUNDERAH STREET, WAHROONGA – TO ALTER TERMS OF COUNCIL DRAINAGE EASEMENT

Attachment B



SCALE: 1:1000  
DATE: 24-10-2007

Location plan for proposed connection to Council pipeline



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## NORTH TURRAMURRA RECREATION AREA REVIEW OF EXHIBITION SUBMISSIONS

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### EXECUTIVE SUMMARY

<b>PURPOSE OF REPORT:</b>	For Council to consider feedback received during the public exhibition of the preferred Concept Masterplan for the North Turramurra Recreation Area (NTRA), to consider adoption of the Concept Masterplan, and to consider preparation of a draft Plan of Management for the NTRA incorporating all elements contained in the preferred Concept Masterplan followed by detailed design work and preparation of a development application for construction works.
<b>BACKGROUND:</b>	Council resolved on 8 May 2007 to place the preferred Concept Plan for North Turramurra Recreation Area on public exhibition for a period 28 days. Council has sought for many years to develop a recreation area incorporating additional playing fields and a rejuvenated golf course on the former tip site off Curagul Road, North Turramurra, incorporating the current golf course location.
<b>COMMENTS:</b>	A preferred Concept Masterplan for the North Turramurra Recreation Area has been exhibited and public comments regarding the proposals have been addressed in this report. Implementation of the Masterplan will represent a significant commitment for Council over an extended period. A number of amendments to the draft Masterplan have been outlined in this report following the period of public exhibition.
<b>RECOMMENDATION:</b>	That Council adopt the preferred Concept Masterplan for North Turramurra Recreation Area, that a revised draft Plan of Management for the North Turramurra Recreation Area, including lands identified within the Concept Masterplan be prepared for exhibition and that the timetable for progression of the North Turramurra Recreation Area be adopted to guide future management of the project, subject to appropriate financial resources.

## PURPOSE OF REPORT

For Council to consider feedback received during the public exhibition of the preferred Concept Masterplan for the North Turrumurra Recreation Area (NTRA), to consider adoption of the Concept Masterplan, and to consider preparation of a draft Plan of Management for the NTRA incorporating all elements contained in the preferred Concept Masterplan followed by detailed design work and preparation of a development application for construction works.

## BACKGROUND

Council resolved at the 8 May 2007 Ordinary Meeting of Council to place the preferred Concept Masterplan for North Turrumurra Recreation Area on public exhibition for a period 28 days. At the conclusion of the exhibition period a report considering community feedback was to be provided to Council. Council also resolved to seek further information on how the unfunded amount of \$8.6 million could be funded before Council adopts any timetable incorporating unfunded elements, and to prepare for exhibition a draft Plan of Management for the NTRA, including lands identified within the Concept Masterplan.

Council has sought for many years to develop a recreation area incorporating additional playing fields and a rejuvenated golf course on the former tip site off Curagul Road, North Turrumurra, incorporating the current golf course location.

Following the preparation of a brief, the consultant team of Spackman & Mossop were engaged in 2006 to prepare a Concept Masterplan, staging options and lodge a development application in respect of the site.

Consultants assisting Spackman & Mossop consisted of Arup Transport Planning, Jeffery & Katauskas, HM Leisure Planning, Scott Murray & Associates and Storm Consulting.

The consultants report (Spackman & Mossop) and appendices in Attachment A represent the basis of material that was placed on public exhibition.

## COMMENTS

The public exhibition of the draft Masterplan ran from 25 May 2007 until 6 July 2007. All households on the North Turrumurra peninsula north of Burns Road were notified by mail and the Masterplan was available for viewing on Council's website, at Council's Customer Service and libraries, and at Council's two golf courses. The exhibition was also advertised in the local press and a community open day was conducted at the North Turrumurra golf course clubhouse.

There was a strong response to the exhibition with 85 submissions from 64 households covering a wide range of issues. A full summary of each individual submission and questionnaire response is contained in Attachment C.

A statistical summary of public submissions for and against the NTRA proposal is shown in the table below.

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	Total Household Submissions	Total Individual Submissions
For proposal	28	35
Against proposal	29	43
Impartial	1	1
Comment only	5	5
Incomplete questionnaire	1	1
Total number of submissions	64	85

Of the 64 household submissions received, 28 were in favour of the proposal and 7 were neither for nor against. The key themes raised in the 29 submissions that outlined some level of objection to the proposal can be grouped under 5 main categories as follows:

1. demand for this facility and alternative locations;
2. traffic and car parking;
3. impacts on local area;
4. cost; and
5. option to acquire residential property for extension to NTRA.

Those submissions that were opposed to the proposal are considered below under the five main themes.

### 1. Demand for this facility and alternative locations

A number of submissions outlined that this is not a required facility for the North Turrumurra area given its demographic composition and suggested that a number of other more suitable locations for this facility are possible.

In response to this theme it is important for Council to consider the factors which in overall terms are guiding Council's actions when looking at both this facility and other options for the development of sporting and recreational facilities.

Participation rates in sport are growing. Women's sport, veteran's leagues, in addition to much higher participation rates across primary and secondary aged school children are increasing the demand on sportsfields in Ku-ring-gai. Population growth in Ku-ring-gai of at least 20,000 people over the next twenty to thirty years is clearly going to exacerbate this issue.

The usage of recreational and specifically sporting facilities is not localised. Facilities in Lindfield, Turrumurra, St Ives, Wahroonga, Pymble, Roseville, Killara and Gordon draw visitation from across the Local Government Area (LGA). Section 94 Developer Contributions from across the whole LGA will provide funding for embellishment of the NTRA facility. The North Turrumurra Recreation Area, as are all recreation facilities in Ku-ring-gai, a district-wide asset that will be utilised by people from across the entire LGA.

As has been documented in previously adopted Council Plans, such as the 2006 Sport in Ku-ring-gai Strategy, Ku-ring-gai's sportsfields are already at or beyond sustainable levels of use. Currently you cannot book or hire any sporting ground in Ku-ring-gai for weeknight or weekend use in Winter. They are all booked to the maximum allowable level. Programmes to improve or

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provide lighting and upgrade existing facilities are in place to assist with increasing our capacity to meet long term demand. These initiatives however, need to be supported by an increase in the number of fields available for use.

Importantly a number of submissions raised other options that may be available such as St Ives Showground or Golden Jubilee fields. Ironically, current sports users at these other facilities have expressed strong interest in the proposed NTRA sportsfields. Their reasoning is that existing demand is so strong at the Showground and Golden Jubilee fields that they cannot meet their current requirements at these sites. At St Ives Showground there is also some difficulty in the compatibility of a surface being used for horse events one day and touch football, soccer or other sports the next day.

Some submissions also suggested use of other areas of the St Ives Showground outside the main arena. It should be noted that none of the areas are of sufficient size for any full size soccer, rugby, AFL, baseball, softball or cricket fields, and all of the possible areas have either long term hirers or licensees that use these areas for other recreational activities, including the Northside Riding Club, Northern Suburbs Dog Training Club, Mini Wheels Club, and Model Aeroplane Flying Club. In addition, Council's efforts to ensure the preservation of Duffy's Forest vegetation at this site must be considered in the context of any proposal to further develop this facility.

North Turrumurra Recreation Area represents the most viable option for the delivery of new sporting and recreation infrastructure for Ku-ring-gai.

## 2. Traffic and car parking

Many of the issues raised in submissions to the NTRA Concept Masterplan and the new sportsfields in particular, relate to traffic and parking issues in North Turrumurra and that congestion already experienced around the golf course and Knox playing fields on Saturdays would be exacerbated. Some submissions also pointed out that the traffic data used in the consultants report was 2002 statistics and therefore not of much assistance for either the design of the proposed facility or for further investigation/analysis.

In response to these issues, staff engaged independent traffic counts and for traffic and transport specialists GTA Consultants in September 2007 to undertake a traffic and parking impact assessment of the proposed development. Their assessment reviews the existing transport and parking assessment prepared by Arup in 2007 (using 2002 traffic data), but utilising updated 2007 traffic flow data and considers the traffic and transport issues raised in the public exhibition submissions. The GTA review considered the following points:

- the existing traffic and car parking conditions surrounding the site;
- the parking demand likely to be generated by the proposed development;
- the suitability of the existing car parking supply to accommodate any additional parking demand;
- the traffic generation characteristics of the proposed development; and
- the impact of the development proposal on the surrounding road network.

Council provided GTA Consultants with the submissions received during the exhibition to assist with their analysis.

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Traffic and car parking generally

There were a number of issues raised in the submissions which related to traffic and parking which have been reviewed and summarised Table 1 below. GTA Consultants have also provided a response, where relevant, on the basis of the assessment undertaken within their report.

Table 1: Summary of Traffic and Parking Issues and GTA Responses

Traffic & Parking Issue Raised	GTA Response
<p>NTRA would attract more traffic onto Bobbin Head Road which conflicts with not only the cyclists but also activities associated with the North Turrumurra Shopping Centre.</p>	<p>The current cycle facilities on Bobbin Head Road are expected to adequately cater for cyclists needs in the context of increased traffic volumes. There should be additional measures implemented on the approaches to the new access roundabout to highlight the presence of cyclists.</p> <p>The traffic assessment estimates that there would be a maximum of 171 additional traffic movements during the sportsfields peak hour and approximately 700 additional daily movements on a Saturday. The expected flows associated with the NTRA would be significantly less on other days.</p> <p>These levels of traffic are not expected to compromise the safety of cyclists.</p> <p>A further assessment would be required to determine the traffic impacts on the operation of the North Turrumurra Shopping Centre.</p>
<p>Insufficient assessment of the existing and future traffic conditions and the requirement for coaches to access the site.</p>	<p>Existing and future traffic conditions assessment indicates that the impacts of traffic volumes and parking could be adequately accommodated. There is however a need to investigate further the accommodation of coaches to and from the site which don't appear to have been considered within the Masterplan.</p>
<p>There is not enough sight distance for vehicles exiting from the Bertrand Road egress.</p>	<p>Driveway design should comply with sight distance requirements stipulated in Australian Standards Parking Facilities Part 1: Off-street Car Parking.</p>
<p>Proposed roundabout for NTRA access would cause delay to traffic already on Bobbin Head Road.</p>	<p>There will inevitably be some delay to existing traffic on Bobbin Head Road but the traffic analysis undertaken by GTA Consultants indicates that the roundabout would result in negligible queues and delays during the peak periods which are acceptable in accordance with industry standards.</p>
<p>NTRA access should be relocated to Curagul Road.</p>	<p>This would not be a practical option as it would require a complete re-design of the golf course and relocation of the existing club house for very minimal traffic benefit.</p>

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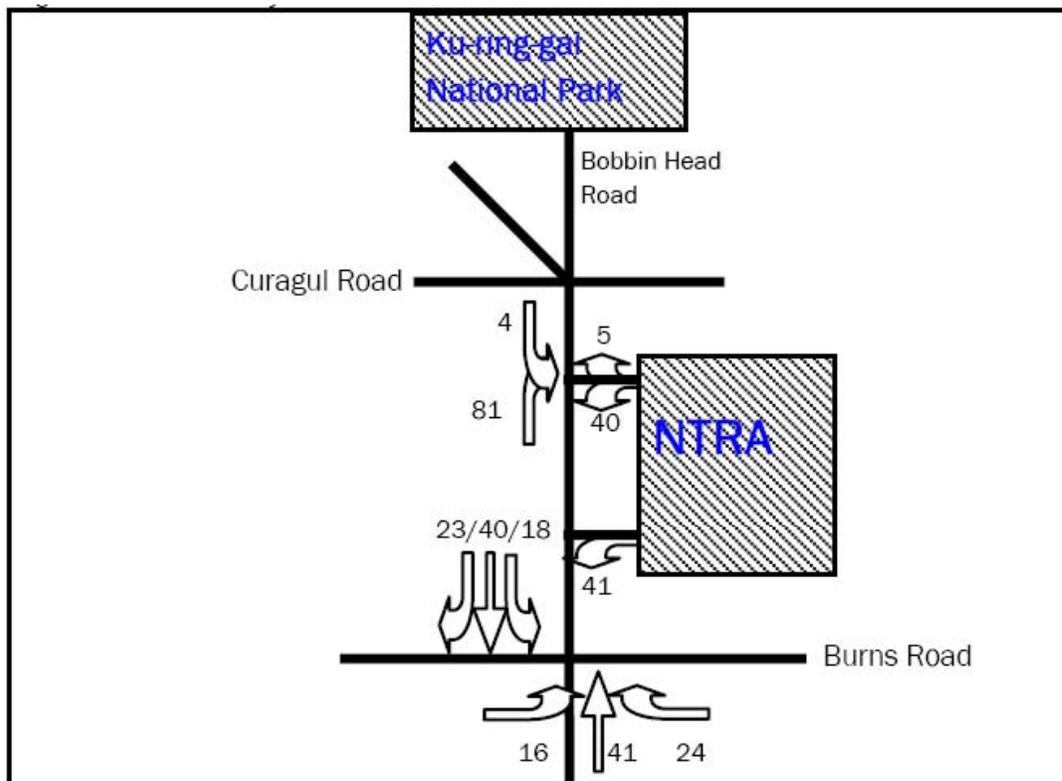
The following conclusions were made by GTA:

- The existing provision of 100 car parking spaces for the North Turramurra Golf Club exceeds the current parking demand;
- The proposed 200 spaces provided for the sporting facilities would more than adequately accommodate the expected additional parking demand generated by the NTRA and help to alleviate the current parking issues generated by traffic associated with the Knox playing fields on Saturdays;
- The site is expected to generate up to a maximum of 171 additional vehicle movements during the Saturday mid-day peak hours;
- The analysis indicates that the additional traffic generated by NTRA would have negligible impacts on the intersections of Bobbin Head Road/Curagul Road and Bobbin Head Road/NTRA Access Road;
- The Councils upgrade scheme (implementation subject to allocation of funding through the black spot program) for the intersection of Bobbin Head Road/Burns Road results in a substantial improvement in the operation of the intersection, in particular for the southern approach of Bobbin Head Road and the eastern approach of Burns Road;
- The analysis of the proposed upgrade of the intersection of Bobbin Head Road/Burns Road, as proposed by Council, indicates that the designated right turn bays on the northern, eastern and southern approaches would need to be extended further to accommodate the future right turn queues;
- The design of Bertrand Road egress should comply with sight distance requirements stipulated in Australian Standards Parking Facilities Part 1: Off-street Car Parking;
- The design of the proposed Bobbin Head Road/NTRA Access Road roundabout should be such that it safely accommodates cyclists;
- Bicycle parking facilities should be provided within the proposed car park which should be easily accessible, secure and located as close to the clubhouse as possible for convenience;
- Coach parking and manoeuvrability needs to be accommodated within the master plan design as this is inevitably going to be required in relation to sporting events; and
- The use of the car park during non-peak periods as hard courts for sports such as netball and basketball should take into consideration the issues of oil spills/leaks from parked cars.

The full consultants report is **Attachment B** to this report. Based on the GTA analysis it's recommended that the accommodation of coaches to and from the site be investigated during preparation of the Plan of Management and detailed design. Coach use will most likely occur in relation to school use on weekdays or uses relating to the golf course. Drop off, pick up and layover facilities will be considered for coaches during the detailed design phase.

Traffic Volumes on Bobbin Head Road

Below is a diagram showing the expected additional traffic flows on Bobbin Head Road resulting from the proposal, and their assignment to the surrounding road network:



The existing Saturday peak hour traffic volumes recorded south of the NTRA site entrance were 571 vehicles per hour (two-way), which includes traffic associated with the Knox Grammar School playing fields. For a Regional road such as Bobbin Head Road, this is not a significant traffic flow. Effectively, there would be an additional 162 vehicles per hour during the Saturday peak hour arriving and departing from the site from/to a southerly direction.

The additional traffic of 162 vehicles per hour would represent an increase of 28% over the existing traffic flows. However, because the existing traffic flows are below the capacity of the road, it is considered that the increase would not have significant additional impact on traffic conditions and access.

By comparison, the sections of Bobbin Head Road closer to Burns Road carried 1120 vehicles per hour (two way) during the corresponding Saturday peak hour. The additional traffic of up to 162 vehicles per hour would represent approximately up to 14% increase over the existing traffic flows in this section of Bobbin Head Road.

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An assessment of the impacts that the anticipated development traffic would have on the three intersections in close proximity to the site was undertaken by comparing the performance of the relevant intersections prior to and following the proposed development. In the case of the Bobbin Head Road/Curagul Road intersection the 12 trips generated from the NTRA site to and from this intersection during the Saturday peak hour would have a negligible impact on this intersection.

GTA Consultants assessed the existing performance of the Bobbin Head Road/Burns Road intersection on the basis of Ku-ring-gai Councils upgraded intersection design and using existing 2007 traffic volumes for the Saturday peak period, the results of which are provided in Table 5.1 (Attachment B).

Table 5.1 indicates that there would be a substantial improvement in the operation of this intersection if Councils intersection upgrade proposal was implemented. In particular the assessment indicates that the queues and delays would reduce noticeably on the southern approach of Bobbin Head Road and eastern approach of Burns Road during the Saturday peak period.

Table 5.2 (**Attachment B**) indicates that there would be minor impacts on the operation of the Bobbin Head Road/Burns Road intersection as a consequence of the traffic generated from the NTRA development with queues and delays increasing marginally on the southern approach of Bobbin Head Road and the eastern approach of Burns Road. Of more importance was that the right turning queues would increase to a point which was greater than the available storage length provided within the Council design which would result in these queues encroaching into the adjacent lanes. It is anticipated that intersection performance, post NTRA development, will be improved over the current intersection performance, when the upgrade (including extra lane depth in the right hand turn lanes) is implemented.

Table 5.3 (**Attachment B**) indicates that the Bobbin Head Road/NTRA intersection would operate well with minimal queues and delays on all approaches during the Saturday peak hour.

Intersection Burns Road and Bobbin Head Road

Council has currently submitted a funding nomination with the 'Auslink' (Federal) Black Spot program for the 2008/2009 year for the intersection upgrade of Burns Road and Bobbin Head Road. Maximum available funding for a project is \$750,000, and successful projects are 100% funded. Council's nominations compete with other nominations nationally, and approximately half of the funding is directed to non-metropolitan areas.

It is proposed to implement fully-controlled right turns on all approaches (to address an adverse accident history), and to widen Burns Road to provide two through lanes in each direction in the vicinity of the intersection. Vehicles currently turning right from Burns Road into The Chase Road will be required to turn right from Burns Road into Bobbin Head Road. This proposal was considered by the Ku-ring-gai Traffic Committee on 23 August 2007 and Council approved the nomination on 4 September 2007.

Given the estimated cost of the project (\$1.25m), its scale and potential traffic impacts during construction, it is proposed to stage the project over 2 years so that the project is more likely to

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attract funds. Council's nomination is based on a project cost of \$950,000, but split over two years, effectively resulting in a contribution by the Auslink program of \$475,000 per year. If the application is successful, then Council would either have to fund the shortfall of \$300,000 over 2 years i.e. \$150,000 per year (which is the amount Council typically allocates annually to traffic facilities works) or seek funding assistance for the shortfall from the Roads and Traffic Authority.

The project has a benefit/cost ratio of 2.0, which meets the minimum criteria of the program. Council is notified of successful projects (typically in April/May) prior to the commencement of the financial year in which the project has been nominated. Comments from the consultants that the length of the right turning lanes could be made longer have been referred to the Director Operations for incorporation into detailed designs for this intersection upgrade. Comments from North Turrumurra residents and North Turrumurra Action Group annual general meeting strongly supported this intersection upgrade, regardless of whether the NTRA is undertaken or not. This report recommends that design of this intersection upgrade be commenced to support Council's application for funding of these works.

Surplus parking provision in the NTRA site would allow the introduction of parking controls on the eastern side of Bobbin Head Road in the vicinity of the Knox Playing Fields. This would facilitate a reorganisation of the road space to improve vehicle/parking/bicycle lane widths and their location within the carriageway. These measures should assist in reducing possible congestion resulting from parking and exiting the area, and would assist in reducing vehicle-vehicle and vehicle-cyclist conflict. The improved access into, and circulation within, the NTRA site would also assist in reducing traffic movements in the vicinity of the Knox playing fields by providing safe and efficient access and egress to additional parking located away from the playing fields.

Summary of recommendations relating to traffic and parking:

1. That a design be prepared for the intersection upgrade at Burns Road/ Bobbin Head Road to support Council's grant application.
2. That the various recommendations arising from the GTA (Consultants) review be incorporated into detailed design including provision for coaches.
3. That the next phase of design involve the preparation of a parking and traffic management plan for Bobbin Head Road and Curagul Road surrounding the Knox playing fields and the proposed NTRA which also provides for the staging of activities to further relieve peak hourly parking demand.

### 3. Impacts on local area

A number of submissions highlighted issues with the NTRA proposal due to a variety of factors that may impact on the amenity of the local area, including such factors as traffic and parking around the golf course, amenity impacts on residents in Glengarry Avenue, particularly walking tracks, impacts of lighting and noise, flora and fauna impacts, and perceived vegetation and buffering interface between NTRA and bushland.

In response to these issues it is intended that further investigation of the impact on local residents be undertaken during the preparation of the Plan of Management for NTRA, including management of on-street parking, an operational management plan for the phasing of games to further reduce traffic and parking issues, and other aspects discussed below.

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With regard to the proposed walking tracks, submissions in particular, raised privacy issues as the proposed track would in most cases be at a higher level than the Glengarry Avenue properties. These comments are supported and Glengarry Avenue residents will be closely consulted on the location of any walking tracks planned for the perimeter of the site to ensure that privacy is maintained for residents. This requires removal of the tracks or relocation completely and will be incorporated into the adopted Concept Masterplan and further designs.

With regard to the impact of lighting, lighting designs will meet appropriate Australian Standards which will ensure negligible impact for Glengarry Avenue and Bobbin Head Road residents, as modern lighting technology ensures negligible light spill and glare, particularly with the proposed floodlights not to be facing in the direction of Glengarry Avenue.

With regard to the impact of noise, it is planned that additional vegetation will be planted compared with the existing situation to create an increased buffer between the proposed NTRA sportsfields and Glengarry Avenue residents. This will help to further minimise the impact of noise and light spill for Glengarry Avenue residents.

Of more importance to local residents than lighting appeared to be the impacts of use including noise generation at nights and on weekends. Residents within Glengarry Avenue and located at a distance of 130-160 metres away from the proposed fields. A significant bushland buffer exists between the fields and houses in Glengarry Avenue that will be further strengthened by planting.

In regards to the carriage of noise from the proposed recreation areas to these residents prevailing and localised wind direction needs to be considered. Southerly to north-west winds dominate morning breeze and southerly and north-easterly wind movements dominate evening breeze (Sydney Airport wind frequency analysis). Local topography and elevation will also dominate wind direction strongly with an expectation that air movement will occur from the east or west following the valley. Combined with the "stoess" effect due to the elevation of the course above the houses, it is likely that noise impacts will be limited. Nevertheless it is considered that the following recommendations be incorporated into the adopted Masterplan and incorporated in the next phases of work:

1. the distance of sportsfield location from Glengarry Avenue be maximised.
2. that an acoustic study be undertaken to support the development application for the NTRA to quantify potential impacts.
3. that the operational management plan for this facility incorporates measures to minimise noise disturbances to local residents and any recommendations from the acoustic study. An initial version of this plan to be incorporated in an amended Plan of Management.

During the Plan of Management preparation we will also look at the field locations and what the most effective size is that allows for a variety of future uses and keeps fields as far away from Glengarry Avenue and Bobbin Head Road as possible to minimise any impacts. Additionally, during the lighting development application phase, it will be recommended that an acoustic study be undertaken to ensure the impact on residents is minimal.

With regard to the impact on flora and fauna of the proposed development, it is intended that a flora and fauna study will be commissioned in conjunction with a detailed design of the site and appropriate measures resulting from the study in the development application. Potential flora and fauna impacts have been considered in the development of the draft Concept and have influenced the preferred Concept Masterplan as exhibited.

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Finally, in addressing the perceived reduction in vegetation and buffering along the interface between NTRA and bushland, it should be noted that the Masterplan makes provision for additional vegetation to be planted along the southern side of the new sportsfields to create an increased buffer between the NTRA site and bushland. It is not planned to decrease planting along the bushland interface.

#### 4. Cost

A number of submissions raised concerns at the overall cost of providing the facility. This issue is addressed in the financial considerations section of this report in some detail. It should be noted that providing community infrastructure is an expensive exercise and much of this cost will involve remediation at the old tip site, including earthworks, capping and shaping to final levels, and therefore Council would have liability for this cost whether or not it determines to go ahead with the NTRA proposal.

It should also be remembered that costs indicated in the latter stages 5 and 6 are as much related to management of the existing golf course as they are about the new proposals and that costs associated with the construction of the car park and traffic management are partly associated with the management of existing issues in the vicinity of the NTRA.

As discussed earlier in the report, a basic calculation on the costs of land acquisition alone to provide for this infrastructure elsewhere within Ku-ring-gai, based on average North Turramurra land values of around \$850 per sqm, would in itself be around 25 to 30 million dollars. The costs of development of the facility would remain in excess of that cost.

The cost of the components of the project that only relate directly to the recreation area car parks, clubhouse and stormwater harvesting are approximately 8.4 million dollars.

It is considered that progression of the NTRA provides Council with its most viable opportunity, including in financial terms to provide necessary recreation infrastructure for the community.

#### 5. Option to acquire residential property for extension to NTRA

In addition to the key issues raised in the submissions, the preferred Concept Masterplan tested the idea of acquiring the residential property in the south-west corner of the NTRA site at 361 Bobbin Head Road for extension to the passive recreation area. These options are divided in sub-options in the Plan as follows:

Sub-option A - Residential property in Bobbin Head Road retained:

- Does not require property acquisition
- Option for left-out only intersection at Bertrand Road to provide separate entry and exit to sporting facilities car park, reducing potential traffic congestion at the main entrance.

Sub-option B - Acquisition of property in Bobbin Head Road:

- Acquisition of the residential property off Bobbin Head Road required prior to construction of sporting field's car park.

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- Provides informal open space areas for general (non sporting) community use, such as picnicing or other passive leisure activities.
- Separate sporting field car park entry and exit to reduce traffic congestion and potential conflict at the main entrance. Exit to be left out only at upgraded Bertrand Road intersection. Cars wishing to exit right at Bobbin Head Road would have to use roundabout at main entrance.

Note: sub-option A and B are not mutually exclusive, if the sites were to be developed according to sub option A and the opportunity arose in the future for Council to acquire the residential property, car parking and open space areas could still be configured as per sub-option B. However, this would involve additional construction costs.

The owner of 361 Bobbin Head Road was briefed about the Masterplan during the period of exhibition and his views sought on the proposal and / or potential acquisition. He submitted comments to Council as well as to the state and federal MP's stating his strong opposition to the NTRA proposal and that currently he has no interest in selling his property.

Accordingly it is proposed that the next phases of this project proceed as per sub option A. Should the owner determine to sell in the future, acquisition of this property is recommended. That should however, be a process initiated by the owner. Expenses associated with the acquisition of this property and funding for its acquisition by S94 (2000 and 2004 plan) remain identified within this report.

### Next Steps

The draft Concept Masterplan provides an illustrative overview, plans, sections, a strategy plan for implementation and indicative costing for the facility. It should be noted that the costings are only preliminary and will as part of the project brief be subject to further review and revision. The costs however are significant and the project will, once progressed by Council, take a number of years to implement.

The preferred option will provide Council with a large degree of flexibility, both in terms of the range of sporting and recreational activities that could take place on the site and in responding to future demand.

Despite the depth of work undertaken in the development of the Concept Masterplan for this area, there are still a range of issues which require further work and resolution. These long standing issues include the care, control and management of crown land within the site including unformed roads, the presence of a telecommunications tower upon the area ultimately proposed for sportsfield use, and most importantly matters of tip remediation and stability. In addition a new Plan of Management will need to be prepared for the site encompassing uses as proposed by the Landscape Masterplan. Detailed property reviews will also need to be conducted to ensure that proposed uses are consistent with Council's original acquisition for the land. Following completion of the Plan of Management, detailed design of the site and development approval will also need to be achieved for much of the work. Further work to ensure the success of this facility has been identified following the period of exhibition and review of comments and submissions received.

Consistent with current Council resolution, the draft Masterplan does not indicate preferred sporting uses for the field as recommendations regarding use will be the subject of a separate

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review of sportsground allocation and future demand. Specifically as already outlined in this report the Masterplan seeks to provide as large a space as possible to cater for the maximum range of uses, in the short and long term, as dictated by current need.

Having addressed submissions received during the public exhibition period and incorporating a number of amendments, the preferred Concept Masterplan is considered ready for adoption by Council and progression to the next stage of the project.

A draft timetable to progress this project is outlined below.

Progress	Date
Council adoption of Preferred Concept	November 2007
Amended Plan of Management presented to Council for exhibition	March 2008
Adopt Plan of Management for NTRA	June 2008
Detailed design complete and lodged with Council	July 2008
Finalise design and construction certificate	November 2008
Tenders for Stage 1 advertised	November 2008
Stage 1 construction commences	February 2009

## CONSULTATION

The development of the draft Concept Masterplan that was placed on exhibition involved significant consultation. Stakeholder input to the Masterplan has included Ku-ring-gai High School, local residents, North Turramurra Action Group, Bushcare Groups, the Bee Keepers Association, Council's Golf Course Managers and Golfers, Knox Grammar School (due to the proximity of their fields) and several presentations and discussions with the Parks, Sport & Recreation Reference Group including an on-site meeting. Consultants also provided Councillors with a detailed presentation/discussion of the report.

During the period of public exhibition, the community were extensively alerted to the plan and comments sought, particularly on the identified preferred Concept. Advertisements were placed in local papers, the Masterplan was exhibited at Council libraries, the Golf Courses and on Council's website. The proposal was the subject of a media release by Council and it was also highlighted in the Mayor's column in the North Shore Times. Further, over 1,600 letters were sent to residents of North Turramurra living on the peninsula north of Burns Road and an open day was conducted at the golf course during the exhibition period, with members of the consultant team and staff present to answer questions about the plan. The open day went very well and was attended by local residents.

As sub option B of the preferred Concept Masterplan includes potential acquisition of an existing residence at 361 Bobbin Head Road, the owner of the property was briefed about the Masterplan during the period of exhibition and his views sought on the proposal and/or potential acquisition of the property.

The Parks, Sport & Recreation Reference Group and the Bushland, Catchments and Natural Areas Reference Group were each invited to comment on the preferred Concept Masterplan and each group indicated its satisfaction with the plan. The Parks, Sport and Recreation Reference Group has formally recommended support for the Masterplan. Additionally the Director Strategy and

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Sport and Recreation Planner have attended the annual general meeting of the North Turrumurra Action Group (NTAG). A presentation and open session for questions was conducted with over 100 people in attendance. Questions from this meeting covered the full range of issues addressed within this report. Subsequent communication with the President of NTAG outlined that whilst not speaking on behalf of all residents, he outlined qualified support for the proposal subject to traffic matters (general and Burns Road & Bobbin Head Road intersection) and any potential impact on Glengarry Avenue residents being successfully managed.

Council's Parks Sport and Recreation Reference Group, at its meeting on 12 July 2007, discussed the public exhibition of the NTRA preferred Masterplan and recommended to Council the following motion:

*"Having received preliminary feedback on the results of the public exhibition of the preferred concept plan for North Turrumurra Recreation Area, the PS&RRG reiterates its support for the preferred Concept Masterplan".*

## FINANCIAL CONSIDERATIONS

To achieve the completed development of the North Turrumurra Recreation Area, will represent a significant financial commitment for Council.

The preferred Concept Masterplan as exhibited could cost in excess of \$18 million to be fully developed (with potential variations in remediation the cost may reach \$23 million). This figure provides a substantial allowance for remediation of the tip site, a figure that cannot yet be accurately verified.

Whilst this indicative costing should not be regarded as a final costed amount, it does highlight the commitment that Council will require. Whilst the cost associated with remediation and redevelopment of this site is very high, the cost of acquiring the amount of land to achieve the sportsfield, car parking and additional passive recreation elsewhere would, in itself, be more than this amount. A simple calculation of the area (40,000m<sup>2</sup>) at current land value of \$850 per m<sup>2</sup> within the North Turrumurra area, would suggest an acquisition cost of over \$30 million. Demolition of existing development and construction of new infrastructure would represent a sizeable addition to that cost. The cost of the facility was one of the matters raised in submissions although when provided with a detailed explanation of the background, the response was generally positive.

A number of the costs identified within the Masterplan are for the delivery of solutions to existing issues or matters requiring future works which do not bear a direct relationship to the implementation of the North Turrumurra Recreation Area itself. These costs include the following:

- Remediation of the previous tip site. This cost with an allowance of \$3,750,000 included within the plan on exhibition is a liability that Council faces, regardless of whether it pursues the development of the recreation area or not. Appropriately designed, the remediation of the tip site can integrate the design of the reconfigured holes, thus most efficiently achieving several outcomes through one project.

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- The proposed car park is in excess of requirements for the proposed fields. It is intended that this excess capacity will help alleviate on-street parking issues surrounding the Knox fields, an existing situation.
- The costs that have been identified for sewer mining are largely costs that are an identified need for the golf course, regardless of Council’s decision to construct the recreation area. It is proposed that stormwater harvesting and sewer mining be utilised also for the purposes of sporting field irrigation.
- Stage 6 of the project outlines costs associated with the reconstruction of the remainder of course following the construction of the fields. It is proposed within this report that the scope of works associated with this stage be prioritised and reduced to only those funds available through the Golf Course Improvement Levy.

Given the cost of proceeding with this development, a staged approach to implementing the Masterplan will be required. The Masterplan as exhibited in the Consultant’s report outlines in detail proposed stages of development. This report assumes, in terms of financial implications, development of the facility in line with the proposals outlined by the Consultants with the exception of the delivery of Stage 6 as outlined above. It is anticipated that the final delivery Masterplan will vary further.

The table below identifies the stages, time frames and indicative costing for the North Turramurra Recreation Area as outlined in the report. The maximum costs, including all sub options indicated in the consultant’s proposal, have been utilised for this table.

Stage	Description of Works	Year(s) of Implementation	Indicative Cost \$
1	Construct new holes on land fill area	2008 - 2010	6,900,000
2	Construct holes adjacent to proposed fields	2010 - 2012	2,350,000
3	Construct sporting fields and car parks	2012 - 2014	6,040,000
4	New club house and stormwater harvesting	2014 - 2016	2,400,000
5	Implementation of sewer mining	2016 - 2018	2,600,000
6	Reconstruction of remaining course	2018 -	1,000,000
	Total cost is currently assessed at		\$21,290,000

The variation in cost indicated in preliminary cost estimates within the Masterplan is due to a number of factors. Until further exploration is completed on tip remediation and slope stabilisation, it is difficult to predict the final cost of this element of the project. Likewise the use or non use of various sub options relating to:

- 1) acquisition of the property directly adjacent to the proposed fields, tenure relating to Crown land and resolution of the location of the existing telecommunications tower;
- 2) use of stormwater harvesting and/ or sewer mining;
- 3) the extent of additional recreational facilities; and

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- 4) the extent of final course reconstruction will all have a significant impact on total costs.

The size and complexity of delivery of this project will mean multiple funding sources will be required to be utilised in the delivery of this piece of community infrastructure. This report envisages funding from Section 94 Plans, past, current and future; funds from Golf Course Improvement Levy; direct contribution from future Council budgets, grant funds and user contributions. Sources of grant funds include, Department of Sport and Recreation Facility Grants, various grants relating to water management and funding from the Australian Sports Federation. This detail will need to be built into review of Council's long-term financial model.

Of similar importance is that the final project configuration will also influence funding sources. For instance, around \$1 million has been assumed previously by Council as an allowance from the waste reserve for tip remediation. Should the cost of this component be more, it is reasonable to assume that the Waste Reserve should bear these costs. Similarly, should sewer mining be undertaken as part of this project, an opportunity exists to divert site water from the current treatment plant where it is then deposited into the sewer system under license as trade waste into an integrated sewer recycling system. Ongoing funding of this through waste budgets may be able to be utilised.

Section 94 Acquisition funds may be able to be utilised for the purchase of the property directly adjacent to the proposed fields on Bobbin Head Road. It should be noted that at this time the owner of the property has indicated he is not interested in selling his property.

At this stage of project planning, a ten year horizon is being assumed to achieve completion of the project. Within the context of Council's Long Term Financial Model, some reshaping of various programmes may assist in the delivery of the project. For instance the Playground and Parks Programme could deliver funds towards less structured recreational facilities, such as a playground, shelters and pathways. The sportsfield capital programme could provide up to \$100,000 per year over a ten year period to assist in field construction and ancillary infrastructure and funds from the Courts Programme could be utilised in the construction of car park/ training courts. Two additional funding sources have been identified within this report to address the funding gap identified in delivery of this infrastructure.

Those funding sources include the New Facilities Reserve and user contributions. The following comments should be regarded as context within which these two sources of funds are identified and recommended to Council in this report:

- 1 The New Facilities Reserve represents an appropriate source of funding for part of this project, as do a number of other projects Council is currently considering. Although this Reserve is formally identified as a funding source for this project in this report, it is appropriate that Council, when it considers the development of a new long-term financial model in December 2007, reconsider this aspect of funding in conjunction with all other projects that may be appropriately funded by this Reserve.
2. To address funding for the clubhouse/ amenity building it is proposed that a substantial user contribution be sought from whomever is the final identified user of the facilities.

An alternative for Council and the sporting community to consider could include a levy on sports participants within Ku-ring-gai to address this funding gap. Such a process could be managed by

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the sporting associations and donated toward the cost of this and other major initiatives. Other Local Government Areas have initiated similar schemes with success. The remaining option is that this facility be designed in such a way that it can be added to over time. In other words, a very modest building be constructed initially with an obvious cost saving.

It is also proposed that the updated cost estimates for this project be included within the review of the Section 94 Plan to be undertaken in 2008.

Funding the implementation of each stage is highlighted in the table below including source and proposed year of expenditure:-

FUNDING SOURCE BY YEAR								
Stage	Total Cost *	Period of Anticipated Expenditure	Golf Course Improvement Levy *	Section 94	Waste Remediation Reserve *	Grants/ User Contributions *	Diverted cash under long term model	New Facilities Reserve (or other source)
1	6,900	2008-2010	410		3,000			3,490
2	2,350	2010-2012	500				100	1,750
3	6,040	2012-2014	250	4,500		100	1,190	
4	2,400	2014-2016	250	1,200		650	300	
5	2,600	2016-2018	750		500	550	200	600
6	1,000	2018-2025	1000					
	<b>21,290</b>		3160	5,700	3,500	1300	1,790	5840

\* multiplied by 1000

It is stressed that these costs and funding sources are preliminary estimates only. To aid cash flow requirements of the project, borrowings against internal reserves may also be required.

## CONSULTATION WITH OTHER COUNCIL DEPARTMENTS

Officers from Operations, Community, Corporate and Strategy have assisted in the preparation of this report.

## SUMMARY

A preferred concept Masterplan for the North Turramurra Recreation Area has been exhibited and public comments regarding the proposals have been received and addressed in this report.

A summary of recommended alterations to the preferred Concept Masterplan for final adoption is provided below:

1. That a design be prepared for the intersection upgrade at Burns Road/ Bobbin Head Road to support Council's grant application.

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2. That the various recommendations arising from the GTA (Consultants) review be incorporated into detailed design including provision for coaches.
3. That the next phase of design involve the preparation of a parking and traffic management plan for Bobbin Head Road and Curagul Road surrounding the Knox playing fields and the proposed NTRA which also provides for the staging of activities to further relieve peak hourly parking demand.
4. That the distance of sportsfield location from Glengarry Avenue be maximised.
5. That an acoustic study be undertaken to support the development application for the NTRA to quantify potential impacts.
6. That an operational management plan for this facility be prepared to address traffic and parking issues, recommendations from the acoustic study, OHS responsibilities in relation to bushfire management, staging of activities and extent of use.
7. That a flora and fauna study be undertaken in conjunction with detailed design work.
8. That the further development of this project focus on sub option A. Sub option B should remain as a future option should the owner of 361 Bobbin Head Road determine that he wishes to sell.
9. The extent of Stage 6 works be reduced to that which can be funded from the Golf Course Improvement Levy.
10. Further consideration to be given to the concept of user contribution toward the funding of the clubhouse/ amenity block. Alternatively the scale of this element of the project be reduced.
11. Use of the New Facilities Reserve as a funding mechanism for this project along with other priorities be reviewed when the Long Term Financial Model is reported to Council in December 2007.

Implementation of this project will represent a significant commitment for Council over an extended period of time. This report provides a path for the progression of this project for Council. The modifications and alterations and further work recommended to this project as a result of exhibition and consultation should address many of the concerns that have been raised and will add value to the project.

## RECOMMENDATION

- A. That Council adopt the preferred Concept Masterplan for North Turramurra Recreation Area as amended in the report.
- B. That the timetable for progression of the North Turramurra Recreation Area be adopted to guide future management of the project, subject to appropriate financial resources.

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- C. That a revised draft Plan of Management for the North Turrumurra Recreation Area, including lands identified within the preferred Concept Masterplan be prepared incorporating changes to the Concept Plan as outlined in the report.
- D. That Council commence preparation of detailed design and documentation for development application to be lodged immediately following adoption of the revised Plan of Management incorporating changes and further work as outlined in the report.

Roger Faulkner  
**Sport and Recreation Planner**

Steven Head  
**Director Strategy**

- Attachments:**
- 1. North Turrumurra Recreation Area Draft Concept Masterplan Report (March 2007) - 767046
  - 2. NTRA Traffic and Transport Review September 2007 by GTA Consultants - 849093
  - 3. NTRA Public Exhibition Submissions (July 2007) - 849007



## North Turramurra Recreation Area

Draft Concept Masterplan Report  
Volume I

March 2007



Prepared by Spackman & Mossop

Ku-ring-gai Council



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Supporting Reports

STORM Consulting  
- Constraints and Opportunities  
- Civil and Environmental Engineering  
- Summary of Water Management Options

ARUP Transport Planning  
- Transport Issues  
- Review of Transport and Access and Parking

Jeffery & Katauskas  
- Geotechnical Report

HM Leisure Planning  
-The Demographics of the Kur-Ring-Gai and North Turramurra Community

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## Introduction

This report has been prepared for Ku-ring-gai Council, with the purpose of providing a brief summary of the constraints and opportunities with regard to the redevelopment potential of the North Turrumurra Recreation Area (NTRA).

The NTRA is located off Bobbin Head and Curagul Road in North Turrumurra and includes a Council-owned golf course (the North Turrumurra Golf Course), as well as a former landfill site.

Spackman & Mossop Landscape Architects are the lead consultant engaged by Ku-ring-Gai Council to develop a concept masterplan and staging options for the redevelopment of the NTRA, with the aim of maximising the recreation potential of the site. The brief envisages that this would be achieved by relocating sections of the golf course to the former landfill site and identifying layout options for the development of multi-use sports facilities on the existing golf course land.

In order to gain a good understanding of the site and the issues affecting its redevelopment, the identification of constraints and opportunities has involved

- a number of site visits,
- ongoing liaison with Council staff,
- a review of existing information, including previous reports and redevelopment proposals prepared for the site,
- consultation with key stakeholder groups, and
- 2 presentations to Council's Parks, Sports & Recreation Reference Group.

Further, in the preparation of this report, we have drawn on the expertise and knowledge of a range of specialist consultants on our study team. They are:

<i>ARUP Transport Planning</i>	Traffic and Access Planning
<i>Jeffery &amp; Katauskas</i>	Geotechnical Advice, including landfill slope stability, settlement and methane hazards
<i>HM Leisure Planning</i>	Recreation Planning
<i>Scott Murray &amp; Associates</i>	Golf Course Design
<i>STORM Consulting</i>	Environmental and Civil Engineering

This report presents a summary of the findings of the analysis undertaken by the study team members, it is followed by a brief overview of potential site development options and a summary of the preferred option and its staging potential.

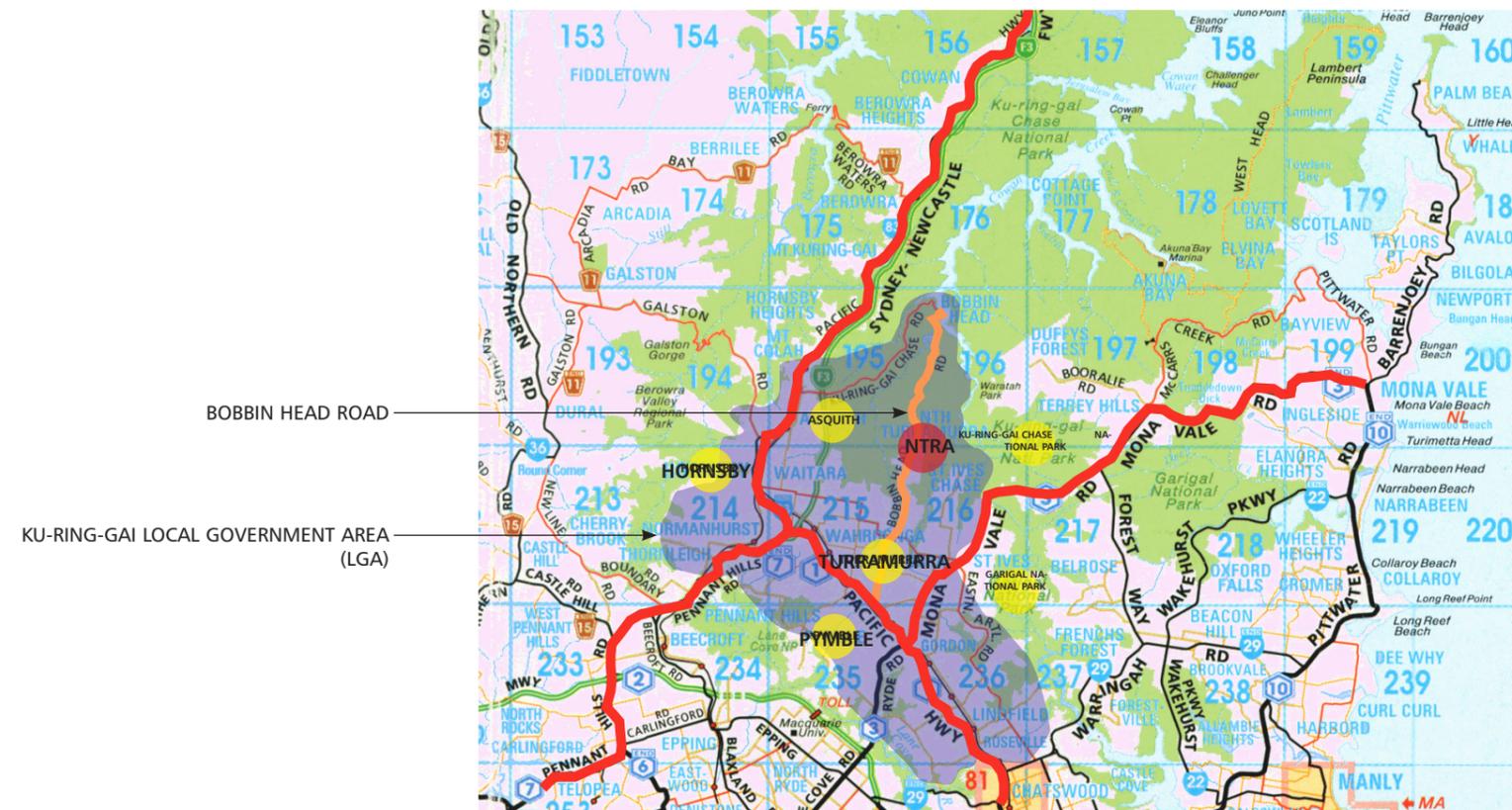


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## Site Location and Context

- North Turramurra is located around the ridge of a narrow peninsula of land bounded by two north flowing creeks, Cowan and Cockle Creek. This creates a narrow strip of land confining development largely to the upper slopes and the ridge top.
- The NTRA is located off Bobbin Head and Curagul Roads in North Turramurra.
- The site is surrounded by largely residential development, including low-density and medium density housing and a number of retirement villages.
- It is isolated from the major population centres in the LGA, being located near the northern limit of development in the LGA and on a narrow ridge line between Cowan Creek and Lovers Jump reek. It is relatively isolated from areas with concentrations of people and activity which tend to be closer to or along the Pacific Highway and the North Shore Rail Line.
- Depending on the level of proposed redevelopment of the NTRA, this could attract potentially large numbers of additional people to this relatively isolated and 'peaceful' area.
- Options for the re-location of the NTRA, including access points, golf course design and the location of new sporting fields or other recreational facilities will need to consider the potential impacts on surrounding areas and the amenity of local residents.

### Sub-regional Context



Source: Greater Sydney and Blue Mountains Street directory, Seventh Edition July 2001

0 0.25 0.5 0.75 1 km



Figure 1- Context Map

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## Local Government Area Context

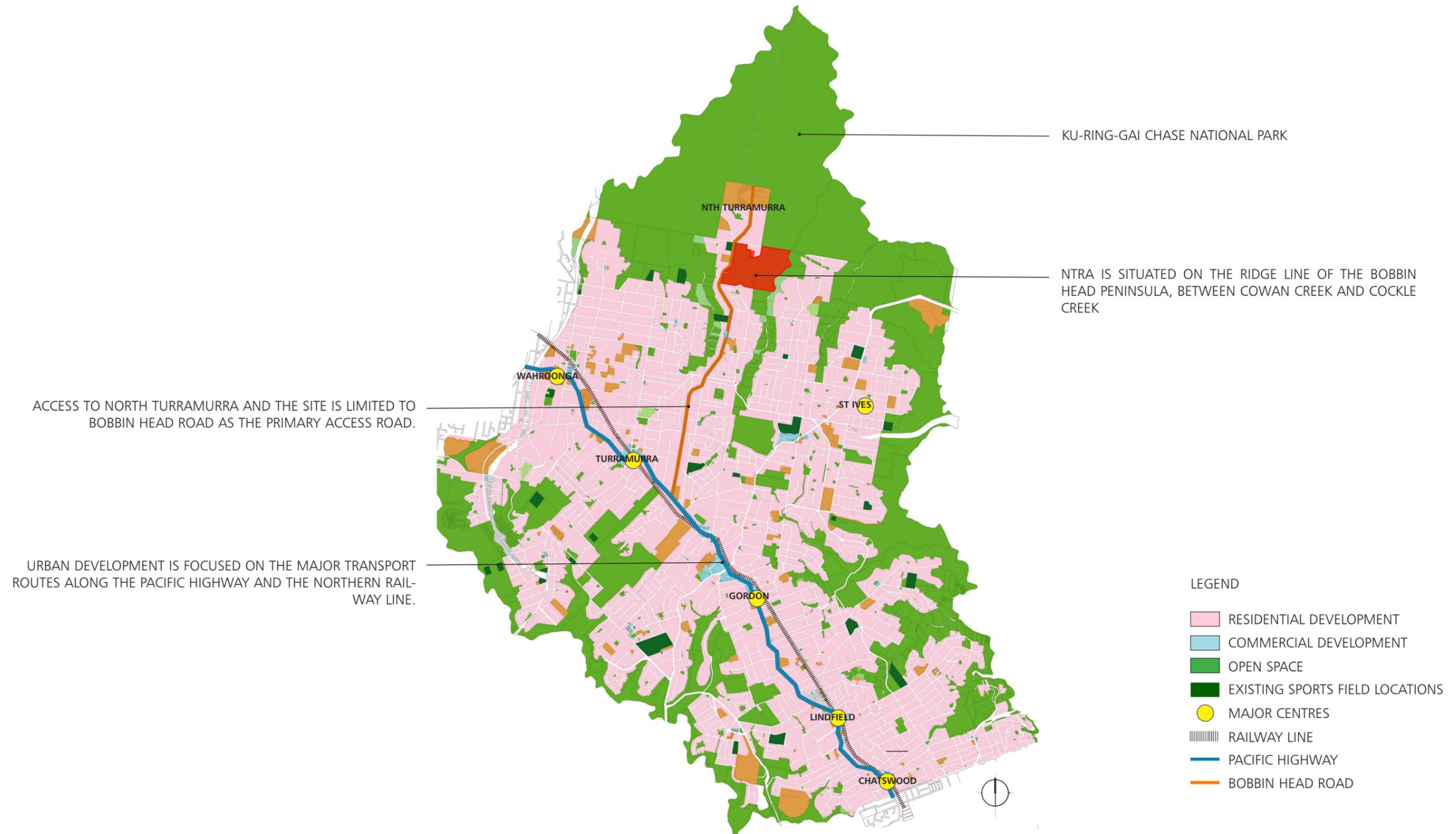


Figure 2- Map of LGA

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## Site Overview

- The North Turrumurra Recreation Area is comprised of a series of publicly owned community lands, including the existing North Turrumurra Golf Course, the former North Turrumurra Landfill, two Council depots off Bertrand and Curagul Roads and Glengarry Camp Girl Guides Reserve (refer to figure 3). The total land area of the NTRA is about 81.5 hectares, representing a significant open space resource.
- In the Ku-ring-gai Local Government Area, there is a growing demand for recreation facilities in general and playing fields in particular. The NTRA offers the potential to contribute towards meeting this demand. This applies in particular to the former landfill areas which are currently not available for recreation activities and are expected to be able to support these, once remediation has been completed. As shown in the list below, development of this land would provide an approximate 5.2 hectares of additional public open space or recreation areas.
- Some of the major features and their respective areas are:
  - Crown Land (includes Glengarry Camp): 33.2 hectares
  - Glengarry Camp Girl Guides Reserve: 22.4 hectares
  - North Turrumurra Golf Course: 28.2 hectares
  - Former North Turrumurra Land Fill: 18.2 hectares (Note: the southern and eastern sections of the golf course are located on sections of the landfill)
  - Landfill area with redevelopment potential: 5.2 hectares
  - Golf Course Depot: approximately 0.48 hectares
  - Landfill Depot and compound: approximately 0.66 hectares
  - Bushland (largely on steep slopes and much of it on crown land): 41 hectares
- The focal area for any redevelopment of the NTRA will be the part of the site currently featuring the golf course and the former landfill to the west of it, which represents about half of the total NTRA area (the core study area). The other half consists of bushland on predominantly steep slopes adjoining Cowan Creek and Ku-ring-gai Chase National Park and is not suitable for development.
- Development would generally be excluded from bushland areas, however these areas offer opportunities to cater for some of the recreation demand, in the area such as the demand for more passive, informal or nature-based activities including (bush-) walking or wildlife observation.

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Figure 3- Study Area

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## Site Analysis

### Access, Traffic and Circulation

#### Regional Access

- Bobbin Head is a regional road and primary north-south transport route providing access to North Turramurra and the site Refer to figure 1 and 2.
- The site is surrounded by a low and medium density residential developments, as well as other institutions such as Nazareth House Retirement Village and the Knox Grammar playing fields, all of which contribute to traffic on the road. Overall, Bobbin Head Road retains presumably low volumes of traffic (refer to Arup- Traffic Report in Volume II- Appendix)
- In recent years there has been a significant increase in the level of traffic north of Curagul Road which can be attributed to significant medium- density residential development in the area.
- Knox Playing Fields generate significant weekend traffic and parking demand, spilling over into Bobbin Head and Curagul Roads.
- With the proposed addition of sporting facilities to the site, traffic levels are expected to increase. Potential traffic management should be implemented for safety and also to avoid traffic conflicts.

#### Site Access

- Currently, access to the site is possible in three locations: two entrances off Bobbin Head Road and one off Curagul Road., as described below:
  - The main site entrance and access to the golf course is located approximately midway between Curagul Road and Hartley Close. In its current configuration this entrance is not safe to cater for a large increase in traffic movement such as would result from the development of sporting fields. An upgrade of the entrance would be needed to improve visibility as well as control both vehicular and pedestrian movements.
  - A locked driveway at the end of Curagul Road permits staff access only to Council's landfill depot.



NTRA is fenced along Bobbin Head Road, there are no path systems or pedestrian crossing along or into the site



Entrance to Golf Course

Noise and privacy concerns of residents in Curagul Road would make this entrance unsuitable for public use or larger numbers of traffic movement.

Bertrand Road provides access to Council's golf course maintenance depots as well as to the beekeepers' hives located adjacent to it. The beginning of this road is sealed, turning into an unsealed track close towards the depot. Similarly to the main entrance, the configuration of the Bobbin Head Road intersection is currently not

safe enough to support an increase in vehicle movements. If required, this access could be retained and upgraded to provide public access to the site.

- Access to the site by public transport is limited and any new development is therefore likely to generate an increase in vehicular traffic in the area, particularly on the weekends when playing field demand/ use is greatest.

#### Parking

- Parking for any new development should be located on-site to reduce the impact on the local neighbourhood and road system as well as limit potential conflict with Knox users.
- The existing golf course carpark (approximately 80 parking spaces) is generally sufficient to meet demand from golf users. However, there is little spare capacity on the weekends to accommodate additional users.

#### Pedestrian Access and Circulation

- Much of the NTRA is currently fenced, limiting pedestrian access to the vehicular entrance points. Entrances are unsafe for pedestrians however, as they lack dedicated footpaths. Further, there is a lack of safe pedestrian crossing facilities across Bobbin Head Road.
- The golf course site does not feature any formalised paths, and many of the existing maintenance tracks on the landfill site are unsuitable or unsafe for general public pedestrian use.
- Safety considerations severely limit opportunities for general community access to or walking tracks around, the golf course. However, there maybe opportunities for walking tracks around any proposed sporting fields and for new path linkages from the site to existing bush walking trails around Cowan Creek and in surrounding National Parks, including the Darri and Warrimoo Track.



Bertrand Road access to Southern KMC Depot site.



View of access road to Northern KMC Depot from Curagul Road

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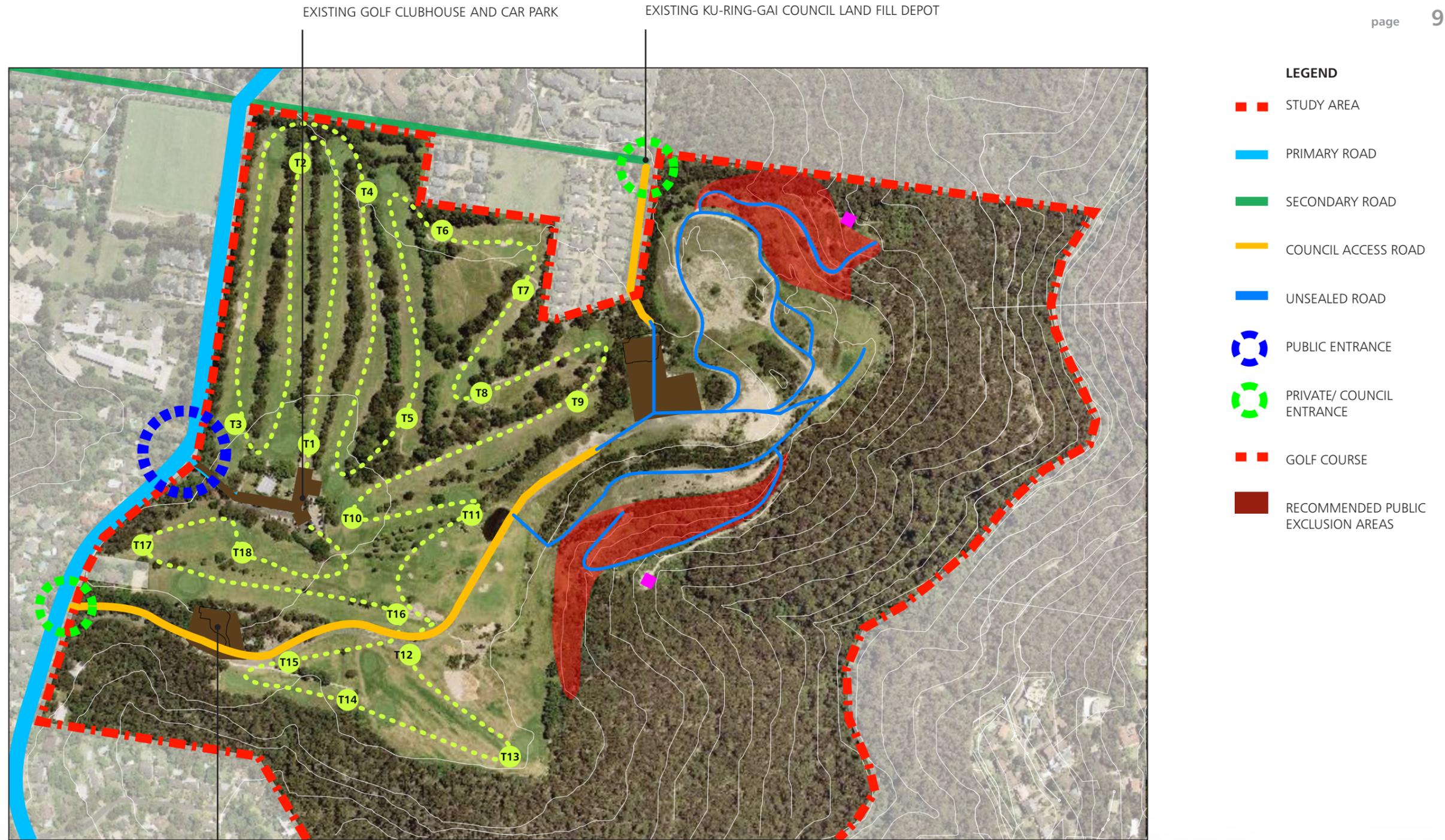


Figure 4- Access and Circulation

\* Information on this map has been generated from KMC GIS mapping.

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site analysis

### Topography and Aspect

- North Turrumurra sits on a high point that gradually slopes down to the north, west and south boundaries of the site (refer to Figure 5).
- The site has a predominantly easterly aspect with views to the National Park St Ives Chase.
- Site slopes vary and greatly; from gentle in the eastern of the site around Bobbin Head Road to steep in the western and southern portion of the site towards natural gullies.
- The steep topography around the perimeter of the site limits development opportunities for level sporting fields and associated facilities to relatively few locations.
- Steeper slopes may still be suitable to accommodate some of the more challenging golf fairways.



Steep slopes on the north-western edge of the landfill site



Slopes of the restricted zone area

### Drainage and Creeks

- The majority of the site drains towards bushland slopes and gullies to the south and west which form part of the Cowan Creek Catchment, which in turn flows into the Hawkesbury River.
- Untreated site run-off may pose a threat to surrounding bushland and the water catchment, due to the potential for leachate/ landfill pollution and the use of fertilisers on the golf course. Which could promote weed growth. However opportunities exist to either treat stormwater before release into the catchment tributaries, or to collect stormwater for re-use on the site (refer to "Water Use and Management").

### Landfill and Slope Stability

- Continuous monitoring of landfill slopes has been undertaken on the site since 1988, with a focus on slopes A, B and C (refer to Figure 5).
- A number of serious issues have been identified that limit the redevelopment potential of former landfill areas (refer to J&F Geotechnical Report in Volume II-Appendix):
  - The landfill has been neither well designed nor constructed.
  - Settlement of land fill areas is uneven, ongoing and expected to continue for several years, making it unsuitable for uses that require a level and stable surface such as buildings or car parks or sports fields.
  - Landfill slopes A and C in particular are unstable and show evidence of previous slope failure/ landslides. They are unsafe and public use must be excluded from these areas.
  - Landfill areas seem to lack an adequate capping layer. The lack of adequate drainage and surface runoff control contributes to slope instability problems
  - The poor health of vegetation (turf and trees) suggests ongoing landfill gas emissions such as methane which may pose health risks.

In order to ensure the stability of the landfill and the safety of users in existing and new recreation areas, the following measures are recommended:

- Improve slope stability by controlling drainage (ground and surface water), reducing the gradients of fill slope batters and by providing stabilising berms. Particular measures include:
  - Surface grading of the open areas behind Slopes A, B and C to promote surface water runoff instead of infiltration into the landfill.



Northern area of the landfill site



Current condition of Landfill Area

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- Provision of flexible lined drains behind the mounds which run along the crests of Slopes A, B and C. The drains should be directed/ piped away from the slopes to discharge into the existing nearby creeks and gullies, or fed into other water management re-use systems (refer section "Water Use and Management")
- Any site levelling should be achieved through the placement of an engineered fill material. There should be no cutting or excavation of the existing capping layer.
- Provide a capping layer in line with current EPA standards, including both water and gas drainage layers. Typically, such a capping layer would be about 2.1m thick and include the following:
  - Seal-bearing surface
  - Gas Drainage layer 300 mm thick
  - Sealing clay layer
  - Drainage layer
  - Revegetation layer
- For developments on the landfill site, the following measures may be required:
  - Gas drainage provisions along buried service trenches to eliminate emissions.
  - Fully ventilated floor slabs to limit impacts to sealed structures such as buildings and slabs.
  - Flexible segmental block paving to parking facilities above the landfill.



Slope A, viewing to the Northern Pump Station

For more detailed information and a full discussion of landfill issues refer to J&K Geotechnical report in Volume II- Appendix.

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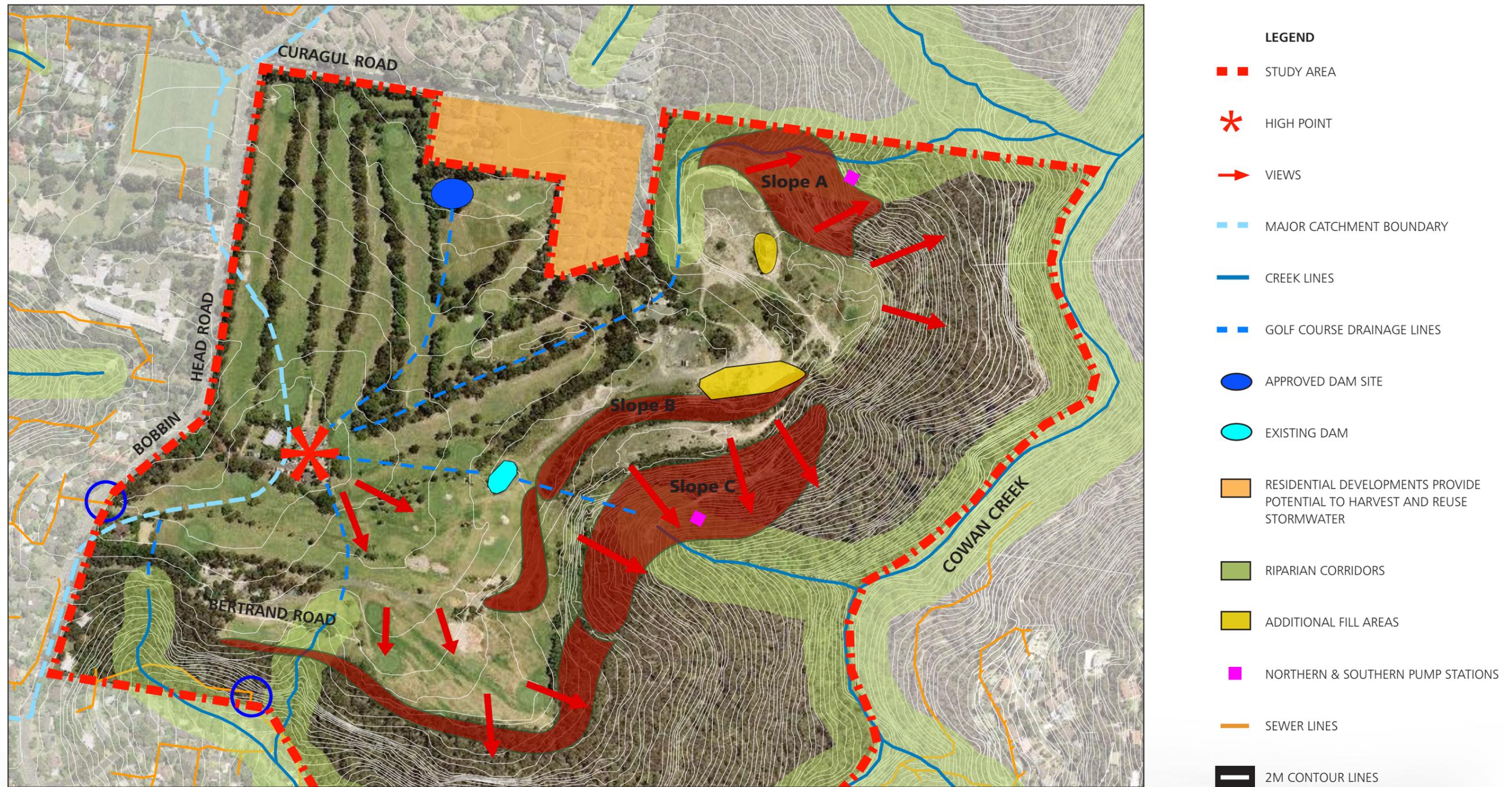


Figure 5- Landform and Drainage

\* Information on this map has been generated from KMC GIS mapping.

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site analysis

**Vegetation, Wildlife and Habitat**

- The site is surrounded by dense bushland. This provides an aesthetic backdrop to the NTRA and restricts any unauthorised user activity on these slopes.
- Bushland is protected under *State Environmental Planning Policy (SEPP) 19 - Bushland in Urban Areas and SEPP 44 - Koala Habitat Protection*. It provides habitat for a number of threatened or endangered species, including the following wildlife;

Green and Golden Bell Frog	Yellow-bellied Glider
Cotton Pygmy- Goose	Common Bent-wing Bat
Shy Albatross	Heath Monitor
Grey Falcon	Koala
Pied Oystercatcher	Southern Brown Bandicoot
Glossy Black-Cockatoo	Tiger Quoll
Regent Honeyeater	Masked Owl
Swift Parrot	Powerful Owl
Supurb Parrot	Turquoise Parrot

- The presence of wildlife and natural bushland provides opportunities for conservation, nature study and educational uses of the NTRA.
- The site also contains sections of endangered ecological community known as Duffy's Forest located to the North of Bobbin Head Road, Curragul Road and areas of the Golf Course.
- Bush fires are a significant threat to residential areas in North Turrumurra. New open areas/ sporting fields within the Recreation Area would make a valuable contribution towards bush fire management by providing potential marshalling areas should evacuation of the local area be required.
- Future landscape works should incorporate native species to provide additional food and nesting opportunities for native animals.
- The proximity of bushland provides the opportunity to conduct nature education tours, bush regeneration



Existing Bushland in surrounding National Park



Existing fairway vegetation in the north-eastern portion of the site consists of exotic species

classes or similar activities from the site, or establish regular bush care or "friends" groups that assist Council in the management of the site.

- Weed infested slopes on some landfill areas present a threat to bushland and should be controlled to prevent further spread of weeds.
- Lighting and noise may disturb native animals even though they are able to adapt to the day and night time urban activity to a degree. The NSW National Parks and Wildlife Service has previously advised that some mitigation measures might be required, to reduce potential negative impacts such as the use of directional lighting or louvres to floodlights.
- Established corridors of vegetation exist along golf fairways 17,18,1,2,3,5,6 and 7 and are complemented by sporadic plantings of gums and pine trees throughout the remainder of the course.
- Existing fairway trees should be kept to retain the sites character, as features of more challenging fairways, and for the protection of golfers from stray balls.
- Vegetation is limited on the landfill area due to the more recent development of this area, as well as growth being inhabited by the release of poisonous methane gas. The introduction of a capping layer to current EPA standards would provide the opportunity to introduce new vegetation species. Selection of appropriate small trees, shrubs, and grass species will be required to avoid root penetration through the capping layer.



Vegetation on landfill area is not healthy due to poor environmental conditions



Environmental control measures will be required to prevent the further spread of weeds.

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- LEGEND**
- - - STUDY AREA
  - EXISTING VEGETATION (MIXED BUT PREDOMINANTLY NATIVE)
  - WEED INFESTED AREAS
  - EXISTING FAIRWAYS
  - T1 EXISTING TEE LAYOUT
  - G1 EXISTING GREEN LAYOUT
  - - - EXISTING GOLF COURSE CIRCULATION/ PLAY SEQUENCE

Figure 6- Existing Vegetation  
\* Information on this map has been generated from KMC GIS mapping.

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site analysis

### Views and Visual and Scenic Quality

- Pleasant views towards the National Park and bush suburbs such as St. Ives Chase can be enjoyed from the site, particularly from its high point around the existing golf course car park and from above the rim of the landfill slopes.
- The treed outlook from Bobbin Head Road and adjoining residencies into the golf course provides high visual amenity to the area, as well as a pleasant landmark experience along Bobbin Head Road. These views should be retained where possible and redevelopment should consider the visual impact of any works on the Bobbin Head Road frontage.
- The established golf course has a high visual character and value which should be retained.
- Newer sections of the golf course and other landfill areas have lesser visual quality, due mainly to the difficulty of establishing vegetation in these areas. From a visual point of view, these are preferred areas for redevelopment as work would have a lesser visual impact by not affecting the existing tree cover.



Monitor on the landfill



View from NTRA south west towards St. Ives Chase



Views into the NTRA from Bobbin Head Road

### Water Use and Management

- Currently, North Turramurra Golf Course only waters its greens and tees but not its fairways. Clubhouse water use is limited to toilet facilities and minor kitchen facilities. Nevertheless current mains water consumption is already significant, with an average 30.4kL/ day.
- Additional facilities on the site may significantly increase water demand, mainly as a result of the need to irrigate sporting fields.
- The majority of water is currently sourced from town water, supplemented by stored site run-off. An additional water storage dam with a 10ML capacity has been approved for construction, on the northern part of the site, in order to further increase site storm water re-use and recycling.
- In view of ongoing drought conditions, a series of potential water sources were identified to meet the existing and additional water demand while minimising the use of portable townwater. These include:
  - Roof Water
  - Stormwater/ Surface water runoff (from across the NTRA and/ or residential development North of Curagul Road)
  - Stormwater Harvesting from surrounding residential developments
  - Ground water extraction and Sewer mining
  - Leachate and sewer mining
- In particular, opportunities include:
  - collection of stormwater runoff from the site through the installation of swales, underground collection systems and the use of porous paving. Treatment maybe required prior to re-use on site.
  - stormwater harvesting from local residential housing (existing or future developments) along Curagul Road, such as through the use of water retention/ storage tanks.
  - harvested water would be suitable for toilet flushing, washing down golf buggies.
  - the landfill generates varying amounts of leachate which may be able to supplement the water



Leachate collection pond on the landfill site



The existing water storage dam on the golf course site

- supply. However, leachate would require treatment and amounts fluctuate too greatly to provide a reliable water supply.
- the proximity of a sewer main would make sewer mining a technically feasible need option that would deliver a reliable water supply to the site, for use in irrigation and toilet flushing. However, a small treatment works would be required, with a relatively high initial capital cost. Other small issues to consider would be its location (access to sewer main, maintenance access) as well as community concerns regarding plant operation noise and odour emissions.

For a more detailed discussion of water use and management issues, the Storm Consulting Civil and Environmental Engineering report in Volume II- Appendix should be referred to.

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## Existing Site Uses and Structures

### North Turramurra Golf Course

- The North Turramurra Golf Course is owned by Council and managed by the private contractor "Tee Tops", under lease from Council. It is a popular and highly valued recreation asset in the area.
- The current golf course layout is unbalanced, in particular with regard to the length, strength, visual character/ interest and amenity (shade) between the first and second 9 holes.
- The "best" holes are holes 1, 2, 3, 17 and 18, located around the club house and along Bobbin Head Road. They feature fairways lined with established trees, providing protection from stray balls.
- Site redevelopment may provide the opportunity to enhance the layout and aesthetics of the course and make it more technically challenging and balanced overall.
- The majority of greens and tees are worn out or have reached the end of their life. NTRA development should consider refurbishment or re-building of tees and greens to improve the quality of the course.
- Council's resolution requires any redevelopment to be able to be staged to ensure the ongoing operation of the golf course with an 18 hole capacity.
- Some golf players have identified the potential to reduce the course to a 9 hole course of high quality, complemented by additional practice facilities such as a driving range, chip and putt area, putt-putt facilities or similar. This would also render the course more suitable for local school use and teaching activities.



Tree lined golf fairways



Existing green in need of refurbishment

### Existing Buildings and Structures

- The existing Golf club house is an old building that may require refurbishing or renovations to better meet the need of golfers
- There is an opportunity to replace the existing golf club house with a new purpose-built building consolidating golf facilities with new facilities required for sporting use, such as change rooms, match rooms, toilets, etc. Additional support buildings may still be needed, such as for maintenance equipment, buggy storage and the like.
- In order to minimise potential user conflict, functional separation between golf and sporting users/ facilities should be maintained.
- There is currently no community building provided for on-site. The opportunity to provide any new facilities including buildings should be flexible enough to allow for a range of community uses and activities, including community meetings or indoor activities such as yoga classes.



The existing Golf club house

### Other Uses

- Ku-ring-gai Council currently operates two independent depots in the NTRA: the "landfill depot" off Curagul Road and the golf course maintenance depot accessed from Bertrand Road. It may be possible to consolidate these in a single location in order to free up additional areas for recreational use.
- Beehives are located in a compound near Council's golf course depot and provide an interesting and unusual education opportunity in urban areas. The potential impact of redevelopment on the beehives will need to be considered. If necessary for safety or other considerations, it may be possible to relocate the hives to another location on the site. This possibility has been provided for in Council's license with the Bee Keepers.
- Girl Guides and Scouts Group Halls are located off Bobbin Head Road in the south-western portion of the NTRA. These bushland areas are protected and beyond the extent of any redevelopment proposals. The use and function of these buildings has therefore not been reviewed as part of this study and would remain independent of any redevelopment proposals.



Council's golf course depot, located off Bertrand Road

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## Recreation Demand

- The Ku-ring-gai Local Government Area (LGA) currently houses numerous sports fields and recreational facilities, however there is a need for more due to the continually growing population and increasing recreation demands from all age groups.
- It is estimated that the acquisition of a further 4.84 ha of open space is required to meet the recreation demand. Yet, opportunities for the expansion of the open space system are limited. The North-Eastern portion of the LGA in particular has a shortage of recreation and sporting facilities.
- The NTRA is a large area of open space and represents a singularly important opportunity for Council to increase open space resources in the LGA without negatively impacting existing users.
- A number of recreation facilities could be accommodated at the NTRA, providing recreation opportunities for various groups and for children and teenagers in particular.
- In addition to maintaining the current eighteen-hole golf course, recreation opportunities would need to include sporting fields and facilities for competitive and noncompetitive sports, social facilities or educational activities and playgrounds.
- Recreation opportunities to be provided for older residents could include a range of informal activities, walking tracks and cycling paths, nature observation opportunities and involvement in environmental conservation, seating and shelter, indoor social or educational creative arts programs and golf.
- Recreation options should be flexible and allow for different types of use at different times, in particular with regard to the use of the sporting fields.
- There is also a need for the site to accommodate for people with disability. Activity and accessibility on site should be encouraged for their use.

## Summary of Constraints and Opportunities

- Redevelopment of the NTRA should aim for the creation of a good multi-purpose/ multi-field space which permits a variety of different configurations, so that use of the facility can be adapted over time to meet changing demands.
- In addition to the unsuitability of land fill areas for the development of sporting facilities, a number of factors influence their potential location, including topography, existing tree cover and vehicular access and parking considerations.
- Possible sporting field locations include;
  - In the North of the site, at the corner of Bobbin Head Road and Curaxgul Road.  
  
While there would be no negative impact on native bushland, extensive shortening of fairways would be required, as well as the removal of significant fairway vegetation. It would also increase traffic around the Bobbin Head and Curagul Road intersection and may lead to conflict with traffic to and from the Knox playing fields. In this location, a separate road entrance may be required and fields would be close to adjoining residents. Noise and activity on the weekends may impact negatively on the amenity of this currently quiet neighbourhood. There is also a perceived risk that fields in this location could become dominated by private school use/ demand, to the disadvantage of the needs of the wider community.
  - South of the existing golf club house, off Bobbin Head Road.  
  
Depending on the final size of the playing fields this option may have some impacts on bushland to the south of Bertrand Road. However it benefits from the relatively gentle slopes in this area and the proximity to the existing main entrance which would be able to be used as long as some upgrading to improve safety and cope with increased traffic flows is undertaken. It also provides

the opportunity to provide a new purpose- built building which would house both golf club and other sporting facilities. The impact on existing golf fairways would be limited to the ones south of the existing club house, which are generally of lower quality from those of further north.

- Immediately east of the golf course 'clubhouse'

This location would be ideal in the sense that it provides the largest naturally flat area on the site which would significantly reduce the amount of earthworks required to construct sporting fields. The existing club house could be retained and upgraded to accommodate sporting uses, or a new building could be proposed- designed to suit sporting requirements. The existing main entrance would be able to be re-used, but would require some upgrading to improve safety and cater for larger traffic numbers. However, in this location it would not be possible to functionally and physically separate golf from other sporting uses which is likely to generate more user conflicts and may also increase safety risks.

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## NTRA Concept Options

Based on the identified constraints and opportunities, three re-development concept options were developed and presented to Ku-Ring-Gai Council and the Parks, Sports and Recreation Reference Group. The options showed varied golf, sporting and recreational opportunities. A description and a plan of each along with a series of diagrams showing potential sporting field configurations were presented. They are summarised in following section.

Each option is complemented by a preliminary cost indication that provides a rough estimate, as well as a staging plan. The staging plan identifies the most effective sequence of construction activities which ensures that 18 golf holes will be available for play at all times during the different redevelopment stages.

### Outcome

The presentation of the three design options was well received. Feedback from the group was positive, and the members were supportive of the projects direction. They were also most appealed by the flexibility in the design of the schemes accommodating a range of recreation users.

The group would further like to see a preferred design option derived from Option 1 and 2 that explores more space for organised sporting purposes as there is a great need in the area.

### Major Design Considerations

During the site analysis process of the design development certain restrictions were identified (Refer to Figure 7 and 8). Those of which limited flexibility and the space available for a variety of design configurations. These include:

- Topographically challenging site and the limited availability of flat land.
- Restricted use of the land on the former landfill site due to dangerous slopes. These are the exclusion zones on the northern and western edges of the site and insufficient heavy-load capacity.
- Restricted redevelopment opportunities on the site edges along Bobbin Head Road and Curagul Road due to conflict with surrounding residents.
- Sensitivity of the surrounding bushlands and national parklands.
- Existing matured trees and shrubs are present across the site in various groups and alignments. Some of which create a characteristic frontage along Bobbin Head Road and pleasant golfing fairways. Redevelopment of site should have minimal disturbance to this vegetation.
- Clear separation of users. Golf course, sports field users and the general public should be separated, firstly due to safety reasons and also to distinguish the users experience on site.
- Entrance/ Exit to the site is to be retained via Bobbin Head Road. Public access to the site via Curagul Road is restricted to avoid disturbance to residential developments along this road.

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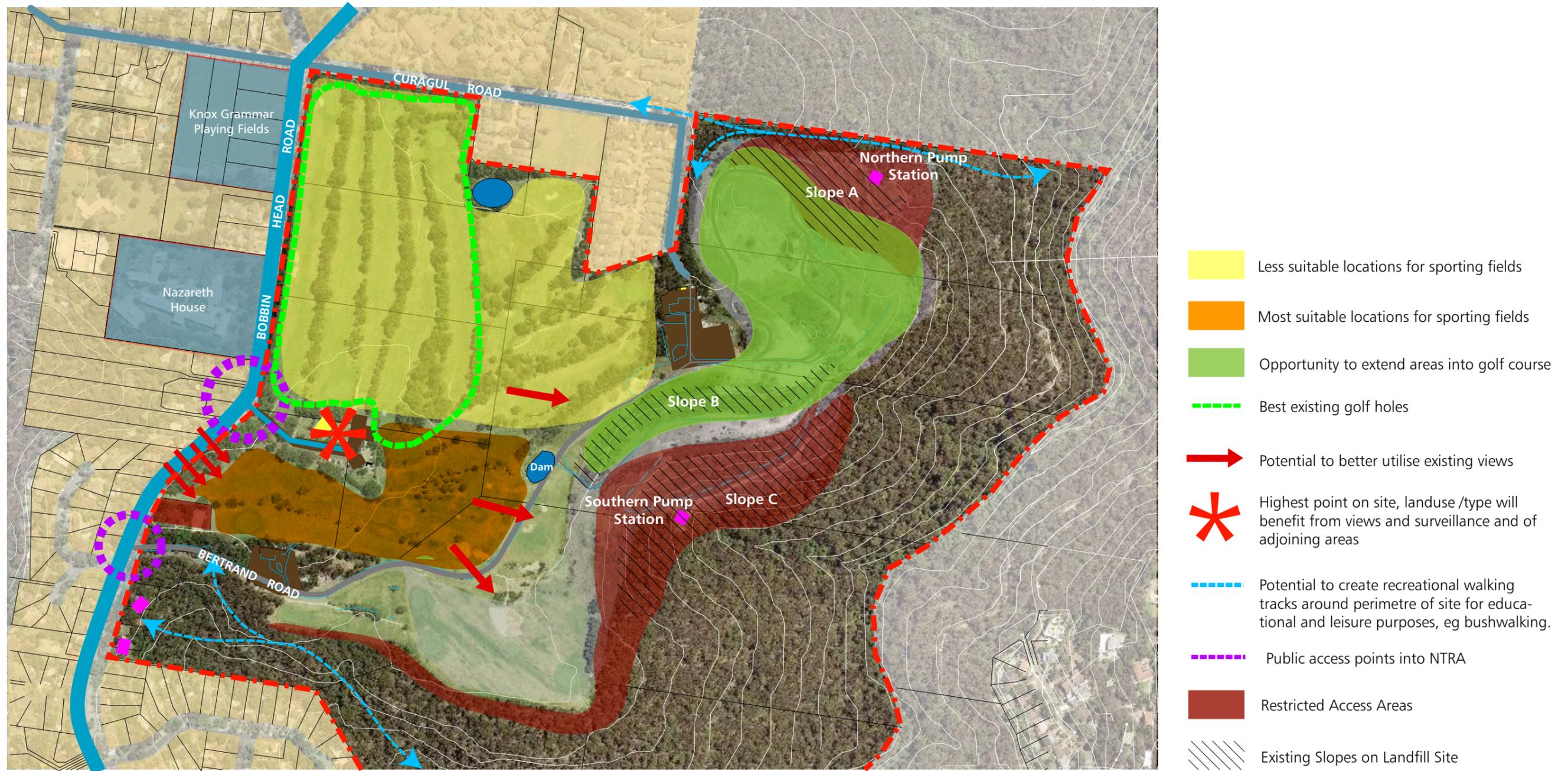


Figure 7- Opportunities analysis diagram

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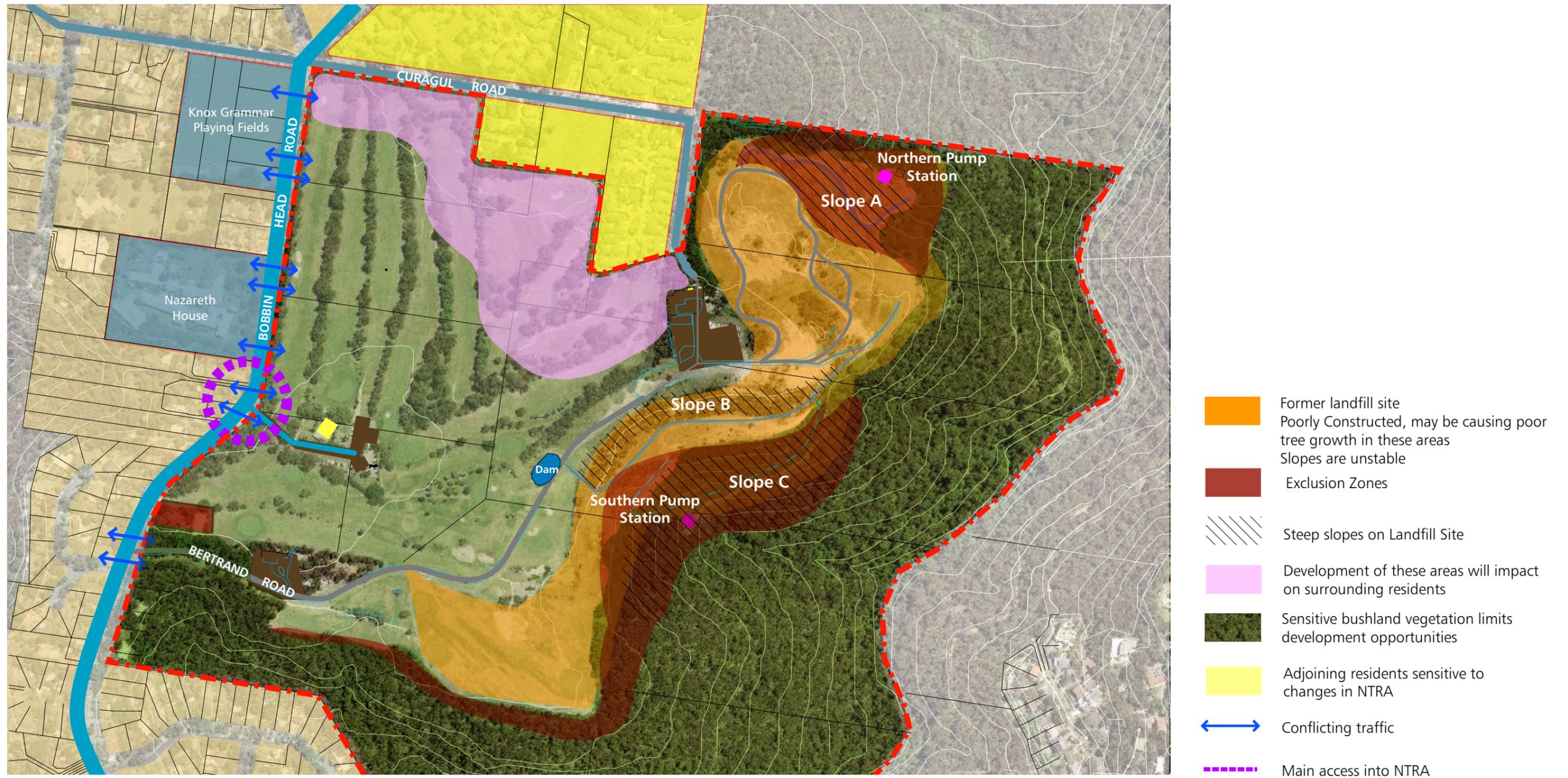


Figure 8- Constraints analysis diagram

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### Integration of Council Requirements

Our design ideas for this site, together with these limitation, followed a series of criteria set out by Ku-Ring-Gai Council. The criteria was implemented in all the three options. They include:

- An eighteen-hole golf course of equal or improved quality
- Upgrading the golf club house and facilities ( ie. car park)
- Sporting fields that can cater for a variety of organised sporting games
- Club house facility for the proposed sporting fields
- A two-hundred space car park for the new sporting facilities.
- Passive recreational open space and the potential to introduce walking tracks in and around the site.

These factors were considered during the development of options and as a result the three options illustrated in this section unavoidably share some common design features.

### Common Features of Concept Options

- The golf course is stronger and more interesting than the existing layout, by providing a greater range of hole types and overall par value.
- Combination of new and existing tees and greens used.
- Golf course utilises land-fill area for new golf holes.
- New vegetation through the golf course to increase visual interest and amenity.

- Existing golf course car parking (65 spaces) retained.
- Upgrading works proposed on the existing golf course club house.
- Existing golf practise nets retained.
- Dedicated area for sports grounds proposed on the site with a clearly separation to the golf course. Field configurations are varied.
- 30 metre safety buffer zone between golf greens and playing fields. This is to provide safety of users on the sporting fields and passive recreational areas.
- Minimal clearing required for sporting fields.
- The length of the sports grounds will create a surface embankment to the south of the fields in order to create a level surface. The length of the embankment will vary with each sporting configuration option.
- 6m fencing required around sporting grounds for safety of users.
- New sports grounds car park to possibly include golf course overflow parking.
- Potential to locate hard courts in car park (ie netball, basketball, handball etc), when maximum car parking capacity is not required.
- Additional open space areas available for development of other facilities such as, children's playground or possible alternative recreational area.
- Potential for recreational walking tracks around the site and linking to existing bush tracks.

- Sites boundary to be fenced with a 3m/ 6m fence where appropriate. This is to enable safety and protection of users from exclusion zones and safety of residential developments from golf course activity.
- Main entrance to the site is via Bobbin Head Road. A proposed roundabout required to improve existing traffic conditions. Exit point across the three options vary.
- To manage traffic going to the golf and sporting facilities, a second roundabout is required for ease of traffic flow within the site.
- Relocation of existing golf maintenance depot and consolidation with land fill depot in the northern part of the site.
- Access for maintenance vehicles to the new consolidated depot would be retained as the existing private access from Curagul Road.
- Potential to construct a dam on site for collection and reuse of water on site. Development approval for the dam has been granted.

Each of these features responds to the opportunities and constraints identified in the analysis stage of the project.

Supplementary to these elements, the three concept option possess additional features and varied configurations to provide flexibility and to show maximum potential of the site for users. The distinctive features of each concept option is identified in the following section accompanied with drawings and details.

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## Concept Option 1

### Eighteen-Hole Golf Course with 155m x 156m Sporting Grounds

#### Main Features

- Residential property in Bobbin Head Road retained
- Existing golf Clubhouse retained to facilitate the golf course users only.
- Eighteen-hole golf course with 4904m length and Par value of 67.
- Sports grounds (155m x 156m). See pg 34 for configuration of fields
- Independent clubhouse for sports field users, including change rooms (4 sets for teams and 1 set for umpires), toilets ( 2 sets of 8 and 1 disabled) canteen, equipment storage and possibly club or multi-purpose room in a second storey.
- A two-way sporting facility car park with the use of current access point for entry and exit.

#### Staging of Construction Works

It is anticipated, that the redevelopment of the NTRA for option 1 would take a minimum of 3-5 years or longer depending on the availability of funds. Construction would need to be undertaken in the following stages.

##### Stage 1: - Construct holes on landfill area

- build holes 11-16 inclusive, and part hole 6
- existing hole 11 to play to a temporary green, to allow new 15th green to be built
- existing hole 15 to play from a temporary tee, to allow new 16th green to be built

##### Stage 2: - Construct holes adjacent to proposed sporting grounds

Can only progress once stage 1 works are ready for play: ie one growing season minimum is required before play moves to new holes.

- take existing holes 6-11 inclusive out of play
- build new holes 6-10 inclusive

##### Stage 3: - Remove existing holes on proposed sporting fields and construct fields

Can only progress once stage 2 works are ready for play: ie one growing season minimum is required before play moves to new holes

- take existing holes 10, 13-16 inclusive out of play
- build sports facilities

##### Stage 4: - Future Upgrading Works

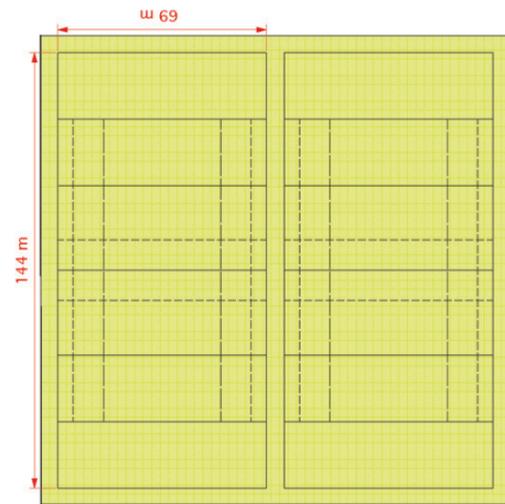
Existing golf holes 17, 18, 1, 2, 3, 4, and 5 to the north of the golf club house site are to be retained as part of the proposed golf course. Future upgrade works, such as repair or reconstruction may be required in the long term period.

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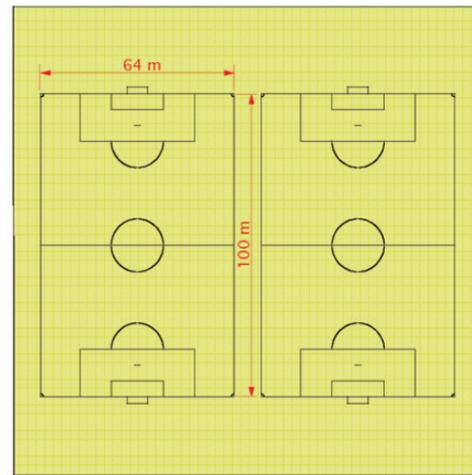
OPTION 1				
NORTH TURRAMURRA GOLF COURSE				
HOLE	EXISTING		PROPOSED	
	LENGTH	PAR	LENGTH	PAR
1	375	4	✓	4
2	330	4	✓	4
3	313	4	✓	4
4	114	3	✓	3
5	150	3	✓	3
6	150	3	324	4
7	320	4	123	3
8	114	3	152	3
9	148	3	365	4
OUT	2014	31	2246	32
10	297	4	128	3
11	152	3	471	5
12	219	4	286	4
13	150	3	152	3
14	160	3	138	3
15	319	4	497	5
16	150	3	255	4
17	410	5	✓	4
18	348	4	✓	4
IN	2206	33	2658	35
OUT	2014	31	2246	32
TOTAL	4220	64	4904	67



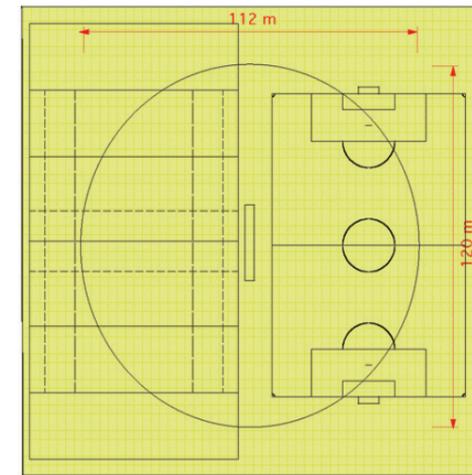
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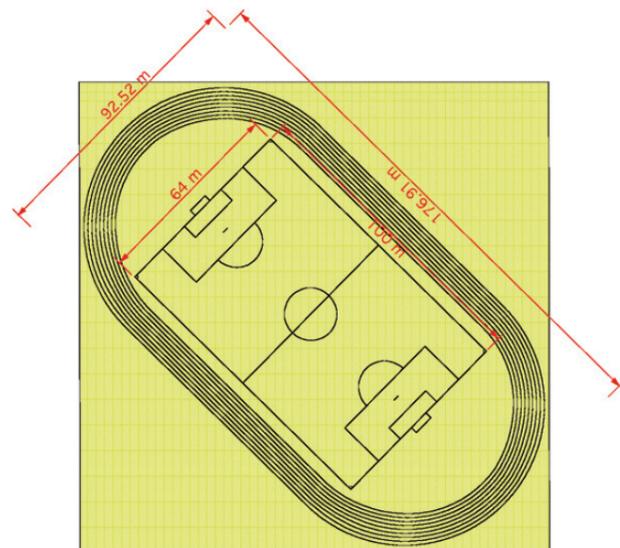
2 Rugby Union / Rugby League Fields



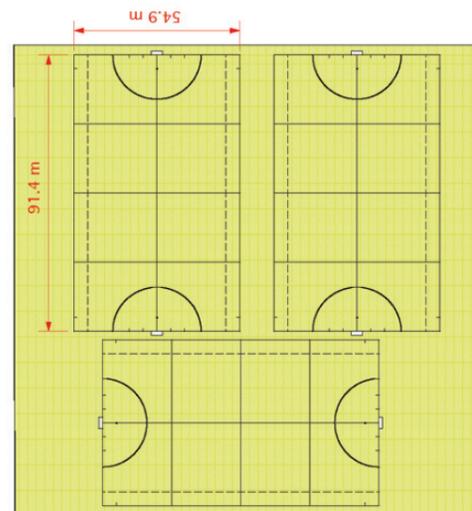
2 Senior Football Fields



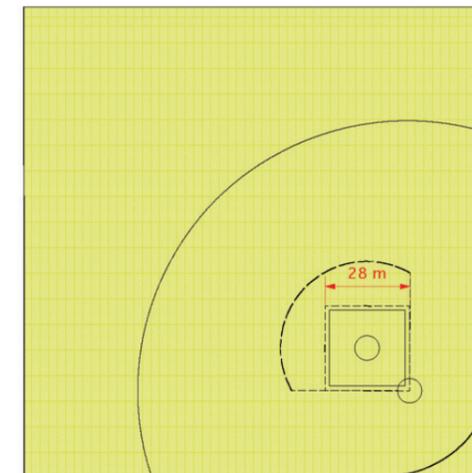
1 Cricket Oval  
1 Rugby Union / Rugby League Field  
1 Senior Football Field



400m Running Track  
1 Senior Football Field



3 Hockey Fields



1 Baseball/ Softball Fields



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STAGING FOR OPTION 1

	Unit	Rate	Qty	Total
Site Establishment				
Allowance for site establishment incl. fencing, signage, facilities	item			\$40,000.00
Earthworks				
Site clearing	m2	\$2.50	150000	\$375,000.00
Filling and compaction of capping, sealing, drainage and revegetation layers	m3	\$50.00	75000	\$3,750,000.00
New Golf Holes				
New greens and surrounds	no.	\$65,000.00	11	\$715,000.00
New tee blocks	no.	\$15,000.00	11	\$165,000.00
New fairway works incl. preparation, topsoil and turf	m2	\$15.00	53650	\$804,750.00
New fairway features incl. bunkers and mounding	no.	\$15,000.00	11	\$165,000.00
Golf Course Irrigation				
Allowance for 18 hole irrigation system	item			\$500,000.00
Cart Paths				
2.5m wide concrete cart path, tee to green only	m2	\$45.00	3500	\$157,500.00
Sports Fields				
Allowance for earthworks / excavation	item			\$100,000.00
Allowance for subsurface drainage to playing fields	item			\$50,000.00
Turf, incl. fertiliser to playing fields	m2	\$7.00	24000	\$168,000.00
Establishment of turf wicket square	m2	\$20.00	500	\$10,000.00
900mm high tubular steel fence incl. gates	lm	\$30.00	650	\$19,500.00
Carparking				
Excavation, base course and preparation	m2	\$25.00	7250	\$181,250.00
Asphalt surface	m2	\$50.00	7250	\$362,500.00
Allowance for misc. line painting, drainage etc.	item			\$10,000.00
Tree planting 100L	no.	\$250.00	41	\$10,250.00
Building Works				
Allowance for refurbishment of existing clubhouse	item			\$300,000.00
Allowance for new sports pavilion with maintenance storage rooms	item			\$600,000.00
			Sub total (excl GST)	\$8,483,750.00
			Contingency (5%)	\$424,187.50
			TOTAL (excl GST)	\$8,907,937.50

## Concept Option 2

### Eighteen-hole Golf Course with 225m x 187m Sports Grounds

#### Main Features

- Acquisition of residential property in Bobbin Head Road
- Eighteen-hole golf Course with 4904m length Par value of 67
- Playing ground 225m x 187m See pg 39 for configuration of fields
- Shared clubhouse/ multi-purpose building for golf course users, sports field users and community use. ie yoga, pilates, activities room.
- To avoid user conflict, the facility rooms within the new building will remain separate. Facilities will be closed off from one another to restrict access of other users.
- Within the new clubhouse/ multi-purpose building, facilities of better quality will be provided for golfers.
- The sporting facility rooms will include; change rooms (4 sets for teams and 1 set for umpires), canteen, equipment storage and possibly club or multi-purpose room in a second storey.
- A proposed starters box/ Pro shop will be positioned near the 1st Tee.
- A two-way sporting facility car park with the use of current access point for entrance and the use of Bertrand Road as an exit.
- Retained character of tree-lined Bobbin Head Road by keeping existing trees along the road edge of the new sporting facility car park.

#### Staging of Construction Works

It is anticipated that the redevelopment of the NTRA for option 2 would take a minimum of 3-5 years or longer depending on the availability of funds. Construction would need to be undertaken in the following stages.

##### Stage 1: - Construct holes on landfill area

- build holes 11-16 inclusive, and part hole 6
- existing hole 11 to play to a temporary green, to allow new 15th green to be built
- existing hole 15 to play from a temporary tee, to allow new 16th green to be built

##### Stage 2: - Construct holes adjacent to proposed sporting grounds

Can only progress once stage 1 works are ready for play: ie one growing season minimum is required before play moves to new holes.

- take existing holes 6-11 inclusive out of play
- build new holes 6-10 inclusive

##### Stage 3: - Remove existing holes on proposed sporting fields and construct fields

Can only progress once stage 2 works are ready for play: ie one growing season minimum is required before play moves to new holes

- take existing holes 10, 13-16 inclusive out of play
- build sports facilities

##### Stage 4: - Future Upgrading Works

Existing golf holes 17, 18, 1, 2, 3, 4, and 5 to the north of the golf club house site are to be retained as part of the proposed golf course. Future upgrade works, such as repair or reconstruction may be required in the long term period.

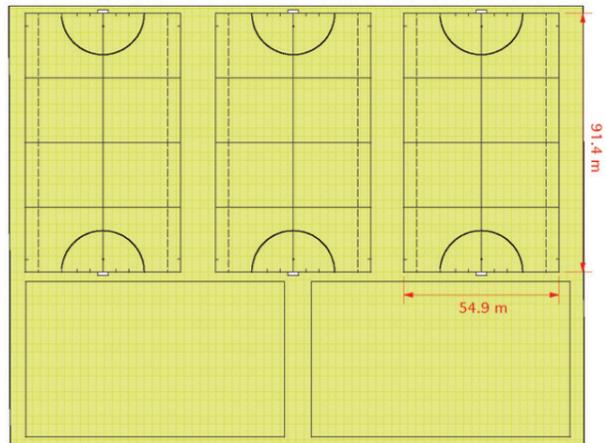


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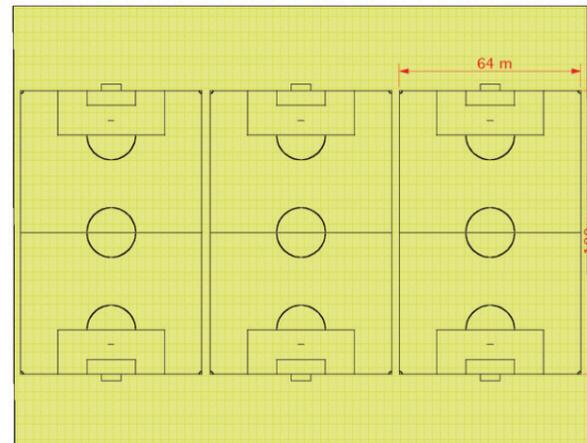
OPTION 2				
NORTH TURRAMURRA GOLF COURSE				
HOLE	EXISTING		PROPOSED	
	LENGTH	PAR	LENGTH	PAR
1	375	4	✓	4
2	330	4	✓	4
3	313	4	✓	4
4	114	3	✓	3
5	150	3	✓	3
6	150	3	324	4
7	320	4	123	3
8	114	3	152	3
9	148	3	365	4
OUT	2014	31	2246	32
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16	150	3	255	4
17	410	5	✓	4
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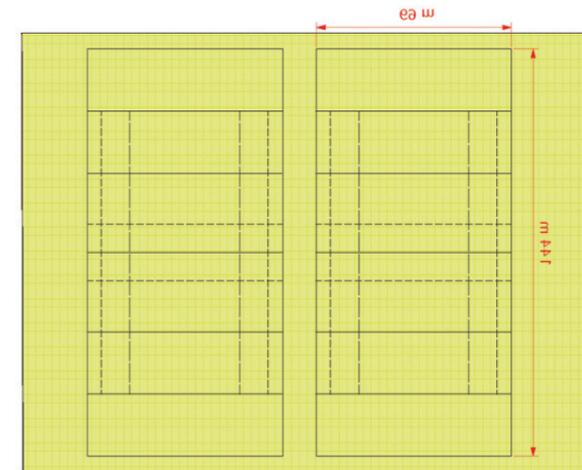
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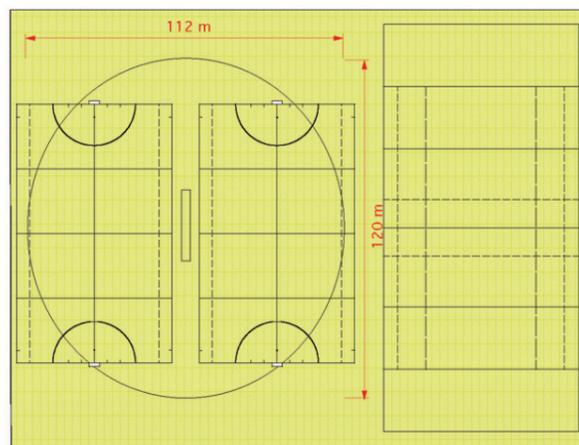
3 Hockey Fields  
2 Training Fields



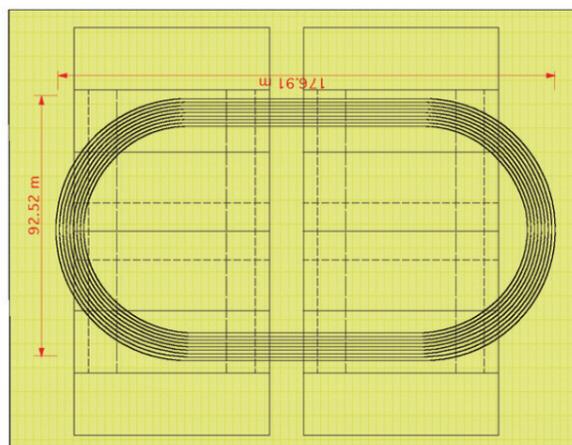
3 Senior Football Fields



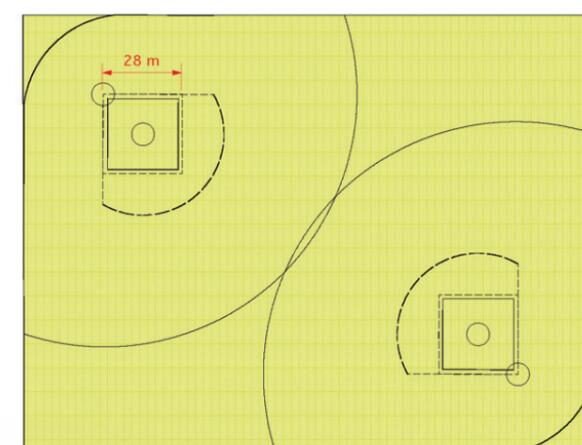
2 Rugby Union / Rugby League Fields



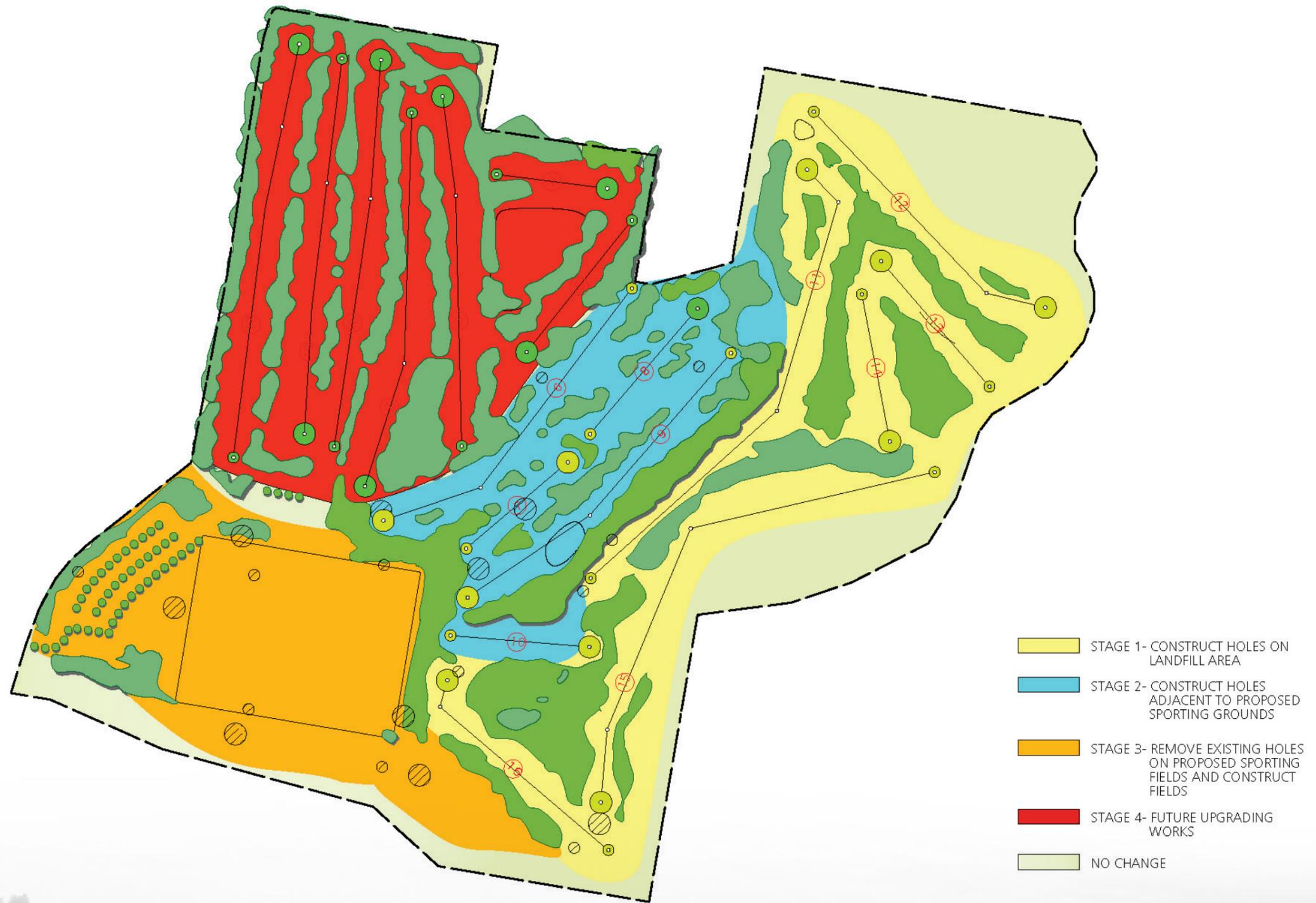
1 Cricket Oval  
2 Hockey Fields  
1 Rugby Union / Rugby League Field



2 Rugby Union / Rugby League Fields  
400m Running Track



2 Baseball/Softball Fields



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STAGING FOR OPTION 2

	Unit	Rate	Qty	Total
Site Establishment				
Allowance for site establishment incl. fencing, signage, facilities	item			\$40,000.00
Purchasing property, 361 Bobbin Head Rd	item			
Earthworks				
Site clearing	m2	\$2.50	150000	\$375,000.00
Filling and compaction of capping, sealing, drainage and revegetation layers	m3	\$50.00	75000	\$3,750,000.00
New Golf Holes				
New greens and surrounds	no.	\$65,000.00	11	\$715,000.00
New tee blocks	no.	\$15,000.00	11	\$165,000.00
New fairway works incl. preparation, topsoil and turf	m2	\$15.00	53650	\$804,750.00
New fairway features incl. bunkers and mounding	no.	\$15,000.00	11	\$165,000.00
Golf Course Irrigation				
Allowance for 18 hole irrigation system	item			\$500,000.00
Cart Paths				
2.5m wide concrete cart path, tee to green only	m2	\$45.00	3500	\$157,500.00
Sports Fields				
Allowance for earthworks / excavation	item			\$100,000.00
Allowance for subsurface drainage to playing fields	item			\$50,000.00
Turf, incl. fertiliser to playing fields	m2	\$7.00	32000	\$224,000.00
Establishment of turf wicket square	m2	\$20.00	500	\$10,000.00
900mm high tubular steel fence incl. gates	lm	\$30.00	650	\$19,500.00
Carparking				
Excavation, base course and preparation	m2	\$25.00	7250	\$181,250.00
Asphalt surface	m2	\$50.00	7250	\$362,500.00
Allowance for misc. line painting, drainage etc.	item			\$10,000.00
Tree planting 100L	no.	\$250.00	41	\$10,250.00
Building Works				
Allowance for new golf and sports pavilion	item			\$2,500,000.00
Starters Box/Pro Shop	item			\$100,000.00
			Sub total (excl GST)	\$10,239,750.00
			Contingency (5%)	\$511,987.50
			TOTAL (excl GST)	\$10,751,737.50

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OPINION OF PROBABLE COST FOR OPTION 2

### Concept Option 3

#### Nine-Hole/ Eighteen-Tee Golf Course with Driving Range and 246m x 189m Sports Grounds

- Residential property in Bobbin Head Road retained
- Existing golf clubhouse retained for golf course users only.
- Independent clubhouse for sports field users, including change rooms (4 sets for teams and 1 set for umpires), toilets ( 2 sets of 8 and 1 disabled) canteen, equipment storage and possibly club or multi-purpose room in a second storey.
- A two-way sporting facility car park with the use of current access point for entry and exit.
- 9 hole/ 18 tee 6032m length Par 71
- Full size golf course driving range with 25 tee bays and coaching area.
- Playing ground 246m x 189m. See pg 44 for configuration of fields
- Land fill area utilized for driving range and possible chip and putt / putt-putt area and car parking.

#### Staging of Construction Works

It is anticipated, that the redevelopment of the NTRA for option 3 would take a minimum of 3-5 years or longer depending on the availability of funds. This option has considerable advantages over Option 1 and 2 in that redevelopment costs for the golf course would be lower. Construction would need to be undertaken in the following stages.

Stage 1: - Construct holes on landfill area

- build holes 2/11 and 4/13; 1/10 green and part fairway; 3/12 tees and green and part fairway; 5/15 tees and green and part fairway; 7/16 tees; and 8/17 tees

Stage 2: - Reconfigure golf holes at proposed dam site  
Can only progress once stage 1 works are ready for play : ie one growing season minimum is required before play moves to new holes.

- take existing holes 3 and 4 out of play
- build new holes 6/15 (and treat as 2 holes in next stage)

Stage 3: - Construct holes adjacent to existing club house  
Can only progress once stage 2 works are ready for play: ie one growing season minimum is required before play moves to new holes.

- take existing holes 5 and 7 out of play
- complete new holes 1/10, 3/12 and 5/14

Stage 4: - Construct holes above clubhouse and sporting fields. Can only progress once stage 3 works are ready for play: ie one growing season minimum is required before play moves to new holes.

- take existing holes 2 and 17 out of play
- complete new holes 7/16, 8/17 and 9/18
- build sports facilities

Stage 5: - Construct driving range

Can only progress once stage 4 works are ready for play: ie one growing season minimum is required before play moves to new holes.

- take existing holes 8-16 inclusive out of play
- build sports facilities and driving range

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OPTION 3				
NORTH TURRAMURRA GOLF COURSE				
EXISTING			PROPOSED	
HOLE	LENGTH	PAR	LENGTH	PAR
1	375	4	474	5
2	330	4	178	3
3	313	4	503	5
4	114	3	326	4
5	150	3	307	4
6	150	3	137	3
7	320	4	335	4
8	114	3	362	4
9	148	3	365	4
OUT	2014	31	2897	36
10	297	4	458	5
11	152	3	139	3
12	219	4	480	5
13	150	3	326	4
14	160	3	302	4
15	319	4	179	3
16	150	3	350	4
17	410	5	372	4
18	348	4	386	4
IN	2206	33	2992	36
OUT	2014	31	2986	36
TOTAL	4220	64	5978	72



EXISTING CAR PARKING AND CLUBHOUSE TO BE RETAINED

UPGRADE ENTRANCE WITH NEW ROUNDABOUT

PRACTICE NET

GOLF CLUB CAR PARKING

GATE TO PREVENT VEHICLE ACCESS INTO SITE (BUGGIES AND MAINTENANCE VEHICLE ACCESS ONLY)

PROPOSED SPORTING FACILITIES CAR PARK 200 SPACES

PLAYGROUND OR POSSIBLE ADDITIONAL TRAINING AREA

EXISTING SCOUT HALL AND GIRL GUIDES BUILDING

PAVILION INCLUDING 6 CHANGE ROOMS FOR TEAMS AND 2 FOR UMPIRES, CANTEN EQUIPMENT STORAGE AND POSSIBLE CLUB ROOMS

PLAYING GROUNDS. REFER TO PLAYGROUND CONFIGURATION 3 DRAWING FOR LAYOUT OPTIONS.

PUMP STATION VEHICULAR ACCESS ACROSS IDENTIFIED LOCATIONS ON GOLF COURSE

EXISTING PUMP STATIONS

REMOVED TEES AND GREENS OF GOLF COURSE

GOLF HOLE NUMBER

RETAINED TEES AND GREENS OF GOLF COURSE

PROPOSED TEES AND GREENS OF GOLF COURSE

NEW VEGETATION

EXISTING SITE VEGETATION TO BE RETAINED

EXISTING BUSHLAND

SLOPE STABILISATION AND REPLANTING WITH NATIVE VEGETATION

POTENTIAL PASSIVE RECREATION/PLAYGROUND AREA

PLAYING GROUNDS

ROAD/PARKING AREA

BUILDINGS

ACCESS TRACKS

PROPOSED CONTOUR LINE

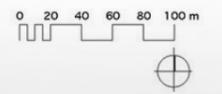
WALKING TRACK

FENCE LINE

STUDY AREA

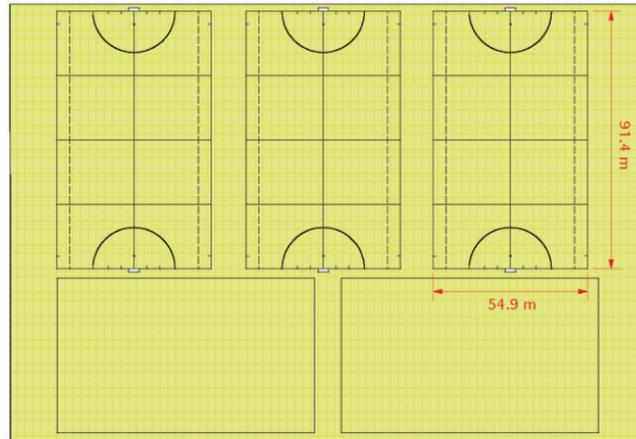
EXISTING DEPOT TO BE RETAINED

PUMP STATION VEHICULAR ACCESS ACROSS IDENTIFIED LOCATIONS ON GOLF COURSE

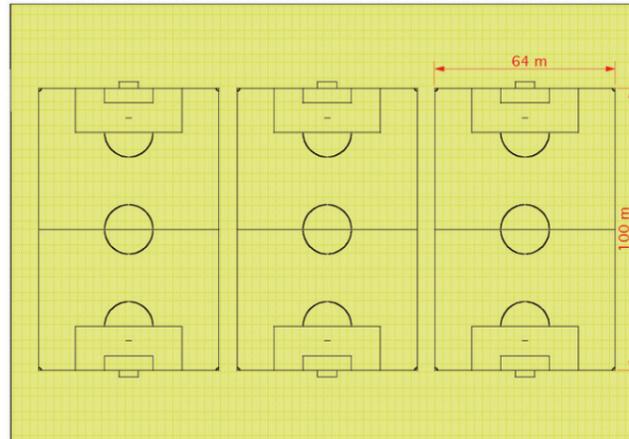


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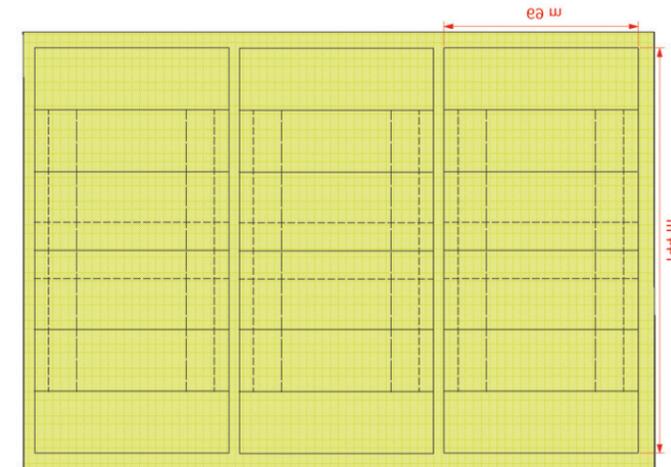
OPTION 3  
9 HOLES



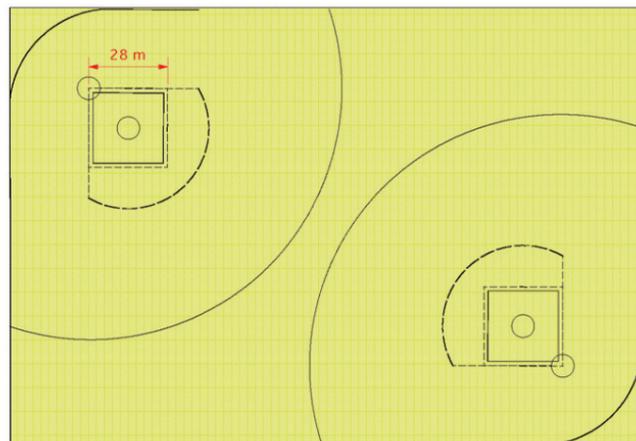
3 Hockey Fields  
2 Training Fields



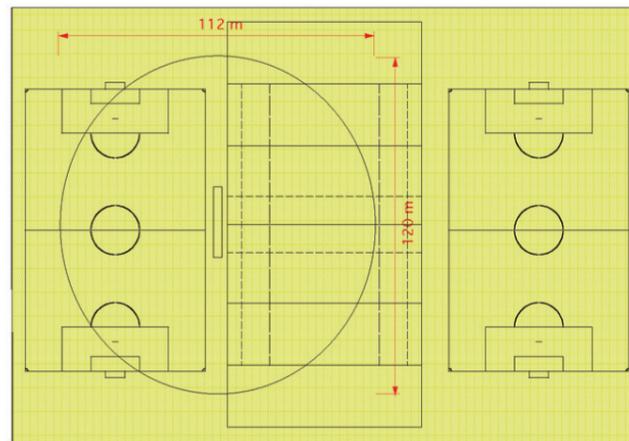
3 Senior Football Fields



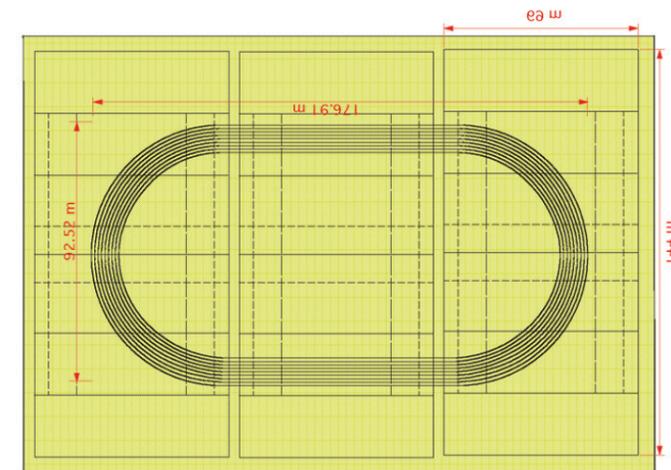
3 Rugby Union / Rugby League Fields



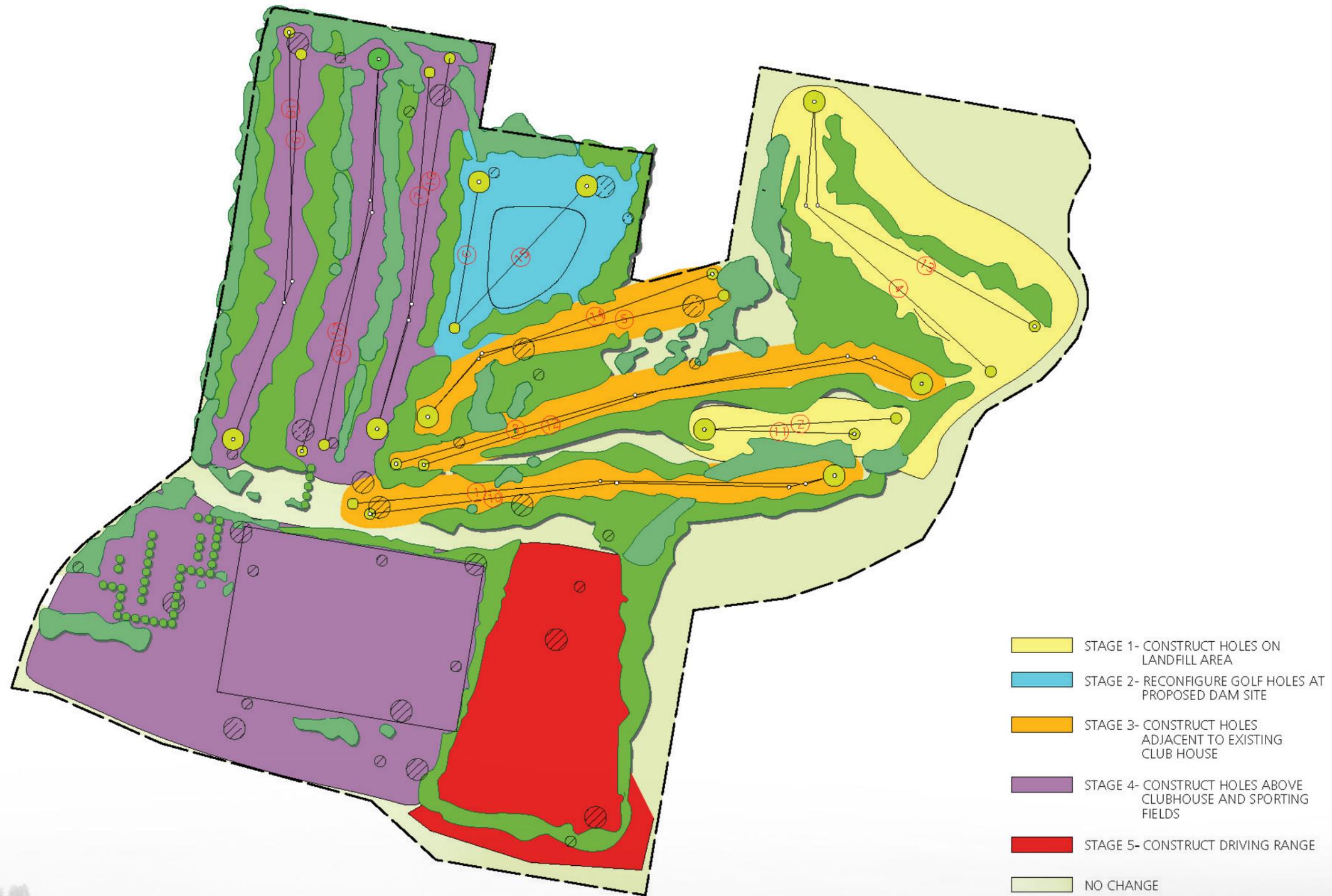
2 Baseball/Softball Fields



1 Cricket Oval  
2 Senior Football Fields  
1 Rugby Union / Rugby League Field



3 Rugby Union / Rugby League Fields  
400m Running Track



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	Unit	Rate	Qty	Total
Site Establishment Allowance for site establishment incl. fencing, signage, facilities	item			\$40,000.00
Earthworks Site clearing	m2	\$2.50	150000	\$375,000.00
Filling and compaction of capping, sealing, drainage and revegetation layers	m3	\$50.00	75000	\$3,750,000.00
New Golf Holes New greens and surrounds	no.	\$65,000.00	9	\$585,000.00
New tee blocks	no.	\$15,000.00	18	\$270,000.00
New fairway works incl. preparation, topsoil and turf	m2	\$15.00	49600	\$744,000.00
New fairway features incl. bunkers and mounding	no.	\$15,000.00	8	\$120,000.00
Golf Course Irrigation Allowance for 9 hole irrigation system	item			\$375,000.00
Cart Paths 2.5m wide concrete cart path, tee to green only	m2	\$45.00	2000	\$90,000.00
Driving Range Allowance for driving range incl. 25 tee bays and fencing	item			\$350,000.00
Sports Fields Allowance for earthworks / excavation	item			\$125,000.00
Allowance for subsurface drainage to playing fields	item			\$60,000.00
Turf, incl. fertiliser to playing fields	m2	\$7.00	35000	\$245,000.00
Establishment of turf wicket square	m2	\$20.00	500	\$10,000.00
900mm high tubular steel fence incl. gates	lm	\$30.00	550	\$16,500.00
Carparking and Roads Excavation, base course and preparation	m2	\$25.00	8000	\$200,000.00
Asphalt surface	m2	\$50.00	8000	\$400,000.00
Allowance for misc. line painting, drainage etc.	item			\$10,000.00
Tree planting 100L	no.	\$250.00	41	\$10,250.00
Building Works Allowance for refurbishment of existing clubhouse	item			\$300,000.00
Allowance for new sports pavilion with maintenance storage rooms	item			\$600,000.00
Sub total (excl GST)				\$8,675,750.00
Contingency (5%)				\$433,787.50
TOTAL (excl GST)				\$9,109,537.50

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## NTRA Preferred Option

Following the presentation of redevelopment options to council staff, a combination of Option 1 and Option 2 was considered the most appropriate redevelopment outcome and the one which would maximise recreation opportunities on the site and therefore best realise council's vision.

The preferred option was further refined through an interactive process with council staff and includes a number of sub-options with regard to the potential or otherwise to acquire an existing residential property off Bobbin Head Road, as well as with regard to a number of potential playing field sizes and the respective uses these would permit.

The preferred sub-option will be chosen by council following a strategic review of playing field supply and demand in the Ku-Ring-Gai Local Government Area.

The preferred option provides council with a large degree of flexibility, both in terms of the range of sporting activities that could take place on the site and in terms of accommodating or responding to future changes in demand. It maximises the potential number of sports fields, provides an improved golf course and features upgraded existing and new purpose-built sporting facilities.

The following section provides an overview of the preferred option and sub-options, followed by plans, sections, a strategy plan and an indicative costing plan. Please note that these costs are extremely indicative and provided as a rough estimate. Each item will be subject to further revision and review prior to the final design adopted.

The preferred option incorporates the features common to the three concept options. They are briefly as follows:

- The golf course is stronger and more interesting
- New and existing Tees and Greens used.
- Golf course utilises land-fill area for new golf holes.
- New vegetation through the golf course
- Existing golf course parking retained with additional spaces (100 total).
- Upgrading works proposed on the existing golf course club house.
- Existing golf practise nets retained.
- Dedicated area for sports grounds proposed on the site.
- 30 metre safety buffer zone between golf greens and playing fields.
- Minimal clearing required for sporting fields.
- Creation of an embankment to the south of the new sporting fields.
- 6m fencing required around sporting grounds
- New sports grounds car park
- Potential to locate hard courts in car park
- Additional open space areas
- Potential for recreational walking tracks
- Sites boundary to be fenced with a 3m/ 6m fence
- Main entrance to the site is via Bobbin Head Rd
- Consolidation of depots to northern site
- Potential to construct a dam on site

### Main Features

The distinctive feature of the preferred option are as follows:

- Eighteen-hole golf course of higher standard than existing with more challenging and a greater variety of fairways.

- Existing hole 12 retained as spare hole that can be used for teaching activities or to maintain an eighteen hole course when/ if other holes require repair or construction.
- A range of playing field sizes configuration options. Playing field area could range from 185m x 101m to 227m x 154m maximum, with most appropriate size likely to be between 154m x 110 m and 132m x 154m. Sporting field configurations are provided simply to illustrate the maximum capacity of playing space available. Refer to page 51 for configurations. Options for the specific sports to be played will continue to be considered when decision of the field is determined.
- Potential to provide up to four hard playing courts (ie: netball, basketball etc.) on the sporting field car park. This would reduce parking capacity while in use and may not be suitable for use on weekends.
- Potential playground site west of the playing facilities or alternatively close to clubhouse.
- Shared club building with a range of facilities including; change rooms, toilets, match room, canteen, multi-purpose/ community room.
- New Starters Box/ Pro Shop located near 1st Tee
- Incorporation of water management schemes for on-site collection and reuse. Stormwater harvesting and Sewer mining have been further investigated and are presented as two options for the site. Refer to Volume II for Storm Consulting's Summary of Water Management Options report for more details.
- Appropriate traffic management recommendations for improvement of user conditions. Incorporation of safety of pedestrian and vehicular movements, cyclists and on site users. Refer to Volume II for APUP's Review of Transport, Access and Parking report.

The preferred option also tested the idea of acquiring and retaining the residential property in the south-west corner of the NTRA site on Bobbin Head Road. These option are divided in sub- options as follows:

#### Sub-option a:

##### Residential Property in Bobbin Head Road Retained

- Does not require property acquisition
- Option for left-out only intersection at Bertrand Road to provide separate entry and exit to sporting facilities car park, reducing potential traffic congestion at the main entrance.

#### Sub-option b:

##### Acquisition of Property in Bobbin Head Road

- Acquisition of the residential property off Bobbin Head Road required prior to construction of sporting field's car park.
- Provides informal open space areas for general (non-sporting) community use, such as picnicking or other passive leisure activities.
- Separate sporting field car park entry and exit to reduce traffic congestion and potential conflict at the main entrance. Exit to be left out only at upgraded Bertrand Road intersection.

Note: Sub-option a and b are not mutually exclusive, if site were to be developed according to sub- option a and the opportunity arose in the future for council to acquire the residential property, car parking and upon space areas could still be reconfigured as per sub-option b. However, this would be less cost-effective.

### Staging of Construction Works

It is anticipated, that the redevelopment of the NTRA for the preferred option would take a minimum of 3-5 years or longer depending on the availability of funds. Construction would need to be undertaken in the following stages.

#### Stage 1: - Construct holes on landfill area

- build holes 11-16 inclusive, and part hole 6
- existing hole 11 to play to a temporary green, to allow new 15th green to be built
- existing hole 15 to play from a temporary tee, to allow new 16th green to be built

#### Stage 2: - Construct holes adjacent to proposed sporting grounds

Can only progress once stage 1 works are ready for play: ie one growing season minimum is required before play moves to new holes.

- take existing holes 6-11 inclusive out of play
- build new holes 6-10 inclusive

#### Stage 3: - Remove existing holes on proposed sporting fields and construct fields

Can only progress once stage 2 works are ready for play: ie one growing season minimum is required before play moves to new holes

- take existing holes 10, 13-16 inclusive out of play
- build sports facilities

#### Stage 4: - Removal of existing holes and construction of new replacement tees and greens

- remove existing holes 7, 9 and 11
- build new greens 6, 9, and 15

Note: All existing greens and tees will require upgrading, repair or reconstruction over time. However, if construction funds are limited, it would be possible to retain the following greens during the interim period.

- Existing green no. 2, would be able to play until construction of a new green no. 6
- Existing green no. 9, would be able to play until construction of a new green no. 9

#### Stage 5: - Future Upgrading Works

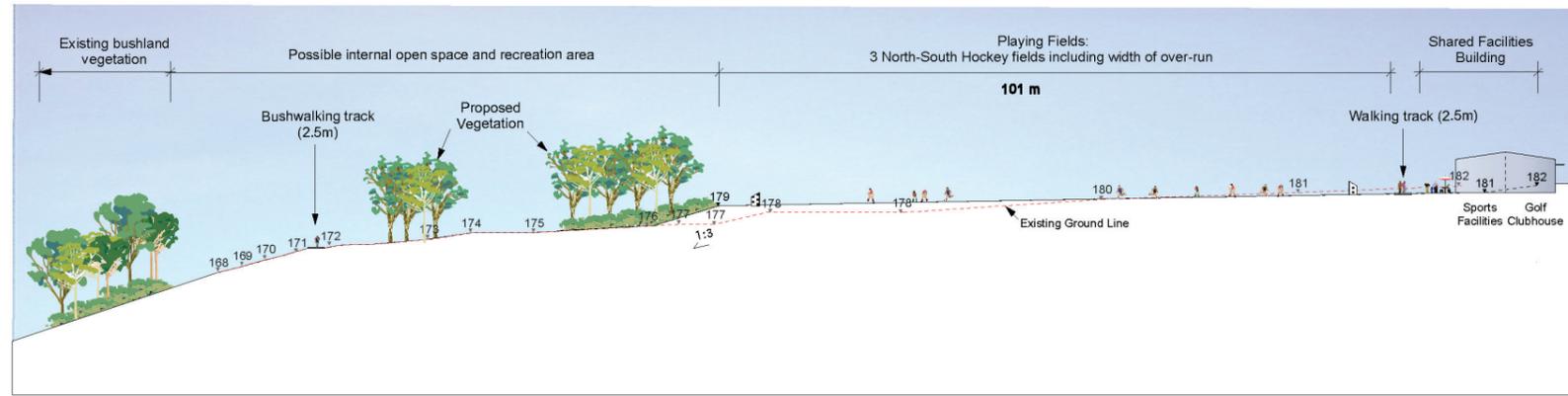
Existing golf holes 17, 18, 1, 2, 3, 4, and 5 to the north of the golf club house site are to be retained as part of the proposed golf course. Future upgrade works, such as repair or reconstruction may be required in the long term period.

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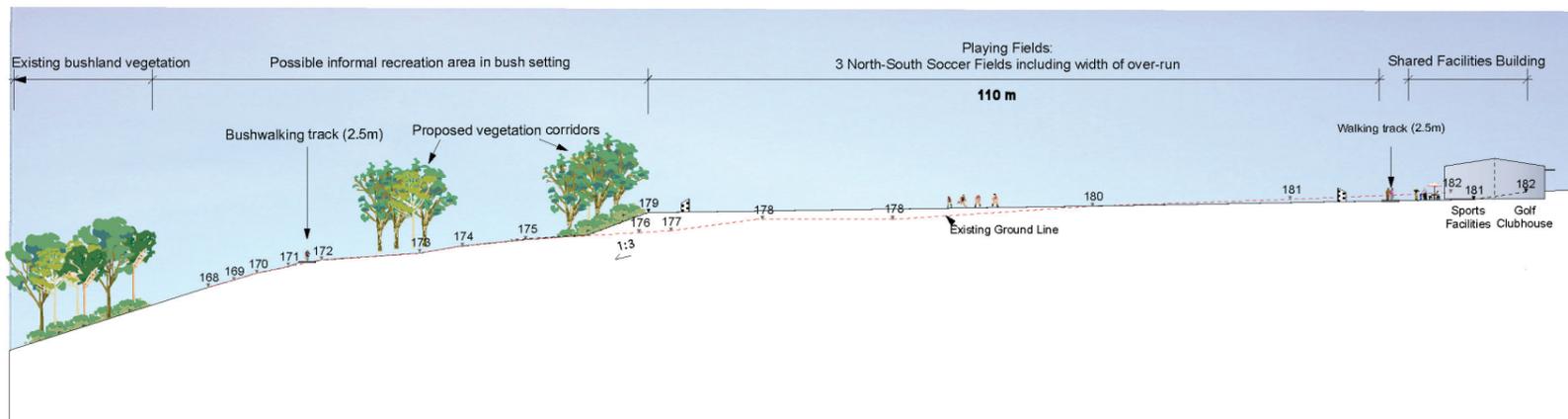


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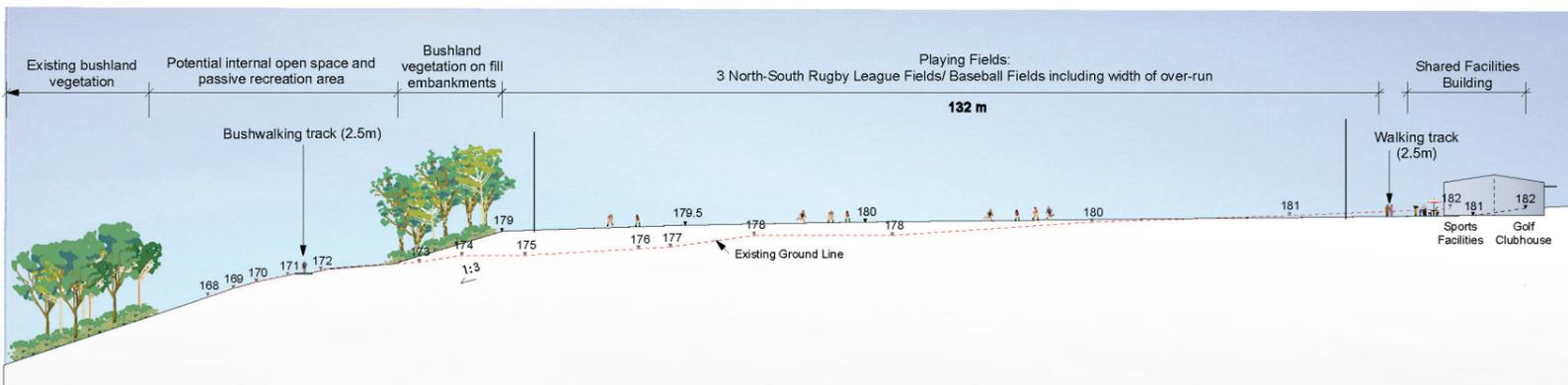
PREFERRED OPTION  
18 HOLES



AA/1 SECTION NORTH-SOUTH THROUGH SPORTS GROUND SHOWING FIELD CONFIGURATION NO.1: 3 HOCKEY FIELDS  
SCALE 1:500



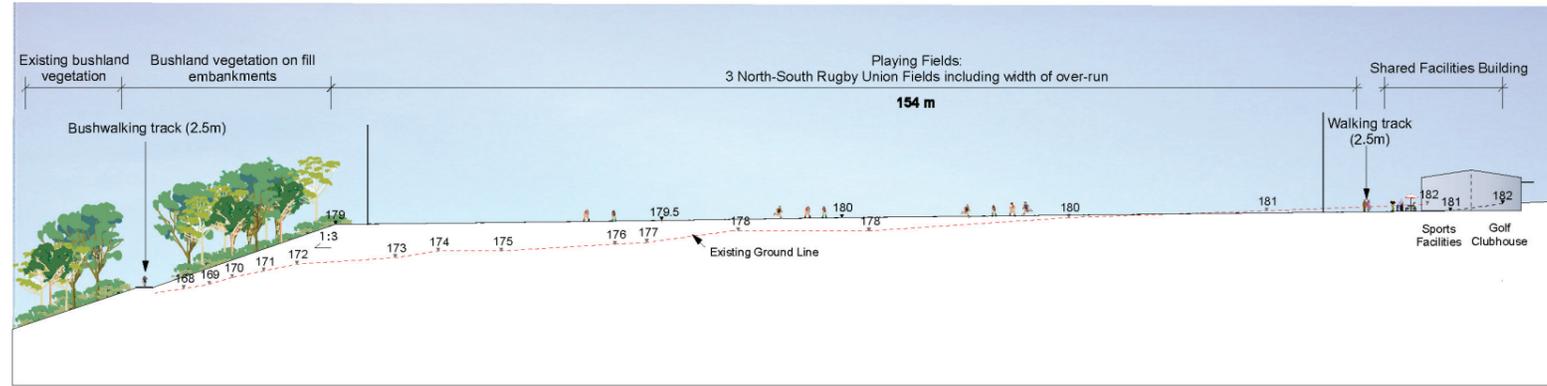
AA/2 SECTION NORTH-SOUTH THROUGH PLAYING GROUNDS SHOWING FIELD CONFIGURATION NO.3: 3 SENIOR SOCCER FIELDS  
SCALE 1:500



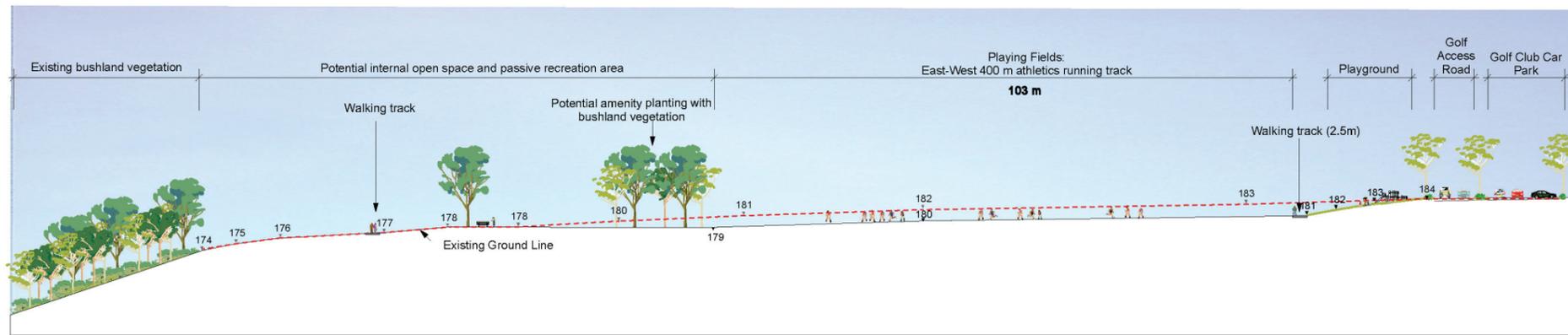
AA/3 SECTION NORTH-SOUTH THROUGH PLAYING GROUNDS SHOWING PLAYGROUND CONFIGURATION NO. 4: 2 BASEBALL FIELDS  
SCALE 1:500

DRAFT

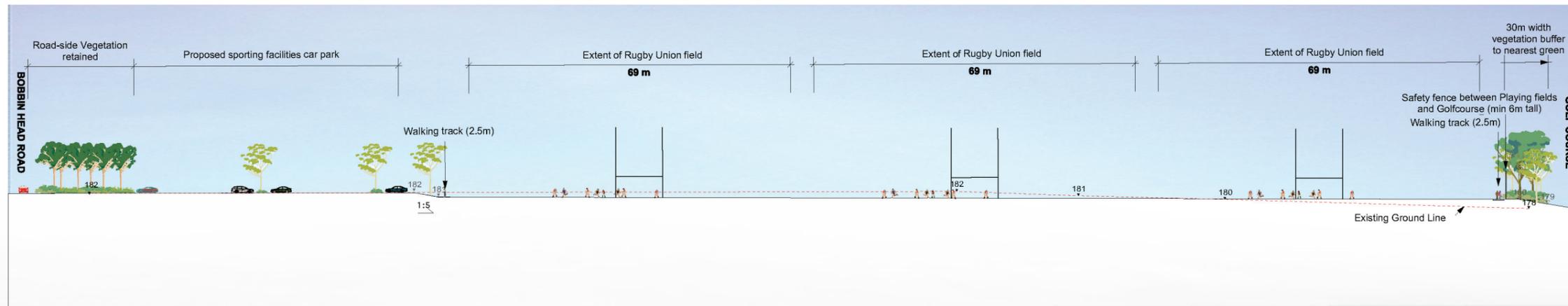
SECTIONS THROUGH PLAYING FIELDS  
AA



AA/4 SECTION NORTH-SOUTH THROUGH SPORTS GROUNDS SHOWING FIELD CONFIGURATION NO.5: 3 RUGBY UNION FIELDS  
SCALE 1:500



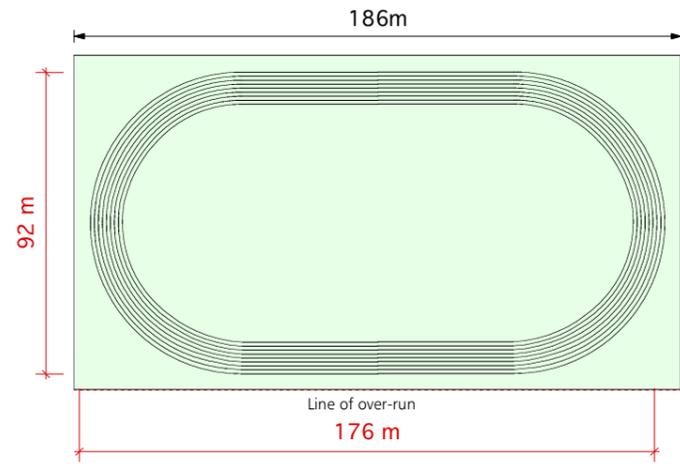
BB SECTION NORTH-SOUTH THROUGH SPORTS GROUNDS SHOWING FIELD CONFIGURATION NO.2: 400M ATHLETICS RUNNING TRACK  
SCALE 1:500



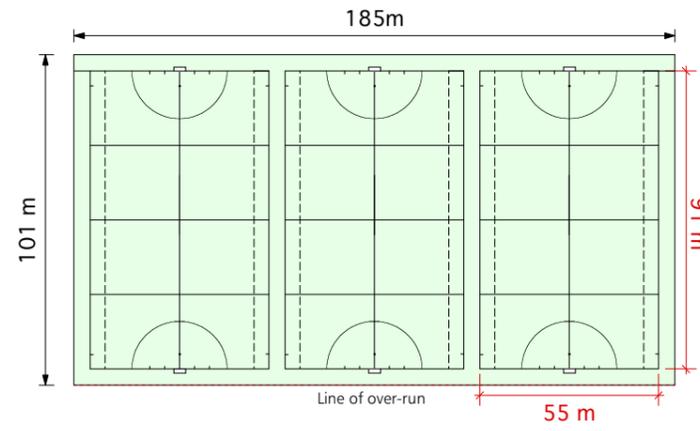
CC SECTION WEST-EAST THROUGH PROPOSED CARPERK AND SPORTS GROUNDS SHOWING FIELD CONFIGURATION NO.5: 3 RUGBY UNION FIELDS  
SCALE 1:500

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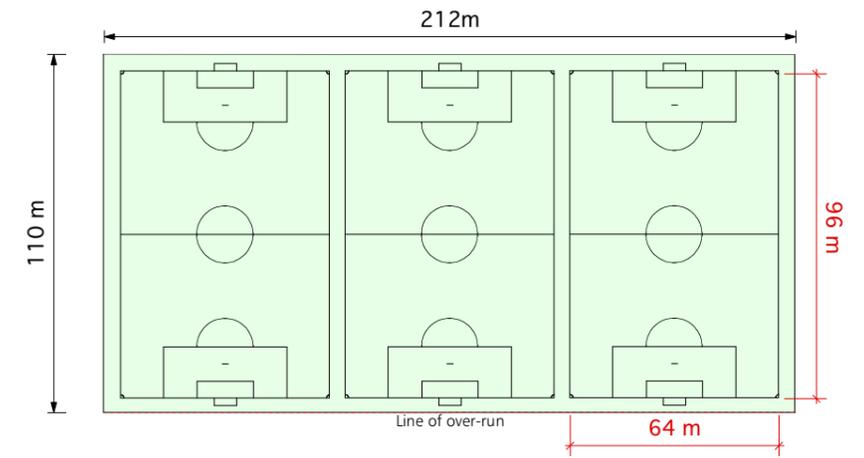
SECTIONS THROUGH PLAYING FIELDS  
AA, BB, CC



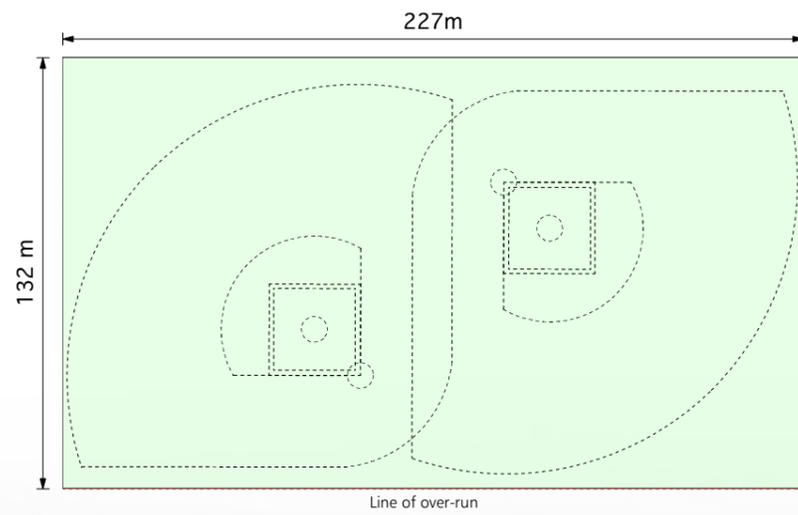
**Field Configuration 1**  
400m Running Track



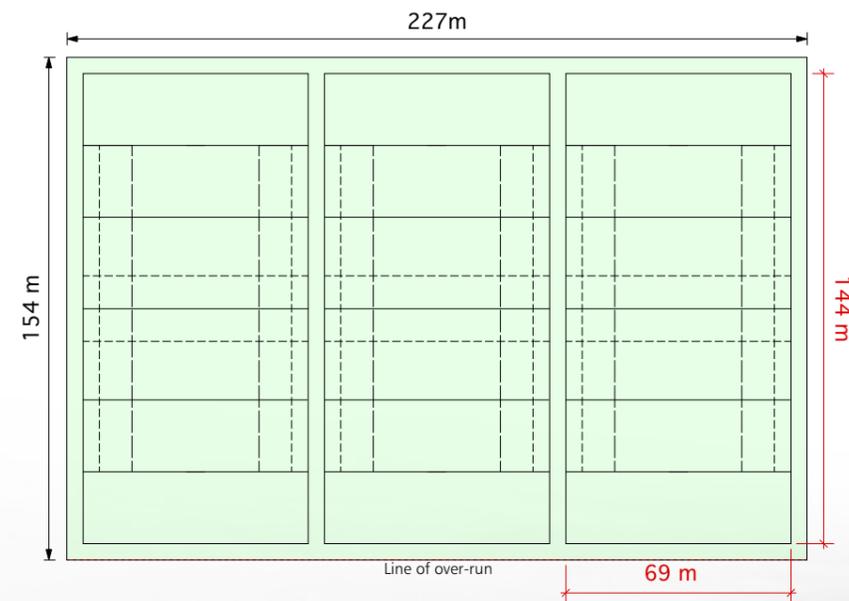
**Field Configuration 2**  
3 Hockey Fields



**Field Configuration 3**  
3 Senior Soccer Fields



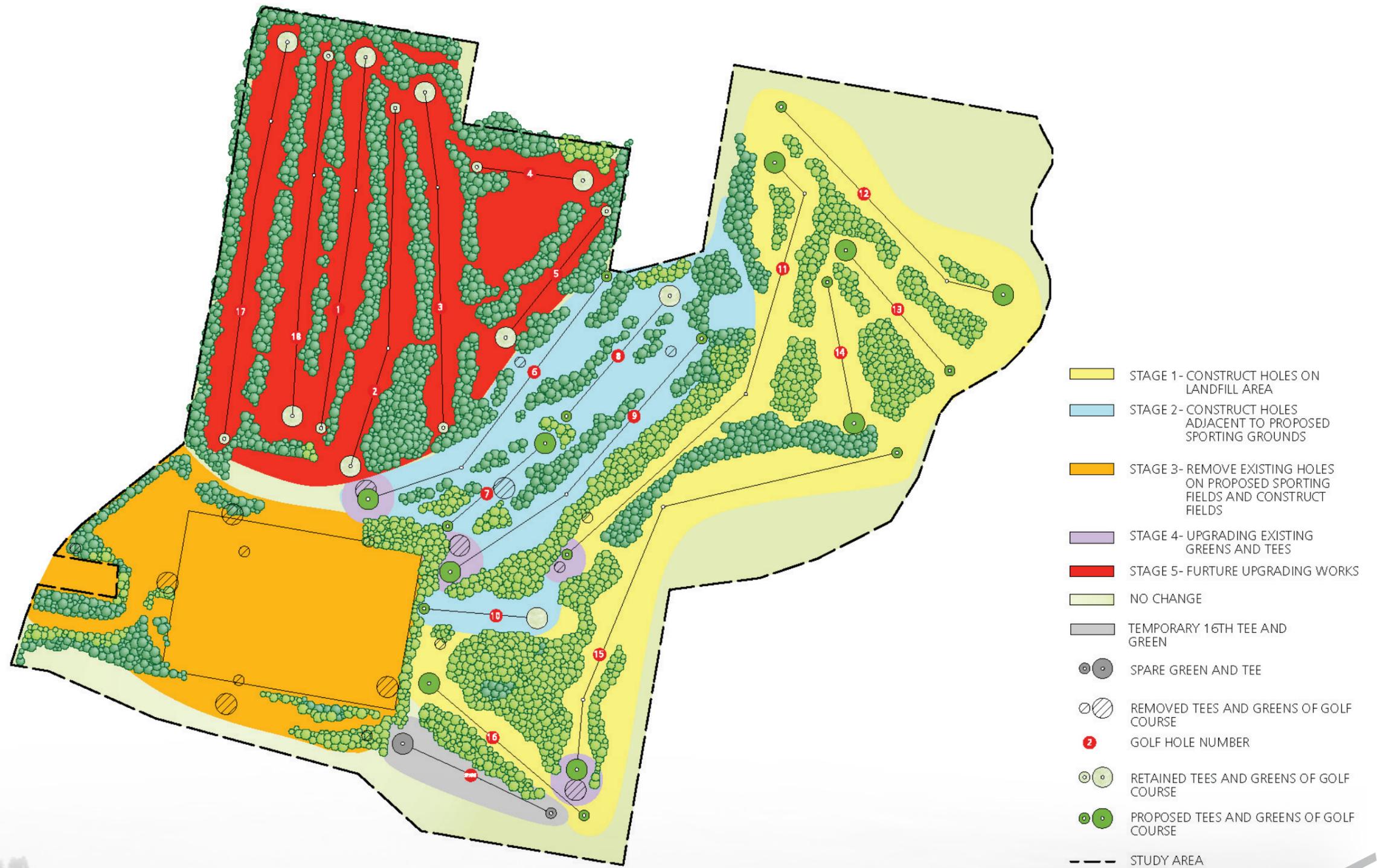
**Field Configuration 4**  
2 Baseball fields



**Field Configuration 5**  
3 Rugby Union Fields

DRAFT

PLAYING GROUND CONFIGURATIONS FOR PREFERRED OPTION



- STAGE 1- CONSTRUCT HOLES ON LANDFILL AREA
- STAGE 2- CONSTRUCT HOLES ADJACENT TO PROPOSED SPORTING GROUNDS
- STAGE 3- REMOVE EXISTING HOLES ON PROPOSED SPORTING FIELDS AND CONSTRUCT FIELDS
- STAGE 4- UPGRADING EXISTING GREENS AND TEES
- STAGE 5- FUTURE UPGRADING WORKS
- NO CHANGE
- TEMPORARY 16TH TEE AND GREEN
- SPARE GREEN AND TEE
- REMOVED TEES AND GREENS OF GOLF COURSE
- GOLF HOLE NUMBER
- RETAINED TEES AND GREENS OF GOLF COURSE
- PROPOSED TEES AND GREENS OF GOLF COURSE
- STUDY AREA

DRAFT

STAGING FOR PREFERRED OPTION

**NORTH TURRAMURRA RECREATION AREA COST SUMMARY**



ITEM	DESCRIPTION	PRELIMINARIES, OVERHEADS & PROFIT	BUILDING WORKS	EXTERNAL WORKS	FF&E	SUB-TOTAL	10% CONTINGENCIES	PROFESSIONAL FEES	TOTAL (EXCL. GST)	10% GST	TOTAL (INCL. GST)
<b>BASE MODEL</b>											
1	Clubhouse & Pro Shop	\$ 207,500	\$ 1,667,500	\$ 60,000	Excl.	\$ 1,935,000	\$ 193,500	Excl.	\$ 2,128,500	\$ 212,850	\$ 2,341,350
2	Golf Course Areas	\$ 555,400	\$ -	\$ 5,854,600	N/A	\$ 6,410,000	\$ 641,000	Excl.	\$ 7,051,000	\$ 705,100	\$ 7,756,100
3	Consolidated Depots & Beekeepers Facilities	\$ 33,800	\$ 221,200	\$ 165,000	N/A	\$ 420,000	\$ 42,000	Excl.	\$ 462,000	\$ 46,200	\$ 508,200
4	Dams & Sediment Basin	\$ 76,900	\$ -	\$ 973,100	N/A	\$ 1,050,000	\$ 105,000	Excl.	\$ 1,155,000	\$ 115,500	\$ 1,270,500
5	Relocation of Communications Tower	\$ 3,000	\$ -	\$ 27,000	N/A	\$ 30,000	\$ 3,000	Excl.	\$ 33,000	\$ 3,300	\$ 36,300
<b>BASE MODEL TOTAL</b>		<b>\$ 876,600</b>	<b>\$ 1,888,700</b>	<b>\$ 7,079,700</b>	<b>\$ -</b>	<b>\$ 9,845,000</b>	<b>\$ 984,500</b>	<b>\$ -</b>	<b>\$ 10,829,500</b>	<b>\$ 1,082,950</b>	<b>\$ 11,912,450</b>
<b>OPTIONS</b>											
A	Playing Fields - Field Configuration 3 (3 Senior Soccer Fields, 110m)	\$ 149,800	\$ -	\$ 1,860,200	N/A	\$ 2,010,000	\$ 201,000	Excl.	\$ 2,211,000	\$ 221,100	\$ 2,432,100
B	Playing Fields - Field Configuration 4 (2 Baseball Fields, 132m)	\$ 179,100	\$ -	\$ 2,255,900	N/A	\$ 2,435,000	\$ 243,500	Excl.	\$ 2,678,500	\$ 267,850	\$ 2,946,350
C	Playing Fields - Field Configuration 5 (3 Rugby Union Fields, 154m)	\$ 203,500	\$ -	\$ 2,551,500	N/A	\$ 2,755,000	\$ 275,500	Excl.	\$ 3,030,500	\$ 303,050	\$ 3,333,550
AA	Roads & Carparking (Sub-Option A Residential Property Retained)	\$ 112,000	\$ -	\$ 1,398,000	N/A	\$ 1,510,000	\$ 151,000	Excl.	\$ 1,661,000	\$ 166,100	\$ 1,827,100
BB	Roads & Carparking (Sub-Option B Residential Property Acquired)	\$ 128,200	\$ -	\$ 1,566,800	N/A	\$ 1,695,000	\$ 169,500	Excl.	\$ 1,864,500	\$ 186,450	\$ 2,050,950
A1	Option A - Stormwater Harvesting	\$ 18,000	\$ -	\$ 212,000	N/A	\$ 230,000	\$ 23,000	Excl.	\$ 253,000	\$ 25,300	\$ 278,300
A2	Option B - Sewer Mining	\$ 175,000	\$ -	\$ 2,180,000	N/A	\$ 2,355,000	\$ 235,500	Excl.	\$ 2,590,500	\$ 259,050	\$ 2,849,550
<b>VARIATION TO DESIGN</b>											
α	Treatment to Landfill Area	\$ 1,474,800	\$ -	\$ 18,440,200	N/A	\$ 19,915,000	\$ 1,991,500	Excl.	\$ 21,906,500	\$ 2,190,650	\$ 24,097,150
β	Slope Stabilisation	\$ 53,600	\$ -	\$ 691,400	N/A	\$ 745,000	\$ 74,500	Excl.	\$ 819,500	\$ 81,950	\$ 901,450
<b>TOTAL</b>		<b>\$ 1,528,400</b>	<b>\$ -</b>	<b>\$ 19,131,600</b>	<b>\$ -</b>	<b>\$ 20,660,000</b>	<b>\$ 2,066,000</b>	<b>\$ -</b>	<b>\$ 22,726,000</b>	<b>\$ 2,272,600</b>	<b>\$ 24,998,600</b>

- All costs shown above are current as at January 2007  
 - Refer to "List of Exclusions from the Estimate"

**COST MATRIX 1** FIELD CONFIGURATIONS COST ESTIMATE

BASE MODEL	A	B	C
AA	\$ 14,701,500	\$ 15,169,000	\$ 15,521,000
BB	\$ 14,905,000	\$ 15,372,500	\$ 15,724,500

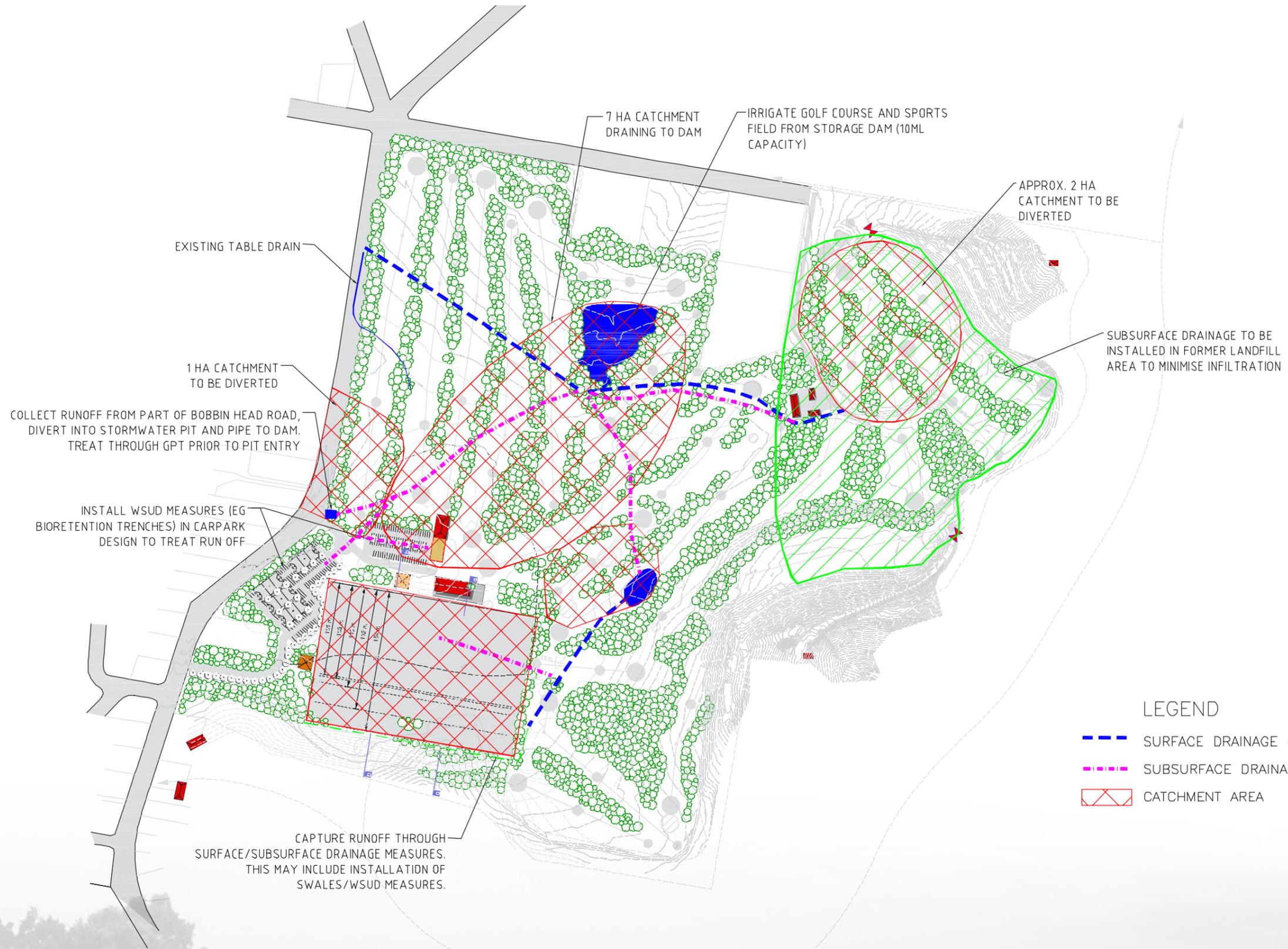
**COST MATRIX 2** SUMS AS PER COST MATRIX 1

VARIATION COST ESTIMATES WITH WATER MANAGEMENT OPTIONS	AA/A-BB/A-A1	AA/B-BB/B-A1	AA/C-BB/C-A1
A1	\$ 14,954,500	\$ 15,422,000	\$ 15,774,000
	\$ 15,158,000	\$ 15,625,500	\$ 15,977,500
	BB/A-BB/A-A2	BB/B-BB/B-A2	BB/C-BB/C-A2
A2	\$ 17,292,000	\$ 17,759,500	\$ 18,111,500
	\$ 17,495,500	\$ 17,963,000	\$ 18,315,000

CAR PARK OPTIONS COST ESTIMATE

WATER MANAGEMENT OPTIONS COST ESTIMATE

**DRAFT**



LEGEND

- SURFACE DRAINAGE (SWALES)
- SUBSURFACE DRAINAGE
- ⊠ CATCHMENT AREA

**DRAFT**  
WATER MANAGEMENT OPTION A  
STORMWATER HARVESTING



**DRAFT**  
WATER MANAGEMENT OPTION B  
SEWER MINING

**transport**

**traffic**

**offices**

**sydney**

**melbourne**

**GTA**  
**CONSULTANTS**

[www.gta.com.au](http://www.gta.com.au)

North Turrumurra Recreation Area  
Review of Transport, Access and Parking

Ku-ring-gai Council  
26 September 2007  
GS10260



# Document Issue

**SYDNEY OFFICE**  
LEVEL 10  
815 PACIFIC HIGHWAY  
CHATSWOOD NSW 2067  
PO BOX 5254 WEST CHATSWOOD  
NSW 1515 AUSTRALIA  
T 02 8448 1800 F 02 8448 1810  
E [sydney@gta.com.au](mailto:sydney@gta.com.au)  
[www.gta.com.au](http://www.gta.com.au)

**MELBOURNE OFFICE**  
87 HIGH STREET SOUTH  
KEW VIC 3101  
PO BOX 684 KEW  
VIC 3101 AUSTRALIA  
T 03 9851 9600 F 03 9851 9610  
E [melbourne@gta.com.au](mailto:melbourne@gta.com.au)  
[www.gta.com.au](http://www.gta.com.au)  
ABN 34 005 839 645

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Issue	Date	Description	Project Consultant	Project Manager	Director Approval
A-Dr	21/09/07	Draft for comment	Felix Liu	Alan Stewart	Original not signed
A-Dr2	26/09/07	Draft	Felix Liu	Alan Stewart	Original not signed

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# 1 Introduction

## 1.1 Background

Ku-ring-gai Council has developed a plan for the North Turrumurra Recreation Area (NTRA) which will maximise the recreation potential of the site and include the addition of a multi-use sports facility. A concept Masterplan has recently been prepared for the site which was supported by a Transport and Parking Assessment. Following the public exhibition of the Masterplan Council received feedback from the public which has initiated a need to undertake an independent review of the traffic and parking assessment in the context of the Masterplan.

GTA Consultants was commissioned in September 2007 by Ku-ring-gai Council to undertake a traffic and parking impact assessment of the proposed development.

## 1.2 Purpose of This Report

This report reviews the existing transport and parking assessment prepared by Arup utilising updated traffic flow data and further considering the traffic and transport issues raised within the public submissions. This review considers of the following:

- i The existing traffic and car parking conditions surrounding the site;
- ii The parking demand likely to be generated by the proposed development;
- iii The suitability of the existing car parking supply to accommodate any additional parking demand;
- iv The traffic generation characteristics of the proposed development; and
- v The impact of the development proposal on the surrounding road network.

## 1.3 Referenced Documents

In preparing this report, reference has been made to a number of background documents, including:

- Ku-ring-gai Council Car Parking Development Control Plan;
- AS2890.5:1993 Parking Facilities Part 5: On-Street Parking;
- North Turrumurra Recreation Area Review of Transport Access and Parking, January 2007;
- North Turrumurra Recreation Area Draft Concept Masterplan Report;
- Traffic Survey Data provided by Ku-ring-gai Council;
- An inspection of the site and its surrounds; and
- Other documents as nominated.

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# 2 Existing Conditions

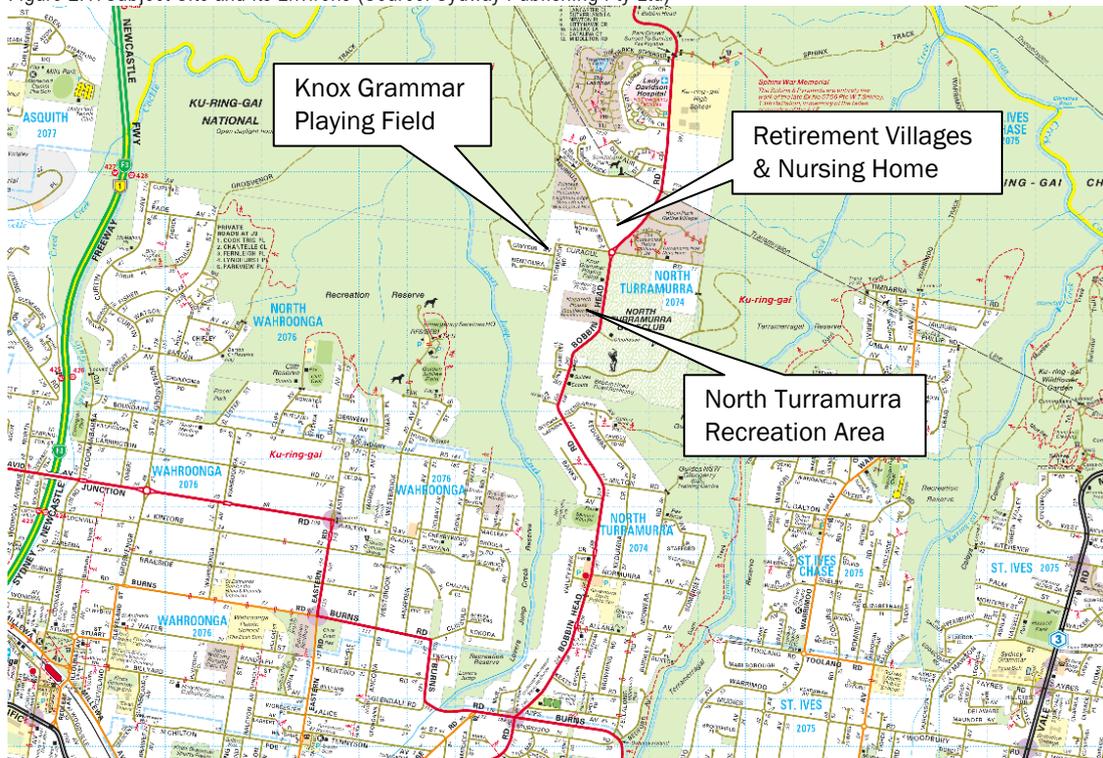
## 2.1 Subject Site

The NTRA is proposed to occur on the site of the existing North Turramurra Golf Club on Bobbin Head Road in North Turramurra.

The surrounding properties are predominantly residential with the exception of the Knox Grammar Playing field to the west and the Cotswolds Retirement Village, Huon Park Retirement Village & Turramurra Nursing home to the north of the site.

The location of the subject site and the surrounding environs is shown in Figure 2.1.

Figure 2.1: Subject Site and its Environs (Source: Sydway Publishing Pty Ltd)



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## 2.2 Road Network

### 2.2.1 Adjoining Roads

#### Bobbin Head Road

Bobbin Head Road functions as a secondary arterial road and is aligned in the north-south direction. Bobbin Head Road has an undivided carriageway and is configured with a 2-lane, 11 metre wide carriageway. There is kerbside parking and bicycle shoulder lanes on the eastern and western sides of Bobbin Head Road. The eastern side of Bobbin Head Road however changes from bicycle shoulder lanes to separate bicycle lanes over part of its length.

Bobbin Head Road carries approximately 5,800 vehicles per day<sup>1</sup> north of the North Turrumurra Golf Club Entry road.

#### Curagul Road

Curagul road is a no through road and functions as a local road which is aligned in the east-west direction. Curagul Road has an undivided carriageway and is configured with a 2-lane, 9 metre wide carriageway. Unrestricted kerbside parking is permitted on both sides of the carriageway.

Curagul Road carries approximately 580 vehicles per day<sup>1</sup>.

### 2.2.2 Surrounding Intersections

A number of intersections currently exist adjacent to and in the vicinity of the site. Those intersections which are located along Bobbin Head Road are:

- Bobbin Head Road/Curagul Road (roundabout);
- Bobbin Head Road/North Turrumurra Golf Club Entry (unsignalised); and
- Bobbin Head Road/Burns Road (signalised).

### 2.2.3 Traffic Volumes

Ku-ring-gai Council provided GTA Consultants with traffic count data for the above 3 intersections which were obtained on Saturday 28 July 2007 between 10.00am and 1.00pm and Tuesday 31 July 2007 between 7.00am and 9.00am and 4.00pm and 6.00pm.

Full results from these counts are included in Appendix A.

The peak traffic volumes of these key intersections are summarised as follows:

<sup>1</sup> Based on the peak hour traffic counts provided by Ku-ring-gai Council, undertaken in July 2007 and assuming a peak-to-daily ratio of 8% for arterial roads and 10% for local roads.

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Table 2.1: Summary of Peak Traffic Volumes

Location	Approach	Bidirectional Peak Traffic Volumes (Vehicles/Hour)		
		Tuesday AM	Tuesday PM	Saturday
Bobbin Head Rd/Curagul Road	North-East	422	333	345
	North-West	58	74	75
	South	551	505	608
	East	58	100	88
	West	53	52	122
Bobbin Head Rd/Golf Club Entry	North	577	539	731
	South	589	548	771
	East	16	9	40
Bobbin Head Rd/Burns Road	North	1052	914	1222
	South	1089	852	1071
	East	2410	2276	2376
	West	1909	2076	2027

**2.2.4 Intersection Operation**

The operation of the three intersections has been assessed using SIDRA INTERSECTION 3.0<sup>2</sup>, a computer based modelling package which calculates intersection performance.

The commonly used measure of intersection performance, as defined by the RTA, is vehicle delay. SIDRA INTERSECTION 3.0 determines the average delay that vehicles encounter and provides a measure of the level of service.

Table 2.2 shows the criteria that SIDRA INTERSECTION 3.0 adopts in assessing the level of service.

Table 2.2: SIDRA INTERSECTION 3.0 Level of Service Criteria

Level of Service (LOS)	Average Delay per vehicle (secs/veh)	Traffic Signals, Roundabout	Give Way & Stop Sign
A	Less than 14	Good operation	Good operation
B	15 to 28	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity
C	29 to 42	Satisfactory	Satisfactory, but accident study required
D	43 to 56	Near capacity	Near capacity, accident study required
E	57 to 70	At capacity, at signals incidents will cause excessive delays	At capacity, requires other control mode
F	Greater than 70	Extra capacity required	Extreme delay, major treatment required

<sup>2</sup> Program used under license from Akcelik & Associates Pty Ltd.

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Tables 2.3, 2.4 and 2.5 present a summary of the existing operation of the three key intersections, during the AM, PM and Saturday peak hours respectively, with full results presented in Appendix B of this report.

Table 2.3: Key Intersection Summary – Existing Operating Conditions - AM Peak

Intersection	Approach	Critical Turning Movements			
		Degree of Saturation	Average Delay (sec)	95 <sup>th</sup> Percentile Queue (m)	Level of Service
Bobbin Head Rd/Curagul Road	South	0.191	9.4	9	A
	East	0.027	6.7	1	A
	North-East	0.161	4.9	6	A
	North-West	0.023	10.5	1	A
	West	0.032	11.3	1	A
Bobbin Head Rd/Golf Club Entry	South	0.175	1.9	12	A
	East	0.004	13.3	0	A
	North	0.149	0.1	0	A
Bobbin Head Rd/Burns Road	South	1.141	139.7	395	F
	East	1.138	203.4	1027	F
	North	0.555	41	137	C
	West	0.833	35.3	335	C

Table 2.4: Key Intersection Summary – Existing Operating Conditions - PM Peak

Intersection	Approach	Critical Turning Movements			
		Degree of Saturation	Average Delay (sec)	95 <sup>th</sup> Percentile Queue (m)	Level of Service
Bobbin Head Rd/Curagul Road	South	0.180	9.2	9	A
	East	0.042	7	2	A
	North-East	0.132	4.9	5	A
	North-West	0.037	10.1	1	A
	West	0.024	11.1	1	A
Bobbin Head Rd/Golf Club Entry	South	0.154	1.4	10	A
	East	0.012	10.2	0	A
	North	0.138	0	0	A
Bobbin Head Rd/Burns Road	South	0.849	32.9	73	C
	East	0.879	29.7	240	C
	North	0.598	28.2	69	B
	West	0.674	13	130	A

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Table 2.5: Key Intersection Summary – Existing Operating Conditions – Saturday Peak

Intersection	Approach	Critical Turning Movements			
		Degree of Saturation	Average Delay (sec)	95 <sup>th</sup> Percentile Queue (m)	Level of Service
Bobbin Head Rd/Curagul Road	South	0.230	8.5	12	A
	East	0.031	6.3	1	A
	North-East	0.136	4.9	5	A
	North-West	0.033	10.7	1	A
	West	0.039	10.7	1	A
Bobbin Head Rd/Golf Club Entry	South	0.241	2.2	18	A
	East	0.038	10.4	1	A
	North	0.167	0	0	A
Bobbin Head Rd/Burns Road	South	1.211	135.7	280	F
	East	1.180	168.8	1000	F
	North	0.681	50	181	D
	West	0.712	26.5	278	B
	Intersection	1.211	105.8	1000	F

On the basis of the above assessment, the intersections of Bobbin Head Road/Curagul Road and Bobbin Head Road/Golf Club Entry currently operate well with minimal delays on all approaches during the AM, PM and Saturday peak hours. The Bobbin Head Road/Burns Road intersection currently operates satisfactorily on the northern and western approaches, but unacceptable queues and delays occur on the southern and eastern approaches during the Tuesday AM and Saturday peak hours.

**2.2.5 Pedestrian Facilities**

Adjacent to the Golf Club, there are no sealed pedestrian pathways in the frontage of the site, except for a pathway along the western side of Bobbin Head Road.

There are no marked or signalised pedestrian crossings in the vicinity of the site. Pedestrians use the blisters on each approach of the Bobbin Head Road/Curagul Road roundabout to cross the roads within this intersection.

**2.2.6 Cycling Facilities**

Bobbin Head Road is one of the designated bicycle routes, connecting Ku-ring-gai National Park, within Ku-ring-gai Local Government Area. Bicycle shoulder lanes are provided on both sides of Bobbin Head Road but on the eastern side adjacent to the site there is a separate bicycle lane on Bobbin Head Road.

Bobbin Head Road also has bicycle signage along it.

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## 2.3 Car Parking

### 2.3.1 Supply

The North Turrumurra Golf Club currently provides a total of 100 car parking spaces, 73 sealed and 27 unsealed, on site.

On-street parking is also available in some sections along Bobbin Head Road. An inventory of publicly available on-street car parking on Bobbin Head Road between Curagul Road and Glengarry Avenue, undertaken by Ku-ring-gai Council, was provided to GTA Consultants for the assessment.

The inventory identified a total of some 140 on-street spaces within the survey area.

The full inventory is presented in Appendix C of this report.

### 2.3.2 Demand

Parking demand surveys, undertaken on Saturday 28 July 2007, between 8:00am and 2:00pm and Tuesday 31 July 2007 between 7:00am and 9:00am and 4:00pm and 6:00pm, was also provided to GTA Consultants by Ku-ring-gai Council in support of the assessment.

The peak parking demand results of this survey are summarised in Table 2.6 with the full results provided in Appendix C.

Table 2.6: Summary of On-Street Public Parking Demand Surveys – July 2007

Time Period	Supply (No of spaces)	Peak Demand (Vehicles)	Peak Vacancies
Tuesday AM	140	6 (4%) (8-9am)	134 (96%)
Tuesday PM	140	9 (6%) (4-5pm)	131 (94%)
Saturday	140	69 (49%) (1-2pm)	71 (51%)

The survey results indicated that the peak parking period occurred between 1:00pm and 2:00pm on a Saturday, with an occupancy rate of 49%. These occupancies are low and equate to a total of 71 available parking spaces during the peak period.

These low occupancy rates were confirmed during a site visit undertaken on Saturday 15 September, 2007.

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# 3 Development Proposal

## 3.1 Land Uses

The preferred option (sub-option A & B) includes the existing North Turramurra Golf Club, a proposed 227m x 154m playing field, a proposed multi-purpose sports facility<sup>3</sup>, and four convertible hard-surface playing courts, as indicated in plans included in Appendix D.

## 3.2 Car Parking

The proposal retains the existing 100 car parking spaces for the golf club and proposes 200 additional car parking spaces for the sporting facilities. The expanded car park also has the potential to locate up to four hard-surface playing courts on the car parking area itself which could further reduce parking capacity when in use. However it is proposed that the additional parking area would only be made available during peak times.

## 3.3 Site Access

The existing golf course entrance is proposed to be the location for the main access to and from the NTRA which would be upgraded to a new roundabout. An additional left out only egress is also proposed on Bertrand Road.

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<sup>3</sup> The multi-purpose sports facility is intended to be a club house facility for the golf course and also sports fields as well as a community room currently not provided in North Turramurra or indoor yoga/Pilates activities room.

# 4 Car Parking

## 4.1 Car Parking Requirements

### 4.1.1 Golf Course

Requirements for the provision of car parking for golf courses are not set out in either the Ku-ring-gai Council DCP or the RTA Guide to Traffic Generating Developments. However a parking rate of 4 spaces per hole is stipulated in both the Gosford Council DCP<sup>4</sup> and the Cessnock Council DCP<sup>5</sup>. On the basis of these two DCP's an 18 hole golf course therefore requires a minimum of 72 car parking spaces provided on-site. On-site observations by GTA Consultants also confirmed that the parking demand of the existing golf course is approximately 60 car parking spaces at 10:00am on a Saturday morning.

### 4.1.2 Playing Fields

Requirements for the provision of car parking for the playing fields are also not set out in either the Ku-ring-gai Council DCP or the RTA Guide to Traffic Generating Developments. The parking requirements for the site have been determined from first principles using information regarding the expected number of players and supervisors attending matches and the proposed times of operation. The assumptions made in the North Turrumurra Recreation Area Review of Transport Access and Parking (Arup 2007), which were adopted by Council, were used by GTA Consultants for the assessment as indicated in Table 4.1 below. These were considered to be reasonable assumptions based on experience of previous GTA Consultant projects relating to sports fields.

Table 4.1: Assumptions – Peak Parking Demand (Arup)

Parameter	Description	Notes
Peak use of the site	Winter weekend competition days	
Number of fields in use simultaneously	3 full size fields	
Game times	8:00 AM 9:30 AM 11:00 AM 1:00 PM 3:00 PM	
Total number of players at any one time	3 x 16 x 2 = 96	3 matches 16 players per side 2 teams per match
% of players that park on-site	75%	allows for drop-off, car sharing, other transport modes
% of players that stay for more than one game	10%	
Spectators/officials per game that park on-site	25% x number of players	

4 Gosford City Council Development Control Plan 2006, No. 111- Car Parking.

5 Cessnock City Council Development Control Plan 2006, Part C General Guidelines, Chapter 1: Parking and Access.

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Using information provided in Table 4.1, GTA Consultants undertook a first principles analysis to determine the parking requirements for the peak periods as follows:

The total number of players and spectators/officials per match on-site at any one time has been estimated to be a maximum of 120 on the basis that there would be 3 matches with 32 players per match and 25% of these would be made up of officials and spectators.

On the basis that not all of these people would drive individually to the site (i.e. Some will car share, get dropped off or use other modes) a reduction factor of 75% has been applied to ascertain more accurately the number of actual car parking spaces required resulting in a need to provide 90 car parking spaces on site.

The total parking demand at 9:30am, 11:00am and 1:00pm (worst cases) however would be the cumulation of new cars arriving together with cars already parked on-site. Assuming that 10% of players stayed for more than one game, the number of car parking spaces required for both new arrivals and already parked cars has been calculated as follows:

New Arrival:  $120 \times 90\% \times 75\% =$  **81 car parking spaces;** plus  
 Already Parked:  $=$  **90 car parking spaces.**

The total parking demand would therefore be 171 car parking spaces during match times of 9:30am, 11:00am and 1:00pm.

The estimated parking demands for each of the match times are as follows:

- 8:00am 90 spaces;
- 9:30am 171 spaces;
- 11:00am 171 spaces;
- 1:00pm 171 spaces; and
- 3:00pm 90 spaces.

#### 4.2 Parking Supply

Based on the above parking supply and demand assessment, the provision of 100 car parking spaces for the golf course and 200 car parking spaces for the proposed playing fields exceed the expected parking demand and is therefore expected to adequately accommodate the peak parking demands likely to be generated by both the golf course and the playing fields during the Saturday peak periods.

#### 4.3 Car Parking Layout and Access

The design of parking modules, circulation roadways and access facilities of the NTRA should comply with **Australian Standards Parking Facilities Part 1: Off-street Car Parking**, and also enable special vehicles, such as emergency vehicles and fire brigade trucks, to access the site. At present the current design is not sufficiently detailed to undertake this assessment, but given the space available, GTA would expect that a compliant design is achievable.

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# 5 Traffic Impact Assessment

## 5.1 Traffic Generation

Traffic generation estimates for the NTRA have been sourced using the expected parking demand figures determined previously in Section 4.

It has been assumed that the golf course would not generate any additional traffic upon completion of the NTRA.

The peak volume of traffic expected to be generated by the proposed sporting facilities would occur at 9:30am, 11:00am and 1:00pm on a Saturday, where traffic from both match sessions would be simultaneously either picking up or dropping off those attending matches.

Therefore, the total additional volume of traffic expected on Bobbin Head Road during this period would be up to a maximum of 171 vehicle movements.

## 5.2 Traffic Impact

### 5.2.1 Distribution and Assignment

The directional distribution and assignment of traffic generated by the NTRA will be influenced by a number of factors, including:

- i The configuration of the arterial road network in the immediate vicinity of the site;
- ii The existing operation of intersections providing access between the local and arterial road network;
- iii The configuration of access points to the site; and
- iv The location of Ku-ring-gai National Park at the northern end of Bobbin Head Road.

GTA Consultants have determined that the peak traffic generation would occur at 9:30am, 11:00am and 1:00pm on a Saturday.

Having consideration to the above, and for the purposes of estimating vehicle movements, the following directional distributions have been assumed:

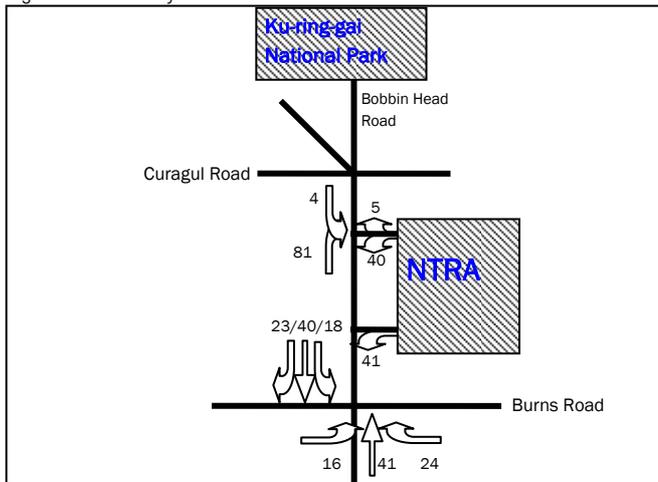
- 5% of generated traffic would travel northbound along Bobbin Head Road from NTRA<sup>6</sup>;
- 95% of traffic would travel southbound along Bobbin Head Road from NTRA<sup>7</sup>;
- Traffic from the playing fields would exit in equal proportions from both the NTRA main in/out access and from the Bertrand Road egress. (i.e. a 50/50 split); and
- Directional split of traffic is distributed with the same proportions as the existing turning movements counted at each intersection.

Based on the above, Figure 5.1 has been prepared to show the estimated marginal increase in turning movements in the vicinity of NTRA following full site development.

<sup>6</sup> The assumed splits are provided by Council.



Figure 5.1: Saturday Peak Hour Generated Traffic Volumes



### 5.2.2 Bobbin Head Road/Burns Road Intersection Upgrade

The number of accidents involving right turning vehicles at the signalised intersection of Bobbin Head Road/Burns Road intersection has been of concern to Kuring-gai Council and the Turramurra community for some years. Council has sought to include treatments to upgrade this intersection. The proposed lane configuration and phases proposed by Council for this intersection are detailed below:

- West approach: one 250m shared left/through lane, one through lane, one 50m dedicated right turn lane;
- East approach. One 320m shared left/through lane, one through lane, one 80m dedicated right turn lane;
- South approach: one short left turn only lane retained, one bicycle lane, one through lane, one 50m dedicated right lane;
- North approach: one left turn slip lane retained, one bicycle lane, one through lane, and one 55m dedicated right lane; and
- Double diamond overlap phasing which provides full control for the right turn movements.

### 5.2.3 Intersection Performances

An assessment of the impacts that the anticipated development traffic would have on the three intersections in close proximity to the site was undertaken by comparing the performance of the relevant intersections prior to and following the proposed development.

In the case of the Bobbin Head Road/Curagal Road intersection the 12 trips generated from the NTRA site to and from this intersection during the Saturday peak hour would have a negligible impact on this intersection.

GTA Consultants assessed the existing performance of the Bobbin Head Road/Burns Road intersection on the basis of Kuring-gai Councils upgraded intersection design and using existing 2007 traffic volumes for the Saturday peak period, the results of which, are provided in Table 5.1.

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Table 5.1: Intersection Performance Summary – Existing Traffic Flows with Council Upgraded Design – Saturday Peak Hour

Intersection	Approach	Critical Turning Movements			
		Degree of Saturation	Average Delay (sec)	95 <sup>th</sup> Percentile Queue (m)	Level of Service
Bobbin Head Rd/Burns Road	South	1.000	61.3	163	E
	East	0.994	79.2	291	F
	North	0.804	43.2	114	D
	West	0.813	36.3	170	C
	Intersection	1.000	58.4	291	E

Table 5.1 indicates that there would be a substantial improvement in the operation of this intersection if Councils intersection upgrade proposal was implemented. In particular the assessment indicates that the queues and delays would reduce noticeably on the southern approach of Bobbin Head Road and eastern approach of Burns Road during the Saturday peak period.

In view of this future Council intersection upgrade proposal GTA Consultants assessed the implications of the traffic generated from the proposed NTRA development on this intersection proposal to determine the likely impacts.

Table 5.2 presents a summary of the future operation of the upgraded intersection of Bobbin Head Road/Burns Road during the Saturday peak hour applying the traffic generated from the proposed NTRA development.

Table 5.2: Intersection Performance Summary – Future with Council Upgraded Design – Saturday Peak Hour

Intersection	Approach	Critical Turning Movements			
		Degree of Saturation	Average Delay (sec)	95 <sup>th</sup> Percentile Queue (m)	Level of Service
Bobbin Head Rd/Burns Road	South <sup>1</sup>	1.025	81.9	222	F
	East <sup>1</sup>	1.023	98.0	324	F
	North <sup>1</sup>	0.869	47.3	135	D
	West	0.855	39.4	183	C
	Intersection	1.025	70.4	324	E

[1] Approach performance is affected by queue length exceeding short lane length.

Table 5.2 indicates that there would be minor impacts on the operation of the Bobbin Head Road/Burns Road intersection as a consequence of the traffic generated from the NTRA development with queues and delays increasing marginally on the southern approach of Bobbin Head Road and the eastern approach of Burns Road.

Of more importance was that the right turning queues would increase to a point which was greater than the available storage length provided within the Council design which would result in these queues encroaching into the adjacent lanes.

Full results of the existing and future operation of the Bobbin Head Road/Burns Road intersection are presented in Appendix E of this report.

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Table 5.3 presents a summary of the future operation of the Bobbin Head Road/NTRA intersection during the Saturday peak hour with full results presented in **Appendix F** of this report.

Table 5.3: Intersection Performance Summary – Future Operation - Saturday Peak Hour

Intersection	Approach	Critical Turning Movements			
		Degree of Saturation	Average Delay (sec)	95 <sup>th</sup> Percentile Queue (m)	Level of Service
Bobbin Head Rd/Golf Club Entry	South	0.351	5.5	22	A
	East	0.066	2.0	3	A
	North	0.263	3.0	11	A

Table 5.3 indicates that the Bobbin Head Road/NTRA intersection would operate well with minimal queues and delays on all approaches during the Saturday peak hour.

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# 6 Public Submission Review

Ku-ring-gai Council provided GTA Consultants with public submissions received in response to the NTRA Masterplan exhibition as summarised in Table 6.1.

Table 6.1: Summary of Public Submission

Summary of Public Submission	Total number of Households/ Groups/same address	Total number of Responses
Against Proposal	31	43
Supporting Proposal	28	35
Impartial Body	1	1
Comment Only	5	5
Incomplete Questionnaire	1	1
<b>Total number of submissions</b>	<b>66</b>	<b>85</b>

Within the above submissions there were a small number of issues raised which related to traffic and parking which have been reviewed and summarised in Table 6.2. GTA Consultants have also provided a response, where relevant, on the basis of the assessment undertaken within this report.

Table 6.2: Summary of Public Traffic & Parking Issues and GTA Response

Traffic & Parking Issues	GTA Response
NTRA would attract more traffic onto Bobbin Head Road which conflicts with not only the cyclists but also activities associated with the North Turramurra Shopping Centre	<p>The current cycle facilities on Bobbin Head Road are expected to adequately cater for cyclists needs in the context of increased traffic volumes. There should be additional measures implemented on the approaches to the new access roundabout to highlight the presence of cyclists.</p> <p>The traffic assessment estimates that there would be a maximum of 171 additional traffic movements during the peak hour and approximately 700 daily movements on a Saturday. The expected flows associated with the NTRA would be significantly less on other days.</p> <p>These levels of traffic are not expected to compromise the safety of cyclists. A further assessment would be required to determine the traffic impacts on the operation of the North Turramurra Shopping Centre.</p>
Insufficient assessment of the existing and future traffic conditions and the requirement for coaches to access the site.	The GTA Consultants existing and future traffic conditions assessment indicates that the impacts of traffic volumes and parking could be adequately accommodated. There is however a need to investigate further the accommodation of coaches to and from the site which don't appear to have been considered within the master plan.
There is not enough sight distance for vehicles exiting from the Bertrand Road egress.	Driveway design should comply with sight distance requirements stipulated in <b>Australian Standards Parking Facilities Part 1: Off-street Car Parking</b> .
Proposed roundabout for NTRA access would cause delay to traffic already on Bobbin Head Road	There will inevitably be some delay to existing traffic on Bobbin Head Road but the traffic analysis undertaken by GTA Consultants indicates that the roundabout would result in negligible queues and delays during the peak periods which are acceptable in accordance with industry standards.
NTRA access should be relocated to Curagul Road	This would not be a practical option as it would require a complete re-design of the golf course and relocation of the existing club house for very minimal traffic benefit.

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# 7 Conclusion

Based on the analysis and discussions presented within this report, the following conclusions are made:

- i The existing provision of 100 car parking spaces for the North Turramurra Golf Club exceeds the current parking demand;
- ii The proposed 200 spaces provided for the sporting facilities would more than adequately accommodate the expected additional parking demand generated by the NTRA;
- iii The site is expected to generate up to a maximum of 171 additional vehicle movements during the Saturday mid-day peak hours;
- iv The analysis indicates that the additional traffic generated by NTRA would have negligible impacts on the intersections of Bobbin Head Road/Curagul Road and Bobbin Head Road/NTRA Access Road;
- v The Councils upgrade scheme (implementation subject to allocation of funding through the black spot program) for the intersection of Bobbin Head Road/Burns Road results in a substantial improvement in the operation of the intersection, in particular for the southern approach of Bobbin Head Road and the eastern approach of Burns Road;
- vi The analysis of the proposed upgrade of the intersection of Bobbin Head Road/Burns Road, as proposed by Council, indicates that the designated right turn bays on the northern, eastern and southern approaches would need to be extended further to accommodate the future right turn queues;
- vii The design of Bertrand Road egress should comply with sight distance requirements stipulated in **Australian Standards Parking Facilities Part 1: Off-street Car Parking**;
- viii The design of the proposed Bobbin Head Road/NTRA Access Road roundabout should be such that it safely accommodates cyclists;
- ix Bicycle parking facilities should be provided within the proposed car park which should be easily accessible, secure and located as close to the clubhouse as possible for convenience;
- x Coach parking and manoeuvrability needs to be accommodated within the master plan design as this is an inevitably going to be required in relation to sporting events; and
- xi The use of the car park during non-peak periods as hard courts for sports such as netball and basketball should take into consideration the issues of oil spills/leaks from parked cars.

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# Appendix A

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## Traffic Volumes - July 2007

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# R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Fax 88196849, Mob.0418-239019

Client

:Ku-ring-gai Council

Job No/Name

:1885 NTH. TURRAMURRA Bobbin Head Rd

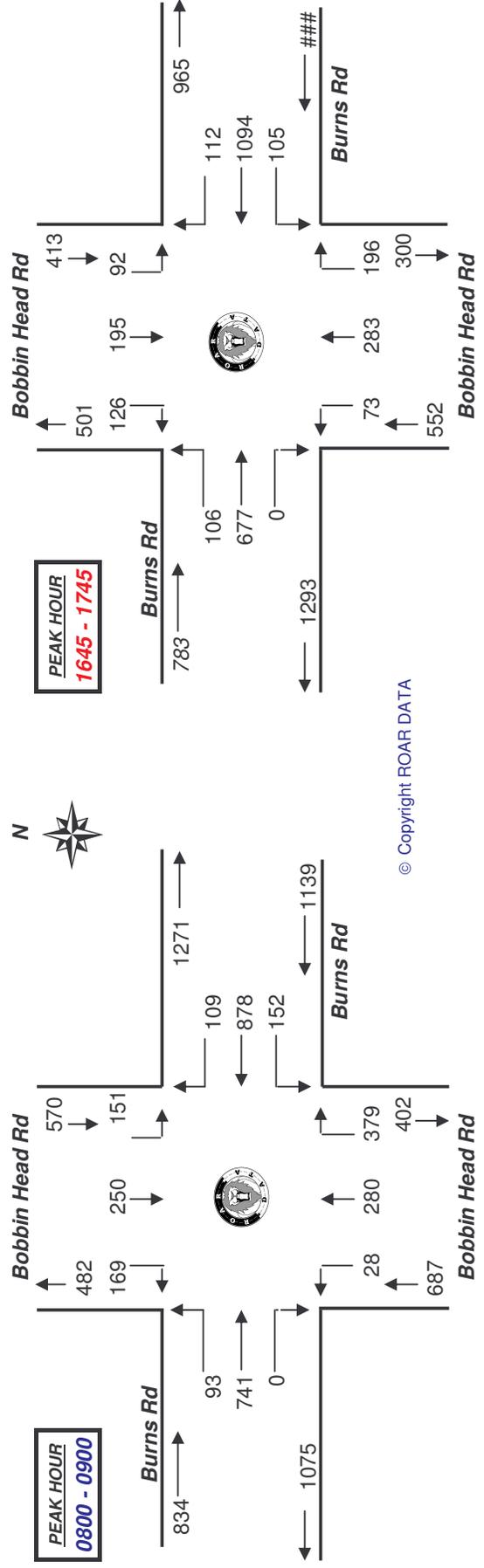
Day/Date

:Tuesday 31st July 07

All Vehicles	NORTH				WEST				SOUTH				EAST			
	Bobbin Head Rd		Burns Rd		Bobbin Head Rd		Burns Rd		Bobbin Head Rd		Burns Rd		Bobbin Head Rd		Burns Rd	
	L	R	I	TOT	L	R	I	TOT	L	R	I	TOT	L	R	I	TOT
0700 - 0715	18	38	18	616	11	274	0	616	3	51	43	616	32	117	11	616
0715 - 0730	23	68	21	673	15	239	0	673	6	37	58	673	36	146	24	673
0730 - 0745	43	78	37	741	14	237	0	741	4	35	59	741	35	188	11	741
0745 - 0800	23	68	35	755	10	219	0	755	5	72	52	755	38	216	17	755
0800 - 0815	40	77	46	881	15	201	0	881	8	81	93	881	40	256	24	881
0815 - 0830	31	38	25	713	16	179	0	713	7	71	102	713	32	189	23	713
0830 - 0845	42	77	42	757	25	160	0	757	5	35	112	757	39	194	26	757
0845 - 0900	38	58	56	879	37	201	0	879	8	93	72	879	41	239	36	879
Period End	258	502	280	6015	143	1710	0	6015	46	475	591	6015	293	1545	172	6015

All Vehicles	NORTH				WEST				SOUTH				EAST			
	Bobbin Head Rd		Burns Rd		Bobbin Head Rd		Burns Rd		Bobbin Head Rd		Burns Rd		Bobbin Head Rd		Burns Rd	
	L	R	I	TOT												
0700 - 0800	107	252	111	2785	50	969	0	2785	18	195	212	2785	141	667	63	2785
0715 - 0815	129	291	139	3050	54	896	0	3050	23	225	262	3050	149	806	76	3050
0730 - 0830	137	261	143	3090	55	836	0	3090	24	259	306	3090	145	849	75	3090
0745 - 0845	136	260	148	3106	66	759	0	3106	25	259	359	3106	149	855	90	3106
0800 - 0900	151	250	169	3230	93	741	0	3230	28	280	379	3230	152	878	109	3230
PEAK HOUR	151	250	169	3230	93	741	0	3230	28	280	379	3230	152	878	109	3230

PEAK HOUR	151	250	169	93	741	0	28	280	379	152	878	109	3230
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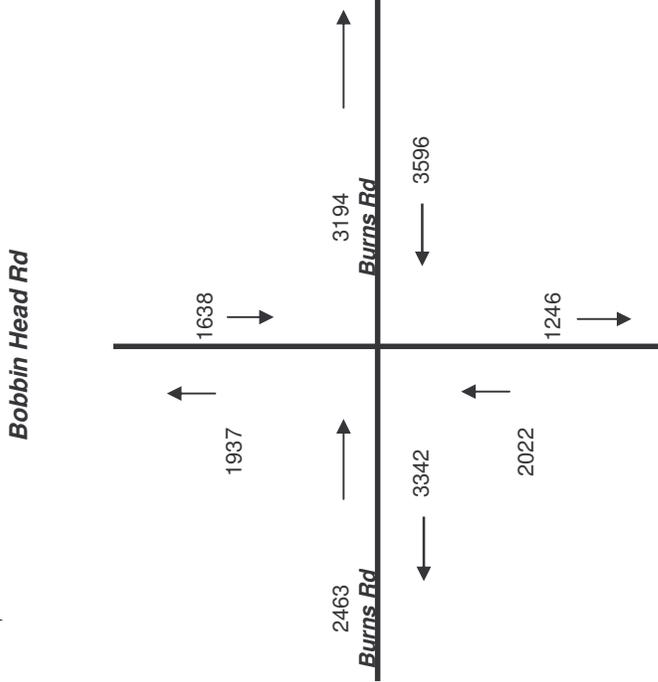
**R.O.A.R. DATA**  
 Reliable, Original & Authentic Results  
 Ph.88196847, Fax 88196849, Mob.0418-239019

Client :Ku-ring-gai Council  
 Job No/Name :1885 NTH, TURRAMURRA Bobbin Head Rd  
 Day/Date :Saturday 28th July 07

All Vehicles Time Per	NORTH Bobbin Head Rd			WEST Burns Rd			SOUTH Bobbin Head Rd			EAST Burns Rd			TOT
	L	I	R	L	I	R	L	I	R	L	I	R	
1000 - 1015	36	71	39	32	163	0	19	67	57	35	189	31	739
1015 - 1030	34	89	41	32	144	0	18	95	49	29	195	41	767
1030 - 1045	24	84	33	33	190	0	22	87	71	28	221	54	847
1045 - 1100	29	69	38	34	175	0	18	79	69	51	249	56	867
1100 - 1115	32	75	45	29	167	0	15	80	54	41	230	53	821
1115 - 1130	43	55	51	36	189	0	16	73	47	37	236	30	813
1130 - 1145	30	61	43	35	175	0	18	87	58	41	241	41	830
1145 - 1200	20	50	34	29	158	0	13	76	60	28	215	30	713
1200 - 1215	37	90	52	27	147	0	14	111	85	26	208	30	827
1215 - 1230	33	57	38	51	192	0	19	95	73	49	204	35	846
1230 - 1245	42	60	23	45	159	0	27	98	62	43	237	42	838
1245 - 1300	22	33	25	28	193	0	15	100	75	44	241	35	811
<b>Period End</b>	<b>382</b>	<b>794</b>	<b>462</b>	<b>411</b>	<b>2052</b>	<b>0</b>	<b>214</b>	<b>1048</b>	<b>760</b>	<b>452</b>	<b>2666</b>	<b>478</b>	<b>9719</b>

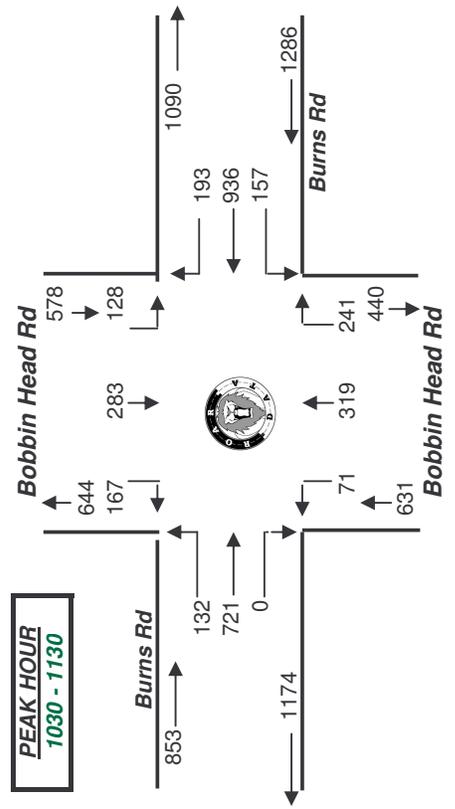


TOTAL VOLUMES  
FOR COUNT  
PERIOD



Peak Time	NORTH Bobbin Head Rd			WEST Burns Rd			SOUTH Bobbin Head Rd			EAST Burns Rd			TOT
	L	I	R	L	I	R	L	I	R	L	I	R	
1000 - 1100	123	313	151	131	672	0	77	328	246	143	854	182	3220
1015 - 1115	119	317	157	128	676	0	73	341	243	149	895	204	3302
<b>1030 - 1130</b>	<b>128</b>	<b>283</b>	<b>167</b>	<b>132</b>	<b>721</b>	<b>0</b>	<b>71</b>	<b>319</b>	<b>221</b>	<b>157</b>	<b>936</b>	<b>193</b>	<b>3348</b>
1045 - 1145	134	260	177	134	706	0	67	319	228	170	956	180	3331
1100 - 1200	125	241	173	129	689	0	62	316	219	147	922	154	3177
1115 - 1215	130	256	180	127	669	0	61	347	250	132	900	131	3183
1130 - 1230	120	258	167	142	672	0	64	369	276	144	868	136	3216
1145 - 1245	132	257	147	152	656	0	73	380	280	146	864	137	3224
1200 - 1300	134	240	138	151	691	0	75	404	295	162	890	142	3322
<b>PEAK HOUR</b>	<b>128</b>	<b>283</b>	<b>167</b>	<b>132</b>	<b>721</b>	<b>0</b>	<b>71</b>	<b>319</b>	<b>241</b>	<b>157</b>	<b>936</b>	<b>193</b>	<b>3348</b>

PEAK HOUR  
1030 - 1130



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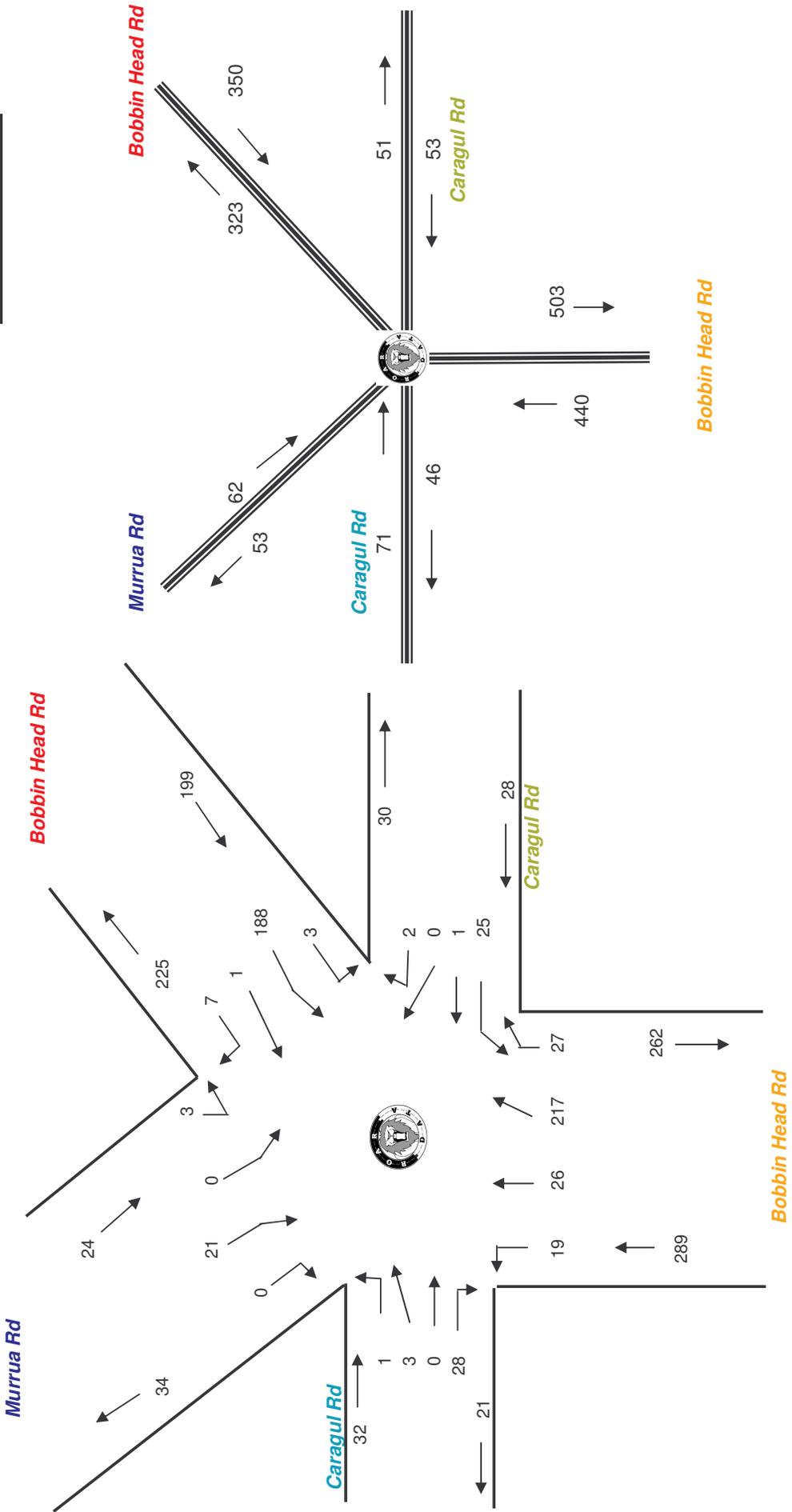


**R.O.A.R. DATA**  
 Reliable, Original & Authentic Results  
 Ph.88196847, Fax 88196849, Mob.0418-239019

Client :Ku-ring-gai Council  
 Job No/Name :1885 NTH. TURRAMURRA Bobbin Head Rd  
 Day/Date :Tuesday 31st July 07

**AM PEAK**  
 0800 - 0900

**TOTAL VOLUMES**  
**FOR PERIODS**  
**COUNTED**



**R.O.A.R. DATA**

Client :Ku-ring-gai Council

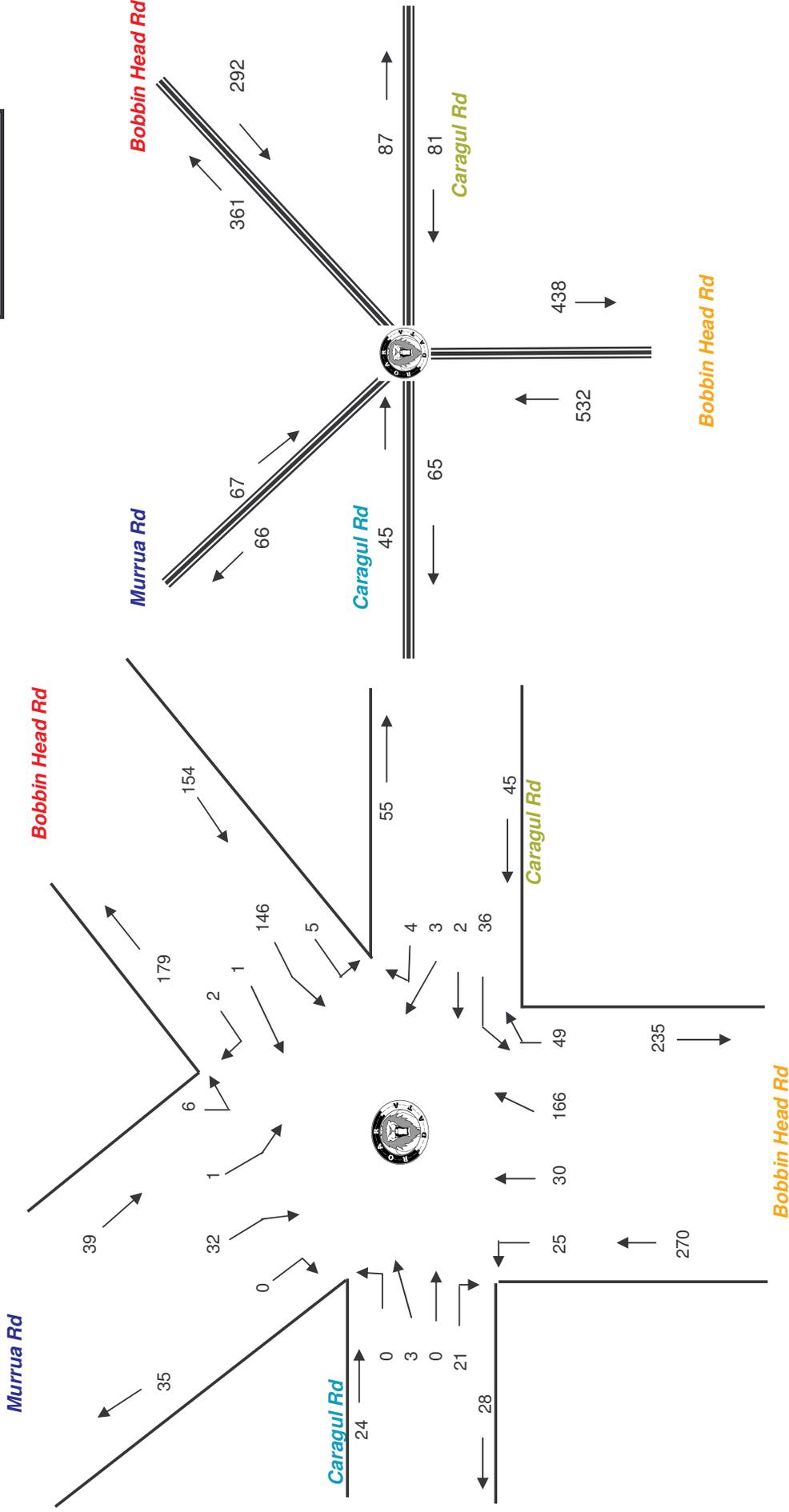


**R.O.A.R. DATA**  
 Reliable, Original & Authentic Results  
 Ph.88196847, Fax 88196849, Mob.0418-239019

Client :Ku-ring-gai Council  
 Job No/Name :1885 NTH. TURRAMURRA Bobbin Head Rd  
 Day/Date :Tuesday 31st July 07

**PM PEAK**  
 1600 - 1700

**TOTAL VOLUMES**  
**FOR PERIODS**  
**COUNTED**



**R.O.A.R. DATA**

Client :Ku-ring-gai Council

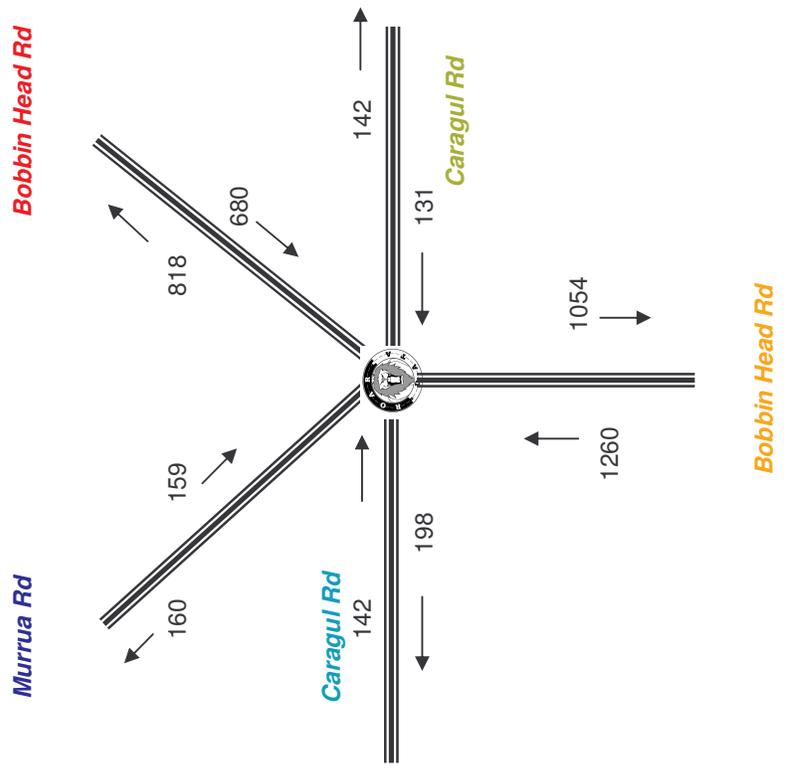
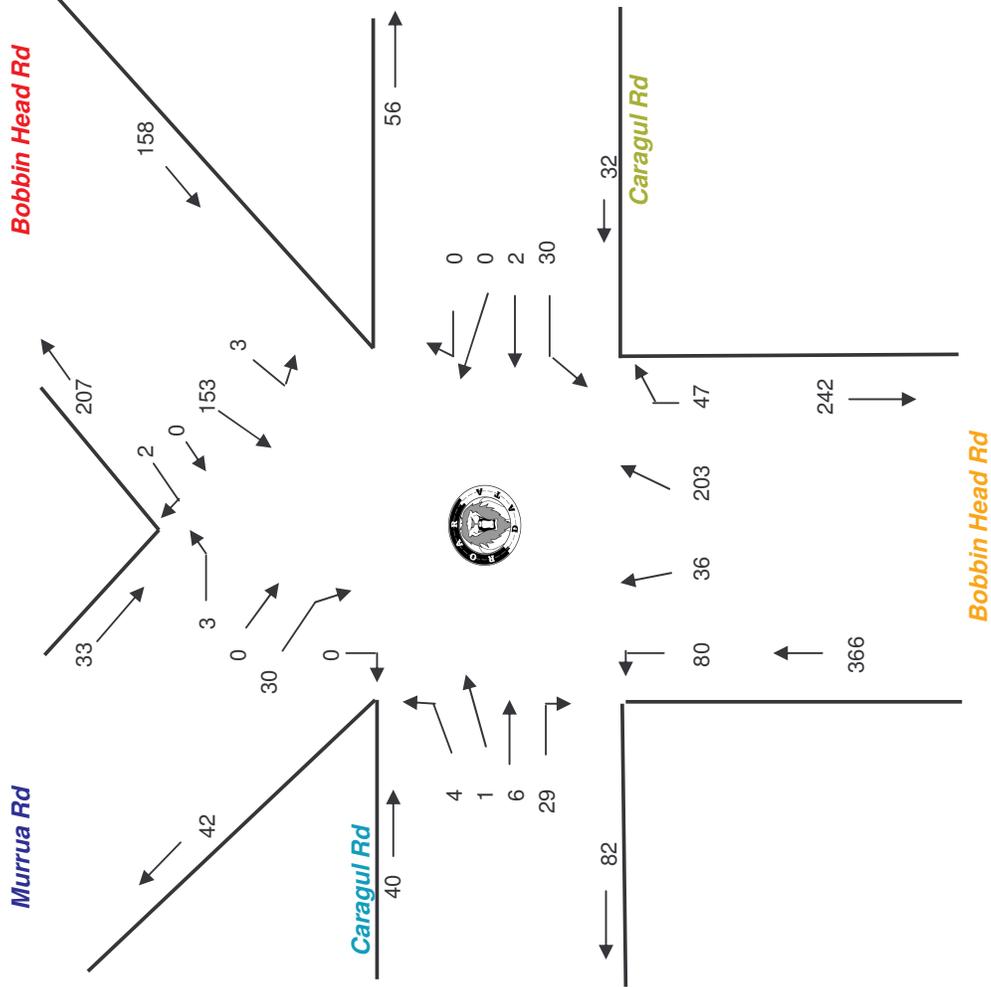


**Reliable, Original & Authentic Results**  
 Ph.88196847, Fax 88196849, Mob.0418-239019

Job No/Name :1885 NTH. TURRAMURRA Bobbin Head Rd  
 Day/Date :Saturday 28th July 07

**PEAK HOUR**  
 1200 - 1300

**TOTAL VOLUMES**  
**FOR PERIODS**  
**COUNTED**



**R.O.A.R. DATA**



Client :Ku-ring-gai Council



# R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Fax 88196849, Mob.0418-239019

Client :Ku-ring-gai Council

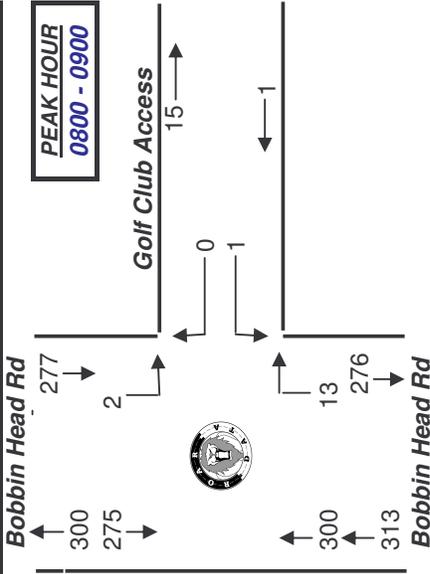
Job No/Name :1885 NTH. TURRAMURRA Bobbin Head Rd

Day/Date :Tuesday 31st July 07

All Vehicles	NORTH		EAST		SOUTH		TOTAL
	Bobbin Head	Bobbin Head	Golf Club	Golf Club	Bobbin Head	Bobbin Head	
Time Per	I	L	R	L	R	I	
0700 - 0715	42	0	0	0	2	38	82
0715 - 0730	52	0	0	0	8	36	96
0730 - 0745	79	1	0	0	5	35	120
0745 - 0800	67	0	0	0	0	37	104
0800 - 0815	71	0	0	0	3	54	128
0815 - 0830	45	0	0	0	4	72	121
0830 - 0845	76	2	0	1	3	78	160
0845 - 0900	83	0	0	0	3	96	182
Period End	515	3	0	1	28	446	993

Peak Per	NORTH		EAST		SOUTH		TOTAL
	Bobbin Head	Bobbin Head	Golf Club	Golf Club	Bobbin Head	Bobbin Head	
0700 - 0800	240	1	0	0	15	146	402
0715 - 0815	269	1	0	0	16	162	448
0730 - 0830	262	1	0	0	12	198	473
0745 - 0845	259	2	0	1	10	241	513
0800 - 0900	275	2	0	1	13	300	591

PEAK HR	275	2	0	1	13	300	591
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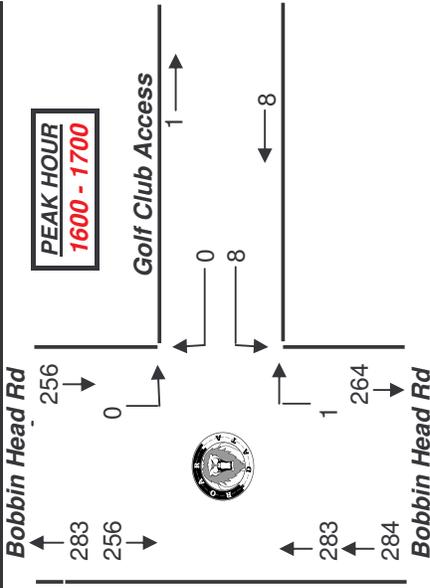


**PEAK HOUR**  
0800 - 0900

All Vehicles	NORTH		EAST		SOUTH		TOTAL
	Bobbin Head	Bobbin Head	Golf Club	Golf Club	Bobbin Head	Bobbin Head	
Time Per	I	L	R	L	R	I	
1600 - 1615	76	0	0	4	0	78	158
1615 - 1630	53	0	0	2	0	72	127
1630 - 1645	59	0	0	2	1	62	124
1645 - 1700	68	0	0	0	0	71	139
1700 - 1715	67	0	0	0	0	75	142
1715 - 1730	53	0	0	1	0	79	133
1730 - 1745	61	0	0	0	0	63	124
1745 - 1800	48	0	0	0	0	49	97
Period End	485	0	0	9	1	549	1044

Peak Per	NORTH		EAST		SOUTH		TOTAL
	Bobbin Head	Bobbin Head	Golf Club	Golf Club	Bobbin Head	Bobbin Head	
1600 - 1700	256	0	0	8	1	283	548
1615 - 1715	247	0	0	4	1	280	532
1630 - 1730	247	0	0	3	1	287	538
1645 - 1745	249	0	0	1	0	288	538
1700 - 1800	229	0	0	1	0	266	496

PEAK HR	256	0	0	8	1	283	548
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**PEAK HOUR**  
1600 - 1700

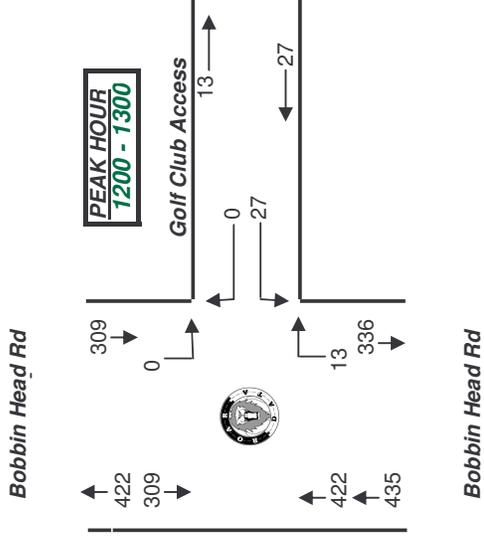


**R.O.A.R. DATA**  
 Reliable, Original & Authentic Results  
 Ph.88196847, Fax 88196849, Mob.0418-239019

Client :Ku-ring-gai Council  
 Job No/Name :1885 NTH. TURRAMURRA Bobbin Head Rd  
 Day/Date :Saturday 28th July 07

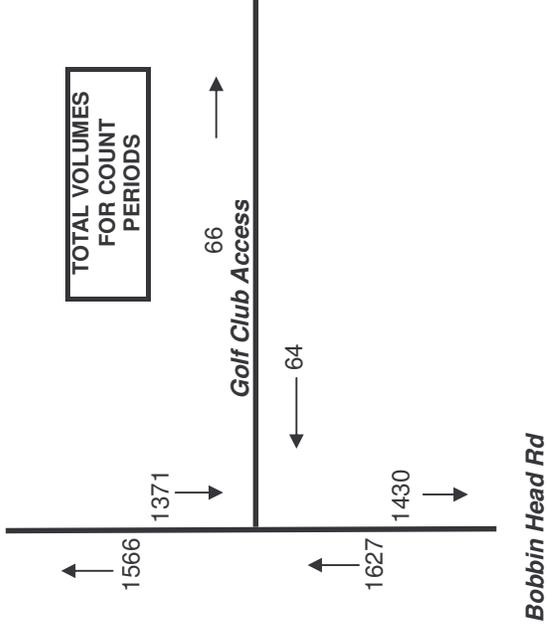
**All Vehicles**

Time Per	NORTH			EAST			SOUTH			TOTAL
	Bobbin Head			Golf Club			Bobbin Head			
	I	R	T	I	R	T	I	R	T	
0800 - 0815	32	0	0	0	0	0	5	56	93	
0815 - 0830	34	1	0	0	0	8	47	90		
0830 - 0845	45	0	0	3	6	55	109			
0845 - 0900	45	0	0	2	2	50	99			
0900 - 0915	81	0	0	0	2	46	129			
0915 - 0930	65	0	1	0	4	60	130			
0930 - 0945	53	0	0	0	2	59	114			
0945 - 1000	71	0	0	2	1	63	137			
1000 - 1015	87	0	0	1	2	86	176			
1015 - 1030	94	0	0	1	2	94	191			
1030 - 1045	72	0	0	4	1	85	162			
1045 - 1100	76	1	1	2	4	94	178			
1100 - 1115	86	0	0	3	3	98	190			
1115 - 1130	82	0	0	5	5	76	168			
1130 - 1145	89	1	0	3	2	84	179			
1145 - 1200	47	0	0	9	1	89	146			
1200 - 1215	96	0	0	8	2	107	213			
1215 - 1230	70	0	0	5	4	113	192			
1230 - 1245	80	0	0	6	5	115	206			
1245 - 1300	63	0	0	8	2	87	160			
<b>Period End</b>	<b>1368</b>	<b>3</b>	<b>2</b>	<b>62</b>	<b>63</b>	<b>1564</b>	<b>3062</b>			



**Bobbin Head Rd**

Peak Per	NORTH			EAST			SOUTH			TOTAL
	Bobbin Head			Golf Club			Bobbin Head			
	I	R	T	I	R	T	I	R	T	
0800 - 0900	156	1	0	5	21	208	391			
0815 - 0915	205	1	0	5	18	198	427			
0830 - 0930	236	0	1	5	14	211	467			
0845 - 0945	244	0	1	2	10	215	472			
0900 - 1000	270	0	1	2	9	228	510			
0915 - 1015	276	0	1	3	9	268	557			
0930 - 1030	305	0	0	4	7	302	618			
0945 - 1045	324	0	0	8	6	328	666			
1000 - 1100	329	1	1	8	9	359	707			
1015 - 1115	328	1	1	10	10	371	721			
1030 - 1130	316	1	1	14	13	353	698			
1045 - 1145	333	2	1	13	14	352	715			
1100 - 1200	304	1	0	20	11	347	683			
1115 - 1215	314	1	0	25	10	356	706			
1130 - 1230	302	1	0	25	9	393	730			
1145 - 1245	293	0	0	28	12	424	757			
<b>1200 - 1300</b>	<b>309</b>	<b>0</b>	<b>0</b>	<b>27</b>	<b>13</b>	<b>422</b>	<b>771</b>			



PEAK HR	309	0	0	27	13	422	771
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# Appendix B

## SIDRA Results – Existing

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# Movement Summary

## Bobbin Head Road / Burns Road

### Tuesday AM Peak

Signalised - Fixed time

Cycle Time = 150 seconds

### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>Bobbin Head-S</b>										
1	L	29	0.0	0.157	32.4	LOS C	12	0.59	0.70	30.6
2	T	295	0.0	0.344	30.4	LOS C	107	0.71	0.65	31.5
3	R	399	0.0	1.142	228.2	LOS F	395	1.00	1.65	7.9
<b>Approach</b>		<b>723</b>	<b>0.0</b>	<b>1.141</b>	<b>139.7</b>	<b>LOS F</b>	<b>395</b>	<b>0.86</b>	<b>1.20</b>	<b>11.8</b>
<b>Burns-E</b>										
4	L	160	0.0	1.138	206.1	LOS F	1027	1.00	1.85	9.0
5	T	924	0.0	1.138	198.8	LOS F	1027	1.00	1.84	9.3
6	R	115	0.0	1.138	236.4	LOS F	145	1.00	1.39	8.0
<b>Approach</b>		<b>1199</b>	<b>0.0</b>	<b>1.138</b>	<b>203.4</b>	<b>LOS F</b>	<b>1027</b>	<b>1.00</b>	<b>1.80</b>	<b>9.1</b>
<b>Bobbin Head-N</b>										
7	L	159	0.0	0.554	39.7	LOS C	139	0.83	0.83	27.8
8	T	263	0.0	0.554	35.9	LOS C	139	0.84	0.75	29.1
9	R	178	0.0	0.554	49.6	LOS D	106	0.86	0.83	24.4
<b>Approach</b>		<b>600</b>	<b>0.0</b>	<b>0.555</b>	<b>41.0</b>	<b>LOS C</b>	<b>139</b>	<b>0.84</b>	<b>0.80</b>	<b>27.2</b>
<b>Burns-W</b>										
10	L	98	0.0	0.209	30.6	LOS C	37	0.58	0.74	32.5
11	T	780	0.0	0.833	35.9	LOS C	335	0.94	0.86	30.2
<b>Approach</b>		<b>878</b>	<b>0.0</b>	<b>0.833</b>	<b>35.3</b>	<b>LOS C</b>	<b>335</b>	<b>0.90</b>	<b>0.85</b>	<b>30.5</b>
<b>All Vehicles</b>		<b>3400</b>	<b>0.0</b>	<b>1.142</b>	<b>117.8</b>	<b>LOS F</b>	<b>1027</b>	<b>0.92</b>	<b>1.25</b>	<b>13.9</b>

### Pedestrian Movements

Mov ID	Dem Flow (ped/h)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate
P1	53	26.4	LOS C	0	0.59	0.59
P3	53	27.0	LOS C	0	0.60	0.60
P7	53	28.2	LOS C	0	0.61	0.61
<b>All Peds</b>	<b>159</b>	<b>27.2</b>	<b>LOS B</b>	<b>0</b>	<b>0.60</b>	<b>0.60</b>

Symbols which may appear in this table:

Following Degree of Saturation

# x = 1.00 for Short Lane with resulting Excess Flow

\* x = 1.00 due to minimum capacity

Following LOS

# - Based on density for continuous movements

Following Queue

# - Density for continuous movement



Site: Tue AM

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# Movement Summary

## Bobbin Head Road / Burns Road

### Tuesday PM Peak

Signalised - Fixed time

Cycle Time = 70 seconds

### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>Bobbin Head-S</b>										
1	L	77	0.0	0.276	27.8	LOS B	20	0.78	0.74	32.9
2	T	298	0.0	0.535	24.4	LOS B	73	0.89	0.77	34.7
3	R	206	0.0	0.849	47.0	LOS D	70	1.00	1.02	25.2
<b>Approach</b>		<b>581</b>	<b>0.0</b>	<b>0.849</b>	<b>32.9</b>	<b>LOS C</b>	<b>73</b>	<b>0.92</b>	<b>0.85</b>	<b>30.4</b>
<b>Burns-E</b>										
4	L	111	0.0	0.878	32.9	LOS C	240	0.95	1.06	31.4
5	T	1152	0.0	0.879	27.9	LOS B	240	0.96	1.04	34.0
6	R	118	0.0	0.879	43.8	LOS D	139	1.00	1.10	27.2
<b>Approach</b>		<b>1381</b>	<b>0.0</b>	<b>0.879</b>	<b>29.7</b>	<b>LOS C</b>	<b>240</b>	<b>0.96</b>	<b>1.05</b>	<b>33.0</b>
<b>Bobbin Head-N</b>										
7	L	97	0.0	0.582	27.2	LOS B	69	0.91	0.83	33.3
8	T	205	0.0	0.582	21.3	LOS B	69	0.91	0.79	36.6
9	R	133	0.0	0.598	39.4	LOS C	43	0.98	0.82	27.8
<b>Approach</b>		<b>435</b>	<b>0.0</b>	<b>0.598</b>	<b>28.2</b>	<b>LOS B</b>	<b>69</b>	<b>0.93</b>	<b>0.81</b>	<b>32.7</b>
<b>Burns-W</b>										
10	L	112	0.0	0.135	16.5	LOS B	19	0.51	0.74	41.2
11	T	713	0.0	0.674	12.4	LOS A	130	0.78	0.70	44.7
<b>Approach</b>		<b>825</b>	<b>0.0</b>	<b>0.674</b>	<b>13.0</b>	<b>LOS A</b>	<b>130</b>	<b>0.74</b>	<b>0.70</b>	<b>44.2</b>
<b>All Vehicles</b>		<b>3222</b>	<b>0.0</b>	<b>0.879</b>	<b>25.8</b>	<b>LOS B</b>	<b>240</b>	<b>0.89</b>	<b>0.89</b>	<b>34.8</b>

### Pedestrian Movements

Mov ID	Dem Flow (ped/h)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate
P1	53	13.2	LOS B	0	0.61	0.61
P3	53	22.4	LOS C	0	0.80	0.80
P7	53	24.0	LOS C	0	0.83	0.83
<b>All Peds</b>	<b>159</b>	<b>19.9</b>	<b>LOS B</b>	<b>0</b>	<b>0.75</b>	<b>0.75</b>

Symbols which may appear in this table:

Following Degree of Saturation

# x = 1.00 for Short Lane with resulting Excess Flow

\* x = 1.00 due to minimum capacity

Following LOS

# - Based on density for continuous movements

Following Queue

# - Density for continuous movement



Site: Tue PM

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# Movement Summary

## Bobbin Head Road / Burns Road

### Saturday Peak

Signalised - Fixed time

Cycle Time = 150 seconds

### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>Bobbin Head-S</b>										
1	L	75	0.0	0.455	39.8	LOS C	34	0.69	0.73	27.6
2	T	336	0.0	0.462	38.9	LOS C	134	0.81	0.73	27.9
3	R	254	0.0	1.211	292.0	LOS F	280	1.00	1.65	6.3
<b>Approach</b>		<b>665</b>	<b>0.0</b>	<b>1.211</b>	<b>135.7</b>	<b>LOS F</b>	<b>280</b>	<b>0.87</b>	<b>1.08</b>	<b>12.1</b>
<b>Burns-E</b>										
4	L	165	0.0	1.086	157.3	LOS F	1000	1.00	1.63	11.2
5	T	985	0.0	1.087	149.1	LOS F	1000	1.00	1.63	11.8
6	R	203	0.0	1.179	273.5	LOS F	224	1.00	1.57	7.0
<b>Approach</b>		<b>1353</b>	<b>0.0</b>	<b>1.180</b>	<b>168.8</b>	<b>LOS F</b>	<b>1000</b>	<b>1.00</b>	<b>1.62</b>	<b>10.6</b>
<b>Bobbin Head-N</b>										
7	L	135	0.0	0.667	48.0	LOS D	181	0.90	0.86	25.0
8	T	298	0.0	0.667	42.1	LOS C	181	0.90	0.82	26.7
9	R	176	0.0	0.681	64.7	LOS E	95	0.96	0.86	20.7
<b>Approach</b>		<b>609</b>	<b>0.0</b>	<b>0.681</b>	<b>50.0</b>	<b>LOS D</b>	<b>181</b>	<b>0.92</b>	<b>0.84</b>	<b>24.3</b>
<b>Burns-W</b>										
10	L	139	0.0	0.267	25.6	LOS B	45	0.52	0.75	35.1
11	T	759	0.0	0.712	26.6	LOS B	278	0.81	0.74	34.7
<b>Approach</b>		<b>898</b>	<b>0.0</b>	<b>0.712</b>	<b>26.5</b>	<b>LOS B</b>	<b>278</b>	<b>0.76</b>	<b>0.74</b>	<b>34.7</b>
<b>All Vehicles</b>		<b>3525</b>	<b>0.0</b>	<b>1.211</b>	<b>105.8</b>	<b>LOS F</b>	<b>1000</b>	<b>0.90</b>	<b>1.16</b>	<b>15.1</b>

### Pedestrian Movements

Mov ID	Dem Flow (ped/h)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate
P1	53	20.8	LOS C	0	0.53	0.53
P3	53	33.3	LOS D	0	0.67	0.67
P7	53	34.7	LOS D	0	0.68	0.68
<b>All Peds</b>	<b>159</b>	<b>29.6</b>	<b>LOS C</b>	<b>0</b>	<b>0.62</b>	<b>0.62</b>

Symbols which may appear in this table:

Following Degree of Saturation

# x = 1.00 for Short Lane with resulting Excess Flow

\* x = 1.00 due to minimum capacity

Following LOS

# - Based on density for continuous movements

Following Queue

# - Density for continuous movement



Site: Sat Peak

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# Movement Summary

## Bobbin Head Rd / Curagul Rd

### Tuesday AM Peak

#### Roundabout

#### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>Bobbin Head - S</b>										
1	L	47	0.0	0.190	4.9	LOS A	9	0.07	0.44	49.1
3	R	257	0.0	0.191	10.2	LOS A	9	0.07	0.65	47.1
<b>Approach</b>		<b>304</b>	<b>0.0</b>	<b>0.191</b>	<b>9.4</b>	<b>LOS A</b>	<b>9</b>	<b>0.07</b>	<b>0.61</b>	<b>47.4</b>
<b>Caragul Rd - E</b>										
4	L	26	0.0	0.027	6.2	LOS A	1	0.34	0.50	50.0
5	T	1	0.0	0.026	5.8	LOS A	1	0.34	0.48	50.3
6	R	2	0.0	0.027	13.3	LOS A	1	0.34	0.66	44.5
<b>Approach</b>		<b>29</b>	<b>0.0</b>	<b>0.027</b>	<b>6.7</b>	<b>LOS A</b>	<b>1</b>	<b>0.34</b>	<b>0.51</b>	<b>49.5</b>
<b>Bobbin Head - NE</b>										
24	L	201	0.0	0.161	4.6	LOS A	6	0.20	0.40	52.0
26	R	8	0.0	0.160	11.4	LOS A	6	0.20	0.65	45.9
<b>Approach</b>		<b>209</b>	<b>0.0</b>	<b>0.161</b>	<b>4.9</b>	<b>LOS A</b>	<b>6</b>	<b>0.20</b>	<b>0.41</b>	<b>51.8</b>
<b>Murrua Rd - NW</b>										
27	L	3	0.0	0.023	6.4	LOS A	1	0.35	0.51	49.9
29	R	22	0.0	0.023	11.1	LOS A	1	0.35	0.64	46.0
<b>Approach</b>		<b>25</b>	<b>0.0</b>	<b>0.023</b>	<b>10.5</b>	<b>LOS A</b>	<b>1</b>	<b>0.35</b>	<b>0.62</b>	<b>46.4</b>
<b>Caragul Rd-W</b>										
10	L	4	0.0	0.032	5.8	LOS A	1	0.35	0.49	50.4
11	T	1	0.0	0.031	5.4	LOS A	1	0.35	0.47	50.8
12	R	29	0.0	0.032	12.3	LOS A	1	0.35	0.65	45.2
<b>Approach</b>		<b>34</b>	<b>0.0</b>	<b>0.032</b>	<b>11.3</b>	<b>LOS A</b>	<b>1</b>	<b>0.35</b>	<b>0.62</b>	<b>45.9</b>
<b>All Vehicles</b>		<b>601</b>	<b>0.0</b>	<b>0.191</b>	<b>7.8</b>	<b>LOS A</b>	<b>9</b>	<b>0.16</b>	<b>0.54</b>	<b>48.7</b>

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\* x = 1.00 due to minimum capacity

Following LOS

# - Based on density for continuous movements

Following Queue

# - Density for continuous movement



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# Movement Summary

## Bobbin Head Rd / Curagul Rd

### Tuesday PM Peak

#### Roundabout

#### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>Bobbin Head - S</b>										
1	L	58	0.0	0.180	4.9	LOS A	9	0.08	0.44	48.8
3	R	226	0.0	0.180	10.4	LOS A	9	0.08	0.65	47.0
<b>Approach</b>		<b>284</b>	<b>0.0</b>	<b>0.180</b>	<b>9.2</b>	<b>LOS A</b>	<b>9</b>	<b>0.08</b>	<b>0.60</b>	<b>47.3</b>
<b>Caragul Rd - E</b>										
4	L	38	0.0	0.042	6.1	LOS A	2	0.31	0.50	50.2
5	T	2	0.0	0.042	5.7	LOS A	2	0.31	0.47	50.6
6	R	7	0.0	0.042	12.1	LOS A	2	0.31	0.65	45.2
<b>Approach</b>		<b>47</b>	<b>0.0</b>	<b>0.042</b>	<b>7.0</b>	<b>LOS A</b>	<b>2</b>	<b>0.31</b>	<b>0.52</b>	<b>49.3</b>
<b>Bobbin Head - NE</b>										
24	L	159	0.0	0.132	4.8	LOS A	5	0.23	0.42	51.8
26	R	3	0.0	0.130	11.2	LOS A	5	0.23	0.65	45.9
<b>Approach</b>		<b>162</b>	<b>0.0</b>	<b>0.132</b>	<b>4.9</b>	<b>LOS A</b>	<b>5</b>	<b>0.23</b>	<b>0.42</b>	<b>51.6</b>
<b>Murrua Rd - NW</b>										
27	L	7	0.0	0.037	6.1	LOS A	1	0.33	0.50	50.1
29	R	34	0.0	0.037	11.0	LOS A	1	0.33	0.64	46.1
<b>Approach</b>		<b>41</b>	<b>0.0</b>	<b>0.037</b>	<b>10.1</b>	<b>LOS A</b>	<b>1</b>	<b>0.33</b>	<b>0.62</b>	<b>46.7</b>
<b>Caragul Rd-W</b>										
10	L	3	0.0	0.024	5.2	LOS A	1	0.34	0.45	51.0
11	T	1	0.0	0.024	5.3	LOS A	1	0.34	0.45	50.9
12	R	22	0.0	0.024	12.2	LOS A	1	0.34	0.64	45.3
<b>Approach</b>		<b>26</b>	<b>0.0</b>	<b>0.024</b>	<b>11.1</b>	<b>LOS A</b>	<b>1</b>	<b>0.34</b>	<b>0.61</b>	<b>46.0</b>
<b>All Vehicles</b>		<b>560</b>	<b>0.0</b>	<b>0.180</b>	<b>7.9</b>	<b>LOS A</b>	<b>9</b>	<b>0.17</b>	<b>0.55</b>	<b>48.5</b>

Symbols which may appear in this table:

Following Degree of Saturation

# x = 1.00 for Short Lane with resulting Excess Flow

\* x = 1.00 due to minimum capacity

Following LOS

# - Based on density for continuous movements

Following Queue

# - Density for continuous movement



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# Movement Summary

## Bobbin Head Rd / Curagul Rd

### Saturday Peak

Roundabout

### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>Bobbin Head - S</b>										
1	L	122	0.0	0.230	4.8	LOS A	12	0.05	0.45	47.1
3	R	263	0.0	0.230	10.3	LOS A	12	0.05	0.66	47.1
<b>Approach</b>		<b>385</b>	<b>0.0</b>	<b>0.230</b>	<b>8.5</b>	<b>LOS A</b>	<b>12</b>	<b>0.05</b>	<b>0.59</b>	<b>47.1</b>
<b>Caragul Rd - E</b>										
4	L	32	0.0	0.031	6.1	LOS A	1	0.32	0.49	50.1
5	T	2	0.0	0.031	5.7	LOS A	1	0.32	0.47	50.5
6	R	1	0.0	0.031	13.1	LOS A	1	0.32	0.66	44.6
<b>Approach</b>		<b>35</b>	<b>0.0</b>	<b>0.031</b>	<b>6.3</b>	<b>LOS A</b>	<b>1</b>	<b>0.32</b>	<b>0.50</b>	<b>49.9</b>
<b>Bobbin Head - NE</b>										
24	L	164	0.0	0.136	4.8	LOS A	5	0.24	0.42	51.7
26	R	2	0.0	0.133	11.7	LOS A	5	0.24	0.66	45.6
<b>Approach</b>		<b>166</b>	<b>0.0</b>	<b>0.136</b>	<b>4.9</b>	<b>LOS A</b>	<b>5</b>	<b>0.24</b>	<b>0.42</b>	<b>51.6</b>
<b>Murrua Rd - NW</b>										
27	L	3	0.0	0.033	6.4	LOS A	1	0.36	0.52	49.8
29	R	32	0.0	0.033	11.1	LOS A	1	0.36	0.64	46.0
<b>Approach</b>		<b>35</b>	<b>0.0</b>	<b>0.033</b>	<b>10.7</b>	<b>LOS A</b>	<b>1</b>	<b>0.36</b>	<b>0.63</b>	<b>46.3</b>
<b>Caragul Rd-W</b>										
10	L	5	0.0	0.039	6.9	LOS A	1	0.36	0.54	49.4
11	T	6	0.0	0.039	5.5	LOS A	1	0.36	0.47	50.7
12	R	31	0.0	0.039	12.3	LOS A	1	0.36	0.65	45.2
<b>Approach</b>		<b>42</b>	<b>0.0</b>	<b>0.039</b>	<b>10.7</b>	<b>LOS A</b>	<b>1</b>	<b>0.36</b>	<b>0.61</b>	<b>46.3</b>
<b>All Vehicles</b>		<b>663</b>	<b>0.0</b>	<b>0.230</b>	<b>7.8</b>	<b>LOS A</b>	<b>12</b>	<b>0.15</b>	<b>0.55</b>	<b>48.2</b>

Symbols which may appear in this table:

Following Degree of Saturation  
 # x = 1.00 for Short Lane with resulting Excess Flow  
 \* x = 1.00 due to minimum capacity

Following LOS  
 # - Based on density for continuous movements

Following Queue  
 # - Density for continuous movement



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# Movement Summary

## Bobbin Head Rd / Golf Club Entry

### Tuesday AM Peak

Give-way

### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>Bobbin Head-S</b>										
2	T	316	0.0	0.175	1.5	LOS A	12	0.47	0.00	46.0
3	R	14	0.0	0.175	10.0	LOS A	12	0.47	0.72	46.8
<b>Approach</b>		<b>330</b>	<b>0.0</b>	<b>0.175</b>	<b>1.9</b>	<b>LOS A</b>	<b>12</b>	<b>0.47</b>	<b>0.03</b>	<b>46.0</b>
<b>Golf Course-E</b>										
4	L	1	0.0	0.004	13.2	LOS A	0	0.51	0.60	44.0
6	R	1	0.0	0.004	13.5	LOS A	0	0.51	0.73	43.6
<b>Approach</b>		<b>2</b>	<b>0.0</b>	<b>0.004</b>	<b>13.3</b>	<b>LOS A</b>	<b>0</b>	<b>0.51</b>	<b>0.67</b>	<b>43.8</b>
<b>Bobbin Head-N</b>										
7	L	2	0.0	0.154	8.2	LOS A	0	0.00	0.67	49.0
8	T	289	0.0	0.149	0.0	LOS A	0	0.00	0.00	60.0
<b>Approach</b>		<b>291</b>	<b>0.0</b>	<b>0.149</b>	<b>0.1</b>	<b>LOS A</b>		<b>0.00</b>	<b>0.00</b>	<b>59.9</b>
<b>All Vehicles</b>		<b>623</b>	<b>0.0</b>	<b>0.175</b>	<b>1.1</b>	<b>Not Applicable</b>	<b>12</b>	<b>0.25</b>	<b>0.02</b>	<b>51.8</b>

Symbols which may appear in this table:

Following Degree of Saturation  
 # x = 1.00 for Short Lane with resulting Excess Flow  
 \* x = 1.00 due to minimum capacity

Following LOS  
 # - Based on density for continuous movements

Following Queue  
 # - Density for continuous movement



Site: Tue AM Peak  
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# Movement Summary

## Bobbin Head Rd / Golf Club Entry

### Tuesday PM Peak

Give-way

### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>Bobbin Head-S</b>										
2	T	298	0.0	0.154	1.3	LOS A	10	0.45	0.00	46.1
3	R	1	0.0	0.143	9.8	LOS A	10	0.45	0.70	46.9
<b>Approach</b>		<b>299</b>	<b>0.0</b>	<b>0.154</b>	<b>1.4</b>	<b>LOS A</b>	<b>10</b>	<b>0.45</b>	<b>0.00</b>	<b>46.1</b>
<b>Golf Course-E</b>										
4	L	8	0.0	0.012	10.2	LOS A	0	0.39	0.63	46.8
6	R	1	0.0	0.012	10.5	LOS A	0	0.39	0.75	46.5
<b>Approach</b>		<b>9</b>	<b>0.0</b>	<b>0.012</b>	<b>10.2</b>	<b>LOS A</b>	<b>0</b>	<b>0.39</b>	<b>0.65</b>	<b>46.8</b>
<b>Bobbin Head-N</b>										
7	L	1	0.0	0.143	8.2	LOS A	0	0.00	0.67	49.0
8	T	269	0.0	0.139	0.0	LOS A	0	0.00	0.00	60.0
<b>Approach</b>		<b>270</b>	<b>0.0</b>	<b>0.138</b>	<b>0.0</b>	<b>LOS A</b>		<b>0.00</b>	<b>0.00</b>	<b>60.0</b>
<b>All Vehicles</b>		<b>578</b>	<b>0.0</b>	<b>0.154</b>	<b>0.9</b>	<b>Not Applicable</b>	<b>10</b>	<b>0.24</b>	<b>0.01</b>	<b>51.9</b>

Symbols which may appear in this table:

Following Degree of Saturation  
 # x = 1.00 for Short Lane with resulting Excess Flow  
 \* x = 1.00 due to minimum capacity

Following LOS  
 # - Based on density for continuous movements

Following Queue  
 # - Density for continuous movement



Site: Tue PM Peak  
 P:\GS10000 - 10990\GS10260\Sidra\FL\Bobbin Head\_Golf Course Entry.aap  
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# Movement Summary

## Bobbin Head Rd / Golf Club Entry

### Saturday Peak

Give-way

### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>Bobbin Head-S</b>										
2	T	444	0.0	0.241	1.9	LOS A	18	0.54	0.00	45.4
3	R	14	0.0	0.241	10.4	LOS A	18	0.54	0.75	46.6
<b>Approach</b>		<b>458</b>	<b>0.0</b>	<b>0.241</b>	<b>2.2</b>	<b>LOS A</b>	<b>18</b>	<b>0.54</b>	<b>0.02</b>	<b>45.5</b>
<b>Golf Course-E</b>										
4	L	28	0.0	0.038	10.4	LOS A	1	0.42	0.68	46.7
6	R	1	0.0	0.038	10.7	LOS A	1	0.42	0.83	46.3
<b>Approach</b>		<b>29</b>	<b>0.0</b>	<b>0.038</b>	<b>10.4</b>	<b>LOS A</b>	<b>1</b>	<b>0.42</b>	<b>0.69</b>	<b>46.6</b>
<b>Bobbin Head-N</b>										
7	L	1	0.0	0.167	8.2	LOS A	0	0.00	0.67	49.0
8	T	325	0.0	0.167	0.0	LOS A	0	0.00	0.00	60.0
<b>Approach</b>		<b>326</b>	<b>0.0</b>	<b>0.167</b>	<b>0.0</b>	<b>LOS A</b>		<b>0.00</b>	<b>0.00</b>	<b>60.0</b>
<b>All Vehicles</b>		<b>813</b>	<b>0.0</b>	<b>0.241</b>	<b>1.6</b>	<b>Not Applicable</b>	<b>18</b>	<b>0.32</b>	<b>0.04</b>	<b>50.6</b>

Symbols which may appear in this table:

Following Degree of Saturation  
 # x = 1.00 for Short Lane with resulting Excess Flow  
 \* x = 1.00 due to minimum capacity

Following LOS  
 # - Based on density for continuous movements

Following Queue  
 # - Density for continuous movement



Site: Sat Peak  
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# Appendix C

## Parking Inventory and Demand Survey

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**R.O.A.R. DATA**  
**Reliable, Original & Authentic Results**

Ph.88196847, Fax 88196849, Mob.0418-239019

Client  
 Job No/Name  
 Day/Date

:Ku-ring-gai Council  
 :1885 NTH. TURRAMURRA Bobbin Head Rd  
 :Tuesday 31st July 07

**TIMES**

Zone	Location	Capacity	0700	0800	0900	1600	1700	1800
A	Bobbin Head Rd E/Side	18	0	0	0	1	0	0
B	Bobbin Head Rd E/Side	11	0	0	0	0	0	0
C	Bobbin Head Rd E/Side	11	0	0	0	0	2	0
D	Bobbin Head Rd E/Side	4	0	0	0	0	0	0
E	Bobbin Head Rd E/Side	4	0	0	0	0	0	0
F	Bobbin Head Rd E/Side	8	0	0	0	1	1	0
G	Bobbin Head Rd E/Side	12	0	0	0	0	0	0
H	Bobbin Head Rd E/Side	8	0	0	0	0	0	0
I	Bobbin Head Rd W/Side	6	0	0	0	0	0	0
J	Bobbin Head Rd W/Side	10	0	0	0	0	0	0
K	Bobbin Head Rd W/Side	8	0	0	0	0	0	1
L	Bobbin Head Rd W/Side	6	1	1	1	1	1	1
M	Bobbin Head Rd W/Side	2	0	0	0	0	0	0
N	Bobbin Head Rd W/Side	7	0	0	0	0	0	0
O	Bobbin Head Rd W/Side	9	1	1	1	1	0	0
P	Bobbin Head Rd W/Side	14	2	4	3	4	0	0
P	Bus Parking	2	0	0	0	1	0	0
<b>Total Vehicles Parked</b>		<b>140</b>	<b>4</b>	<b>6</b>	<b>5</b>	<b>9</b>	<b>4</b>	<b>2</b>
<b>Number of Vacant spaces</b>			136	134	135	131	136	138
<b>% of Capacity used</b>			<b>2.9%</b>	<b>4.3%</b>	<b>3.6%</b>	<b>6.4%</b>	<b>2.9%</b>	<b>1.4%</b>



**R.O.A.R. DATA**  
*Reliable, Original & Authentic Results*

Ph.88196847, Fax 88196849, Mob.0418-239019

Client

:Ku-ring-gai Council

Job No/Name

:1885 Nth. Turramurra Bobbin Head Rd

Day/Date

:Saturday 28th July 07

Zone	Location	Capacity	0800	0900	1000	1100	1200	1300
A	Bobbin Head Rd E/Side	18	8	17	16	18	18	18
B	Bobbin Head Rd E/Side	11	7	10	8	11	11	10
C	Bobbin Head Rd E/Side	11	0	0	0	0	3	8
D	Bobbin Head Rd E/Side	4	0	0	0	0	0	0
E	Bobbin Head Rd E/Side	4	0	0	0	0	0	0
F	Bobbin Head Rd E/Side	8	0	0	0	0	0	0
G	Bobbin Head Rd E/Side	12	0	0	0	0	0	0
H	Bobbin Head Rd E/Side	8	0	0	0	0	0	0
I	Bobbin Head Rd W/Side	6	0	0	0	0	0	0
J	Bobbin Head Rd W/Side	10	0	0	0	0	0	0
K	Bobbin Head Rd W/Side	8	0	0	0	0	0	0
L	Bobbin Head Rd W/Side	6	3	0	0	1	1	1
M	Bobbin Head Rd W/Side	2	0	0	1	0	0	2
N	Bobbin Head Rd W/Side	7	1	6	6	5	6	5
O	Bobbin Head Rd W/Side	9	8	7	8	9	8	9
P	Bobbin Head Rd W/Side	14	12	14	14	14	14	14
P	Bus Parking	2	0	1	2	2	1	2
<b>Total Vehicles Parked</b>		<b>140</b>	<b>39</b>	<b>55</b>	<b>55</b>	<b>60</b>	<b>62</b>	<b>69</b>
<b>Number of Vacant spaces</b>			101	85	85	80	78	71
<b>% of Capacity used</b>			<b>27.5%</b>	<b>39.3%</b>	<b>39.3%</b>	<b>42.9%</b>	<b>44.3%</b>	<b>49.3%</b>



**R.O.A.R. DATA**

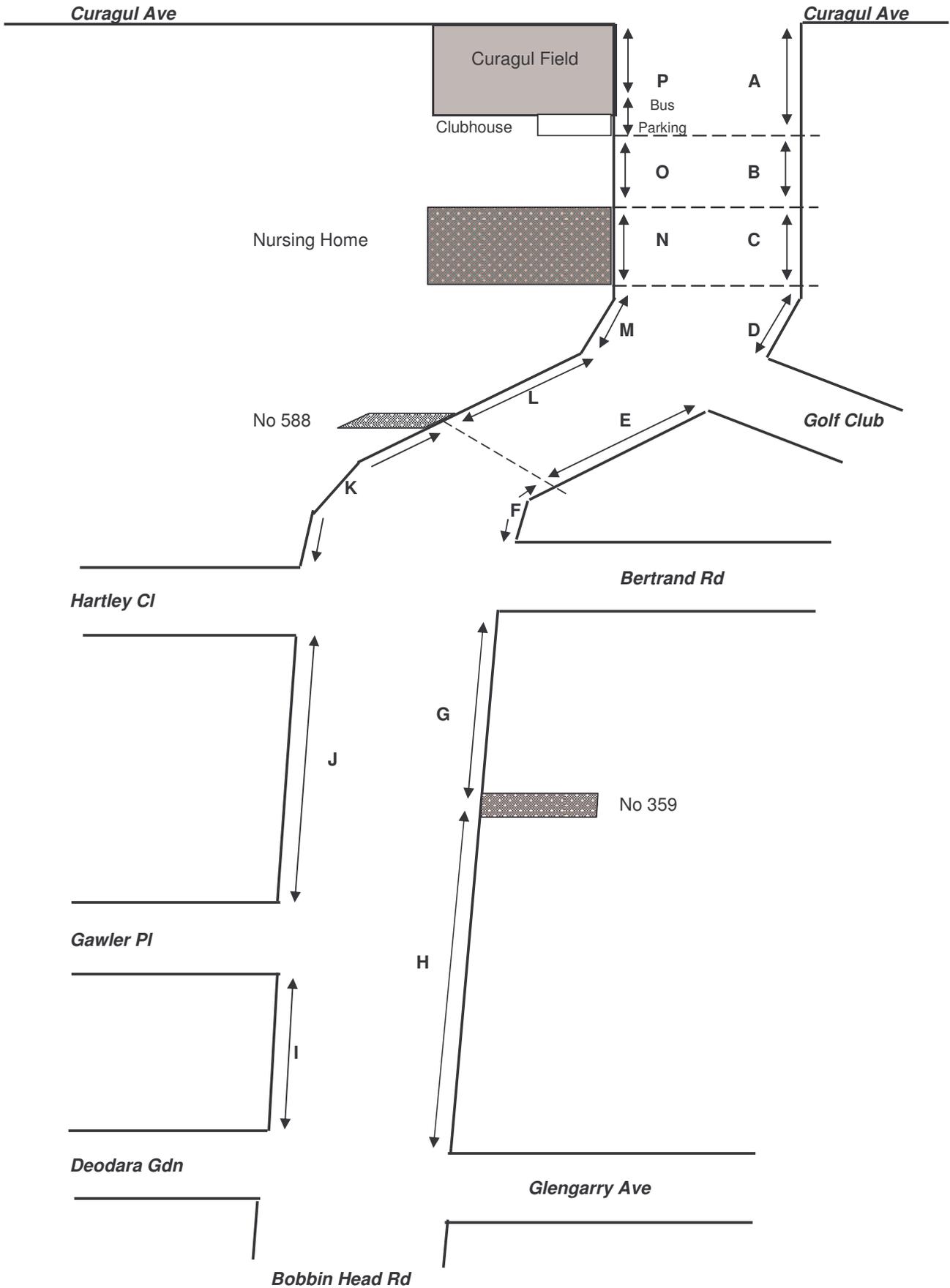
*Reliable, Original & Authentic Results*

Ph.88196847, Fax 88196849, Mob.0418-239019

Client :Ku-ring-gai Council

Job No/Name :1885 Nth.Turramurra Bobbin Head Rd

Day/Date :Saturday 28th July 07



# Appendix D

## North Turrumurra Recreation Area (NTRA) Master Plan

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# Appendix E

Sidra Results – Bobbin Head Road/Burns Road  
Council Upgrade Design (Existing & Future)

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# Movement Summary

## Bobbin Head Road/Burns Road Proposed Layout

### Saturday Peak

Signalised - Fixed time

Cycle Time = 100 seconds

### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>Bobbin Head Rd-S</b>										
1	L	75	0.0	0.349	33.8	LOS C	26	0.75	0.74	28.5
2	T	336	0.0	0.957	69.4	LOS E	163	1.00	1.24	18.6
3	R	254	0.0	1.000#	53.4	LOS D	92	1.00	0.83	22.7
<b>Approach</b>		<b>647</b>	<b>0.0</b>	<b>1.000</b>	<b>61.3</b>	<b>LOS E</b>	<b>163</b>	<b>1.00</b>	<b>1.07</b>	<b>20.8</b>
<b>Burns Rd-E</b>										
4	L	165	0.0	0.981	83.5	LOS F	274	1.00	1.30	17.5
5	T	985	0.0	0.982	75.5	LOS F	291	1.00	1.30	19.5
6	R	203	0.0	0.994	93.7	LOS F	109	1.00	1.22	16.1
<b>Approach</b>		<b>1353</b>	<b>0.0</b>	<b>0.994</b>	<b>79.2</b>	<b>LOS F</b>	<b>291</b>	<b>1.00</b>	<b>1.29</b>	<b>18.7</b>
<b>Bobbin Head Rd-N</b>										
7	L	135	0.0	0.712	24.3	LOS B	37	0.61	0.78	32.8
8	T	298	0.0	0.804	46.6	LOS D	114	1.00	0.96	23.5
9	R	176	0.0	0.632	51.8	LOS D	70	0.99	0.83	23.1
<b>Approach</b>		<b>609</b>	<b>0.0</b>	<b>0.804</b>	<b>43.2</b>	<b>LOS D</b>	<b>114</b>	<b>0.91</b>	<b>0.88</b>	<b>25.0</b>
<b>Burns Rd-W</b>										
10	L	139	0.0	0.663	38.6	LOS C	126	0.92	0.85	28.1
11	T	759	0.0	0.813	35.9	LOS C	170	0.96	0.89	30.2
12	R	1	0.0	0.005	50.1	LOS D	0	0.91	0.60	24.3
<b>Approach</b>		<b>899</b>	<b>0.0</b>	<b>0.813</b>	<b>36.3</b>	<b>LOS C</b>	<b>170</b>	<b>0.96</b>	<b>0.88</b>	<b>29.9</b>
<b>All Vehicles</b>		<b>3526</b>	<b>0.0</b>	<b>1.000</b>	<b>58.4</b>	<b>LOS E</b>	<b>291</b>	<b>0.97</b>	<b>1.07</b>	<b>22.2</b>

### Pedestrian Movements

Mov ID	Dem Flow (ped/h)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate
P1	53	29.6	LOS C	0	0.77	0.77
P3	53	42.3	LOS E	0	0.92	0.92
P7	53	42.3	LOS E	0	0.92	0.92
<b>All Peds</b>	<b>159</b>	<b>38.1</b>	<b>LOS C</b>	<b>0</b>	<b>0.87</b>	<b>0.87</b>

Symbols which may appear in this table:

Following Degree of Saturation

# x = 1.00 for Short Lane with resulting Excess Flow

\* x = 1.00 due to minimum capacity

Following LOS

# - Based on density for continuous movements

Following Queue

# - Density for continuous movement



Site: Sat Peak Existing

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# Movement Summary

## Bobbin Head Road/Burns Road Proposed Layout with NTRA

### Saturday Peak

Signalised - Fixed time

Cycle Time = 100 seconds

### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>Bobbin Head Rd-S</b>										
1	L	75	0.0	0.339	32.2	LOS C	25	0.73	0.73	29.1
2	T	378	0.0	1.025	103.0	LOS F	222	1.00	1.48	14.3
3	R	254	0.0	1.000#	54.6	LOS D	92	1.00	0.82	22.4
<b>Approach</b>		<b>686</b>	<b>0.0</b>	<b>1.025</b>	<b>81.9</b>	<b>LOS F</b>	<b>222</b>	<b>1.00</b>	<b>1.22</b>	<b>17.4</b>
<b>Burns Rd-E</b>										
4	L	165	0.0	1.016	102.4	LOS F	304	1.00	1.42	15.1
5	T	985	0.0	1.015	94.4	LOS F	324	1.00	1.42	16.7
6	R	228	0.0	1.023	110.2	LOS F	130	1.00	1.30	14.3
<b>Approach</b>		<b>1378</b>	<b>0.0</b>	<b>1.023</b>	<b>98.0</b>	<b>LOS F</b>	<b>324</b>	<b>1.00</b>	<b>1.40</b>	<b>16.1</b>
<b>Bobbin Head Rd-N</b>										
7	L	154	0.0	0.806	27.2	LOS B	43	0.61	0.79	31.5
8	T	339	0.0	0.869	51.1	LOS D	135	1.00	1.05	22.3
9	R	200	0.0	0.769	56.2	LOS D	83	1.00	0.92	22.1
<b>Approach</b>		<b>693</b>	<b>0.0</b>	<b>0.869</b>	<b>47.3</b>	<b>LOS D</b>	<b>135</b>	<b>0.91</b>	<b>0.95</b>	<b>23.8</b>
<b>Burns Rd-W</b>										
10	L	156	0.0	0.696	39.7	LOS C	131	0.94	0.86	27.7
11	T	759	0.0	0.855	39.3	LOS C	183	0.98	0.94	28.8
12	R	1	0.0	0.004	49.0	LOS D	0	0.90	0.60	24.7
<b>Approach</b>		<b>916</b>	<b>0.0</b>	<b>0.855</b>	<b>39.4</b>	<b>LOS C</b>	<b>183</b>	<b>0.97</b>	<b>0.92</b>	<b>28.6</b>
<b>All Vehicles</b>		<b>3694</b>	<b>0.0</b>	<b>1.025</b>	<b>70.4</b>	<b>LOS E</b>	<b>324</b>	<b>0.97</b>	<b>1.16</b>	<b>19.7</b>

### Pedestrian Movements

Mov ID	Dem Flow (ped/h)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate
P1	53	30.4	LOS D	0	0.78	0.78
P3	53	41.4	LOS E	0	0.91	0.91
P7	53	41.4	LOS E	0	0.91	0.91
<b>All Peds</b>	<b>159</b>	<b>37.7</b>	<b>LOS C</b>	<b>0</b>	<b>0.87</b>	<b>0.87</b>

Symbols which may appear in this table:

Following Degree of Saturation

# x = 1.00 for Short Lane with resulting Excess Flow

\* x = 1.00 due to minimum capacity

Following LOS

# - Based on density for continuous movements

Following Queue

# - Density for continuous movement



Site: Sat Peak Proposed

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# Appendix F

## Sidra Results – Bobbin Head Road/NTRA Access - Future

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# Movement Summary

## Bobbin Head Road/NTRA Proposed Roundabout

### Saturday Peak

#### Roundabout

#### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>Bobbin Head Rd-S</b>										
2	T	444	0.0	0.351	5.1	LOS A	22	0.05	0.49	44.3
3	R	134	0.0	0.351	7.2	LOS A	22	0.05	0.61	41.1
<b>Approach</b>		<b>578</b>	<b>0.0</b>	<b>0.351</b>	<b>5.5</b>	<b>LOS A</b>	<b>22</b>	<b>0.05</b>	<b>0.52</b>	<b>43.6</b>
<b>NTRA-E</b>										
4	L	64	0.0	0.066	1.8	LOS A	3	0.40	0.31	20.8
6	R	4	0.0	0.066	5.6	LOS A	3	0.40	0.57	20.7
<b>Approach</b>		<b>68</b>	<b>0.0</b>	<b>0.066</b>	<b>2.0</b>	<b>LOS A</b>	<b>3</b>	<b>0.40</b>	<b>0.32</b>	<b>20.8</b>
<b>Bobbin Head Rd-N</b>										
7	L	4	0.0	0.267	7.7	LOS A	11	0.28	0.62	43.0
8	T	325	0.0	0.263	2.9	LOS A	11	0.28	0.32	45.5
<b>Approach</b>		<b>329</b>	<b>0.0</b>	<b>0.263</b>	<b>3.0</b>	<b>LOS A</b>	<b>11</b>	<b>0.28</b>	<b>0.33</b>	<b>45.5</b>
<b>All Vehicles</b>		<b>975</b>	<b>0.0</b>	<b>0.351</b>	<b>4.4</b>	<b>LOS A</b>	<b>22</b>	<b>0.15</b>	<b>0.44</b>	<b>41.0</b>

Symbols which may appear in this table:

Following Degree of Saturation

# x = 1.00 for Short Lane with resulting Excess Flow

\* x = 1.00 due to minimum capacity

Following LOS

# - Based on density for continuous movements

Following Queue

# - Density for continuous movement



Site: Sat Peak

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NORTH TURRAMURRA RECREATION AREA PUBLIC EXHIBITION SUBMISSIONS - July 2007

No.	Yes	No	Comment Only	No By Household/Group	Yes By Household/Group	Surname	Suburb	Question 1	Question 2	Question 3	Question 4	Other comments
								Do you agree with the proposal to <b>relocate six holes</b> from the existing Nth Turra Golf Course to the <b>adjacent land fill site</b> ? Why / Why Not	Do you agree with the proposal to <b>convert the southern portion of the existing golf course</b> and the Beekeepers Association facility (to be relocated on the site) into <b>sporting fields</b> ? Why / Why Not	Do you agree with the proposal to install <b>floodlights</b> around the proposed <b>new sporting fields</b> for the purposes of evening training sessions ? Why / Why Not	Do you prefer <b>Sub-Option A</b> or <b>Sub-Option B</b> in the Preferred Concept Masterplan ? Why	
1		1		1		Bakker	NORTH TURRAMURRA					Does not meet "family" needs, eg. Children's bike paths and parks with seats for young and old. Nth Turra residents should have their recreational needs met near to their homes.
2		1		1		Bendit	NORTH TURRAMURRA	No. Area subject to subsidence & inappropriate for golf course use. Landfill area should be regenerated to native bushland as a buffer.	No. Glengarry Ave has not even been shown on Plan A or B. Residents will be subject to spectator noise & night training sessions. Loss of privacy.	No. Unacceptable intrusion on peace & privacy of Glengarry Ave residents. Threat to nocturnal wildlife - territory & breeding patterns.	Neither. No choice to residents in terms of size of the playing fields. Only slight difference to carpark size.	Bobbin Head Rd already identified as a fire hazard problem. Proposed walking track behind Glengarry Ave fence lines may in the future be turned into an access road. Threat to wildlife in the narrow bushland.  <a href="#">Generic petition with individual adaption.</a>
3			0			Bergman NSW National Parks and Wildlife Service	ASQUITH					Asks that due consideration be given to the collection and treatment of the landfill leachate, stormwater runoff and sewer to prevent the potential overflow and contamination of the surrounding bushland. Choose non-invasive plant species. Link any walking tracks to existing Darri track on East side of Cowan Creek.
4		1		1		Bickmore	NORTH TURRAMURRA	No. Area subject to subsidence & inappropriate for golf course use. Landfill area should be regenerated to native bushland as a buffer.	No. Glengarry Ave has not even been shown on Plan A or B. Residents will be subject to spectator noise & night training sessions. Loss of privacy.	No. Unacceptable intrusion on peace & privacy of Glengarry Ave residents. Threat to nocturnal wildlife - territory & breeding patterns.	Neither. No choice to residents in terms of size of the playing fields. Carpark size should be as small as possible, due to impact of concreting & impact of traffic on Bobbin Head Road.	Track not needed & is a waste of ratepayers money. Proposed walking track behind Glengarry Ave fence lines may in the future be turned into an access road. Threat to wildlife in the narrow bushland.
5		1				Bickmore	NORTH TURRAMURRA	<a href="#">As above (Bickmore) &amp; lead petitioner, Andrew Orme-Smith</a>	<a href="#">As above (Bickmore) &amp; lead petitioner, Andrew Orme-Smith</a>	<a href="#">As above (Bickmore) &amp; lead petitioner, Andrew Orme-Smith</a>	<a href="#">As above (Bickmore) &amp; lead petitioner, Andrew Orme-Smith</a>	<a href="#">As above (Bickmore) &amp; lead petitioner, Andrew Orme-Smith</a>
6		1		1		Birt	NORTH TURRAMURRA	Petitioner with Andrew Orme-Smith	Petitioner with Andrew Orme-Smith	Petitioner with Andrew Orme-Smith	Petitioner with Andrew Orme-Smith	Petitioner with Andrew Orme-Smith
7		1				Birt	NORTH TURRAMURRA	Petitioner with Andrew Orme-Smith	Petitioner with Andrew Orme-Smith	Petitioner with Andrew Orme-Smith	Petitioner with Andrew Orme-Smith	Petitioner with Andrew Orme-Smith
8	1				1	Brackin	WARRAWEE	Yes.	Yes.	Yes.	Option B.	Alan Brackin is president of St Ives Junior AFL club. Player numbers have grown 100%. Acron Oval is their only playing field. 2008 numbers will increase by 20% to over 500 players. St Ives Jnr AFL has funded \$100k together with AFL \$50, to install new lights at Acron Oval. AFL urgently need access to additional facilities in Ku-ring-gai.
9	1					Brackin	WARRAWEE	Yes.	Yes The local area needs more sporting fields.	Yes. Gives 3 more hours use for the facility.	Yes. Allows greater use of the existing area.	1. Netball training needs more lights & on full sized courts. 2. At Claude Cameron Reserve netta players had their bags urinated on by unleashed dogs. 3. Behind Lindfield Library is option for 2 netball courts. 4. Alongside Samuel King soccer field, there is potential area for 2 new grass netball courts. 5. Please install lights on Canoon Rd Court Nos. 5,6,7,8. 6. Please build 4 indoor courts atop carpark Brickpit, plus office
10	1				1	Brewer	TURRAMURRA	Yes. It will create more area for sport and recreation. There is a strong community need for AFL facilities.	Yes. The community needs more facilities for organised sport- especially AFL.	Yes. The highest demand is for training which occurs after school/work when lighting is needed.	I have not seen the Masterplan as yet.	

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11			3			Burke President STEP Inc.	NORTH TURRAMURRA					1. Shortage of sportsfields in Sydney is acknowledged. 2. Traffic problems are very likely. No evidence that a traffic study has been carried out. 3. Council didn't listen to the community when the Canoan Road netball courts were built: it would be careless to repeat that mistake. 4. Bobbin Head Rd busy & dangerous for children to ride their bikes along. Bike lanes should be installed. 5. Walking tracks behind Glengarry Ave should NOT be installed as they will lead to degradation of this narrow strip of bushland ... 6. Capturing run-off by swales or detention methods should NOT be allowed. No nutrients should be allowed to escape into the bush ... any concentration of water of any quality into bushland will inevitably damage its ecological integrity. Run-off should be retained on the site for watering with overflow piped
12	1				1	Cochrane	NORTH TURRAMURRA	Yes, Appears to be best arrangement.	Yes. Appears to be a good solution.	Yes. Provided they are properly screened to prevent light spillage to side & up & minimise light pollution.	Option B. Purchase at fair price to owners & Council. Also minimise one source of noise from playing fields.	1. Agree with the proposed roundabout at the existing Golf Club entrance being 'Left Turn Only'. 2. Bobbin Head Rd & Burns Road needs a four-way filter lights. 3. Golf Course boundary between Curagul Links (11-15 Curagul Rd & the Fairways, 9 Curagul Rd, needs the bank raised in height to prevent water flowing down to Curagul Rd over the currently vacant block (see photo). 4. At present considerable run-off from roadway & golf course into creek between Huon park buildings 16 & 17 (see map attached). 5. Agree to walking tracks linking to Darri Track. 6. Consultants should be commended.
13	1					Cochrane	NORTH TURRAMURRA	As above	As above	As above	Option B.	As above.
14		1			1	Cross	TURRAMURRA	No. Council previously undertook to return the site to bushland. If disturbed, a return to noxious smells, fly infestation & rats plus possible leaching of subsurface materials from tip.	No.	No. Floodlights will drive out fauna & destroy the peace & privacy of Glengarry Avenue.	Neither.	Previous thousands of dollars in legal fees have been spent in vain. The ambience of the area will be destroyed. Nth Turra contains the largest community of the elderly anywhere in Australia. The Nth Turra Soccer club has gone out of existence after 30-40 years for want of members. The proposed changes will be entirely for people who are not residents. Following closure of the tip, there has been a return of native fauna, echidnas, wallabies, brush turkeys, bower birds and parrots together with a driving out of the indian mynah bird.
15		1				Cross	NORTH TURRAMURRA	As above (Jim Cross)	As above (Jim Cross)	As above (Jim Cross)	As above (Jim Cross)	As above (Jim Cross)
16		1			1	Dahl	NORTH TURRAMURRA	No. Course is in good condition and well used. It would inconvenience players during relocation.	No. Proposed and rejected previously. Additional strain on existing facilities.	No. Older people in the area will have an impact of extra noise and traffic etc. thus altering the quiet, safe life.		1. No fire evacuation plan and a service road in and out. 2. Round-about unsafe at golf course entrance
17		1				Dahl	NORTH TURRAMURRA					

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18	1				1	Dalziel	NORTH TURRAMURRA	Yes.	Yes.	Yes.	Option B.	Request that the new 6th tee be moved 50-75 metres along the proposed fairway thus reducing noise from voices, including fowl language and blasphemy carrying into their property.
19	1					Dalziel	NORTH TURRAMURRA	Yes.	Yes.	Yes.	Option B.	Request that the new 6th tee be moved 50-75 metres along the proposed fairway thus reducing noise from voices, including fowl language and blasphemy carrying into their property.
20		1			1	Dean	NORTH TURRAMURRA	No.				1. No plans to manage increased traffic on an already overloaded and substandard Bobbin Head Road.
21		1				Dean	NORTH TURRAMURRA	No.				1. No plans to manage increased traffic on an already overloaded and substandard Bobbin Head Road.
22	1				1	Deegan	KILLARA	Yes. Desperate need for sportsfields. Smart Solution.	Yes.	Yes. Night training grounds in short supply.		
23		1			1	Dobbin	NORTH TURRAMURRA	No. Golf course is a great community facility.	No. There are sufficient sporting fields in the area.	No. Noise & light pollution.		
24		1			1	Dowsett	NORTH TURRAMURRA	No. Area subject to subsidence & inappropriate for golf course use. Landfill area should be regenerated to native bushland as a buffer.	No. Glengarry Ave has not even been shown on Plan A or B. Residents will be subject to spectator noise & night training sessions. Loss of privacy.	No. Unacceptable intrusion on peace & privacy of Glengarry Ave residents. Threat to nocturnal wildlife - territory & breeding patterns.		A fauna study is required to assess impact of playing fields, floodlights and walking trails on this sensitive wildlife corridor. Proposed walking track behind Glengarry Ave fence lines may in the future be turned into an access road. Threat to wildlife in the narrow bushland.  <a href="#">Generic petition with individual adaption.</a>
25	1				1	Duffell Ku-ring-gai Little Athletics Centre Inc.	PYMBLE	Yes. This allows the land nearer Bobbin Head Road to be made available for other sports activities, not otherwise suited to .....	Yes. Severe shortage of public sportsfields in Ku-ring-gai.	Yes. Opportunities for physical activity of an increasing population.	Option A. Little Athletics would find extra space next to the sportsfields useful, although cost may be prohibitive.	Little Athletics request that within this Concept Plan the maximum area be set aside for playing fields to meet the space requirements of Little Athletics as our Centre requires 4 track events, five high jumps, four long jumps, three shot put and three discus circles and a javelin event. Until Council commits to providing a standard 400 metres track and full athletics facilities at Bannockburn, we will continue to press for inclusion in the Nth Turra Rec Area concept plans.
26	1				1	Ellis	WARRAWEE	Yes.	Yes.	No. No lights at this stage.	Option B.	
27	1				1	English	PYMBLE		Yes. Sports facilities including grounds are currently stretched in the upper Nth Shore area. A focus on kids sport is vital to the health of the community.	Yes. Floodlighting can only help in easing the "demand" pressures.		
28		1			1	Firth	NTH TURRAMURRA	No.	No.	No.	Neither	10 page submission dated 21 June 2007. Summarised at bottom of this table.

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29	1				1	Fredericks	PYMBLE	Yes. Relocation of 6 holes on former tip site will improve length & quality of course.	Yes. This will assist with chronic shortage of sporting fields.	Yes. State of the Art lighting will limit 'spillage' to neighbouring homes. Improved lighting will spread the usage and wear on field & reduce maintenance.	Option B. Residence should only be bought at Market Price.	1. Master Plan showing 154m wide best, as it provides greatest number of playing fields. 2. Bobbin Head round-about- needs either two lanes or at least a 'slip' lane to service Rec. area. 3. Exit from Bertrand Road to bobbin Head Rd, southbound, to have a 100m merging lane to facilitate joining with Bobbin Head Rd. 4. An entry bay should be provided on Bobbin Head Rd to facilitate joining traffic from Hartley Close. 5. Walking tracks to include safety fences where required. 6. If 400m athletics track at Bannockburn Oval is not possible as yet, provision should be made for this in the NTRA masterplan.
30		1		1		Gaut	WAHROONGA	No. Existing golf course should not be destroyed after 35 years of developing it. It is essential for the health and well being of the many senior citizen players. Understood original landfill site was owned by indigenous people of Ku-ring-gai.	No. Close proximity to golf course & incompatible noise level will destroy ambience. Potential "hazardous" traffic conditions entering carpark between golfers & sportsfield users.	No. Noise & light pollution. Entry to carpark & complex more hazardous at night.	No. Cost would be in the \$m. Money better spent elsewhere.	
31		1		1		Geddes	TURRAMURRA	No. Curagul Rd has just been resurfaced. Trucks will break up the road (surface). Would like a guarantee that the road surface will be restored to its current condition.	No. There is more than adequate sporting fields in this area. More traffic will cause the one road to be overwhelmed on weekends.	No. Disapproves of another facility because there are already 2 light fields, one at K. High School & the other adjacent to Nth Turra Shopping Centre.	Neither.	Disagrees with round-about at entrance to golf course. We do not need more cars coming into this area. Should there be a bushfire, we would have a catastrophe.
32			3			Gemmell	NTH TURRAMURRA					1. Concern about traffic density & pedestrian safety. 2. Traffic study requested. 3. Pedestrian crossing on Bobbin Head Rd, grave risk particularly at school pick-up drop-off times. 4. Loss of existing bicycle amenity on Bobbin Head Rd. 5. Cycling amenity to and from sportsfield should be enhanced. 6. Possible rise in road-kill of native fauna. 7. Native fauna has increased in population, thus want to retain it.
33	1				1	Green	NORTH TURRAMURRA	Yes.	Yes.	Yes.	Option B. (buy the house)	Would like to also see an indoor heated pool.
34		1		1		Hall	NORTH TURRAMURRA	No. \$6.9m is a cost ratepayers should not bear. NTRA should not proceed unless reliable funding sources are in place to cover	No. Indicative cost of \$15.6m ratepayers should not bear.	No.	Neither.	1. Indicative project cost of \$22,590,000 & funding deficit of \$8.6m should not be contemplated. 2. Additional traffic would choke Bobbin Head Road on weekends. 3. Why is St Ives Showground site not a viable alternative, cost & traffic wise ?

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35	1				1	Hallam	NORTH TURRAMURRA	Yes. Logical concept for this site. Allows for more efficient water storage & catchment.	Yes. Let's give something of Nth Turra to the young, as we have certainly catered for the oldies !!	Yes. Lights need to be off always by 10pm.	Option B.	
36	1					Hallam	NORTH TURRAMURRA	As above (M Hallam)	As above (M Hallam)	As above (M Hallam)	As above (M Hallam)	
37	1				1	Hanlon	WAHROONGA	Yes. Providing land is not swallowed up by more development of housing & is used for children/social purposes.	Yes. Children playing team sports is such wonderful exercise. Obesity is a big issue we need to confront.	Yes. Winter offers limited daylight hours, thus good lighting is an imperative. Good lighting helps restrict injuries & allows more security for parents.	No answer.	
38		1			1	Hansen	NORTH TURRAMURRA	No. More fertilizers & run-off will destroy bushland & increase weed infestation.	No. Also loss of animal habitat.	No. What about cooling the planet by using less energy ?	No. Neither.	1. How much electricity is used to run these floodlights & if coming from green sources, couldn't this be used on lighting thousands of homes, not playing fields for a small amount of people for recreation. 2. Already traffic jams on Bobbin Head Road & pets and wildlife being killed. 3. At peak times traffic are cutting through back streets. 4. Insufficient paths for pedestrians & prams - completely dangerous.
39		1				Hansen	NORTH TURRAMURRA	As above	As above	As above	As above	As above.
40		1			1	Harrison	NORTH TURRAMURRA	No.	No. Traffic and access problems associated with the proposed sporting fields are not acceptable.			1. Bobbin Head Rd is only a single lane roadway and cannot accommodate weekend numbers of cyclists, visitors to National Park, golfers & Knox field attendees. 2. No Fire Evacuation Plan for this area. 3. We moved to Curagul Road because of the tranquil nature of the locality. We object to more development, more cars and noisy sporting fields used by non-residents.
41		1				Harrison	NORTH TURRAMURRA	As above.	As above.	As above.	As above.	As above.
42		1			1	Hasler	NORTH TURRAMURRA	No. Landfill area should be regenerated to native bushland to stabilize pollutants leaching into the National Park & to stabilize land.	No. Totally unacceptable due to possible run-off, pollution and flood light spillage.	No. Lights will disturb the current tranquility of the area, add to traffic in the evenings, add to noise.	No.	1. Proposed walking trail is a threat to nature, flora and fauna, as well as to the security and privacy of properties. 2. Privacy and security of properties will be threatened. 3. Traffic on Bobbin Head Road already inadequate.
43		1				Hasler	NORTH TURRAMURRA	As above.	As above.	As above.	As above.	As above.
44		1			1	Helher	TURRAMURRA	No. Area subject to subsidence & inappropriate for golf course use. Landfill area should be regenerated to native bushland as a buffer.	No. Glengarry Ave has not even been shown on Plan A or B. Residents will be subject to spectator noise & night training sessions. Loss of privacy.	No. Unacceptable intrusion on peace & privacy of Glengarry Ave residents. Threat to nocturnal wildlife - territory & breeding patterns.	Neither. No choice to residents in terms of size of the playing fields. Only slight difference to carpark size.	Bobbin Head Rd already identified as a fire hazard problem. Proposed walking track behind Glengarry Ave fence lines may in the future be turned into an access road. Threat to wildlife in the narrow bushland.

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45	1				1	Howard Ku-ring-gai & District Soccer Association	ST IVES	Yes. To allow the creation of a District sporting facility.	Yes.	Yes.	Option A. Whilst consolidating to include the land may be of some use, the money would be better spent on more pressing acquisitions.	
46	1				1	Hunter	WAHROONGA	Yes. Vitaly important land is used for most effective use to growing community.	Yes. More sporting fields desperately needed across all sporting codes & in particular AFL.	Yes. Floodlights are essential, without them, it will become an oval for dog walking !	Either. Any option that delivers the maximum possible area of playing fields.	
47		1			1	Johnston	NORTH TURRAMURRA	No. Water & fertilizers from golf courses leach into native bushland, with likelihood of weeds and further problems occurring.	No. Bushland is a sensitive narrow corridor where endangered fauna and flora species exist.	No. Floodlights will spill into Glengarry residential area, together with noise. Nocturnal wildlife, breeding and territorial patterns will be disturbed.	Neither. Options provide no choice to residents about the size of the proposed fields.	1. Privacy and security of properties will be threatened. 2. Carpark is only slightly larger.
48		1				Johnston	NORTH TURRAMURRA	As above.	As above.	As above.	As above.	As above.
49		1			1	Kent	NORTH TURRAMURRA	No questionnaire filled in.				1. Totally opposed to further development along Bobbin Head. 2. Concern from possible evacuation from the over developed end of the road during summer bushfire season. 3. We have many sportsfields in the area, look at ways to improve/increase use of existing sports area.
50		1				Kent	TURRAMURRA	No questionnaire filled in.				1. Totally opposed to further development along Bobbin Head. 2. Concern from possible evacuation from the over developed end of the road during summer bushfire season. 3. We have many sportsfields in the area, look at ways to improve/increase use of existing sports area.
51			3			Kraemer	NORTH TURRAMURRA	No questionnaire filled in.				1. Bobbin Head Road be upgraded as part of the proposal. 2. Proposal to exit all vehicles via Bertrand Road. Have Council's traffic planners assessed the impact of this and what are their conclusions and recommended actions ? 3. Has St Ives Showground been considered ? 4. What other locations within Ku-ring-gai have been considered ?
52			3			Kraemer	NORTH TURRAMURRA	No questionnaire filled in.	As above.	As above.	As above.	As above.
53		1			1	Lurie	NORTH TURRAMURRA	No. Current facilities are adequate. Unnecessary disturbance to native bush. Golf Course should not adjoin National Park.	No. Current infrastructure already stretched & cannot cope with additional demands.	No. Floodlights will compromise the lifestyle of residents, drain power supply & compromise tranquil atmosphere, which is why people live here.	Neither.	1. Noise & traffic principles will remain the same. 2. Our children will be at increased risk from traffic. 3. Retirees will be affected by noise and traffic.  <a href="#">Generic attachment but individual comments.</a>

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54		1				Lurie	NORTH TURRAMURRA	As above.	As above.	As above.	As above.	1. This plan has been raised twice before and rejected. 2. Resident of the area do not want any more development.  <a href="#">Generic attachment but individual comments.</a>
55		1				Luxford	NORTH TURRAMURRA	No.	No. One lane each way on Bobbin Head Road now.	No.	Neither.	
56	1				1	McCormack	TURRAMURRA	Yes. I play golf at Nth Turr and don't mind.	Yes.	Yes. We need more fields desperately.	Yes. If lights are off by 9pm, it should be ok.	Option A. If you can afford it.
57	1				1	McIntosh	NORTH TURRAMURRA	Yes. But not near current housing.	No. Traffic congestion. Bobbin Head Road in state of disrepair.	No. Could shine on current homes.	?	
58		1			1	McKay	NORTH TURRAMURRA	No. It has taken many years to establish a reasonably good golf course, why change it.	No. 45 year resident. When evacuated because of bushfires, had trouble getting away because of clogged roads.	No.	Neither.	Bobbin Head Road has potholes that were there many years ago.
59	1				1	Musgrove	NORTH TURRAMURRA	Yes.	Yes.	Yes.	Option A.	Common sense must prevail.
60		1			1	Newman	NORTH TURRAMURRA	No. Part of this area is subject to a Land Claim No. 5342. New layout does not have a 'dog leg' par 3 hole, but several of the par 4's should be rated at 3 1/2. New golf course parking area will impact on holes 17 & 18.	No. Extensive clearing of natural bushland. Existing contours will require approx. 6m depth of fill. Ovals are too big and do not fit comfortably on the site.	No. Light and noise an invasion of our privacy & way of life.	Neither. Leave the golf course alone. Upgrade existing sporting fields.	1. Do not concentrate traffic in unsuitable areas. 2. This is a one-eyed questionnaire ! 3. Proposed development not in best interest of local community. 4. Past schemes rejected: inescapable problem that the area is served by a peninsular road of one lane each way & no alternative route. 5. Junction of Burns Rd/Killeaton St & BHR & shopping centre bottleneck plus pedestrian crossing at primary school & shopping centre are significant problems. 6. Traffic study meaningless as average daily traffic only given for 1996, 1999 & 2002, but no figures for 2005 or 2007. 7. Meeting of Fire Chief Koperberg, Councillors & some State politicians a couple of years ago agreed NO more development in Nth Turra precisely because of the road access. 8. Do not create another Canoon Road.
61	1				1	North Shore Beekeepers Association	TURRAMURRA	Yes. Providing provision is made for relocation of bee garden, including power, water and sewer facility.	Yes. Beekeepers would prefer their own amenities block, plus required 30 car spaces once a month.	Yes. No nearby housing will be affected.	Yes. Logical way to proceed.	
62		1			1	Armstrong North Turramurra Action Group	TURRAMURRA					1. Traffic and cost problems. 2. \$23m is a lot of money to be spending. 3. Traffic problem will be even worse when Knox sports days & new sportsfield games occur on same day.
63	1				1	Oppenheim	NORTH TURRAMURRA	Yes. Relocation makes sense.	Yes. Area flat & close to BHR & would keep car parking etc. to the perimeter of the site.	Yes. Proviso that care taken to ensure least inconvenience to adjacent homes.	Option B. Cleaner parking, pedestrian solution.	1. Major concern living at "The Fairways" is the pond/dam directly behind The Fairways overflows when it rains. 2. We need to be assured that this pond/dam would not be a problem.

NORTH TURRAMURRA RECREATION AREA PUBLIC EXHIBITION SUBMISSIONS - July 2007

No.	Yes	No	Comment Only	No By Household/Group	Yes By Household/Group	Surname	Suburb	Question 1	Question 2	Question 3	Question 4	Other comments
								Do you agree with the proposal to <b>relocate six holes</b> from the existing Nth Turra Golf Course to <b>the adjacent land fill site</b> ? Why / Why Not	Do you agree with the proposal to <b>convert the southern portion of the existing golf course</b> and the Beekeepers Association facility (to be relocated on the site) into <b>sporting fields</b> ? Why / Why Not	Do you agree with the proposal to install <b>floodlights</b> around the proposed <b>new sporting fields</b> for the purposes of evening training sessions ? Why / Why Not	Do you prefer <b>Sub-Option A</b> or <b>Sub-Option B</b> in the Preferred Concept Masterplan ? Why	
64	1			1		Orme-Smith	NORTH TURRAMURRA	No. Landfill site was to be returned to bushland.	No.	No. Light and noise pollution will affect residents of Glengarry Ave.	Whichever plan does NOT have netball facilities.	1. Council to take a genuine approach to make the Rec Area self sufficient in water needs, including irrigation by the harvesting and capture of storm water run-off. 2. Design to minimise energy usage & to make the facility carbon neutral, including development of site carbon neutral. 3. Traffic dangerous at junction of BHR & Burns Rd. 4. Proposed walking trail would allow people to look directly down into our backyards - also security issue. 5. A more suitable route would start at carpark, run along edge of proposed playing fields, & edge of "spare" fairway, down the slope to creek once past the last houses of Glengarry Ave and on to Cowan Creek. 6. St Ives Showground/Mona Vale Rd, much better equipped to handle increased traffic.
65		1		1		Parkinson	NORTH TURRAMURRA	No. If there was not a big sporting complex planned, there would be no need to relocate holes to provide extra parking.	No. BHRd not wide enough to cope with increased traffic. BHR already busy in weekends with boats.	No. Nth Turra has aged population, especially near golf course. Place lights on the UTS field	Neither. Not necessary, too big, too expensive.	Single entry road not capable to extra traffic on weekends. Develop & use South Turramurra Park.
66		1		1		Parkinson	COPACABANA	As above (Mrs Lynne Parkinson)	As above (Mrs Lynne Parkinson)	As above (Mrs Lynne Parkinson)	As above (Mrs Lynne Parkinson)	As above (Mrs Lynne Parkinson)
67		1		1		Pribila	TURRAMURRA	No. Generic response, See Dowset for same responses.	No. Generic response, See Dowset for same responses.	No. Generic response, See Dowset for same responses.		No. Generic response, See Dowset for same responses. <a href="#">Generic petition with individual adaption.</a>
68			4			Procter	WAHROONGA	Inadequately informed to date.				
69		1		1		Renshaw	NORTH TURRAMURRA	Yes. I have no objection to this.	No. 1. Lack of infrastructure to cope with increased traffic. 2. Road would have to be completely upgraded.	No. Elderly in area would have their lifestyle intruded upon.	No response given.	
70	1				1	Rice	EAST LINDFIELD	Yes. To provide sports fields.	Yes.	Yes.	Option B. Does the 'job' properly. Two synthetic cricket wickets should also be included.	1. Good sized fields are in very short supply: Two synthetic cricket wickets should also be included.
71	1				1	Seddon	NORTH TURRAMURRA	Yes.	Yes.	Yes. So long as turned off by 10.30pm.	Option A: if resident on proposed site does not sell. Option B: if resident on proposed site sells.	Bobbin Head Rd be resurfaced.
72	1				1	Southwell	WEST PYMBLE	No. St Ives Football Club need additional facilities.	Yes. Acute shortage of sporting grounds in Sydney. AFL St Ives has grown nearly 100% this year.	Yes.	Option B. Need for more rec. facilities & car Parking.	

NORTH TURRAMURRA RECREATION AREA PUBLIC EXHIBITION SUBMISSIONS - July 2007

No.	Yes	No	Comment Only	No By Household/Group	Yes By Household/Group	Surname	Suburb	Question 1	Question 2	Question 3	Question 4	Other comments
								Do you agree with the proposal to <b>relocate six holes</b> from the existing Nth Turra Golf Course to <b>the adjacent land fill site</b> ? Why / Why Not	Do you agree with the proposal to <b>convert the southern portion of the existing golf course</b> and the Beekeepers Association facility (to be relocated on the site) <b>into sporting fields</b> ? Why / Why Not	Do you agree with the proposal to install <b>floodlights</b> around the proposed <b>new sporting fields</b> for the purposes of evening training sessions ? Why / Why Not	Do you prefer <b>Sub-Option A</b> or <b>Sub-Option B</b> in the Preferred Concept Masterplan ? Why	
73		1		1		Spargo	NORTH TURRAMURRA	No. Only object to sportsfields.	No.	No specific answer, only: Floodlights would be the least of our worries.	Option B.	Attached letter detailing previous proposals. 1. BHR traffic congestion. 2. Parking problems compounded with Knox playing field. Area already equipped with Nth Turra oval, Knox field & Kuringai High School. 3. Majority of residents are over 55 years of age & have no requirement for additional sporting fields.
74		1				Spargo	NORTH TURRAMURRA					
75		1		1		Stringer	NORTH TURRAMURRA	Yes.	No. St Ives Showground is a better site. Generic response. See Dowset for same responses.	No. Generic response. See Dowset for same responses.	No response given.	1. Traffic already bad. 2. In the summer time boats being towed after fishing, ambulances, fire brigades going to false alarms all cause constant night noise now.  <a href="#">Generic petition with individual adaption</a>
76	1				1	Sullivan	TURRAMURRA	Yes. Increase sporting facilities for LGA.	Yes. Further development to the surrounding area & control of bushland.	Yes.	No preference stated.	1. Huon Park Village/surface drainage from storage dam needs addressing.
77	1				1	Tilley	WAHROONGA	Yes. More recreation area provided.	Yes. To accommodate growing demand.	Yes. To make the most of the fields.	Option B. As non-specific playing fields don't support any particular assoc.	
78	1					Tilley	WAHROONGA	Yes. To provide more useable area for residents' recreational purposes.	Yes. To ensure sporting facilities are available. Demand is increasing.	Yes. Lights allow for maximum user of playing fields. Many field games are played in winter.	Option B. Need fields that support a particular sport, eg. AFL who currently have overlapping game to increasing popularity.	AFL is borrowing grounds from other Council's when possible.
79			3			Troy	TURRAMURRA	Email submission only.				Dog enthusiasts hope area will be set aside for exercising dogs off-leash in the NTRA. Sandakan area becomes saturated after rain.
80	1				1	Walton	GORDON	Yes. Free-up land for sportsfields & improves the character of the golf course.	Yes. AFL needs more sportsfields.	Yes. Maximise user of the asset when kids & adults can use it.	Option B. AFL needs much more space.	Oval is suitable for cricket in summer and general family recreation.
81	1				1	Williams	ROSEVILLE	Yes. Provided the course remains an 18 hole layout.	Yes.	Yes.	Yes.	
82	1					Wilson	NORTH TURRAMURRA	Yes.	Yes,	Yes.	Option B.	

NORTH TURRAMURRA RECREATION AREA PUBLIC EXHIBITION SUBMISSIONS - July 2007

No.	Yes	No	Comment Only	No By Household/Group	Yes By Household/Group	Surname	Suburb	Question 1	Question 2	Question 3	Question 4	Other comments
								Do you agree with the proposal to <b>relocate six holes</b> from the existing Nth Turra Golf Course to the <b>adjacent land fill site</b> ? Why / Why Not	Do you agree with the proposal to <b>convert the southern portion of the existing golf course</b> and the Beekeepers Association facility (to be relocated on the site) into <b>sporting fields</b> ? Why / Why Not	Do you agree with the proposal to install <b>floodlights</b> around the proposed <b>new sporting fields</b> for the purposes of evening training sessions ? Why / Why Not	Do you prefer <b>Sub-Option A</b> or <b>Sub-Option B</b> in the Preferred Concept Masterplan ? Why	
83	1				1	Wilson	NORTH TURRAMURRA	Yes.	Yes.	Yes.	No option stated.	1. Suggest you allocate additional fields to football, which will allow fields to specialise. 2. All-weather athletics track needed. 3. Suggest that consideration be given to artificial turf fields.
84	1					Wilson	NORTH TURRAMURRA	Yes.	Yes.	Yes.	No option stated.	
85	1				1	Wilson Regional Manager, Sydney North AFL	STRAWBERRY HILLS	Yes. Major lack of space for sporting organisation & growing number of members.	Yes. We must utilise what space can be created for greater demand on fields.	Yes. Space is limited. ... need to maximise now.	Option B.	
86						Firth	NORTH TURRAMURRA	N/A	N/A	N/A	N/A	Refer to summary immediately below extracted from letter submitted by resident.
								<ul style="list-style-type: none"> <li>* ..... Sports centres, (alias recreational area) are two a penny. North Turramurra and the bushland setting leading to the National Park, is one in a million.</li> <li>* ..... The Master Plan stipulated car parking for 200 vehicles, (265, if you include the golf club) which indicates the plan favoured by Council and its planners is, playing surface 4, the largest.</li> <li>* .... My rejection of all the proposals is based on the following points:- <ul style="list-style-type: none"> <li>1) First Risk &amp; No Emergency Evacuation Plan possible for North Turramurra.</li> <li>2) Lack of relevant traffic study.</li> <li>3) No planned review and/or upgrade to existing infrastructure as part of the Master Plan. 4) Existing over development in the area.</li> <li>5) Flaws in the Master Plan design for the area.</li> </ul> </li> <li>* ..... (Expanding on the point above are the following extractions)</li> <li>* ..... Council declined the DA for expansion to the Landings (a residential development). The Rural Fire Service did not agree with the development due to the risk factor involved with evacuation of the area &amp; the risk to bushfire fighters &amp; the development was not in the public interest due to the risk level relating to fire management and the risk to residents.</li> <li>* It is on record that, due to the uniqueness of the area, it is impossible to write an emergency evacuation plan for North Turramurra. This conclusion was reached by the relevant authorities.</li> <li>* ... This being the case, there should be great concern regarding any further proposed development encouraging large pockets of people into a small area.</li> <li>* ..... Bobbin Head Road runs along a ridge .... blanked on both sides by bushland ..... North Turramurra is recognised as a high fire risk area due to the terrain. .... The area is already over developed.</li> <li>* ... Lack of Relevant Traffic Study: Council should provide residents with an up-to-date traffic study with current traffic levels &amp; increased traffic levels .... including suitability of Bobbin Head Road for any further traffic volume increase.</li> <li>* ..... Bobbin Head Road is an RTA problem, not Council's.</li> <li>* ... No Planned Review and/or Upgrade to existing Infrastructure as part of the Master Plan: Does Council intend to upgrade Bobbin Head Road, which includes .. the road surface, kerb and guttering, improve infrastructure such as water supply etc. .... or is the usual comment to be made that the road is not Council's responsibility but the RTA's.</li> <li>* Another risk is the hordes of cyclists who, despite the cycle track, consider they own Bobbin Head Road and certainly consider themselves to be above the law as they spread out across Bobbin Head Road obstructing vehicles. This is already a risk which will be increased with any increase in traffic volume.</li> <li>* .... Has consideration been given by Council to the intersection of Bobbin Head Road and Killeaton Road. This is currently a nightmare. Any proposed Recreational (Sports) area would compound the problem. .... Cont'd.</li> </ul>				

NORTH TURRAMURRA RECREATION AREA PUBLIC EXHIBITION SUBMISSIONS - July 2007

No.	Yes	No	Comment Only	No By Household/Group	Yes By Household/Group	Surname	Suburb	Question 1	Question 2	Question 3	Question 4	Other comments
								Do you agree with the proposal to <b>relocate six holes</b> from the existing Nth Turra Golf Course to <b>the adjacent land fill site</b> ? Why / Why Not	Do you agree with the proposal to <b>convert the southern portion of the existing golf course</b> and the Beekeepers Association facility (to be relocated on the site) <b>into sporting fields</b> ? Why / Why Not	Do you agree with the proposal to install <b>floodlights</b> around the proposed <b>new sporting fields</b> for the purposes of evening training sessions ? Why / Why Not	Do you prefer <b>Sub-Option A</b> or <b>Sub-Option B</b> in the Preferred Concept Masterplan ? Why	
								<ul style="list-style-type: none"> <li>* .... North Turramurra consists of developments approved by Council for over 55's and like type dwellings..... A sporting venue for the young, which is totally out of keeping for the area.</li> <li>* By declining the expansion DA for the Landing, Council has reaffirmed its opposition to the expansion of development in the area and reaffirmed the unsuitability of North Turramurra for further development.</li> <li>* .... All the traffic has to go right through the middle of North Turramurra shopping centre when entering or leaving the area.</li> <li>* .... No mention has been made relating to the needs ie. parking for buses (coaches).</li> <li>* No study has been undertaken to see the effect night time lighting will have on the area.</li> <li>* .... Bertrand Road Exit: LH turn out of proposed centre at Bertrand Road onto Bobbin Head Road is at a nasty bend where traffic shoots around and is a blind spot for those exiting Bertrand Road. It is also opposite Hartley Close, making it very difficult to exit Hartley Close and turn right into Bobbin Head Road.</li> <li>* Dangerous area to turn right from Bertrand Road into Bobbin Head Road.</li> <li>* Making Bertrand Road exit a 'left only' turn would mean traffic wanting to turn right would have to go down to Gawler Place, undertake a 'U' turn and return up Bobbin Head Rd.</li> <li>* Golf Course Entrance Road with proposed new round-about: ..... blind spot for traffic in both direction. Turn right into sports area will cause delay to traffic already on Bobbin Head Road.</li> <li>* ... The Option is to not put a round-about there, but make traffic go up to the existing round-about at Carugal Road and back track to do a LH turn into the centre.</li> <li>* ... a better option is to have the entrance come of Carugal Road rather than the very unsuitable Bobbin Head Road, though this has been dismissed by Council in the past.</li> <li>* What about the traffic that parks on Bobbin Head Road for the Knox sports field between the Golf Course Road &amp; Carugal Road ?</li> <li>* Conclusion: None are acceptable.</li> <li>* ... Why not utilise better the St Ives Showground or upgrade other amenities such as West Pymble Pool site; or the end of Hampden Road in Wahroonga .....</li> <li>* I therefore hope that Council will: Remember the prohibition of SEPP5s in the area gazetted in December 2002. Not be influenced by biased sporting groups. Put the needs of the local resident of North Turramurra and the effects such a development would have on them first. Summary of Letter from Cheryl Firth dated 21 June 2007. Having reviewed the options, there is no preferred concept within the Master Plan, and I remain against the expansion of North Turramurra golf club area to what Council calls North Turramurra Recreation Area. Summary of Letter from Firth dated 21 June 2007. Having reviewed the options, there is no preferred concept within the Master Plan, and I remain against the expansion of North Turramurra golf club area to what Council calls North Turramurra Recreation Area.</li> </ul>				
	35	43	19	29	28							

KEY  
 1 = Yes or No  
 0 = Impartial Organisation eg. National Parks & Wildlife  
 3 = Comment but not a Yes or No answer  
 4 = Incomplete Questionnaire

SUMMARY	Total number of Households/	
NO	30	43
YES	28	35
IMPARTIAL	1	1
COMMENT	5	5
NO	1	1
	65	85

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## WEST PYMBLE INDOOR POOL & LEISURE CENTRE

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### EXECUTIVE SUMMARY

**PURPOSE OF REPORT:**

For Council to consider for preliminary approval a concept plan of the West Pymble Pool Redevelopment and next steps to progress this matter.

**BACKGROUND:**

Council resolved on 8 May 2007 to proceed as a high priority with planning for the re-development of the West Pymble Pool. It was resolved that a concept plan be submitted to Council for preliminary approval by the first meeting of August 2007, only after the Facilities Committee had reviewed the concept. The report to Council will outline how the facility is to be funded, including ongoing maintenance and a time frame for the commencement of construction, and that the Ku-ring-gai facility blueprint also assesses the provision of an appropriately-sized aquatic/leisure and health facilities in the longer term at Turramurra and Lindfield.

**COMMENTS:**

A concept plan for the redevelopment of West Pymble Pool incorporating a range of indoor aquatic facilities has been developed along with accompanying cost plans to give Council an indication of the financial commitment required to construct the facility. Option 1 is recommended as the preferred option of the four options considered and is also the least expensive option for Council. An Expression of Interest process will assist in Council's decision making by highlighting the degree of interest from suitable organisations to become involved in the development and management of the facility, including potential investments and on what terms.

**RECOMMENDATION:**

That Council adopt Option 1 as the preferred concept plan for the redevelopment of West Pymble Pool and call for Expressions of Interest to gauge interest from the private sector in investing in the development and or ongoing management of West Pymble Pool as outlined in this report. Also that funding of the facility be considered in the review of Council's Long Term Financial Model in December 2007 and following consideration of responses to an Expression of Interest, that further reporting to Council occur following the undertaking of an Expression of Interest by the end of February 2008.

## PURPOSE OF REPORT

For Council to consider for preliminary approval a concept plan of the West Pymble Pool Redevelopment and next steps to progress this matter.

## BACKGROUND

Council resolved on 8 May 2007:

- A. *That the comments received during the public exhibition of the Aquatic Feasibility Study be received and noted and those who made submissions be thanked for their contribution.*
- B. *To proceed as a high priority with planning for the re-development of the West Pymble Pool incorporating:*
  - 1. *A 25 metre x 8 lane indoor heated pool.*
  - 2. *Water play and baby/toddler/junior swimming opportunities.*
  - 3. *Programming space in the 25 metre pool for additional uses such as aqua-aerobics and other exercise programs.*
  - 4. *Improved change rooms and café/refreshment facilities.*
  - 5. *Retention of the existing 50 metre pool.*
- C. *That a concept plan be submitted to Council for preliminary approval by the first meeting of August, only after the Facilities Committee have reviewed the concept.*
- D. *That the report to Council also outlines how the facility is to be funded, including ongoing maintenance and a time frame for the commencement of construction.*
- E. *That the Ku-ring-gai facility blueprint also assesses the provision of an appropriately- sized aquatic/leisure and health facilities in the longer term at Turramurra and Lindfield.*

Council engaged Suters Prior and Cheney Architects to develop concept plans for the redevelopment of West Pymble Pool. Suters Prior and Cheney (SPC) were commissioned due to their existing knowledge of the pool as part of the consultant team who prepared the 2006 Aquatic Feasibility Study for Council as well as their vast experience in designing public aquatic and leisure facilities throughout Australia.

SPC initially developed 4 options for the site (**Attachment 1**). As resolved by Council, the concept plan options were presented to the Facilities Committee for review on Monday 30 July. Some of the feedback received at this meeting was that option 1, the least expensive option, was the preferred concept plan. The Committee also indicated that the estimated cost for the development of the facility as per option 1 was higher than anticipated, and that it would like to see further investigation of the following points:

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- staging the construction of the indoor program/hydrotherapy pool with the intention of constructing a component of the facility at a future date. (It should be noted that removal of this component of the facility would have major ramifications for the ongoing revenue of the facility, which will be discussed in more detail in the Comments section under option 1);
- demolishing the existing change rooms and amenities and re-building them at the same level as the rest of the indoor facility, as an access ramp and steps would be required to access the change rooms if they are retained; and
- inclusion of a health and fitness area within the facility.

SPC responded to this feedback from the Facilities Committee by undertaking further work and supplying options 1a/1b/1c (**Attachment 2**). The cost plans to accompany these options can be seen at **Attachment 3** as options 1.1, 1.2, and 1.3, and the cost plan to accompany option 1 (preferred) forms part of **Attachment 1**.

A comparison of each of the 4 options and their total cost (including allowance for cost escalation to tender and during construction) is given in the table below. Further explanation and discussion about the total estimated cost of each option is contained in the Comments section of this report.

	Option 1 (preferred)	Option 1.1	Option 1.2	Option 1.3
25 metre x 8 lane indoor heated pool	✓	✓	✓	✓
Water play and baby/toddler/junior swimming opportunities	✓	✓	✓	✓
Program/hydrotherapy pool	✓	✗	✗	✓
Improved change rooms and café/refreshment facilities	✓	✓	✓	✓
Retention of the existing 50 metre pool	✓	✓	✓	✓
Health and fitness area	✗	✓	✗	✓
Total Estimated Cost (including allowance for 12 month cost escalation)	\$8,391,000	\$8,954,000	\$8,378,000	\$10,222,000

## COMMENTS

### Concept plan options

#### Option 1

This option follows Council's resolution on 8 May 2007, except with the addition of an 18 metre x 10 metre warm water program/hydrotherapy pool. The inclusion of this type of pool greatly improves the flexibility of the aquatic program space and helps make the facility more profitable, as it is the most economically viable component of the facility per square metre.

The total cost of option 1 without the program pool would be in the vicinity of \$7,364,000. However it should be noted that while the deletion of the program pool saves approximately \$1,027,000 on the total cost of the project, made up of \$864,000 in construction costs plus contingency savings of \$94,000 and professional fees of \$69,000, annual revenue generated by the program pool of approximately \$364,000 gross – or \$92,000 net after deducting expenses for program staff, water, chemicals and other non-labour items – would be foregone. In other words the warm water program/ hydrotherapy pool would be the highest income generating body of water in the facility and would effectively pay for itself in about 10 years. These figures have been calculated using the Financial Plan for option 1 undertaken for Council by HM Leisure Planning (**Attachment 4**). This is aside from the benefits of offering this facility.

It should also be noted that building the facility without the warm water program/hydrotherapy pool, even if it is planned to include it at a later date, could also possibly have a negative impact on interest from potential partners to invest in the development and management of the facility

Another factor to consider is Council's resolution on 8 May 2007 to include programming space in the 25 metre pool for additional uses such as aqua-aerobics and other exercise programs, which is considered very restrictive in terms of program flexibility, lane space for lap swimmers and swim school, and facility profitability. It is considered that customer satisfaction levels may ultimately deteriorate because of the competing demands for space in the 25 metre pool.

#### Option 1.1

This option is more expensive than option 1 because the existing change rooms have been demolished and reconstructed, which is \$318,000 more expensive than refurbishing the existing change rooms, the health and fitness area adds \$442,000 to the cost and the lift/stair adds \$200,000.

The health and fitness area included in this option is approximately 260 sqm (including some circulation space between the lift and the access door to the 50 metre pool concourse), which is not an economically viable space for such a facility. General health and fitness industry standards suggest that the minimum size of this area would need to be 500 sqm before it becomes financially profitable, and this figure does not take into consideration facility construction costs.

The option to construct the health and fitness area above the change rooms was also investigated by SPC, however it was found that locating it below the entry and café was significantly cheaper than locating it above the change rooms. This is partly due to the fact that below the entry/café is a

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slightly smaller area (260 sqm compared to 330 sqm) but also due to the fact that the entry/café will be elevated regardless of whether there is a health and fitness area below or not.

This option also provides lift access to the health and fitness area and 50m pool concourse, which would be significantly more convenient for disabled access than using the outside ramps, which are likely to be located on the far side of the facility grounds.

The void over the health and fitness area allows separation of patrons entering and exiting the building plus provides views to the health and fitness area, and therefore life, movement and interest, from the point of entry. While not a necessary feature, will add to the activation and ambience of the area. This approach works well in many other facilities.

The plant and infrastructure earmarked in option 1 for the space below the entry would have to be re-located elsewhere on the site or pushed further under the building to create space for the health and fitness facility, which would also add to the overall project cost.

As discussed above in option 1, future expansion of the facility to include the indoor program/hydrotherapy pool and pool hall would cost \$1,027,000 at today's rates, made up of \$864,000 in construction costs plus contingency savings of \$94,000 and professional fees of \$69,000, although this estimate does not take into consideration factors such as site preparation, disruption to services when expansion occurs, etc.

In order to accommodate possible future expansion of the pool hall for the program pool, the plant/store room indicated on the sketch in Attachment 2 would be moved adjacent to the female change rooms.

Option 1.2

This option does not include a program pool or health and fitness area. Whilst it would be reasonable to assume this option to be less expensive than option 1, however it is approximately the same cost as option 1. This is because the existing change rooms have been demolished and reconstructed, which is \$318,000 more expensive than refurbishing the existing change rooms.

As discussed above in option 1, future expansion of the facility to include the indoor program/hydrotherapy pool and pool hall would cost \$1,027,000 at today's rates, made up of \$864,000 in construction costs plus contingency savings of \$94,000 and professional fees of \$69,000, although this estimate does not take into consideration factors such as site preparation, disruption to services when expansion occurs, etc.

In order to accommodate possible future expansion of the pool hall for the program pool, the plant/store room indicated on the sketch in Attachment 2 would be moved adjacent to the female change rooms.

Option 1.3

This option includes both the program/hydrotherapy pool and the health and fitness space and is therefore the most expensive option.

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It is also more expensive than option 1 because the existing change rooms have been demolished and reconstructed, which is \$318,000 more expensive than refurbishing the existing change rooms.

Preferred Option

While it is evident from the analysis above that the only way to reduce the cost of the preferred option 1 is to delete the warm water program/hydrotherapy pool, which reduces the overall cost by \$1,027,000 to \$7,364,000, the retention of the program pool and non-inclusion of the health and fitness area in Option 1 would appear to offer the best outcome for Council for the following reasons:

- the major income-generating component of the facility is retained;
- service provision levels, including aqua-aerobics, hydrotherapy, learn to swim and other programs are maintained;
- regular and casual lap swimmers are not inconvenienced;
- customer satisfaction and therefore repeat visitation to the facility is maximised;
- Council's ability to attract interest from a wider cross-section of the private sector during any call for expressions of interest to design, construct and/or manage or lease the facility is maximised;
- the health and fitness area, while adding to the overall flexibility and service levels of the facility, is too small to be financially viable, and therefore its non-inclusion will improve the bottom line of the facility; and
- removal of the health and fitness area reduces pressure on parking within Bicentennial Park, albeit not at times when parking within the park will be in high demand, ie peak visitation at the health and fitness centre would be between 6-8pm Monday – Wednesday, when there is minimum demand for parking in the park.

**Other Matters for Consideration**

Parking Assessment

Other feedback given by Councillors at the Facilities Committee Meeting on 30 July, and one element of the proposal that will come under scrutiny during the assessment of the DA, is the additional parking demand that the redeveloped facility will create in and around Bicentennial Park. This issue has been addressed in this section of the report.

Existing Conditions

The current on-site parking supply is approximately 250 spaces, which includes all parking off Prince of Wales Drive near the playground and pool (except Bowling Club parking), parking spaces adjacent to West Pymble Community Hall, parking spaces adjacent to the netball courts off Lofberg Road, and the formalised 90 degree angle parking on the southern side of Lofberg Road (adjacent to Lofberg Oval).

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On-street parking is also available on Lofberg Road, both on the frontage of Bicentennial Park as well as opposite the Park. This parking capacity is estimated to be approximately 115 spaces.

Surveys conducted in June 2007 (during the winter netball, soccer and rugby fixtures in Bicentennial Park) show that the peak parking utilisation in the above areas approaches 50%. Some additional parking also occurs in the vicinity of the netball courts and surrounding roads.

Although there is no parking survey information for the summer period, the current parking demand of the West Pymble Pool facility can be estimated. Other local government standards for parking at swimming pools generally allow for provision of parking at the rate of 20 spaces per 100m<sup>2</sup> of actual pool area.

The following table shows the dimensions of the existing pool facilities:

Facility	Dimensions	Area
Existing 50m pool	50m x 15m	750m <sup>2</sup>
Existing pool	15m x 15m	225m <sup>2</sup>
New 8 lane pool	25m x 20m	500m <sup>2</sup>
New program pool/ Hydrotherapy pool	20m x 10m	200m <sup>2</sup>
<b>Total</b>		<b>1,675m<sup>2</sup></b>

Based on the above, it is estimated that the parking demand at West Pymble pool is currently approximately 225 spaces.

The parking demand associated with the existing pool facility could be effectively accommodated on site during the summer peak periods, but there is competition for these spaces from other users of the park, particularly the playground area. However, given the existing parking supply of approximately 365 spaces in and around the frontage of the site and on Lofberg Road, it is considered that this should be satisfactory to accommodate all users of the park during peak periods.

Future Pool Facility

The following table outlines the dimensions of the proposed pool facilities under the preferred option 1:

Facility	Dimensions	Area
Existing 50m pool	50m x 15m	750m <sup>2</sup>
Existing pool	15m x 15m	225m <sup>2</sup>
New 8 lane pool	25m x 20m	500m <sup>2</sup>
<b>Total</b>		<b>1,475m<sup>2</sup></b>

The total pool-related peak parking demand in this configuration would be up to 335 parking spaces, or an additional demand of 110 spaces over the existing pool facility, leaving 30 parking spaces for other Bicentennial Park users. As discussed below, provision can be made on site and around the perimeter of the park for an additional 71 spaces.

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The following table outlines the dimensions of the proposed pool facilities without the program pool:

Location	Description	Additional parking spaces
Carpark off Prince of Wales Drive	Current capacity 42 spaces. Additional aisle possible adjacent to north-eastern end of car park	+12
Parallel parking along Quarry Road	Current capacity 7 spaces. Conversion to 90 degree angle parking and extension of parking extent to opposite bowling club car park entrance. Relocation of existing path further to the west.	+29
Parking area east of main pool behind plant room	Current capacity 5 spaces. Potential to achieve additional spaces, which may also be utilised by staff/service vehicles	+5
Lofberg Road (south-western side) adjacent to Norman Griffiths Oval	Formalise existing angle parking on frontage to Norman Griffiths Oval	+8
Lofberg Road (eastern side) Adjacent to Lofberg Oval	Formalise existing angle parking on frontage to Lofberg Oval. Rationalise access to oval via 1 gate only.	+7
Scout halls area	Potential to allow access to parking around scout halls via existing established roads	+10
<b>Total</b>		<b>+71</b>

The above measures would be adequate to cater for the additional demand, although a small proportion of the additional spaces will be located in a slightly more remote location, with respect to the pool. It should also be noted that the cost to create and construct these additional parking spaces would be considerable, particularly the 29 extra spaces to be created along Quarry Rd on the approach to the pool, where a number a small trees would also need to be removed.

To encourage turnover of the parking stock, consideration could be given to introducing period parking in part of the on-site parking area. A parking demand study conducted for the Ryde Aquatic Leisure Centre (Cardno, 2005) found that the average stay of parked vehicles in the Ryde Aquatic Leisure Centre car park on weekends was 1.74 hours. Therefore, a group of parking spaces regulated by 2 hour parking restrictions on weekends would improve turnover. It is initially suggested that 40 spaces could be allocated as "2 hour parking 8am-6pm Sat-Sun". Once operation of the facility commences, the amount and configuration of 2 hour parking could be reviewed, to provide adequate turnover and amenity to the users.

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The winter peak parking demand at the pool on Saturday mornings is exacerbated by other sports, such as rugby at Lofberg Oval (maximum 30 cars per game and maximum of 60 cars during changeover times), soccer at Norman Griffiths Oval (maximum 20 cars per game and maximum of 40 cars during changeover times), and Netball at Lofberg Netball Courts (maximum of 40 cars per game time and maximum of 80 cars during changeover times). The combined maximum peak parking demand during games is 90 cars and during changeover period this could reach a maximum of 180 cars.

During winter Bicentennial Park playground is not a large traffic generator, therefore any Saturday morning overflow traffic generated by West Pymble Pool patrons may need to be directed to use the 54 spaces in the bowling club car park until 12 Noon, or at a time agreed by the bowling club. The bowling club car park would be available on Saturday mornings as lawn bowls is not played until the afternoons on Saturdays, therefore bowls will not clash with the winter Saturday morning peak at the pool. Parking restrictions could be introduced in consultation with the bowling club.

Other Parking Generators – Summer

The summer peak parking demand at the pool is exacerbated by cars visiting the playground and picnic area. On a busy summer day it is estimated that there may be up to 50 vehicles parked at the main carpark for these purposes alone. Fortunately cricket at Lofberg Oval only generates a small number of vehicles (maximum of 20), which park adjacent to the oval, while there are no regular summer sports played at Norman Griffiths Oval or Lofberg Netball Courts.

With no netball played on the Lofberg courts in Summer it may be possible for Council or the pool operators to open the courts to parking on busy days if overflow parking is required. This area could potentially provide up to 100 spaces and would have to be managed carefully if being used for parking as there will be no permanent markings for car spaces and witches hats or some other system would have to be used. Oil leaks from cars would also have to be monitored very closely and cleaned up as soon as possible on the next business day to avoid permanent court damage. Because of the risk of the damage to the courts, it is expected that they would only be used for car parking if absolutely necessary. Such an option if pursued would need to be carefully resurrected, consulted and implemented.

If a health and fitness facility is included in the facility parking requirements would also increase. For instance, a 250 sqm health and fitness facility could be expected to generate up to 15 vehicles at peak times while a 500 sqm facility could be expected to generate up to 30 vehicles at peak times. These estimates are based on health and fitness industry standards around Australia, which generally provide for 145 car parking spaces for a stand-alone 2500 sqm health facility and 60 spaces for a 1000 sqm facility.

Parking demand could be expected to be slightly lower for a health and fitness facility that is part of a facility that contains other leisure activities, as would be the case at West Pymble Pool, as some people already visiting the facility for other activities may at times also use the health and fitness facility.

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### Funding the construction of the facility

The Council resolution on the 8 May 2007 asked for a report outlining how the facility is to be funded, including ongoing maintenance.

Potential Funding sources include S.94 monies, cash, borrowings, partnership arrangements with a commercial enterprise, or some combination of these.

The funding model adopted for the construction of the facility will be influenced by the management model that Council seeks to implement. Broadly speaking Council's options are as follows:-

- 1) Council designs, funds, builds, owns and operates the facility directly.
- 2) Council designs, and builds the facility, and then leases or contracts out the management rights.
- 3) Council designs the facility and seeks an organisation to build and operate the venture.
- 4) Council utilising its adopted option as a basis for the facility, seeks a partner that will design, build and operate the facility.

Each of the above options will involve considerable subsidy by Council. Private sector investment in leisure centres is an increasing area of interest within the industry. Investment however is relative to the potential for components of the facility to provide an adequate return on that investment. Typically, attractive opportunities provide for a sizeable dry area (gymnasium) and learn-to-swim facilities. As outlined earlier in the report, a viable gymnasium will need to be at least 500m<sup>2</sup> which will have a number of consequences for Bicentennial Park.

Regardless of which option Council determines to pursue a comprehensive funding model which will need to be developed.

It is recommended that funding requirements for this facility be identified within Council's Long Term Financial Model currently being reviewed for reporting to Council in December 2007, and assessed against other priorities of Council. Section 94 funding of \$432,975 has been identified within the 2004-2009 Plan (amendment No. 1).

In order to more accurately quantify the most viable approach for Council to pursue, it is recommended that an expression of interest (EOI) be advertised once Council has determined its option. This EOI will highlight the degree of interest from suitable organisations including potential investments and on what terms to assist in Council's decision making. The EOI should provide opportunity to address all managerial models identified and should seek separate application from design architects should Council determine to pursue model 1 or 2.

Ongoing maintenance is envisaged to be funded at this stage as a component of the management contract or as part of the lease and it is further referred to within the financial considerations section of this report.

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### Timeframe for Facility Development

The Council resolution on 8 May 2007 asked for a timeframe for commencement of construction.

At this stage the timeframe for facility development can not be determined as there are too many variables to be determined by Council which will have an impact on timing, should Council determine to go ahead. These matters include which option, a decision on a management model, finalisation of financial planning and tender and construction processes.

Should Council determine to embark upon the development of the facility, it is envisaged that the timing of each stage will progress as follows:

- Development of design brief, call for EOI/tenders, selection and engagement of Architects for facility design – 3 months
- Detailed design, community consultation and preparation of DA – 6 months
- DA approval – 3-6 months
- Development of construction brief, call for tenders, selection and engagement of Builders and project manager – 3 months
- Construction – 9-12 months

Therefore the overall timeframe under this model of facility development is 24-30 months.

## CONSULTATION

During the preparation and public exhibition of the recent Aquatic Feasibility Study Council undertook extensive community consultation.

During preparation of the concept plans discussed in this report Council has consulted with the Ku-ring-gai Amateur Swimming Club and the Parks, Sport and Recreation Reference Group and Council's Facilities Committee. The pool lessee has also been briefed about the concept plans.

Once Council has determined its preferred concept option, it is recommended that this be publicised to allow the broader community the opportunity to comment on the design and offer input that can be considered in the development of detailed design for the facility. This should involve placement of appropriate material at the existing pool, advertisements and on Council's website. The local community in the catchment of Bicentennial Park should also be notified and consulted regarding this proposal.

## **FINANCIAL CONSIDERATIONS**

The development of the new aquatic/leisure facilities will represent a major commitment for Council, the extent of which is not currently provided for in Council's Long Term Financial Model with the exception of part funding identified in Council's current Section 94 Plan (\$432,000). Potential Funding sources include cash, borrowings, partnership arrangements with a commercial enterprise, or some combination of these.

The preferred option for Council has an identified capital cost of \$8,391,000.

A detailed business plan has been prepared for this option that outlines revenue projections, expenses, operating and capital maintenance and subsidies over a fifteen (15) year period. This plan will require further development and scrutiny but gives an indication of the scale of the operation and commitment for Council.

As outlined in the report it is recommended that Council consider the funding of this project within the review of the Long Term Financial Model to be reported to Council in December 2007, against other priorities of Council.

Further consideration of the funding model and business plan should occur when the outcomes of the Expression of Interest are reported to Council.

## **CONSULTATION WITH OTHER COUNCIL DEPARTMENTS**

The concept plan has been discussed with officers from Community and Strategy. Further consultation will occur with relevant departments during the next stages of the project as adopted by Council.

## **SUMMARY**

A concept plan for the redevelopment of West Pymble Pool incorporating a range of indoor aquatic facilities has been developed along with accompanying cost plans to give Council an indication of the financial commitment required to construct the facility. Option 1 is recommended as the preferred option of the four options considered and is also the least expensive option for Council. An Expression of Interest process will assist in Council's decision making by highlighting the degree of interest from suitable organisations to become involved in the development and management of the facility, including potential investments and on what terms.

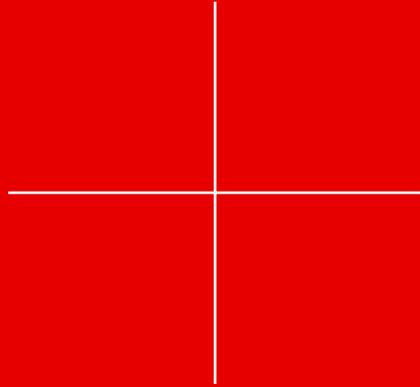
## **RECOMMENDATION**

- A. That Council adopt Option 1 as the preferred concept plan for the redevelopment of West Pymble Pool.
- B. That Council call for expressions of interest to gauge interest from the private sector in investing in the development and or ongoing management of West Pymble Pool as outlined in this report.
- C. That funding of the facility be considered in the review of Council's Long Term Financial Model in December 2007 and following consideration of responses to an Expression of Interest.
- D. That further reporting to Council occur following the undertaking of an Expression of Interest by the end of February 2008.

Roger Faulkner  
**Sport and Recreation Planner**

Steven Head  
**Director Strategy**

- Attachments:**
- 1. West Pymble Pool Redevelopment Concept Design Presentation with initial 4 options and Cost Plan for Preferred Option 1 - 808904**
  - 2. Sketch of Options 1a/1b/1c - 849870**
  - 3. Cost plans for Options 1a/1b/1c - 849113**
  - 4. Financial Plan - HM Leisure Planning - 807936**



# West Pymble Pool Redevelopment Ku-Ring-Gai Council

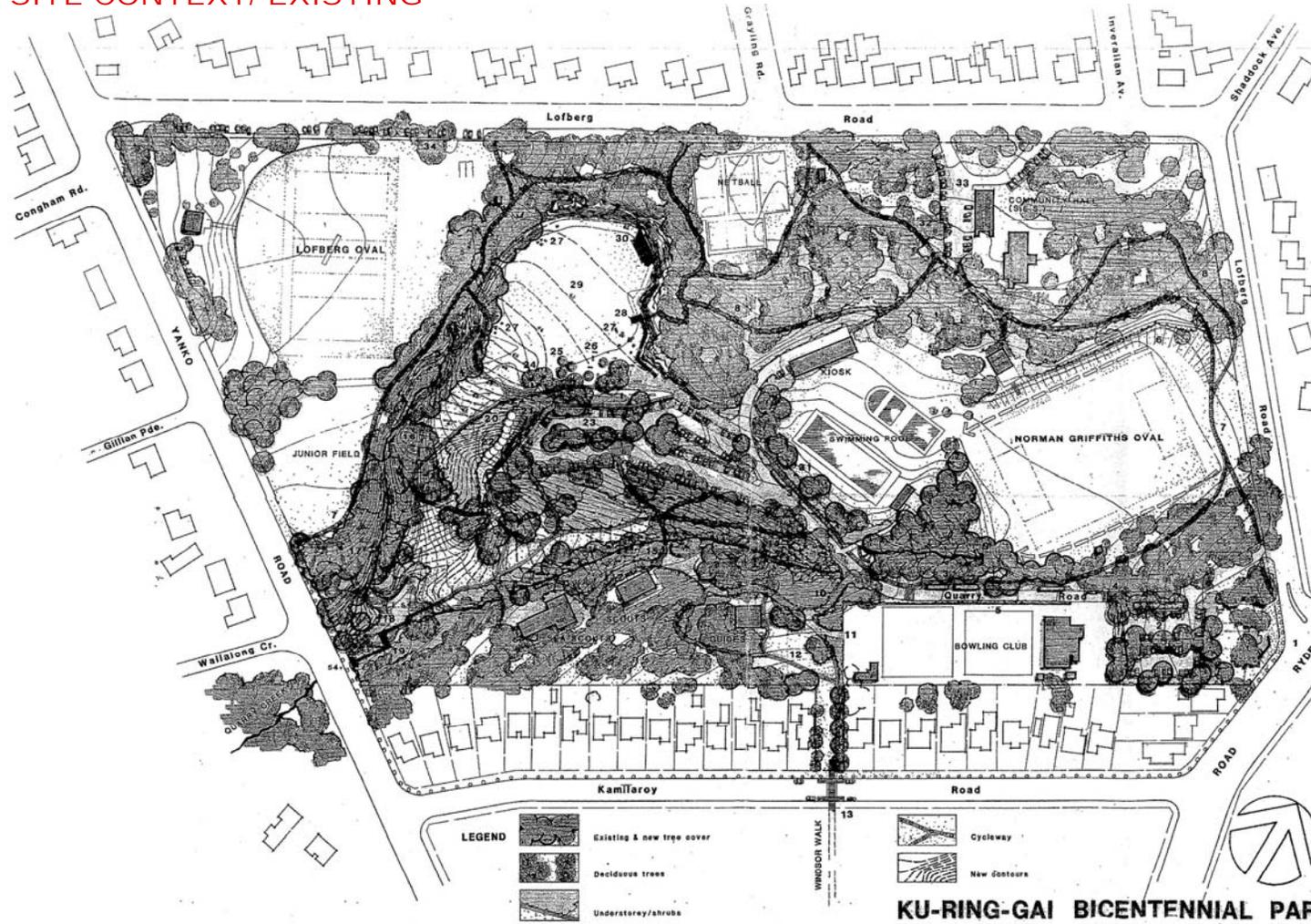
## Concept Design Presentation

30<sup>th</sup> July 2007



# West Pymble Aquatic Centre Redevelopment

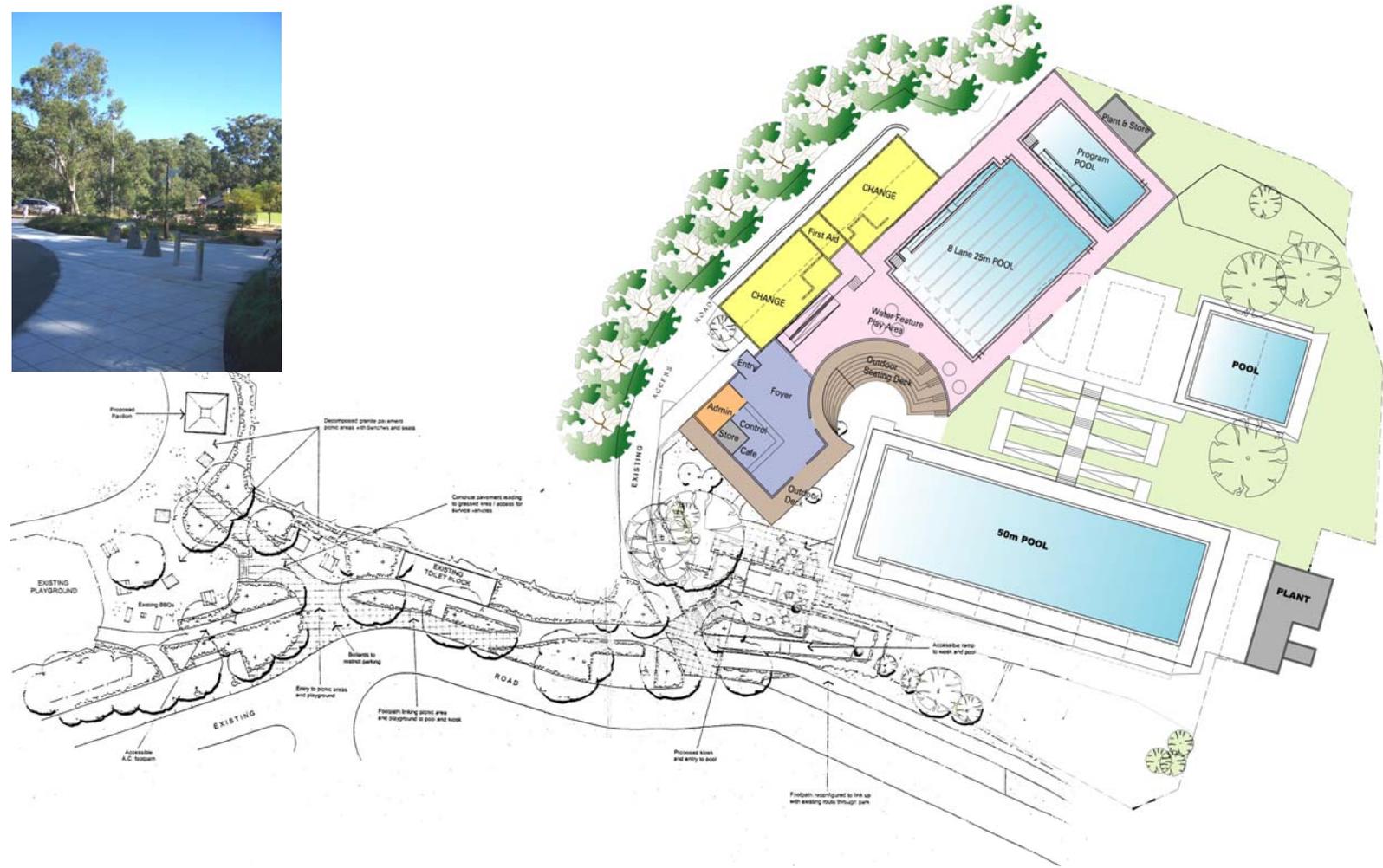
## SITE CONTEXT/ EXISTING



KU-RING-GAI BICENTENNIAL PARK

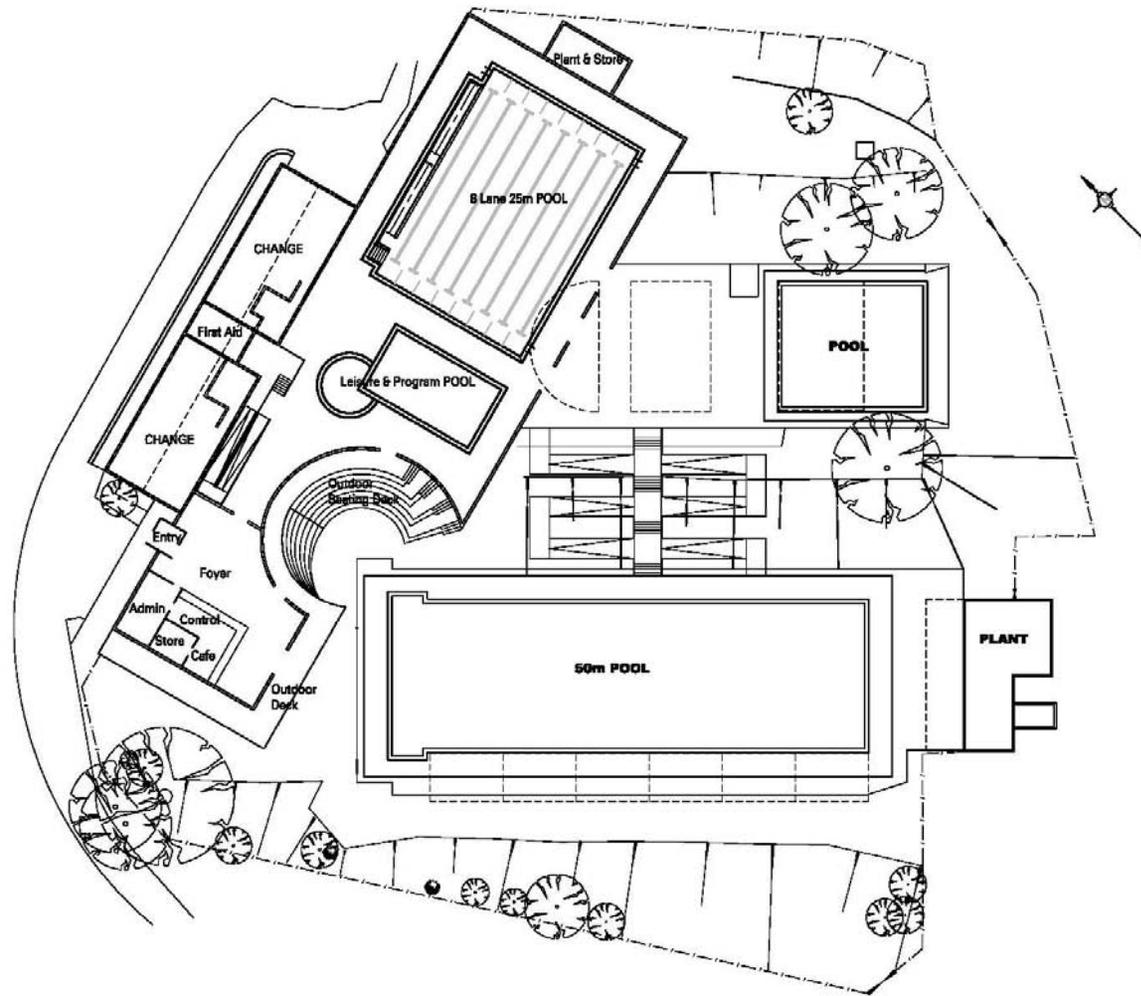
# West Pymble Aquatic Centre Redevelopment

## SITE CONTEXT/ OPPORTUNITIES



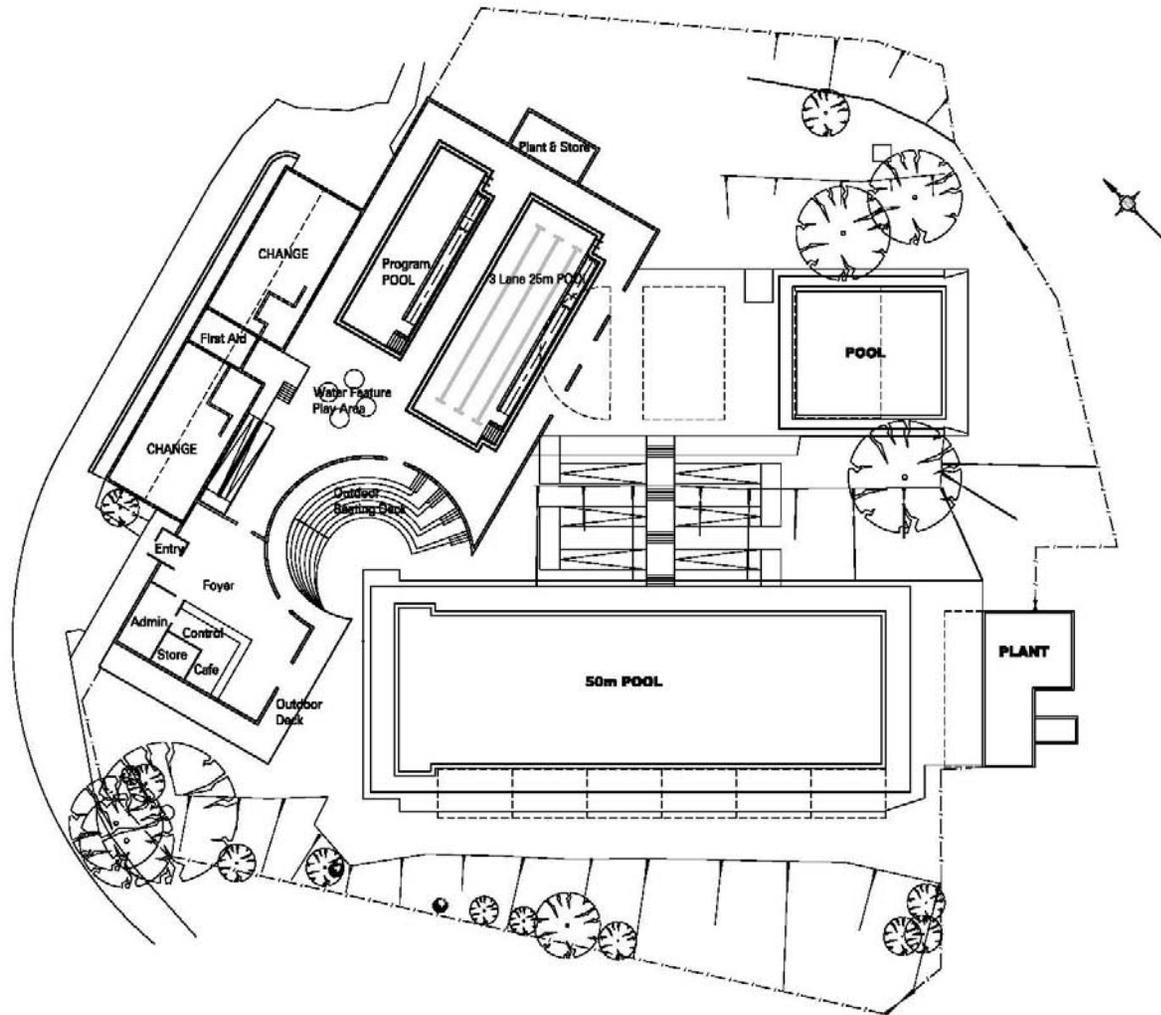
# West Pymble Aquatic Centre Redevelopment

BUILDING PLANNING/ OPPORTUNITIES -Option 02



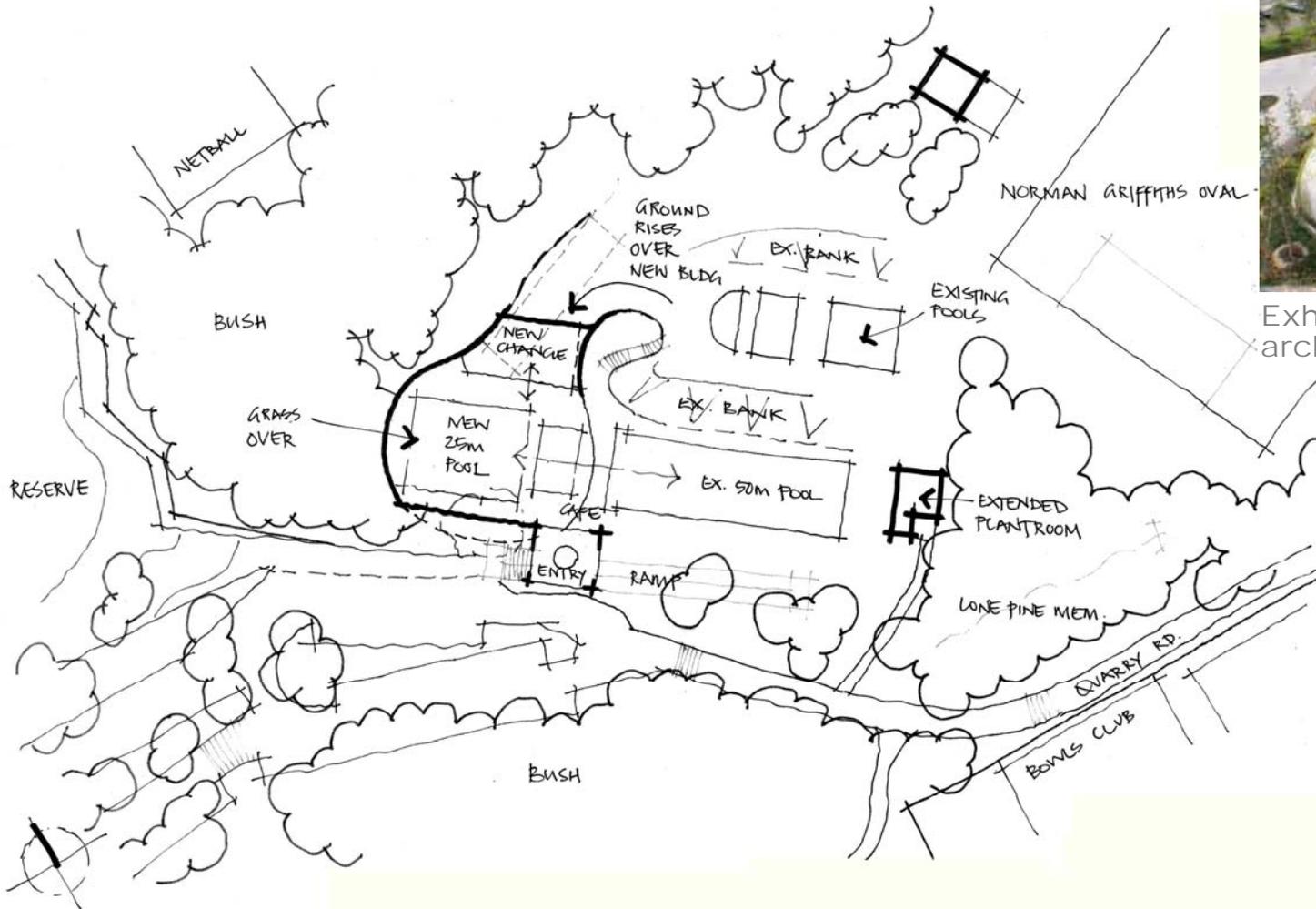
# West Pymble Aquatic Centre Redevelopment

BUILDING PLANNING/ OPPORTUNITIES -Option 03



# West Pymble Aquatic Centre Redevelopment

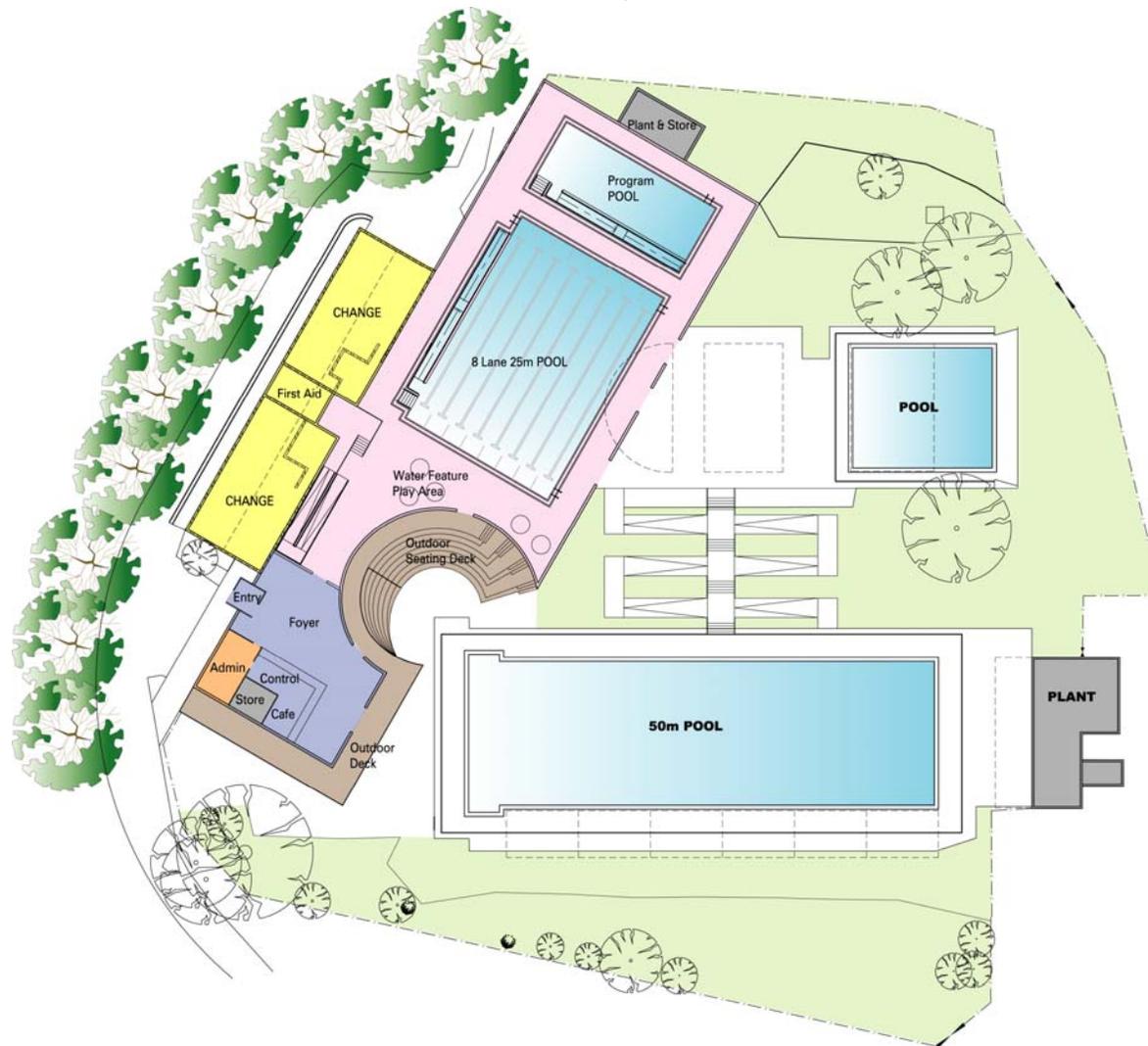
SITE CONTEXT/ OPPORTUNITIES -Option 04



Exhibition Centre, Japan architect Toyo Ito

# West Pymble Aquatic Centre Redevelopment

BUILDING PLANNING/ OPPORTUNITIES -Option 01 (Preferred)



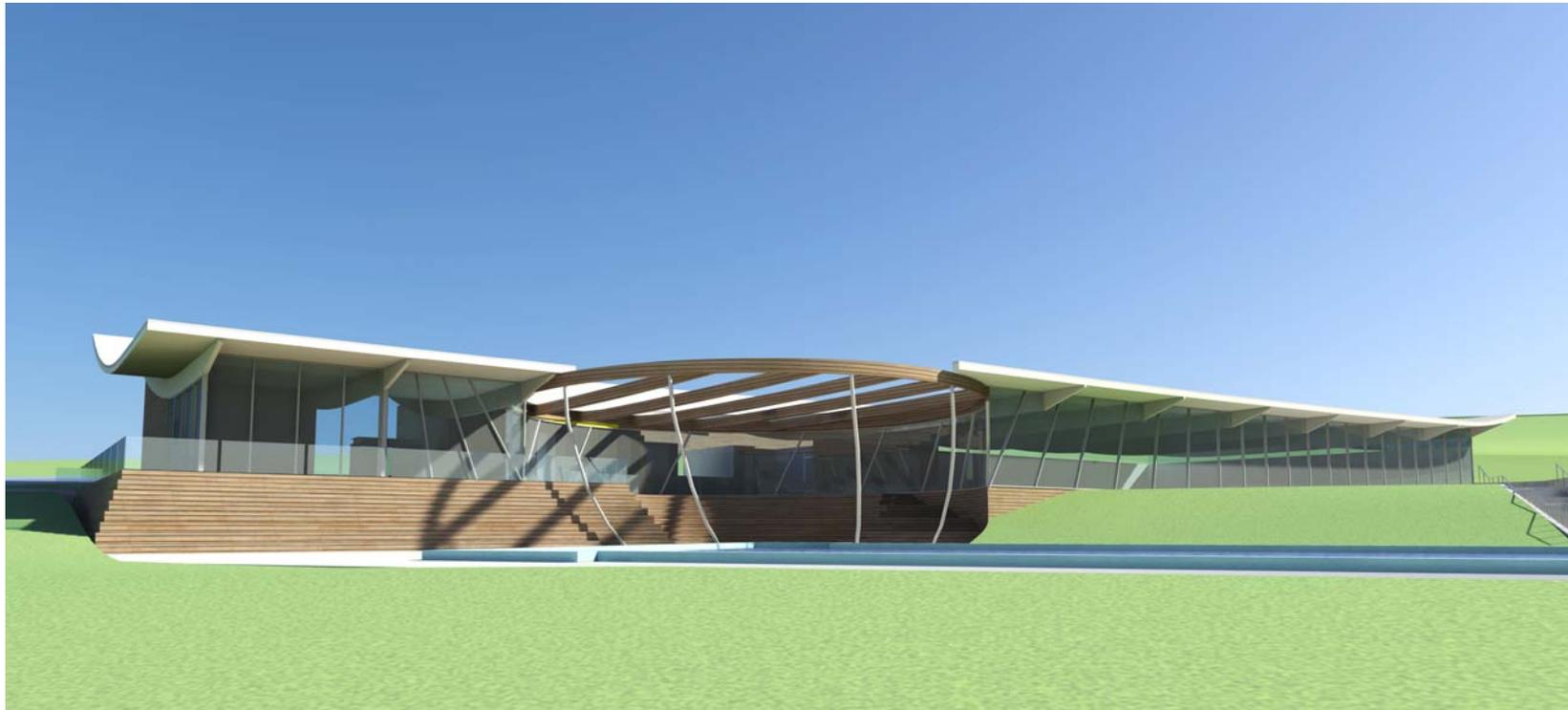
# West Pymble Aquatic Centre Redevelopment

OPTION 1 - CONCEPT VIEW 1

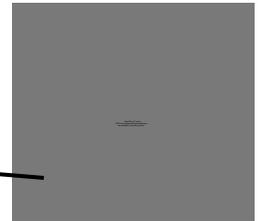
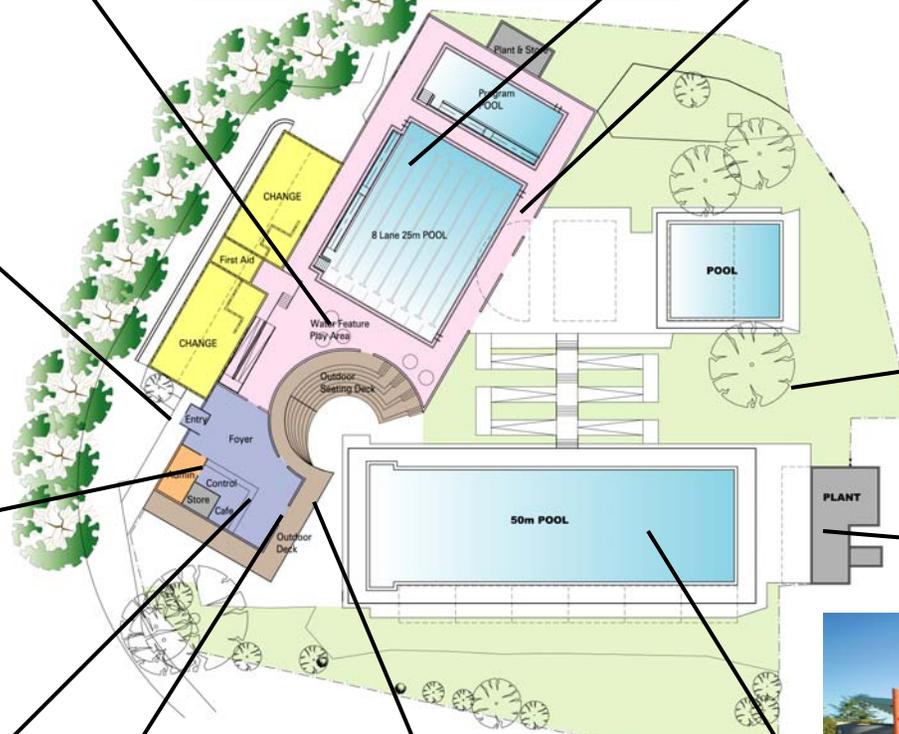


# West Pymble Aquatic Centre Redevelopment

OPTION 1 - CONCEPT VIEW 1



VISION



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CHENE**  
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# West Pymble Aquatic Centre Redevelopment

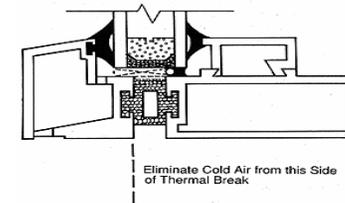
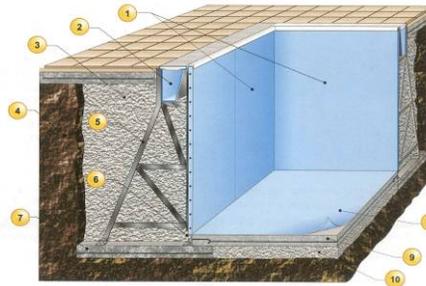
## YARRA JUNCTION AQUATIC CENTRE



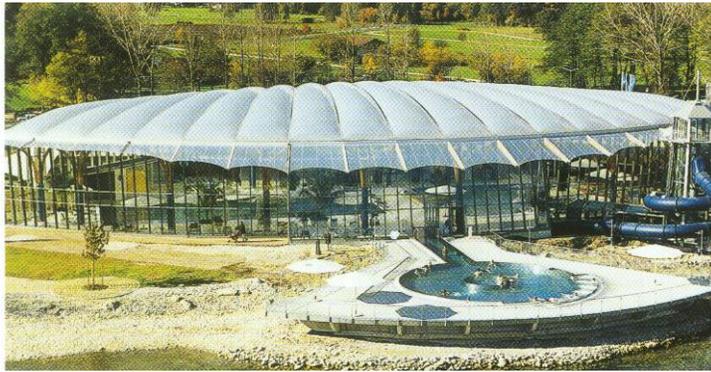
# West Pymble Aquatic Centre Redevelopment

ECOLOGICALLY SUSTAINABLE DESIGN, WHOLE OF LIFE SOLUTIONS

- 1) Myrtha panel
- 2) Overflow gutter
- 3) Gravel backfilling
- 4) Natural ground
- 5) Buttress Frame: this makes the structure self-supporting and aseismic. It allows precise adjustment of the structure vertically and horizontally.
- 6) Base profile: this acts as an initial levelling device for the panels and provides an ideal frame for casting the concrete floor.
- 7) Footing: reinforced concrete
- 8) Pool floor: waterproofing material of reinforced PVC fabric, double thickness with interposition of a polyester fibre web.
- 9) Pool floor with reinforced mesh
- 10) Gravel drainage bed



EFTE



Passive  
Active  
Harvesting  
Materials  
Staffing



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# West Pymble Aquatic Centre Redevelopment

## COST PLAN: OPTION 1

Function	area m2	OPTION 1	
		rate \$/m2	cost \$
New Entry / Café	253	\$ 1,750	\$ 443,000
Ramp to change rooms		allow	\$ 40,000
Café Equipment		allow	\$ 30,000
Pool Hall	1,305	\$ 1,750	\$ 2,284,000
Refurbish existing Change Rooms	304	\$ 2,100	\$ 639,000
Store	32	\$ 1,100	\$ 36,000
Connection to existing buildings		allow	\$ 15,000
Steps to suit change in levels		allow	\$ 20,000
Ramp to suit change in levels		allow	\$ 40,000
Extend existing plant building	75	\$ 1,000	\$ 75,000
Entry canopy / sunshades		allow	\$ 25,000
Stepped timber deck	411	\$ 300	\$ 124,000
Lightweight pergola		allow	\$ 39,000
<b>Total Building Works</b>	<b>2,380</b>	<b>\$ 1,601</b>	<b>\$ 3,810,000</b>
<b>Pool Works</b>			
New small pools x 1	180	\$ 2,600	\$ 468,000
New 25m pool	525	\$ 1,900	\$ 998,000
Ramp to 25m pool	36	\$ 2,000	\$ 72,000
<b>Total Pool Works</b>			<b>\$ 1,538,000</b>
<b>External Works &amp; Services</b>			
Site Preparation / earthworks		allow	\$ 108,000
Demolish existing small pool		allow	\$ 13,000
Demolition		allow	\$ 15,000
Allow for works to existing external concourse / bank		allow	\$ 108,000
Footpath and assoc. stairs /ramps		allow	\$ 50,000
Landscaping - hard/soft		allow	\$ 100,000
External Services		allow	\$ 215,000
<b>Total External Works &amp; Services</b>			<b>\$ 609,000</b>
<b>Construction Cost</b>			<b>\$ 5,957,000</b>

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# West Pymble Aquatic Centre Redevelopment

## COST PLAN: OPTION 1

ESD		6%	\$	358,000
Contingency		15%	\$	948,000
<b>Sub Total</b>			\$	<b>7,263,000</b>
Professional Fee Allowance		8.0%	\$	582,000
Authority Fees & Charges		allow	\$	45,000
Loose Furniture & Equipment				EXCL
<b>Total Project Cost</b> <i>(current day cost)</i>			\$	<b>7,890,000</b>
Cost escalation to tender	12 mths	4.0%	\$	316,000
Cost escalation during construction	12 mths	2.3%	\$	185,000

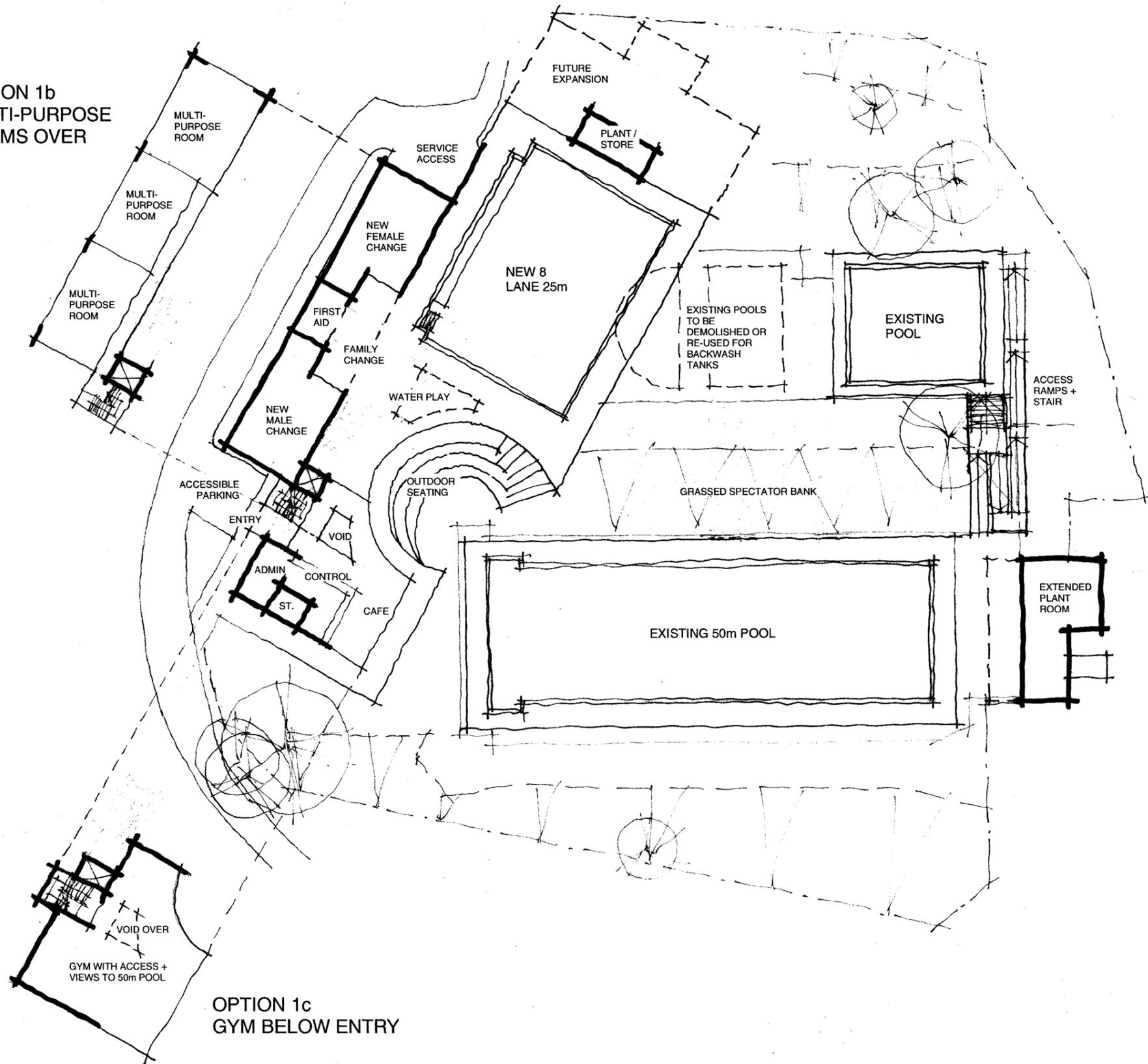
# West Pymble Aquatic Centre Redevelopment

thank you



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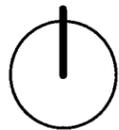
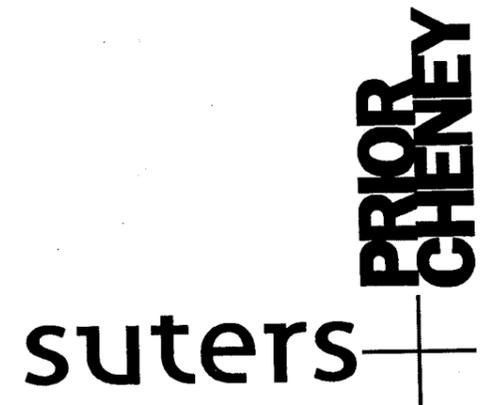
OPTION 1b  
MULTI-PURPOSE  
ROOMS OVER



- NOTES:
- \* NEW CHANGE ROOMS CONSTRUCTED IN LOCATION OF EXISTING CHANGE ROOMS, LEVEL TO SUIT NEW POOL + ENTRY FOYER.
  - \* STAIR + LIFT FOR OPTION 1b / 1c ONLY.
  - \* OPTION 1c INCLUDES LIFT + STAIR ACCESS TO 50m POOL VIA LOWER LEVEL GYM.
  - \* OPERABLE WALLS BETWEEN MULTI-PURPOSE ROOMS.

OPTION 1c  
GYM BELOW ENTRY

WEST PYBBLE POOL  
Options 1a / 1b / 1c  
Ku-Ring-Gai Municipal Council



**KU-RING-GAI COUNCIL**  
**WEST PYMBLE POOL - OPTION 1.1**

**Preliminary Order of Cost for Discussion Only**

QS ref: 307099 (01 Nov 2007)

Function	area m2	OPTION 1.1	
		rate \$/m2	cost \$
<b>Building Works</b>			
New Entry / Café	300	\$ 1,750	\$ 525,000
Café Equipment		allow	\$ 30,000
Pool Hall	1,000	\$ 1,800	\$ 1,800,000
Change/First Aid Rooms	330	\$ 2,900	\$ 957,000
Gym (location 1c)	260	\$ 1,700	\$ 442,000
Plant	100	\$ 1,200	\$ 120,000
Lift/Stair		allow	\$ 200,000
Extend existing plant building	75	\$ 1,200	\$ 90,000
Entry canopy / sunshades		allow	\$ 50,000
<b>Total Building Works</b>	<b>2,065</b>	<b>\$ 2,041</b>	<b>\$ 4,214,000</b>
<b>Pool Works</b>			
Waterplay	60	\$ 2,600	\$ 156,000
New 25m pool	525	\$ 1,900	\$ 998,000
Ramp to 25m pool	36	\$ 2,000	\$ 72,000
<b>Total Pool Works</b>			<b>\$ 1,226,000</b>
<b>External Works &amp; Services</b>			
Site Preparation / earthworks		allow	\$ 93,000
Demolish existing pools		allow	\$ 20,000
Demolition		allow	\$ 20,000
Stepped timber deck/Pergola		allow	\$ 200,000
Access ramps & stair between existing pools		allow	\$ 260,000
Allow for works to existing external concourse / bank		allow	\$ 100,000
Landscaping - hard/soft		allow	\$ 50,000
External Services		allow	\$ 186,000
<b>Total External Works &amp; Services</b>			<b>\$ 929,000</b>
<b>Allowances</b>			
ESD		6%	\$ 383,000
Contingency		15%	\$ 1,013,000
<b>Total Allowances</b>			<b>\$ 1,396,000</b>
<b>Construction Cost</b>			<b>\$ 7,765,000</b>
Professional Fee Allowance		8.0%	\$ 622,000
Authority Fees & Charges		allow	\$ 32,000
Loose Furniture & Equipment			EXCL
<b>Sub Total</b>			<b>\$ 8,419,000</b>
Cost escalation to tender	12 mths	4.0%	\$ 337,000
Cost escalation during construction	12 mths	2.3%	\$ 198,000
<b>Total Project Cost</b>			<b>\$ 8,954,000</b>

**Exclusions:**

Upgrade Off Site Service Infrastructure  
Land, legal and finance costs  
Relocation Costs  
Adverse soil conditions incl. removal of contaminated soil and excavation in rock  
Asbestos & other hazardous materials removal  
Upgrade of existing outdoor pools  
Fire fighting water tanks and pumps  
Entrance path  
Carparking  
Pool play equipment / water features  
Loose Furniture and equipment  
GST

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**KU-RING-GAI COUNCIL**  
**WEST PYMBLE POOL - OPTION 1.2**

**Preliminary Order of Cost for Discussion Only**

QS ref: 307099 (01 Nov 2007)

Function	area m2	OPTION 1.2	
		rate \$/m2	cost \$
<b>Building Works</b>			
New Entry / Café	300	\$ 1,750	\$ 525,000
Café Equipment		allow	\$ 30,000
Pool Hall	1,000	\$ 1,800	\$ 1,800,000
Change/First Aid Rooms	330	\$ 2,900	\$ 957,000
Store under	60	\$ 1,000	\$ 60,000
Plant	100	\$ 1,200	\$ 120,000
Lift/Stair		allow	\$ 200,000
Extend existing plant building	75	\$ 1,200	\$ 90,000
Entry canopy / sunshades		allow	\$ 50,000
<b>Total Building Works</b>	<b>1,865</b>	<b>\$ 2,055</b>	<b>\$ 3,832,000</b>
<b>Pool Works</b>			
Waterplay	60	\$ 2,600	\$ 156,000
New 25m pool	525	\$ 1,900	\$ 998,000
Ramp to 25m pool	36	\$ 2,000	\$ 72,000
<b>Total Pool Works</b>			<b>\$ 1,226,000</b>
<b>External Works &amp; Services</b>			
Site Preparation / earthworks		allow	\$ 84,000
Demolish existing pools		allow	\$ 20,000
Demolition		allow	\$ 20,000
Stepped timber deck/Pergola		allow	\$ 200,000
Access ramps & stair between existing pools		allow	\$ 260,000
Allow for works to existing external concourse / bank		allow	\$ 100,000
Landscaping - hard/soft		allow	\$ 50,000
External Services		allow	\$ 168,000
<b>Total External Works &amp; Services</b>			<b>\$ 902,000</b>
<b>Allowances</b>			
ESD		6%	\$ 358,000
Contingency		15%	\$ 948,000
<b>Total Allowances</b>			<b>\$ 1,306,000</b>
<b>Construction Cost</b>			<b>\$ 7,266,000</b>
Professional Fee Allowance		8.0%	\$ 582,000
Authority Fees & Charges		allow	\$ 29,000
Loose Furniture & Equipment			EXCL
<b>Sub Total</b>			<b>\$ 7,877,000</b>
Cost escalation to tender	12 mths	4.0%	\$ 316,000
Cost escalation during construction	12 mths	2.3%	\$ 185,000
<b>Total Project Cost</b>			<b>\$ 8,378,000</b>

**Exclusions:**

Upgrade Off Site Service Infrastructure  
Land, legal and finance costs  
Relocation Costs  
Adverse soil conditions incl. removal of contaminated soil and excavation in rock  
Asbestos & other hazardous materials removal  
Upgrade of existing outdoor pools  
Fire fighting water tanks and pumps  
Entrance path  
Carparking  
Pool play equipment / water features  
Loose Furniture and equipment  
GST

DRAFT

 **Currie & Brown**

**KU-RING-GAI COUNCIL**  
**WEST PYMBLE POOL - OPTION 1.3**

**Preliminary Order of Cost for Discussion Only**

QS ref: 307099 (01 Nov 2007)

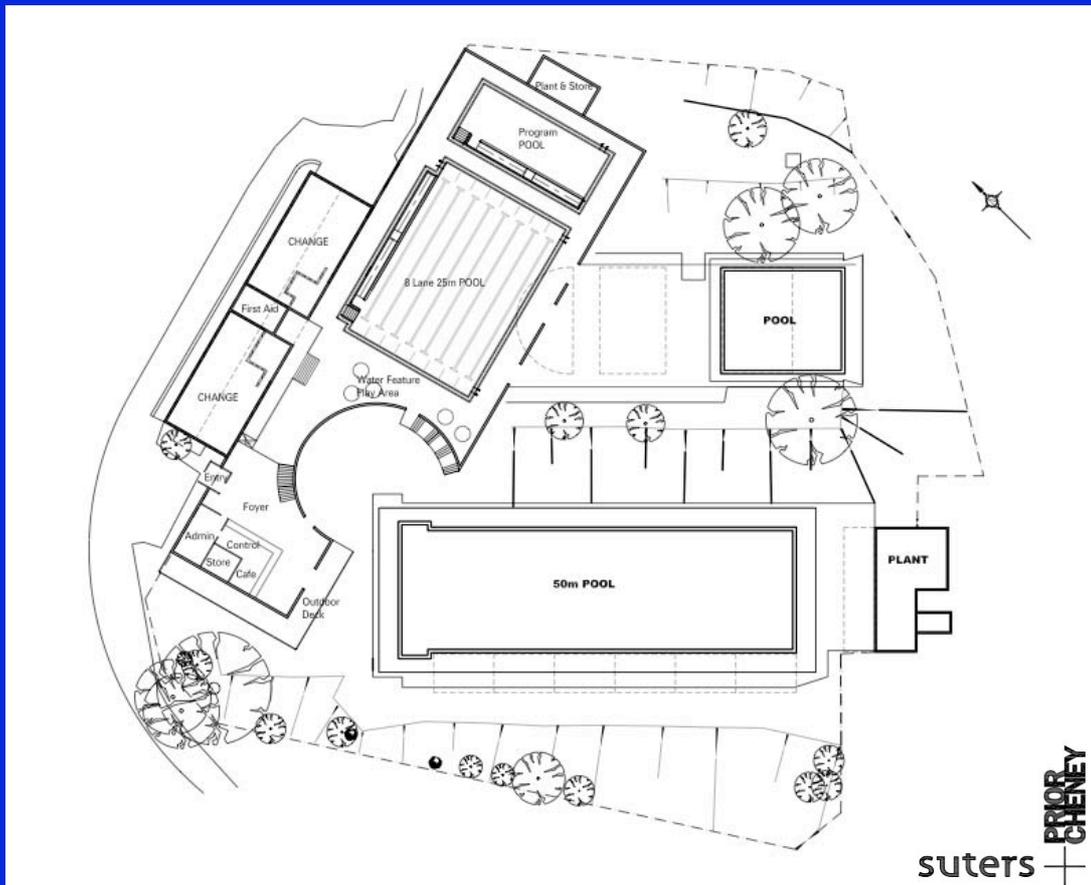
Function	area m2	OPTION 1.3	
		rate \$/m2	cost \$
<b>Building Works</b>			
New Entry / Café	300	\$ 1,750	\$ 525,000
Café Equipment		allow	\$ 30,000
Pool Hall	1,000	\$ 1,800	\$ 1,800,000
Pool Hall (Program Pool)	280	\$ 1,800	\$ 504,000
Change/First Aid Rooms	330	\$ 2,900	\$ 957,000
Gym (location 1c)	260	\$ 1,700	\$ 442,000
Plant	100	\$ 1,200	\$ 120,000
Lift/Stair		allow	\$ 200,000
Extend existing plant building	75	\$ 1,200	\$ 90,000
Entry canopy / sunshades		allow	\$ 50,000
<b>Total Building Works</b>	<b>2,345</b>	<b>\$ 2,012</b>	<b>\$ 4,718,000</b>
<b>Pool Works</b>			
Program pool	150	\$ 2,400	\$ 360,000
Waterplay	60	\$ 2,600	\$ 156,000
New 25m pool	525	\$ 1,900	\$ 998,000
Ramp to 25m pool	36	\$ 2,000	\$ 72,000
<b>Total Pool Works</b>			<b>\$ 1,586,000</b>
<b>External Works &amp; Services</b>			
Site Preparation / earthworks		allow	\$ 106,000
Demolish existing pools		allow	\$ 20,000
Demolition		allow	\$ 20,000
Stepped timber deck/Pergola		allow	\$ 200,000
Access ramps & stair between existing pools		allow	\$ 260,000
Allow for works to existing external concourse / bank		allow	\$ 100,000
Landscaping - hard/soft		allow	\$ 50,000
External Services		allow	\$ 212,000
<b>Total External Works &amp; Services</b>			<b>\$ 968,000</b>
<b>Allowances</b>			
ESD		6%	\$ 437,000
Contingency		15%	\$ 1,157,000
<b>Total Allowances</b>			<b>\$ 1,594,000</b>
<b>Construction Cost</b>			<b>\$ 8,866,000</b>
Professional Fee Allowance		8.0%	\$ 710,000
Authority Fees & Charges		allow	\$ 36,000
Loose Furniture & Equipment			EXCL
<b>Sub Total</b>			<b>\$ 9,612,000</b>
Cost escalation to tender	12 mths	4.0%	\$ 385,000
Cost escalation during construction	12 mths	2.3%	\$ 225,000
<b>Total Project Cost</b>			<b>\$ 10,222,000</b>

**Exclusions:**

Upgrade Off Site Service Infrastructure  
Land, legal and finance costs  
Relocation Costs  
Adverse soil conditions incl. removal of contaminated soil and excavation in rock  
Asbestos & other hazardous materials removal  
Upgrade of existing outdoor pools  
Fire fighting water tanks and pumps  
Entrance path  
Carparking  
Pool play equipment / water features  
Loose Furniture and equipment  
GST

DRAFT

**CB** Currie & Brown



# Financial Plan

## Ku-ring-gai City Council West Pymble Pool Redevelopment Option 1

Aquatic Facilities - All Year 25 Metre Indoor Pool (8 Lane), Warm Water Program Pool, Indoor Waterplay and Café

&

Summer only Outdoor 50 Metre Pool (6 Lane) and Program Pool



July 2007

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# Ku-ring-gai Council

## Variable Assumptions Sheet

### West Pymble Pool Redevelopment with Indoor and Outdoor Aquatics and Social facilities

#### OPTION 1

#### Wet- Indoor 25 Metre Pool (8 Lane), Warm Water Program Pool and Waterplay & Café & Outdoor 50 Metre Pool and Waterplay

#### Guidelines for market demand; fees; salaries and inflation

Population - Aquatics attendance calculation for:		West Pymble Pool Catchments				
		Pymble West Pymble & Killara residents	Ku-ring-gai Municipality Mid Catchment Areas	Other Municipalities Outer Catchment Areas	Total Populations	
Catchment Population (Primary) - Pymble, West Pymble & Killara	25,104	100%				
Aquatics Visits Main Catchment per head:	5.0	2001	25,143	76,203	48,100	149,446
Catchment Population (Mid) - within Ku-ring-gai Municipality	76084	2006	25,078	76,005	47,975	149,059
Aquatics Visits Mid Catchment per head:	3.0	2011	26,511	80,350	50,718	157,579
Catchment Population (Outer) - other Municipalities	48025	2016	28,027	84,943	53,617	166,587
Aquatics Visits Outer Catchment per head:	0.5	2021	29,629	89,799	56,682	176,110
All Catchments Population :	149,213	2026	31,323	94,932	59,922	186,177
Aquatics Projected Visits	377,785	Ave % growth to 2006	-0.05%	-0.05%	-0.05%	-0.1%
		Ave % growth pa 2006-2021	1.12%	1.12%	1.12%	1.12%
		2009 facility user estimate	25104	76084	48025	149,213
		Estimated visits per head Aquatics	5.0	3.0	0.5	
		NB Population figures are from ABS 2001 and 2006 data				
		Weighted Average growth for whole Catchment 2006-21				1.12%

#### Estimated Income parameters

##### Visit Type & estimated visits

% Allocation	VISITS
100%	377,785
45%	170,003
55%	207,782

#### Fees & Charges

##### Fees including GST

	Change Yellow Boxes to alter Spreadsheets	Suggested Prices for Enclosed Pool at 2007 Prices	Calc Prices with Inflation 2007 to 2009 - 2 years 3.4%
Adult	\$	5.00	\$ 5.17
Pensioner	\$	3.00	\$ 3.10
Senior card	\$	4.00	\$ 4.14
Child	\$	3.50	\$ 3.62
Lessons	\$	110.00	\$ 113.77
6 Monthly Swim membership	\$	250.00	\$ 258.57
Early Bird	\$	4.50	\$ 4.65
Lane Hire	\$	55.00	\$ 56.89
Carnival	\$	350.00	\$ 362.00
School	\$	3.20	\$ 3.31
School include tuition	\$	7.00	\$ 7.24
Squad (per class)	\$	22.00	\$ 22.75
Aquarobics	\$	15.00	\$ 15.51
Arthritis class	\$	9.00	\$ 9.31
Physio class	\$	12.00	\$ 12.41
Birthday parties	\$	5.00	\$ 5.17
Family Fun	\$	20.00	\$ 20.69
Mother & Toddler Water Awareness Program	\$	9.40	\$ 9.72
Spectators	\$	2.10	\$ 2.17

#### Salaries & Wages

##### Staff costs based on typical rates in workplace agreements in similar facilities

2004 Rate	Accumulated Wage Inflation 5 years 23.4%	Based on 2004 Award Rates plus Wage Inflation Public Employees
\$ 49,123.36	\$ 60,633	Manager (Band 6 \$24.86 per hr x 38 hours)
\$ 40,014.00	\$ 49,389	Gym/Aquatic Co-ordinator (Band 5 \$20.25 per hours x 38 hrs)
\$ 32,307.60	\$ 39,877	Gym staff; reception/admin staff (Band 3, \$16.35 per hr x 38 hrs)
\$ 32,307.60	\$ 39,877	Swim Attendants (Band 3, \$16.35 per hr x 38 hrs)
\$ 45.00	\$ 55.54	Aerobic/Therapeutic (Market rate)
\$ 40.00	\$ 49.37	Coach (market rate)
\$ 20.44	\$ 25.23	Children's lessons (Band 3 plus 25% loading Casual)
\$ 16.35	\$ 20.18	Life guards; Reception; gym staff (Band 3)
\$ 18.11	\$ 22.35	School Swim Co-ordinator (Band 4)
\$ 19.50	\$ 24.07	Child Care (Band 4)

#### Centre Opening Hours

	Indoor Aquatic	Summer only October to April (28 wks)	OUTDOOR Aquatic
Monday - Thursday 5.30am - 9pm	62.0 hrs	Monday - Thursday 5.30am - 8pm	58.0 hrs
Friday 5.30am - 9pm	15.5 hrs	Friday 5.30am - 8pm	14.5 hrs
Weekends & P/Holidays 6am - 7pm	26.0 hrs	Weekends & P/Holidays 6am - 7pm	26.0 hrs
Total	103.5 hrs		98.5 hrs

#### Marketing

3% of Income

# Ku-ring-gai Council

## Variable Assumptions Sheet

### West Pymble Pool Redevelopment with Indoor and Outdoor Aquatics and Social facilities

#### OPTION 1

#### Wet- Indoor 25 Metre Pool (8 Lane), Warm Water Program Pool and Waterplay & Café & Outdoor 50 Metre Pool and Waterplay

#### ANNUAL GROWTH RATE CALCULATIONS FOR 15 YEAR PROJECTION

Designated Year	Yr 1 2009	Yr 2 2010	Yr 3 2011	Yr 4 2012	Yr 5 2013
1. Facility Market life cycle growth component	First year of operation increase 2007 to 2009	7%	5%	3%	3%
2. Ku-ring-gai Population growth weighted average for whole catchment	1.12%	1.12%	1.12%	1.12%	1.12%
3. Sydney CPI/Inflation: (ABS June 2007 data) averaged with Sports Participation sector CPI	1.7%	1.4%	1.4%	1.4%	1.4%
Income Growth Per annum (product life cycle allow Population Decline Plus CPI Inflation)	3.4%	9.5%	7.5%	5.5%	5.5%
Wage Inflation Public Sector (ABS March 2007 data)	8.8%	4.3%	4.3%	4.3%	4.3%
Expenditure growth (CPI/inflation) estimate	3.4%	1.70%	1.70%	1.70%	1.70%

Designated Years 6 to 10	Yr 6 2014	Yr 7 2015	Yr 8 2016	Yr 9 2017	Yr 10 2018
1. Facility Market life cycle growth component	2%	0%	0%	-3%	5%
2. Ku-ring-gai Population growth weighted average for whole catchment	1.12%	1.12%	1.12%	1.12%	1.12%
3. Sydney CPI/Inflation: (ABS June 2007 data) averaged with Sports Participation sector CPI	1.4%	1.4%	1.4%	1.4%	1.4%
Income Growth Per annum (product life cycle allow Population Decline Plus CPI Inflation)	4.5%	2.5%	2.5%	-0.5%	7.5%
Wage Inflation Public Sector (ABS March 2007 data)	4.3%	4.3%	4.3%	4.3%	4.3%
Expenditure growth (CPI/inflation) estimate	1.70%	1.70%	1.70%	1.70%	1.70%

Continued years 11 to 15	Yr 11 2019	Yr 12 2020	Yr 13 2021	Yr 14 2022	Yr 15 2023
1. Facility Market life cycle growth component	2%	0%	-1%	-2%	-1%
2. Ku-ring-gai Population growth weighted average for whole catchment	1.12%	1.12%	1.12%	1.12%	1.12%
3. Sydney CPI/Inflation: (ABS June 2007 data) averaged with Sports Participation sector CPI	1.4%	1.4%	1.4%	1.4%	1.4%
Income Growth Per annum (product life cycle allow Population Decline Plus CPI Inflation)	4.5%	2.5%	1.5%	0.5%	1.5%
Wage Inflation Public Sector (ABS March 2007 data)	4.3%	4.3%	4.3%	4.3%	4.3%
Expenditure growth (CPI/inflation) estimate	1.70%	1.70%	1.70%	1.70%	1.70%

# Ku-ring-gai Council

## Income

West Pymble Pool Redevelopment with Indoor and Outdoor Aquatics and Social facilities

OPTION 1

Wet- Indoor 25 Metre Pool (8 Lane), Warm Water Program Pool and Waterplay & Café  
& Outdoor 50 Metre Pool and Waterplay

Category	Subcategory	Assumption	No. Hours	Occupancy %	No of Visits	No of Visits from Membership	Fee as at 2007 prices including GST	Anticipated Fee at 2009 Prices including GST	No. Sales	Income	Sub-category totals	Summary Totals
<b>1. Aquatics</b>												
		Opening Hours 5.30am to 9pm Mon/Fri/6am to 7pm Sat & Sunday & PHols (103.5 hours total)										
1.1	Recreational & lap swimming											
	Adult swim	Adult general aquatic visits ratio based on similar centre at adult rate		40.0%	83,113	19,875	\$ 5.00	\$ 5.17	83,113	\$ 429,813		
	Pensioner swim	Pensioner general aquatic visits ratio based on similar centre at Pensioner rate		10.0%	20,778	6,625	\$ 3.00	\$ 3.10	20,778	\$ 64,472		
	Senior Swim	Senior general aquatic visits ratio based on similar centre at senior rate		10.0%	20,778		\$ 4.00	\$ 4.14	20,778	\$ 85,963		
	Child Swim	Children general aquatic visits at child/aged pensioner rate		40.0%	83,113	4,638	\$ 3.50	\$ 3.62	83,113	\$ 300,869		
		Subtotals: Recreational and Lap Swimming		100.0%	207,782						\$ 881,117	
		12% income reduction - Assume 33 % of general aquatics visits will receive a 33% discount due to concessions and swim passes									\$ (105,734)	
	Spectator	25% of child admissions		0.075	20,778		\$ 2.10	\$ 2.17	20,778	\$ 45,130		
		Subtotals: Spectator			20,778						\$ 45,130	
1.2	Aquatics Programs Swim Lessons											
		at lesson rate per term Capacity 40 time slots by 6 children per class by 10 lanes summer and 6 lanes winter (Summer 2400 sales per term & Winter 1400 sales per term)										
		Term 1 Swim Lessons (Bookings for 10 week term)	600 Bookings	25.0%	6,000		\$ 110.00	\$ 113.77	600	\$ 68,263		
		Term 2 Swim Lessons (Bookings for 10 week term)	400 Bookings	28.6%	4,000		\$ 110.00	\$ 113.77	400	\$ 45,509		
		Term 3 Swim Lessons (Bookings for 10 week term)	400 Bookings	28.6%	4,000		\$ 110.00	\$ 113.77	400	\$ 45,509		
	1440	Term 4 Swim Lessons (Bookings for 10 week term)	750 Bookings	31.3%	7,500		\$ 110.00	\$ 113.77	750	\$ 85,329		
		Mother and Toddler water awareness lessons average bookings per week by 40 weeks	150 Bookings		12,000		\$ 9.40	\$ 9.72	6000	\$ 58,334		
	Schools Swim Program	Students per weekly program for 40 weeks of the year at school rate			32,000		\$ 7.00	\$ 7.24	32000	\$ 231,681		
		Subtotals: Swim Lessons			65,500	7,950			40150	\$ 534,624		
1.3	Aquatics Programs Main Pool and Hire											
	Lane Hire -indoor heated	Estimated weekly average hire is 2 lanes by 4 hours/wk X 50 wks pa at lane hire rate per hour. (generates average 6 visits per lane)	Hirings: 400		2,400		\$ 55.00	\$ 56.89	400	\$ 22,754		
	Swim Squad/Club	20 attending 10 session per week at squad lane hire rate per session X 52 weeks			10,400		\$ 22.00	\$ 22.75	520	\$ 11,832		
	Carnivals/ Special Events	Based on total of 10 carnival days per annum at carnival rate per half day (ave 600 participants)			6,000		\$ 350.00	\$ 362.00	10	\$ 3,620		
		Subtotals: Programs Main Pool and Hire			18,800					\$ 38,207		
1.4	Program Pool and Health Fitness											
	Aquarobics casual	Assume 14 classes per week X 8 casuals (+ 20 members) X 40 weeks @ aquarobic rate per person			4,480		\$ 15.00	\$ 15.51	4,480	\$ 69,504		
	Arthritis, Hydrakit & Physio Groups	Assume 4 classes per day of 10 persons arthritis, physio and hydrakit instructed groups			14,400		\$ 9.00	\$ 9.31	14,400	\$ 134,044		
		Aquatic Health Activity Totals			18,880	27,163				\$ 203,548		
1.4	Aquatics Memberships											
		Assuming average membership time 6 months										
	Swim Memberships	Individual Full Swim Membership (2.5 visits per week)	Members: 350	(visits per wk) 2.5	43,750		\$ 250.00	\$ 258.57	350	\$ 90,500		
	Swim Senior and Shared Memberships	Discounted Membership (20% reduction) ave 2 visits per week	Members: 225	2.0	22,500		\$ 200.00	\$ 206.86	225	\$ 46,543		
		Subtotals: Aquatic Membership			66,250					\$ 137,043		
<b>Totals Aquatics</b>					<b>Total Visits excluding spectators</b>	<b>377,212</b>	<b>66,250</b>		<b>Aquatic Total</b>	<b>\$ 1,733,935</b>		

**Ku-ring-gai Council**  
**Income**  
 West Pymble Pool Redevelopment with Indoor and Outdoor Aquatics and Social facilities  
 OPTION 1  
 Wet- Indoor 25 Metre Pool (8 Lane), Warm Water Program Pool and Waterplay & Café  
 & Outdoor 50 Metre Pool and Waterplay

Category	Subcategory	Assumption	No. Hours	Occupancy %	No of Visits	No of Visits from Membership	Fee as at 2007 prices including GST	Anticipated Fee at 2009 Prices including GST	No. Sales	Income	Sub-category totals	Summary Totals
<b>2. Ancillaries</b>												
	Cafe/Kiosk/Merchandise	Based on 48% contribution on ave 0.60 cents spend per visitor (cost of sales 52% of sale value)								\$ 112,362		
	Lockers	Based on 20 Euro lockers at 3 use per day X 364 days 20% return to the centre								\$ 4,518		
	Telephone	Telephone based on estimate \$500 not inflated due to increased use of mobile phones								\$ 500		
<b>Total Ancillary Services</b>												<b>\$ 117,380</b>
<b>3. Other Income</b>												
	Birthday Parties	Based on 16 parties per summer month X 14 children at party rate per head - reserved area in grounds			1568		\$ 5.00	\$ 5.17	1568	\$ 8,109		
	Family fun days	4 per annum @ at family fun rate per family x 75 families (average 3 persons per family)			900		\$ 20.00	\$ 20.69	300	\$ 6,206		
<i>Other income suggestions: Child Care; Holiday Programs; Snorkle Training and Sponsorships</i>												
<b>Total Other Income</b>												<b>\$ 14,315</b>
<b>TOTAL INCOME</b>												<b>\$ 1,865,629</b>
					Total visits	<b>379,680</b>						
<b>TOTAL INCOME after allowing for general discounts, promotions and concessions</b>												<b>\$ 1,865,629</b>
<b>4. GST</b>												<b>\$ 148,541</b>
<b>TOTAL INCOME excluding GST</b>										<b>Total Income</b>	<b>\$ 1,717,089</b>	

# Ku-ring-gai Council

## Expenditure

West Pymble Pool Redevelopment with Indoor and Outdoor Aquatics and Social facilities

### OPTION 1

Wet- Indoor 25 Metre Pool (8 Lane), Warm Water Program Pool and Waterplay & Café  
& Outdoor 50 Metre Pool and Waterplay

Category	Subcategory	Assumption	EFTS	Annual Salary increased by anticipated wage inflation to 2009	No Staff Hours /week	No. weeks per annum	Hourly Rate	Expenditure	Total
<b>1. Staffing</b>		<b>Opening Hours 5.30am to 9pm MonFri/6am to 7pm Sat &amp; Sunday &amp; PHols (103.5 hours total)</b>							
	Centre Manager		1.00	60,633				\$ 60,633	
	Aquatic & Sports Co-ordinator	Supervising Life guard X 2 for 103.5 opening hours of the centre	2.00	49,389				\$ 98,779	
	Bookkeeper & Sales Administration		0.50	49,389				\$ 24,695	
	Administration & receptionist	4 staff to cover opening hours	4.00	39,877				\$ 159,509	
	Reception/Kiosk Staff part time	All year 40 hours per week relief X 52 plus an extra 20 hours per week for the 28 weeks of summer	1.40	39,877				\$ 55,828	
	<u>Aquatics Gym and Program Staff</u>								
	Life Guards	37 hours per week	4.20	39,877				\$ 167,485	
	Life Guards Casual	10 Casual lifeguards hours per week x 52 weeks	0.27		10	52	\$20.18	\$ 10,494	
	Life guards daylight saving months	100 hours Casual lifeguard per week for 28 weeks	0.68		100	28	\$20.18	\$ 56,506	
	Lifeguards hot days	20 hot days pa x 8 hours = equiv 4 weeks	0.08		40	4	\$20.18	\$ 3,229	
	Life guards to cover for annual leave	2 life guards plus manager to cover 4 weeks annual leave (38 hour week)	0.26		38	12	\$20.18	\$ 9,202	
	<u>Program Staff</u>								
	Swim Teachers Sessional lesson = 30 min	45 teaching hours per wk x 4 x 10 wk terms at children's lesson rate includes toddler water awareness daytime programs ave 4 clients per class	0.97		45	40	\$25.23	\$ 45,412	
	School program teachers	90 hour a week for 40 weeks at children's lesson rate	1.95		90	50	\$22.24	\$ 100,060	
	Squad coaches	5 hours per week at coach rate	0.14		5	48	\$49.37	\$ 11,849	
	Aqua Aerobics	14 classes per week, 14 x casual instructors	0.38		14	50	\$55.54	\$ 38,881	
	Physio and Health related classe	Assume 28 classes per week by 30 minutes			14	50	\$55.54	\$ 38,881	
	Staff On Costs	24%						\$ 211,547	
	Staff Training	2%						\$ 17,629	
	Travel							\$ 5,000	
	<b>Staff Total</b>		<b>17.82</b>					<b>\$ 1,115,619</b>	

# Ku-ring-gai Council

## Expenditure

### West Pymble Pool Redevelopment with Indoor and Outdoor Aquatics and Social facilities

#### OPTION 1

#### Wet- Indoor 25 Metre Pool (8 Lane), Warm Water Program Pool and Waterplay & Café & Outdoor 50 Metre Pool and Waterplay

Category	Subcategory	Assumption	Rate	Estimated GST price component	Expenditure as at 2009 estimated prices	Total
<b>2. Administrative and General Centre Costs</b>						
<i>All non-labour costs except bank charges and contingencies will attract a GST</i>						
<i>Management fee if contracted out</i>						
				\$ 5,455	\$ 60,000	
	Telephone/Fax	Estimate \$1000 per month		\$ 1,091	\$ 12,000	
	Insurance	Estimate based on similar sized facilities		\$ 3,182	\$ 35,000	
	Audit	Within Council's financial services		\$ -	\$ -	
	Office Supplies	Based on \$500 per month		\$ 545	\$ 6,000	
	Bank Charges	Based on 1.5% of 50% of total income		\$ 1,211	\$ 13,320	
	Uniforms	Based on a total of 60 uniforms @ \$150 (2 per EFTS)	\$ 0.75%	\$ 503	\$ 5,529	
	Petty / cash contingency	Based on \$50 per week		\$ 273	\$ 3,000	
	Computing & Software Support	Allow \$15,000 pa. Allowing for software and hardware		\$ 1,364	\$ 15,000	
	Operating Contingency	An allocation of \$10,000 for operating contingencies		\$ 909	\$ 10,000	
	Marketing	Based on 3% of annual income	\$ 3.00%	\$ 4,844	\$ 53,279	
	Postage	Estimate of postage requirements		\$ 727	\$ 8,000	
	Printing	Based on \$750 per month printing expenditure. Note: newsletters and m/ship advertising materials would come out of the marketing budget. Includes the cost of leasing a photocopier		\$ 909	\$ 10,000	
<b>Total: Administrative and General Centre Expenditure</b>				\$ 15,557	\$ 171,127	
Category	Subcategory	Assumption	Rate	Estimated GST price component	Expenditure as at 2009 estimated costs	Total
<b>3. Facilities Costs</b>						
<i>All non-labour costs except bank charges and contingencies will attract a GST; estimates are increased by inflation for 7 years</i>						
	Electricity	Estimate based on similar sized facilities		\$ 9,091	\$ 100,000	
	Gas	Estimate based on similar sized facilities		\$ 9,091	\$ 100,000	
	Water	Estimate based on similar sized facilities		\$ 6,364	\$ 70,000	
	Chemicals	Estimate based on similar sized facilities		\$ 2,182	\$ 24,000	
	Oxygen	Estimate based on similar sized facilities		\$ 91	\$ 1,000	
	Fire	Estimate based on similar sized facilities		\$ 45	\$ 500	
	Sundries	Estimate based on similar sized facilities		\$ -	\$ 1,000	
	Cleaning materials	Estimate based on similar sized facilities (Staff clean up at shift end)		\$ 1,364	\$ 15,000	
	First Aid Supplies	\$2,000 per annum has been allocated for First Aid		\$ 227	\$ 2,500	
	Waste Removal	\$7,000 per annum has been allocated for waste removal by contract service - existing plus 100%		\$ 727	\$ 8,000	
	Sanitation	\$7,000 per annum has been allocated for sanitation services by contract service		\$ 682	\$ 7,500	
	Program Materials	\$10000 has been allocated for the dry area and \$15000 for the aquatics area. These monies would be used to purchase additional equipment such as fitness testing equipment, floats, belts, steps, body bars etc		\$ 1,364	\$ 15,000	
	Site Maintenance	Estimate based on similar sized facilities		\$ 909	\$ 10,000	
	Plant and Equipment Maintenance	Estimate/Existing 1% of capital from year 2 based on warranty		\$ -	\$ -	
	Capital Replacement/ Maintenance	Not applicable until after Year 8 then based on 10% of initial capital cost in Year 9 plus inflation and 2% of capital cost per year thereafter	Capital cost =	\$ 8,391,000	\$ -	
	Security	Estimate/Existing		\$ 364	\$ 4,000	
<b>Total: Facilities Expenditure</b>				\$ 32,500	\$ 358,500	
<b>Total Non-Labour Expenditure</b>						\$ 529,627
<b>Total Expenditure</b>						\$ 1,645,247
<b>4. Goods and Services Tax</b>						
Allow payment of income GST less expenditure GST					\$ 107,967	
<b>Total Expenditure</b>						\$ 1,753,214

## Ku-ring-gai Council

### 15 Year Business Plan Summaries

#### West Pymble Pool Redevelopment with Indoor and Outdoor Aquatics and Social facilities

#### OPTION 1

#### Wet- Indoor 25 Metre Pool (8 Lane), Warm Water Program Pool and Waterplay & Café & Outdoor 50 Metre Pool and Waterplay

Income	Year 1 2006	Year 2 2007	Year 3 2008	Year 4 2009	Year 5 2010	Year 6 2011	Year 7 2012
Assumed Income Growth allowing for population growth; inflation and product life cycle:	3.4%	9%	7%	5%	5%	4%	2%
<b>Aquatics</b>							
Recreation							
Adult swim	\$429,813	\$470,508	\$505,645	\$533,294	\$562,454	\$587,585	\$602,086
Pensioner swim	\$64,472	\$70,576	\$75,847	\$79,994	\$84,368	\$88,138	\$90,313
Senior Swim	\$85,963	\$94,102	\$101,129	\$106,659	\$112,491	\$117,517	\$120,417
Child Swim	\$300,869	\$329,355	\$353,952	\$373,306	\$393,718	\$411,309	\$421,460
Less discounts, promotions, concessions	-12%						
Spectator	\$45,130	\$49,403	\$53,093	\$55,996	\$59,058	\$61,696	\$63,219
<b>Swim Lessons</b>							
Junior, Adult and Toddler	\$302,943	\$331,626	\$356,392	\$375,879	\$396,432	\$414,145	\$424,366
Schools Swim Program	\$231,681	\$253,616	\$272,556	\$287,460	\$303,178	\$316,724	\$324,541
Programs main pool and hire							
Lane Hire	\$22,754	\$24,909	\$26,769	\$28,233	\$29,776	\$31,107	\$31,875
Swim Squad/Club	\$11,832	\$12,953	\$13,920	\$14,681	\$15,484	\$16,176	\$16,575
Carnivals/ Special Events	\$3,620	\$3,963	\$4,259	\$4,492	\$4,737	\$4,949	\$5,071
Program Pool and Health Fitness							
Aquarobics /casual	\$69,504	\$76,085	\$81,767	\$86,238	\$90,953	\$95,017	\$97,362
Arthritis, Hydratit & Physio Groups	\$134,044	\$146,735	\$157,693	\$166,316	\$175,410	\$183,247	\$187,770
<b>Aquatics Memberships</b>							
Swim Memberships	\$90,500	\$99,069	\$106,467	\$112,289	\$118,429	\$123,720	\$126,774
Swim Senior and Shared Memberships	\$46,543	\$50,950	\$54,755	\$57,749	\$60,906	\$63,628	\$65,198
<b>Total Aquatics</b>	<b>\$1,733,935</b>	<b>\$1,898,104</b>	<b>\$2,039,854</b>	<b>\$2,151,393</b>	<b>\$2,269,032</b>	<b>\$2,370,412</b>	<b>\$2,428,914</b>
<b>Ancillaries</b>							
Cafe/Kiosk/Merchandise	\$112,362	\$123,001	\$132,186	\$139,414	\$147,037	\$153,607	\$157,398
Lockers	\$4,518	\$4,946	\$5,315	\$5,605	\$5,912	\$6,176	\$6,329
Telephone	\$500	\$547	\$588	\$620	\$654	\$684	\$700
<b>Total Ancillaries</b>	<b>\$117,380</b>	<b>\$128,493</b>	<b>\$138,089</b>	<b>\$145,640</b>	<b>\$153,604</b>	<b>\$160,467</b>	<b>\$164,427</b>
<b>Other Income</b>							
Parties	\$8,109	\$8,877	\$9,539	\$10,061	\$10,611	\$11,085	\$11,359
Family Fun	\$6,206	\$6,793	\$7,301	\$7,700	\$8,121	\$8,484	\$8,693
<b>Total Other Income</b>	<b>\$14,315</b>	<b>\$15,670</b>	<b>\$16,840</b>	<b>\$17,761</b>	<b>\$18,732</b>	<b>\$19,569</b>	<b>\$20,052</b>
<b>TOTAL INCOME after discounts/promotions</b>	<b>\$1,865,629</b>	<b>\$2,042,267</b>	<b>\$2,194,784</b>	<b>\$2,314,794</b>	<b>\$2,441,367</b>	<b>\$2,550,448</b>	<b>\$2,613,393</b>
* not subject to GST							
GST collected	\$ 148,541	\$ 162,605	\$ 174,748	\$ 184,303	\$ 194,381	\$ 203,066	\$ 208,077
<b>TOTAL INCOME excluding GST</b>	<b>\$1,717,089</b>	<b>\$1,879,662</b>	<b>\$2,020,036</b>	<b>\$2,130,491</b>	<b>\$2,246,986</b>	<b>\$2,347,382</b>	<b>\$2,405,315</b>

# Ku-ring-gai Council

## 15 Year Business Plan Summaries

### West Pymble Pool Redevelopment with Indoor and Outdoor Aquatics and Social facilities

#### OPTION 1

#### Wet- Indoor 25 Metre Pool (8 Lane), Warm Water Program Pool and Waterplay & Café & Outdoor 50 Metre Pool and Waterplay

Expenditure	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
	2006	2007	2008	2009	2010	2011	2012
<i>Assumed Wage Growth:</i>	23.4%	4.3%	4.3%	4.3%	4.3%	4.3%	4.3%
<i>Assumed Expend CPI Growth:</i>	3.4%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%
<b>Staffing</b>							
<b>Centre Staff</b>							
Centre Manager	\$60,633	\$63,240	\$65,960	\$68,796	\$71,754	\$74,840	\$78,058
Aquatic/Gym/Program Co-ordinator	\$98,779	\$103,026	\$107,456	\$112,077	\$116,896	\$121,923	\$127,166
Bookkeeper & Sales Administration	\$24,695	\$25,757	\$26,864	\$28,019	\$29,224	\$30,481	\$31,791
Administration & receptionist	\$159,509	\$166,368	\$173,522	\$180,984	\$188,766	\$196,883	\$205,349
Reception/Kiosk Staff part time	\$55,828	\$58,229	\$60,733	\$63,344	\$66,068	\$68,909	\$71,872
<i>Subtotal:</i>	<i>\$399,444</i>	<i>\$416,620</i>	<i>\$434,535</i>	<i>\$453,220</i>	<i>\$472,708</i>	<i>\$493,035</i>	<i>\$514,235</i>
<b>Program Staff</b>							
Life Guards	\$167,485	\$174,687	\$182,198	\$190,033	\$198,204	\$206,727	\$215,616
Life Guards Casual	\$10,494	\$10,945	\$11,416	\$11,907	\$12,419	\$12,953	\$13,510
Life guards daylight saving months	\$56,506	\$58,936	\$61,470	\$64,114	\$66,870	\$69,746	\$72,745
Lifeguards hot days	\$3,229	\$3,368	\$3,513	\$3,664	\$3,821	\$3,985	\$4,157
Life guards to cover for annual leave	\$9,202	\$9,598	\$10,011	\$10,441	\$10,890	\$11,359	\$11,847
Swim Teachers Sessional lesson	\$45,412	\$47,365	\$49,402	\$51,526	\$53,742	\$56,053	\$58,463
School program teachers	\$100,060	\$104,363	\$108,851	\$113,531	\$118,413	\$123,505	\$128,815
Squad coaches	\$11,849	\$12,359	\$12,890	\$13,445	\$14,023	\$14,626	\$15,255
Aqua Aerobics	\$38,881	\$40,552	\$42,296	\$44,115	\$46,012	\$47,990	\$50,054
Physio and Health related classe	\$38,881	\$40,552	\$42,296	\$44,115	\$46,012	\$47,990	\$50,054
<i>Subtotal:</i>	<i>\$ 482,000</i>	<i>\$ 502,726</i>	<i>\$ 524,343</i>	<i>\$ 546,890</i>	<i>\$ 570,406</i>	<i>\$ 594,933</i>	<i>\$ 620,516</i>
Staff On Costs	\$211,547	\$220,643	\$230,131	\$240,026	\$250,347	\$261,112	\$272,340
Staff Training	\$17,629	\$18,387	\$19,178	\$20,002	\$20,862	\$21,759	\$22,695
Travel	\$5,000	\$5,215	\$5,439	\$5,673	\$5,917	\$6,172	\$6,437
<b>Staff Total</b>	<b>\$1,115,619</b>	<b>\$1,163,591</b>	<b>\$1,213,625</b>	<b>\$1,265,811</b>	<b>\$1,320,241</b>	<b>\$1,377,012</b>	<b>\$1,436,223</b>
<b>Administration</b>							
<i>Management fee if contracted out</i>							
	\$60,000	\$61,020	\$62,057	\$63,112	\$64,185	\$65,276	\$66,386
Telephone/Fax	\$12,000	\$12,204	\$12,411	\$12,622	\$12,837	\$13,055	\$13,277
Insurance	\$35,000	\$35,595	\$36,200	\$36,816	\$37,441	\$38,078	\$38,725
Audit	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Office Supplies	\$6,000	\$6,102	\$6,206	\$6,311	\$6,419	\$6,528	\$6,639
Bank Charges *	\$13,320	\$13,546	\$13,776	\$14,011	\$14,249	\$14,491	\$14,737
Uniforms	\$5,529	\$5,623	\$5,718	\$5,816	\$5,914	\$6,015	\$6,117
Petty / cash contingency	\$3,000	\$3,051	\$3,103	\$3,156	\$3,209	\$3,264	\$3,319
Software Support	\$15,000	\$15,255	\$15,514	\$15,778	\$16,046	\$16,319	\$16,597
Operating Contingency	\$10,000	\$10,170	\$10,343	\$10,519	\$10,698	\$10,879	\$11,064
Marketing	\$53,279	\$54,185	\$55,106	\$56,043	\$56,995	\$57,964	\$58,950
Postage	\$8,000	\$8,136	\$8,274	\$8,415	\$8,558	\$8,704	\$8,851
Printing	\$10,000	\$10,170	\$10,343	\$10,519	\$10,698	\$10,879	\$11,064
<i>Admin Sub Total</i>	<i>\$ 171,127</i>	<i>\$ 235,057</i>	<i>\$ 239,053</i>	<i>\$ 243,117</i>	<i>\$ 247,250</i>	<i>\$ 251,453</i>	<i>\$ 255,727</i>
<b>Facilities</b>							
Electricity	\$100,000	\$101,700	\$103,429	\$105,187	\$106,975	\$108,794	\$110,643
Gas	\$100,000	\$101,700	\$103,429	\$105,187	\$106,975	\$108,794	\$110,643
Water *	\$70,000	\$71,190	\$72,400	\$73,631	\$74,883	\$76,156	\$77,450
Chemicals	\$24,000	\$24,408	\$24,823	\$25,245	\$25,674	\$26,111	\$26,554
Oxygen	\$1,000	\$1,017	\$1,034	\$1,052	\$1,070	\$1,088	\$1,106
Fire	\$500	\$509	\$517	\$526	\$535	\$544	\$553
Sundries	\$1,000	\$1,017	\$1,034	\$1,052	\$1,070	\$1,088	\$1,106
Cleaning materials	\$15,000	\$15,255	\$15,514	\$15,778	\$16,046	\$16,319	\$16,597
First Aid Supplies	\$2,500	\$2,543	\$2,586	\$2,630	\$2,674	\$2,720	\$2,766
Waste Removal	\$8,000	\$8,136	\$8,274	\$8,415	\$8,558	\$8,704	\$8,851
Sanitation	\$7,500	\$7,628	\$7,757	\$7,889	\$8,023	\$8,160	\$8,298
Lease of gym equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Program Materials	\$15,000	\$15,255	\$15,514	\$15,778	\$16,046	\$16,319	\$16,597
Site Maintenance	\$10,000	\$10,170	\$10,343	\$10,519	\$10,698	\$10,879	\$11,064
Plant and Equipment Maintenance	\$0	\$85,336	\$86,787	\$88,263	\$89,763	\$91,289	\$92,841
Capital Replacement/ Maintenance	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Security	\$4,000	\$4,068	\$4,137	\$4,207	\$4,279	\$4,352	\$4,426
<i>Facilities Sub Total</i>	<i>\$ 358,500</i>	<i>\$449,931</i>	<i>\$457,580</i>	<i>\$465,359</i>	<i>\$473,270</i>	<i>\$481,315</i>	<i>\$489,498</i>
<b>Total Expenditure</b>	<b>\$ 1,645,247</b>	<b>\$1,848,579</b>	<b>\$1,910,258</b>	<b>\$1,974,287</b>	<b>\$2,040,760</b>	<b>\$2,109,780</b>	<b>\$2,181,448</b>
GST payable to ATO	\$ 107,967	\$ 108,036	\$ 119,252	\$ 127,864	\$ 136,982	\$ 144,691	\$ 148,710
<b>TOTAL EXPENDITURE</b>	<b>\$ 1,753,214</b>	<b>\$1,956,615</b>	<b>\$2,029,510</b>	<b>\$2,102,150</b>	<b>\$2,177,742</b>	<b>\$2,254,471</b>	<b>\$2,330,159</b>
* not subject to GST							
<b>Surplus/Deficit</b>	<b>\$ 112,415</b>	<b>\$85,652</b>	<b>\$165,274</b>	<b>\$212,644</b>	<b>\$263,625</b>	<b>\$295,977</b>	<b>\$283,234</b>

# Ku-ring-gai Council

## 15 Year Business Plan Summaries

### West Pymble Pool Redevelopment with Indoor and Outdoor Aquatics and Social facilities

#### OPTION 1

#### Wet- Indoor 25 Metre Pool (8 Lane), Warm Water Program Pool and Waterplay & Café & Outdoor 50 Metre Pool and Waterplay

Income	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15
	2013	2014	2015	2016	2017	2018	2019	2020
<i>Assumed Income Growth allowing for population growth; inflation and product life cycle:</i>	2%	-1%	7%	4%	2%	1%	0%	1%
<b>Aquatics</b>								
Recreation								
Adult swim	\$616,946	\$613,664	\$659,492	\$688,958	\$705,962	\$716,325	\$719,678	\$730,243
Pensioner swim	\$92,542	\$92,050	\$98,924	\$103,344	\$105,894	\$107,449	\$107,952	\$109,536
Senior Swim	\$123,389	\$122,733	\$131,898	\$137,792	\$141,192	\$143,265	\$143,936	\$146,049
Child Swim	\$431,862	\$429,565	\$461,644	\$482,271	\$494,173	\$501,428	\$503,774	\$511,170
<i>Less discounts, promotions, concessions</i>								
-12%	(\$151,769)	(\$150,961)	(\$162,235)	(\$169,484)	(\$173,667)	(\$176,216)	(\$177,041)	(\$179,640)
Spectator	\$64,779	\$64,435	\$69,247	\$72,341	\$74,126	\$75,214	\$75,566	\$76,675
Swim Lessons								
Junior, Adult and Toddler	\$434,839	\$432,526	\$464,827	\$485,596	\$497,580	\$504,885	\$507,247	\$514,694
Schools Swim Program	\$332,550	\$330,781	\$355,484	\$371,367	\$380,532	\$386,119	\$387,926	\$393,620
Programs,main.pool.and.hire								
Lane Hire	\$32,661	\$32,487	\$34,914	\$36,474	\$37,374	\$37,922	\$38,100	\$38,659
Swim Squad/Club	\$16,984	\$16,893	\$18,155	\$18,966	\$19,434	\$19,720	\$19,812	\$20,103
Carnivals/ Special Events	\$5,196	\$5,168	\$5,554	\$5,803	\$5,946	\$6,033	\$6,061	\$6,150
Program.Pool.and.Health.Fitness								
Aquarobics /casual	\$99,765	\$99,234	\$106,645	\$111,410	\$114,160	\$115,836	\$116,378	\$118,086
Arthritis, Hydratit & Physio Groups	\$192,404	\$191,381	\$205,673	\$214,862	\$220,165	\$223,397	\$224,443	\$227,737
Aquatics Memberships								
Swim Memberships	\$129,903	\$129,211	\$138,861	\$145,065	\$148,645	\$150,828	\$151,533	\$153,758
Swim Senior and Shared Memberships	\$66,807	\$66,452	\$71,414	\$74,605	\$76,446	\$77,568	\$77,931	\$79,076
<b>Total Aquatics</b>	<b>\$2,488,859</b>	<b>\$2,475,619</b>	<b>\$2,660,498</b>	<b>\$2,779,369</b>	<b>\$2,847,964</b>	<b>\$2,889,772</b>	<b>\$2,903,296</b>	<b>\$2,945,916</b>
<b>Ancillaries</b>								
Café / Merchandise	\$161,283	\$160,424	\$172,405	\$180,108	\$184,553	\$187,262	\$188,139	\$190,901
Lockers	\$6,485	\$6,450	\$6,932	\$7,242	\$7,420	\$7,529	\$7,565	\$7,676
Telephone	\$718	\$714	\$767	\$801	\$821	\$833	\$837	\$849
<b>Total Ancillaries</b>	<b>\$168,485</b>	<b>\$167,589</b>	<b>\$180,104</b>	<b>\$188,151</b>	<b>\$192,795</b>	<b>\$195,625</b>	<b>\$196,540</b>	<b>\$199,426</b>
<b>Other Income</b>								
Parties	\$11,639	\$11,577	\$12,442	\$12,998	\$13,319	\$13,514	\$13,577	\$13,777
Family Fun	\$8,908	\$8,860	\$9,522	\$9,947	\$10,193	\$10,342	\$10,391	\$10,543
<b>Total Other Income</b>	<b>\$20,547</b>	<b>\$20,438</b>	<b>\$21,964</b>	<b>\$22,945</b>	<b>\$23,511</b>	<b>\$23,857</b>	<b>\$23,968</b>	<b>\$24,320</b>
<b>TOTAL INCOME after discounts/promotions</b>	<b>\$2,677,891</b>	<b>\$2,663,645</b>	<b>\$2,862,566</b>	<b>\$2,990,465</b>	<b>\$3,064,270</b>	<b>\$3,109,253</b>	<b>\$3,123,805</b>	<b>\$3,169,662</b>
<i>* not subject to GST</i>								
GST collected	\$ 243,445	\$ 242,150	\$ 260,233	\$ 271,860	\$ 278,570	\$ 282,659	\$ 283,982	\$ 288,151
<b>TOTAL INCOME excluding GST</b>	<b>\$2,434,447</b>	<b>\$2,421,495</b>	<b>\$2,602,333</b>	<b>\$2,718,605</b>	<b>\$2,785,700</b>	<b>\$2,826,594</b>	<b>\$2,839,822</b>	<b>\$2,881,511</b>

# Ku-ring-gai Council

## 15 Year Business Plan Summaries

### West Pymble Pool Redevelopment with Indoor and Outdoor Aquatics and Social facilities

#### OPTION 1

#### Wet- Indoor 25 Metre Pool (8 Lane), Warm Water Program Pool and Waterplay & Café & Outdoor 50 Metre Pool and Waterplay

Expenditure	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15
	2013	2014	2015	2016	2017	2018	2019	2020
Assumed Wage Growth:	4.3%	4.3%	4.3%	4.3%	4.3%	4.3%	4.3%	4.3%
Assumed Expend CPI Growth:	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%
<b>Staffing</b>								
<b>Centre Staff</b>								
Centre Manager	\$81,414	\$84,915	\$88,566	\$92,375	\$96,347	\$100,490	\$104,811	\$109,318
Aquatic/Gym/Program Co-ordinator	\$132,634	\$138,337	\$144,285	\$150,490	\$156,961	\$163,710	\$170,750	\$178,092
Bookkeeper & Sales Administration	\$33,158	\$34,584	\$36,071	\$37,622	\$39,240	\$40,927	\$42,687	\$44,523
Administration & receptionist	\$214,179	\$223,388	\$232,994	\$243,013	\$253,462	\$264,361	\$275,729	\$287,585
Reception/Kiosk Staff part time	\$74,963	\$78,186	\$81,548	\$85,055	\$88,712	\$92,526	\$96,505	\$100,655
<b>Subtotal:</b>	<b>\$536,347</b>	<b>\$559,410</b>	<b>\$583,465</b>	<b>\$608,554</b>	<b>\$634,722</b>	<b>\$662,015</b>	<b>\$690,482</b>	<b>\$720,172</b>
<b>Program Staff</b>								
Life Guards	\$224,888	\$234,558	\$244,644	\$255,164	\$266,136	\$277,579	\$289,515	\$301,964
Life Guards Casual	\$14,091	\$14,697	\$15,329	\$15,988	\$16,675	\$17,392	\$18,140	\$18,920
Life guards daylight saving months	\$75,873	\$79,136	\$82,538	\$86,088	\$89,789	\$93,650	\$97,677	\$101,877
Lifeguards hot days	\$4,336	\$4,522	\$4,716	\$4,919	\$5,131	\$5,351	\$5,582	\$5,822
Life guards to cover for annual leave	\$12,356	\$12,888	\$13,442	\$14,020	\$14,623	\$15,252	\$15,907	\$16,591
Swim Teachers Sessional lesson	\$60,977	\$63,599	\$66,334	\$69,186	\$72,161	\$75,264	\$78,500	\$81,876
School program teachers	\$134,354	\$140,132	\$146,157	\$152,442	\$158,997	\$165,834	\$172,965	\$180,402
Squad coaches	\$15,910	\$16,595	\$17,308	\$18,052	\$18,829	\$19,638	\$20,483	\$21,364
Aqua Aerobics	\$52,206	\$54,451	\$56,792	\$59,235	\$61,782	\$64,438	\$67,209	\$70,099
Physio and Health related classe	\$52,206	\$54,451	\$56,792	\$59,235	\$61,782	\$64,438	\$67,209	\$70,099
<b>Subtotal:</b>	<b>\$ 647,198</b>	<b>\$ 675,027</b>	<b>\$ 704,053</b>	<b>\$ 734,328</b>	<b>\$ 765,904</b>	<b>\$ 798,838</b>	<b>\$ 833,188</b>	<b>\$ 869,015</b>
Staff On Costs	\$284,051	\$296,265	\$309,004	\$322,292	\$336,150	\$350,605	\$365,681	\$381,405
Staff Training	\$23,671	\$24,689	\$25,750	\$26,858	\$28,013	\$29,217	\$30,473	\$31,784
Travel	\$6,714	\$7,002	\$7,303	\$7,618	\$7,945	\$8,287	\$8,643	\$9,015
<b>Staff Total</b>	<b>\$1,497,981</b>	<b>\$1,562,394</b>	<b>\$1,629,577</b>	<b>\$1,699,649</b>	<b>\$1,772,733</b>	<b>\$1,848,961</b>	<b>\$1,928,466</b>	<b>\$2,011,390</b>
<b>Administration</b>								
<i>Management fee if contracted out</i>								
Telephone/Fax	\$67,515	\$68,662	\$69,830	\$71,017	\$72,224	\$73,452	\$74,701	\$75,970
Insurance	\$13,503	\$13,732	\$13,966	\$14,203	\$14,445	\$14,690	\$14,940	\$15,194
Audit	\$39,384	\$40,053	\$40,734	\$41,426	\$42,131	\$42,847	\$43,575	\$44,316
Office Supplies	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bank Charges *	\$6,751	\$6,866	\$6,983	\$7,102	\$7,222	\$7,345	\$7,470	\$7,597
Uniforms	\$14,988	\$15,243	\$15,502	\$15,765	\$16,033	\$16,306	\$16,583	\$16,865
Petty / cash contingency	\$6,221	\$6,327	\$6,435	\$6,544	\$6,655	\$6,768	\$6,883	\$7,000
Software Support	\$3,376	\$3,433	\$3,491	\$3,551	\$3,611	\$3,673	\$3,735	\$3,799
Operating Contingency	\$16,879	\$17,166	\$17,457	\$17,754	\$18,056	\$18,363	\$18,675	\$18,993
Marketing	\$11,252	\$11,444	\$11,638	\$11,836	\$12,037	\$12,242	\$12,450	\$12,662
Postage	\$59,952	\$60,971	\$62,008	\$63,062	\$64,134	\$65,224	\$66,333	\$67,460
Printing	\$9,002	\$9,155	\$9,311	\$9,469	\$9,630	\$9,794	\$9,960	\$10,129
<b>Admin Sub Total</b>	<b>\$ 260,075</b>	<b>\$ 264,496</b>	<b>\$ 268,993</b>	<b>\$ 273,565</b>	<b>\$ 278,216</b>	<b>\$ 282,946</b>	<b>\$ 287,756</b>	<b>\$ 292,648</b>
<b>Facilities</b>								
Electricity	\$112,524	\$114,437	\$116,383	\$118,361	\$120,373	\$122,420	\$124,501	\$126,617
Gas	\$112,524	\$114,437	\$116,383	\$118,361	\$120,373	\$122,420	\$124,501	\$126,617
Water *	\$78,767	\$80,106	\$81,468	\$82,853	\$84,261	\$85,694	\$87,151	\$88,632
Chemicals	\$27,006	\$27,465	\$27,932	\$28,407	\$28,890	\$29,381	\$29,880	\$30,388
Oxygen	\$1,125	\$1,144	\$1,164	\$1,184	\$1,204	\$1,224	\$1,245	\$1,266
Fire	\$563	\$572	\$582	\$592	\$602	\$612	\$623	\$633
Sundries	\$1,125	\$1,144	\$1,164	\$1,184	\$1,204	\$1,224	\$1,245	\$1,266
Cleaning materials	\$16,879	\$17,166	\$17,457	\$17,754	\$18,056	\$18,363	\$18,675	\$18,993
First Aid Supplies	\$2,813	\$2,861	\$2,910	\$2,959	\$3,009	\$3,060	\$3,113	\$3,165
Waste Removal	\$9,002	\$9,155	\$9,311	\$9,469	\$9,630	\$9,794	\$9,960	\$10,129
Sanitation	\$8,439	\$8,583	\$8,729	\$8,877	\$9,028	\$9,181	\$9,338	\$9,496
Lease of gym equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Program Materials	\$16,879	\$17,166	\$17,457	\$17,754	\$18,056	\$18,363	\$18,675	\$18,993
Site Maintenance	\$11,252	\$11,444	\$11,638	\$11,836	\$12,037	\$12,242	\$12,450	\$12,662
Plant and Equipment Maintenance	\$94,419	\$96,024	\$97,657	\$99,317	\$101,005	\$102,722	\$104,469	\$106,245
Capital Replacement/ Maintenance			\$960,243	\$170,673	\$173,574	\$176,525	\$179,526	\$182,578
Security	\$4,501	\$4,577	\$4,655	\$4,734	\$4,815	\$4,897	\$4,980	\$5,065
<b>Facilities Sub Total</b>	<b>\$497,819</b>	<b>\$506,282</b>	<b>\$1,475,132</b>	<b>\$694,315</b>	<b>\$706,118</b>	<b>\$718,122</b>	<b>\$730,330</b>	<b>\$742,746</b>
<b>Total Expenditure</b>	<b>\$2,255,875</b>	<b>\$2,333,172</b>	<b>\$3,373,702</b>	<b>\$2,667,529</b>	<b>\$2,757,068</b>	<b>\$2,850,029</b>	<b>\$2,946,552</b>	<b>\$3,046,784</b>
GST payable to ATO	\$ 183,068	\$ 180,747	\$ 110,492	\$ 192,837	\$ 198,203	\$ 200,926	\$ 200,859	\$ 203,615
<b>TOTAL EXPENDITURE</b>	<b>\$2,438,943</b>	<b>\$2,513,919</b>	<b>\$3,484,194</b>	<b>\$2,860,366</b>	<b>\$2,955,271</b>	<b>\$3,050,955</b>	<b>\$3,147,412</b>	<b>\$3,250,399</b>
* not subject to GST								
<b>Surplus/Deficit</b>	<b>\$238,948</b>	<b>\$149,726</b>	<b>(\$621,628)</b>	<b>\$130,100</b>	<b>\$108,999</b>	<b>\$58,298</b>	<b>(\$23,607)</b>	<b>(\$80,737)</b>

## Ku-ring-gai Council

### Net Present Value Table (NPV)

West Pymble Pool Redevelopment with Indoor and Outdoor Aquatics and Social facilities

#### OPTION 1

Wet- Indoor 25 Metre Pool (8 Lane), Warm Water Program Pool and Waterplay & Café  
& Outdoor 50 Metre Pool and Waterplay

**Discount Rate** 8.00%

**Cost of Land** \$ -

**Capital Cost of Building** \$ 8,391,000

Loan required \$ 8,391,000

Calendar Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Year by Number	0	1	2	3	4	5	6	7	8	9	10
Operating Loss/Profit	0	112,415	85,652	165,274	212,644	263,625	295,977	283,234	238,948	149,726	(621,628)
Capital cost -enter as negative amount in time period that any capital loan is drawn	(8,391,000)										
non-present value cash flows	(8,391,000)	112,415	85,652	165,274	212,644	263,625	295,977	283,234	238,948	149,726	(621,628)
<b>NPV Calculation</b>											
Present Value Factor	1.0000	0.9259	0.8573	0.7938	0.7350	0.6806	0.6302	0.5835	0.5403	0.5002	0.4632
Present Value Cash Flow	(8,391,000)	104,088	73,433	131,200	156,300	179,419	186,516	165,264	129,096	74,900	(287,934)
Cumulative Cash Flow		(8,286,912)	(8,213,479)	(8,082,280)	(7,925,980)	(7,746,561)	(7,560,046)	(7,394,781)	(7,265,685)	(7,190,785)	(7,478,719)

Calendar Year	2017	2018	2019	2020	2021
Year by Number	11	12	13	14	15
Operating Loss/Profit	130,100	108,999	58,298	(23,607)	(80,737)
Capital cost					
non-present value cash flows	130,100	108,999	58,298	(23,607)	(80,737)
<b>NPV Calculation</b>					
Present Value Factor	0.4289	0.3971	0.3677	0.3405	0.3152
Present Value Cash Flow	55,798	43,285	21,436	(8,037)	(25,452)
Cumulative Cash Flow	(7,422,921)	(7,379,636)	(7,358,200)	(7,366,237)	(7,391,689)

## Ku-ring-gai Council

### Preliminary Cost Analysis

#### West Pymble Pool Redevelopment with Indoor and Outdoor Aquatics and Social facilities

#### OPTION 1

#### Wet- Indoor 25 Metre Pool (8 Lane), Warm Water Program Pool and Waterplay & Café & Outdoor 50 Metre Pool and Waterplay

### Preliminary Order of Cost for Discussion Only: Option 1

QS ref: 307099 (26 Jul 2007)

Function	area m2	OPTION 1	
		rate \$/m2	cost \$
New Entry / Café	253	\$ 1,750	\$ 443,000
Ramp to change rooms		allow	\$ 40,000
Café Equipment		allow	\$ 30,000
Pool Hall	1,305	\$ 1,750	\$ 2,284,000
Refurbish existing Change Rooms	304	\$ 2,100	\$ 639,000
Store	32	\$ 1,100	\$ 36,000
Connection to existing buildings		allow	\$ 15,000
Steps to suit change in levels		allow	\$ 20,000
Ramp to suit change in levels		allow	\$ 40,000
Extend existing plant building	75	\$ 1,000	\$ 75,000
Entry canopy / sunshades		allow	\$ 25,000
Stepped timber deck	411	\$ 300	\$ 124,000
Lightweight pergola		allow	\$ 39,000
<b>Total Building Works</b>	<b>2,380</b>	<b>\$ 1,601</b>	<b>\$ 3,810,000</b>
<b>Pool Works</b>			
New small pools x 1	180	\$ 2,600	\$ 468,000
New 25m pool	525	\$ 1,900	\$ 998,000
Ramp to 25m pool	36	\$ 2,000	\$ 72,000
<b>Total Pool Works</b>			<b>\$ 1,538,000</b>
<b>External Works &amp; Services</b>			
Site Preparation / earthworks		allow	\$ 108,000
Demolish existing small pool		allow	\$ 13,000
Demolition		allow	\$ 15,000
Allow for works to existing external concourse / bank		allow	\$ 108,000
Footpath and assoc. stairs /ramps		allow	\$ 50,000
Landscaping - hard/soft		allow	\$ 100,000
External Services		allow	\$ 215,000
<b>Total External Works &amp; Services</b>			<b>\$ 609,000</b>
<b>Construction Cost</b>			<b>\$ 5,957,000</b>
ESD		6%	\$ 358,000
Contingency		15%	\$ 948,000
<b>Sub Total</b>			<b>\$ 7,263,000</b>
Professional Fee Allowance		8.0%	\$ 582,000
Authority Fees & Charges		allow	\$ 45,000
Loose Furniture & Equipment			EXCL
<b>Sub Total</b>			<b>\$ 7,890,000</b>
Cost escalation to tender	12 mths	4.0%	\$ 316,000
Cost escalation during construction	12 mths	2.3%	\$ 185,000
<b>Total Project Cost</b>			<b>\$ 8,391,000</b>

#### Exclusions:

Upgrade Off Site Service Infrastructure  
Land, legal and finance costs  
GST  
Relocation Costs  
Adverse soil conditions incl. removal of contaminated soil and excavation in rock  
Asbestos & other hazardous materials removal  
Upgrade of existing building structure / façade  
Fire fighting water tanks and pumps  
Carparking  
Pool play equipment / water features  
Future Gym  
Loose Furniture and equipment

 Currie & Brown

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## NOTICE OF MOTION

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### FUNDS FOR OPEN SPACE

**Notice of Motion from Councillor M Shelley dated 31 October 2007.**

I move:

"That Council undertake an analysis of the feasibility of utilising funds identified for the acquisition of open space to convert the Lord Street Car Park in Roseville for the purpose of open space with above-ground parking replaced underground".

### RECOMMENDATION

That the above Notice of Motion as printed be adopted.

Cr Maureen Shelley  
Councillor for Roseville Ward