

# NORTHERN BEACHES COUNCIL

## **Policy for Payment and Reimbursement of Expenses Incurred by, and the Provision of Facilities to the Mayor, Deputy Mayor and Councillors**

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## Northern Beaches Council

### Policy for Payment and Reimbursement of Expenses Incurred by, and the Provision of Facilities to the Mayor, Deputy Mayor and Councillors

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## Northern Beaches Council – Policy for Payment and Reimbursement of Expenses

### 1. Introduction

This policy is made under the *Local Government Act 1993* (the Act) including Sections 252 to 254A. The Act requires that Council must adopt a policy concerning the payment of expenses incurred by, and the provision of facilities to, the Mayor, the Deputy Mayor and other Councillors.

In the event of Administration, application of this policy is also relevant to Council Administrators and former Mayor's, Deputy Mayor's and Councillors in their role as Implementation Advisory Group and Local Representation Committee members.

The Act requires Council to include in its annual report

- The total amount of money expended during the year on Mayoral fees and Councillor fees
- A statement as to the total amount of money expended during the year on the provision of facilities and the payment of expenses

Schedule 1 of the Government Information (Public Access) Regulation 2009 Clause (1)(h) provides that Information contained in the current version and the most recent previous version of a policy concerning the payment of expenses incurred by, and the provision of facilities to, councillors, is prescribed as open access information. Members of the public may obtain a copy, either free of charge or on payment of reasonable copying charges.

### 2. Preliminary

#### 2.1 Citation

This Policy may be cited as the Northern Beaches Council *"Policy for Payment of Expenses"*.

#### 2.2 Policy Objectives

- To provide for the fair and equitable payment and reimbursement of certain expenses not considered to be included in the annual fees payable under Sections 248-254A of the *Local Government Act 1993*, where such expenses are incurred by the Mayor, Deputy Mayor, Councillors or Administrator (where one is in place) in discharging the functions of civic office.
- To provide adequate facilities for use by the Mayor, Deputy Mayor, Councillors and Administrator to enable them to discharge the functions of civic office.

#### 2.3 Commencement

This code was adopted by Council on [insert date here]

#### 2.4 General Provisions

##### Definitions/Notes

**Administrator:** a person appointed by the State Government to act as 'the Council' (that being the Mayor and Councillors) for an interim period. This may be as a result of misconduct, amendments to the *Local Government Act 1993*, or the former Warringah, Pittwater and Manly Councils undergoing a process of amalgamation as proclaimed by the Local Government (Council Amalgamations) Proclamation 2016.

1. Where reference is made to the Mayor and/ or Councillors within this Policy, in times of Administration, this will be substituted with the reference Administrator.
2. Where reference is made to Office of the Mayor and Councillors within this Policy, in times of Administration, this will be substituted with the reference Office of the Administrator.

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**Implementation Advisory Group (IAG):** Committee established on 19 May 2016 via Council Resolution, as a result of the Local Government (Council Amalgamations) Proclamation 2016 to include former Mayor's, Deputy Mayor's and Councillors as appointed by the Administrator. The terms of reference adopted on 19 May 2016 stated:

*"Members of the IAG will be remunerated at a rate equal to their remuneration as a (former) Councillor or Mayor"*

**Local Representation Committee (LRC):** Committee(s), Economic, Social and Environment established on 19 May 2016 via Council Resolution, as a result of the Local Government (Council Amalgamations) Proclamation 2016 to include former Mayor's, Deputy Mayor's and Councillors as appointed by the Administrator. The terms of reference adopted on 19 May 2016 stated:

*"Members of the LRCs will be remunerated at a rate equal to their remuneration as a (former) Councillor or Mayor"*

**Note:** Former Councillors (including former Mayor's and Deputy Mayor's) who are members of the IAG or LRCs are entitled to claim expenses which are directly related to their role on the IAG and/ or LRCs, or when attendance at an event or function is to aid in the business of council and at the request of the Administrator where appropriate receipts/ tax invoices have been provided in accordance with this Policy.

**General Expenses:** General Expenses will not be paid to Councillors and the Administrator. Any expenses payable to Councillors are specifically listed in this policy, together with the procedures for payment/ reimbursement.

**Private Benefit:** The facilities provided to Councillors and the Administrator under this policy are made available to assist them in undertaking their civic duties. Accordingly, and unless otherwise provided for in this policy, Councillors and the Administrator should ensure that there is no more than incidental private use of these facilities.

**Political Purposes:** Council facilities, equipment and services provided under this policy are not to be used to produce election material or for any other political purposes.

**Political Fundraising:** The fundraising activities of political parties, including political fundraising events, are considered to be personal interests. Council will not pay expenses or provide facilities to Councillors under this Policy in relation to supporting and/ or attending such activities and events.

**Approvals:** All approvals, requests for, and enquiries in relation to, expenses and facilities under this policy are to be directed in the first instance to Council's Executive Manager Governance and Enterprise Risk or their delegate. Where appropriate the Deputy General Manager Corporate Services will consult with the General Manager regarding application of the policy.

The Executive Manager Governance and Enterprise Risk or their delegate will approve travel, stationery, furniture, telephone, internet and out of pocket expenses, as well as any conference expenditure and conference associated expenses, where a conference has been approved either by Council, the Mayor in association with the General Manager or this Policy.

The Executive Manager Governance and Enterprise Risk will contact any Councillor in the event that they are nearing, or have overspent on any allowable limits (such as training or telephone) and appropriate systems will be put in place to recoup any overspend.

**Dispute Resolution:** Any disputes in relation to expenses and/ or facilities provided under this policy should be referred in the first instance to the Executive Manager

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Governance and Enterprise Risk. The General Manager may then refer to the Office of the Internal Ombudsman for independent review.

**Accessibility:** Where a Councillor has specific needs in relation to accessibility to Council facilities and the functions of civic office, additional assistance may be provided under this policy to ensure equity of access.

### **3. Annual Fees, Mayor, Deputy Mayor and Councillors**

#### **3.1 Fees Payable to Councillors**

The Council shall, prior to 30 June each year, set by resolution, the annual fees to be paid, monthly in arrears, to a Councillor for the following year commencing 1st July, provided that such fee shall be within the range for the Council determined annually by the Local Government Remuneration Tribunal. Such payment shall be subject to Clause 403 of the Regulations and any specific resolution of Council under Section 254A.

In accordance with the Australian Taxation Office Interpretive Decision 2007/205 Council may enter into an arrangement with a councillor under which the councillor agrees to forego all or part of their annual fee in exchange for the Council making contributions to a complying superannuation fund on their behalf. Any request by a Councillor must be in writing and cannot be retrospective.

#### **3.2 Fees Payable to the Mayor**

The Council shall, prior to 30 June each year, set by resolution, the annual fee to be paid, monthly in arrears, to the Mayor for the following year commencing 1st July, provided that such fee shall be within the range for the Council determined annually by the Local Government Remuneration Tribunal. Such payment shall be subject to Clause 403 of the Regulations and any specific resolution of Council under section 254A.

Note: As a result of the Local Government (Council Amalgamations) Proclamation 2016, and the membership of the IAG and LRC, the fees paid to the former Mayor's, Deputy Mayor's and Councillors was determined as per the previous year, and is not linked to the Local Government Remuneration Tribunal until September 2017.

#### **3.3 Fees Payable to the Administrator**

The Administrator will be paid a fee in accordance with the determination made by the Minister under Clause 12(5) and 5(1) of the Local Government (Council Amalgamations) Proclamation 2016.

### **4. Payment of Expenses for, and Reimbursement of Expenses and Provision of Facilities for the Mayor, Deputy Mayor and, Councillors**

#### **4.1 Mayor**

The Mayor shall be entitled to receive the benefit of the following facilities, and payment of and reimbursement of expenses, without reduction of the fees payable under Section 248 and/or 249 of the Act:

##### **4.1.1 Transport/ Mayoral Vehicle**

###### **Mayoral Vehicle**

- a) For a weekly fee (paid by the Mayor) based on Council's Private Use Car Scheme standard vehicle rate\* a suitable and appropriate vehicle, (valued below the current luxury car tax threshold, as determined by the Australian Tax Office), fully maintained, insured and registered by the Council, for use by the Mayor for all official, executive and social duties connected with the Office of

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Mayor, and private and personal use in accordance with **Appendix A** to this Policy.

\* The Private Use Car Scheme standard vehicle rate is set at \$109 per week as at 1 July 2016 and is adjusted annually.

- b) Car Allowance – where the Mayor elects to provide his/her own vehicle for all functions related to the Office of Mayor for the Mayoral term and not require the provision of a Council vehicle as in (i) above, the Mayor is entitled to claim payment of a car allowance in accordance with Part 4 of this Policy
- c) Where the Deputy Mayor, at any time, is required to act in the Office of Mayor in accordance with Section 231 of the Act, the provisions of Part 4 of this Policy apply.
- d) Where there is an Administrator in place, they shall be provided with a Council vehicle for official use.

### 4.1.2 Office

Fully furnished accommodation will be provided within the relevant council office(s).

### 4.1.3 Executive Support Services

All Executive Support services are restricted to Council business, functions, meetings and publications. This may include diary and correspondence management, general administrative and project assistance.

### 4.1.4 Office and Reception

Refreshments will be provided for the Mayor and guests.

### 4.1.5 Mobile Telephone

A mobile phone will be provided for use in relation to official functions and duties of the Office of the Mayor. Council will meet the costs of maintenance and all charges against the mobile account. A car kit will be installed in the Council provided Mayoral car, or the Mayor's own car as provided in this Policy.

### 4.1.6 Corporate Credit Card

A corporate credit card in the name of the Council will be provided if the Mayor so chooses, to facilitate payment of official Council business expenses and expenditures provided for under the annual allocation for "discretionary expenditure" for the Office of the Mayor. The corporate credit card, shall be limited to \$5,000, and is to be used in situations where it is not reasonably possible to go through the Council's normal procedures for the ordering and/or payment for goods or services. Ongoing use of the credit card shall be in accordance with administrative requirements. Upon completion of the Mayoral term the credit card shall be returned to the General Manager on the date the term ceases.

### 4.1.7 Car Parking

A car space will be provided within the Executive area at the nominated Council Office for the use of the Mayor.

## 4.2 Councillors (including the Mayor and the Deputy Mayor)

To assist the Councillors in carrying out the duties of their civic office and without reduction (unless otherwise stated) of the fees payable under Section 248 of the Act, Councillors are, if they request such, entitled to payment of expenses or reimbursement of the expenses, and to receive the benefit of the facilities in the following clauses:

### 4.2.1 Office

A Councillors' Office will be provided with suitably equipped with telephone, computer terminal, access to internet and email, facsimile and printer facilities for work directly

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related to the duties of their office. Councillors will be subject to the requirements of Council's internet and email Policy where access is through Council's corporate computer system.

### 4.2.2 Administration Support

The Office of the Mayor and Councillors will be provided certain administrative support. Such support is restricted to the provision of advice in relation to official functions and meetings including sending appointments, providing assistance with Councillor expenses, claims applications and bookings for attendance at seminars and conferences. Staff will also provide assistance with photocopying but this shall be restricted to small requests that relate to Council business, functions and meetings.

### 4.2.3 Stationary

Stationary will be provided with an annual limit of \$1,000 for the Mayor and \$500 for Councillors. The package may include items such as business cards, letterheads, envelopes, with compliments slips, Christmas cards (up to 100 cards for the Mayor and up to 150 cards for a Councillor and includes unlimited e-versions of the selected card), postage stamps and a diary.

### 4.2.4 Food and Refreshments

At approved Council functions and on evenings associated with Council and its Committee meetings, food and refreshments will be provided.

### 4.2.5 Clothing

The Mayor and Councillors will be provided (upon request) with Council approved corporate accessories on election to Office or when the design of these items varies, and protective clothing and equipment is required for civic duty.

### 4.2.6 Transport/ Councillors Vehicle/ Cabcharge

Councillors will be provided with access to a suitable vehicle or vehicles (if available) provided by the Council for use on official duties connected with the office of Councillor. If approved by the General Manager, the Councillors may be issued with a Cab charge card. Cab charge cards are for use on Council business only, and when a Council vehicle is not reasonably available to provide such transport, or the provision of a vehicle would not be economical in the circumstances.

*Any traffic or parking fines incurred while travelling in private or Council vehicles on Council business is the sole responsibility of the Councillor or the driver incurring the fine.*

### 4.2.7 E-Tag

The Mayoral vehicle, and any Council vehicle provided to a Councillor for use on official duties connected with the office of Councillor, will be fitted with an E-tag. Where a Councillor uses their own vehicle, they will be required to claim any tolls associated with their official duties within three (3) months.

### 4.2.8 Furniture and Equipment

#### 4.2.8.1 Bookcase

A standard issue four (4) shelf bookcase will be provided upon request.

#### 4.2.8.2 Filing Cabinet

A standard four (4) drawer filing cabinet will be provided upon request.

#### 4.2.8.3 Printer/ Fax/ Copier/ Telephone

Will be provided for use for Council business, subject to the following conditions:

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1. Council shall:
  - i. Meet the capital cost of acquisition of the equipment.
  - ii. Meet the initial cost of installation of the equipment in the residence of the Councillor, including one (1) additional extension point for an existing line or one (1) separate point for a dedicated line where a Councillor chooses under Clause 4.2.9.
  - iii. Meet the cost of any maintenance/servicing of the equipment including any service call charge.
  - iv. Be responsible for the cost of all consumables of the equipment including up to x5 reams of paper per annum and up to x2 black ink cartridges and x1 set of colour ink cartridges per annum.
2. The Councillor shall be responsible for the good care and proper use of such equipment and to promptly report any faults, malfunctions or needs for service/repair to the Council.
3. The Councillors' telephone and facsimile numbers are to be made available to the public.

**4.2.9 Domestic Telephone Service**

Where a Councillor elects to, Council will provide for the installation of a telephone service, in the name of the Councillor, for use in relation to official functions and duties of Councillor, Mayor and Deputy Mayor, to allow for the connection of equipment provided under Clause 4.2.8.

**4.2.10 Laptop/ iPad**

A laptop and modem or an iPad or equivalent tablet will be provided, to enable internet access, email access, the ability to process correspondence and access to Council business papers, minutes, policies and other Council records and an iTunes or Gmail account allowing access to iTunes or Google Play and credit for applications to the value of \$40 in the first year and \$20 each year thereafter.

**4.2.11 Internet Services**

Internet access charges relating to the performance of a Councillor's civic duties will be paid by Council, up to a maximum of \$70 per month, per Councillor. Where a Councillor exceeds this amount, the difference between the maximum amount payable and the charges will need to be covered by the Councillor. Where Council is reimbursing a service already installed, Councillors will only be able to claim up to the maximum of \$70 per month.

**4.2.12 Ownership and Damage**

All equipment and furniture provided to by Council to Councillors shall remain in the possession of the Councillor during their term of office, and shall remain the property of Council and returned in good operational order and condition upon ceasing to be an elected member of Council.

Where items are lost or damaged requiring repairs, Council will replace or repair these items twice in their term of office. Further repairs and/or replacement will be at the cost of the Councillor.

**4.2.13 Telephone Reimbursements**

Reimbursement of the following telephone accounts, as nominated by the Councillor, on the following basis:

**4.2.14 Standard Domestic Service**

1. Councillors existing standard domestic service where no separate service is provided under Clause 4.2.9: Rental, local call charges and the cost of any mobile and STD call charges related to Council business to a maximum of \$70 per month.

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2. A domestic service provided under Clause 4.2.9: Rental, local call charges and the cost of any mobile and STD call charges related to Council business to a maximum of \$70 per month.
  - Councillors are to identify calls made for the purposes of carrying out their official duties and any claim for reimbursement shall be made within three (3) months of the account falling due. Claims made for reimbursement lodged after this date shall not be paid.

**4.2.14.1 Mobile telephone Service**

1. Councillors' own mobile telephone: Where Councillors already have a mobile telephone and wish to retain it for use in their civic duties, Council will cover the setup fee, and 50% of the contract cap fee per month to a maximum of \$75 per month; or alternatively
2. Council will provide a mobile telephone; to any Councillor who requests it. The account will be in the name of the Councillor. Council will cover the setup fee and reimburse the Councillor for the costs of all charges against that service, associated with their role as a Councillor, to a maximum of \$75 per month.  
Provided in respect of both clauses 4.2.13.1 and 4.2.13.2 that:
  - all telephone numbers in respect of which a claim is made are made available to the public, and
  - claims for reimbursements shall be made within three (3) months of the account falling due. Claims made for reimbursement lodged after this date shall not be paid.

**4.2.15 Parking Sticker**

For a nominated vehicle owned by the Councillor enabling exemption from parking fees at any car parks within the Northern Beaches Council area where exemption for residents apply.

**4.2.16 Car Parking**

Councillors will be provided with parking permits to park within Council's restricted operational parking spaces.

Note: Expenses between Clauses 4.2.1 and 4.2.15 of this Policy shall not exceed \$7000 per Councillor in any given year, with the exception of an election year, where new Councillors will receive all new equipment at once, and this limit will be increased to \$10,000 as a result of this new equipment Expenditure.

**4.2.17 Care and Other Related Expenses**

Reimbursement of the cost of carer arrangements, including childcare expenses and the care of the elderly, disabled and/or sick immediate family expenses and the care of the elderly, disabled and/or sick immediate family members of Councillors, to allow Councillors to undertake their Council business obligations including official scheduled Council inspections and attending Meetings of Council. Reimbursement, less any government subsidy will be subject to the presentation of the appropriate claim form and original receipts, attached to the approved form and will be at a maximum of \$2,000 per annum.

Reimbursement of the cost of carer arrangements will require evidence that the carer nominated is accredited by the appropriate government department and any claim must be submitted on the approved form and must include original receipts and tax invoices relating to the claim.

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**4.2.18 Training and Conference Budget (Including Travel and Accommodation)**

Council will provide training and education opportunities for Councillors as appropriate for the effective discharge of the function of civic office, functions and responsibilities, including a Councillor induction program and ongoing professional development.

In-house program expenses, including a Councillor induction program will be borne by Council outside of this clause. Where outside providers are utilised (as appropriate) and Councillors request to attend/ are sent to externally run courses, these will be covered under this training and conference budget clause.

Council will provide up to \$5,000 per Councillor per annum for all training, education and conference costs, including any incidental costs associated with Councillor attendance.

The only exceptions to this limit will be as follows:

1. For the Mayor, who is allowed to attend the Local Government NSW (LGNSW) and the Australian Local Government Association (ALGA) Conferences each year, over and above the allocated \$5,000 per Councillor limit.
2. For each Councillor who undertakes the Executive Certificate for Elected Members offered by Local Government NSW in conjunction with LITS, the Centre for Local Government and TAFE NSW – within the first 12 months of Civic Office, the cost of the course will be covered over and above the allocated \$5,000 per annum limit.

**4.2.19 Attendance at Council Functions**

Where a Councillor attends a function on behalf of Council (i.e. on Council Business), Council will pay for the cost of attendance at that function. Where the attendee is the Mayor, and where the Mayor is invited to bring a guest (to be addressed in the invitation), the guest will also be covered.

**4.2.20 Gifts and Benefits**

A Councillor must not:

- seek or accept a bribe or other improper inducement
- by virtue of his or her position, acquire a personal profit or advantage which has a monetary value, other than one of a token value.

A Councillor must not seek or accept any payment, gift or benefit intended or likely to influence, or that could be reasonably perceived by an impartial observer as intended or likely to influence a Councillor or staff member to:

- act in a particular way (including making a particular decision)
- fail to act in a particular circumstance
- otherwise deviate from the proper exercise of his or her official duties.

A Councillor may accept gifts or benefits of a nominal or token value that do not create a sense of obligation on his or her part or that may not be perceived to be intended or likely to influence him or her in carrying out their public duty.

A Councillor must never accept an offer of money, regardless of the amount.

No matter the value, all gifts and benefits must be declared and the appropriate Gifts and Benefit Form associated with this is to be completed.

For further information Councillors should consult Council's Code of Conduct.

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**4.2.21 Reporting**

Council shall report separately (in their Annual Report), each year:

- The total cost of expenses and the provision of facilities for the mayor and all councillors, as well as:
- The cost of phone calls including mobiles, home located landlines, facsimile and internet services
- Spouse/partner/accompanying person expenses
- Conference and seminar expenses
- Training and skill development expenses
- Interstate travel expenses
- Overseas travel expenses
- Care and other related expenses
- The cost of the provision, including rental, of dedicated office equipment allocated to councillors on a personal basis such as; laptops, mobile phones, telephones and facsimile machines and internet installed in the councillors homes. This item does not include the costs of using this equipment, such as calls.

The provision of facilities and equipment where such provision is above what would normally be required for the day to day running of the council.

**5. Travel Costs, Use of Mayor and Councillors Private Vehicles**

**5.1 Mayor and Councillors**

1. The Mayor, where he or she elects to use his or her private vehicle and Councillors, subject to their private vehicle being currently registered and covered by Compulsory Third Party Insurance, may claim a kilometre allowance for use of private vehicles when used by the most direct route to travel between their place of residence within the Northern Beaches local government area, and return, to:
  - i. attend meetings of the Council, Council Committees or Sub Committees and other appointments involving council business which may include; Working Parties, Taskforce, Forums or the like, as a Councillor or delegate of the Council; to attend any briefing, community consultation, appointments and engagements associated with the business of the Council, and attend to the transaction of Council business at the Civic Centre;
  - ii. attend inspections or business within or outside the Council area undertaken in accordance with a resolution of the Council;
  - iii. attend public meetings and civic functions convened by the Council or other community meetings where the Councillor has been invited to attend;
  - iv. attend any conference as defined in the policy, where use of the private vehicle is authorised by the Mayor;
  - v. attending a local event, dinner/ lunch or meeting by a local sporting, charitable or community organisation after receiving an official invitation as a Councillor to attend or as a result of a request to attend on behalf of the Mayor.

Provided that the Council shall not meet any claim for travel or costs of any kind associated with attendance at fund raising activities or rallies held by registered political parties or groups.

Note: The official invitation and/ or email addressed to the Councillor must accompany any claim for reimbursement of travel as identified in part 1.v. above.

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The maximum allowance payable for any one travel event shall be capped at \$100.00.

2. Kilometre rates for such travel will be paid at the rate set by the Local Government (State) Award, as at the date of travel. Such rate shall be deemed to cover and include any claims for accidental damage or repairs to the Mayor or Councillor's own vehicle, and any loss of no claim bonus and any excess not covered by any insurance.

The current claimable rate for kilometres is \$0.68c per km for cars under 2.5L and \$0.78c per km for cars over 2.5L.

3. Payment is subject to a formal monthly claim on the prescribed claim form being lodged by the Mayor or Councillor, and such claim must be made no later than three (3) months after the travel occurred. Claims lodged for travel occurring more than three (3) months after the claim is lodged shall not be paid.
4. Where the Mayor provides his/her own form of transport under clause 4.1.1 the General Manager may approve of the payment of the minimum car allowance in accordance with the Local Government (State) Award in lieu of a kilometre allowance.
5. Where the Mayor and Councillors elect to use public transport for Council business, reimbursement of costs may be claimed.

The full cost of fares for public transport associated with Council business (as specified in 5.1 (5)) will be reimbursed subject to lodgement of a formal monthly claim. The claim must be made within three (3) months of the travel having occurred. Claims lodged after three (3) months shall not be paid.

## **6. Conferences held in Australia**

In this part Conference means any conference, seminar, congress, forum, workshop, course, meeting, deputation, information and training session or event, related to the industry of local government and held within Australia.

### **6.1 Who may Attend Conferences**

1. The Mayor and Councillors may be nominated and authorised to attend conferences by:
  - i. The Mayor, acting within any delegated authority during Council recess;
  - ii. The Mayor and the General Manager jointly, or, where the applicant is the Mayor, the Deputy Mayor or one other Councillor and the General Manager jointly\*.
  - iii. Where the applicant is the Administrator, the General Manager.

\* ii. will be subject to the Councillor wishing to attend a conference submitting their request in writing to the Mayor and General Manager outlining the benefits of their attendance to Council.
2. By the adoption of this Policy, authority is hereby delegated to the Mayor and General Manager jointly to nominate and authorise a substitute Councillor to attend any conference in lieu of the Mayor or a nominated and authorised Councillor.
3. The application for approval shall include full details of the travel, including itinerary, costs and reasons for the travel.

### **6.2 What Conferences may be Attended**

The conferences to which this policy applies shall generally be confined to:

- Local Government NSW (LGNSW), Local Government Women's Association (LGWA), and Australian Local Government Association (ALGA) Conferences
- Special "one-off" conferences called or sponsored by, or for, the LGNSW, LGWA, LGMA, and ALGA on important issues

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- Annual conferences of the Local Government Professionals Australia (LGPA) and the major Professions in Local Government
- Australian Sister Cities Conference
- Regional Organisation of Councils Conferences
- Annual Coastal Conference
- Conferences, which further training and development efforts of the Council and of Councillors, or which relate to or impact upon the Council's functions
- Meetings or Conferences of Organisations or Bodies to which a Councillor of the Council has been elected, or appointed as a delegate or member of the Council, or LGNSW, LGWA, or ALGA

After returning from an approved conference, Councillors shall submit a written report to a full meeting of the Council on the aspects of the conference relevant to Council business and/or the local community.

### 6.3 Conference Costs

The following shall apply to the Mayor and Councillors who are authorised and/or appointed as delegates under this Policy to attend Conferences.

#### 6.3.1 Registration

The Council will pay all normal registration costs for the Mayor or Councillors/delegates which are charged by organisers, including those relating to official luncheons, dinners and tours/inspections which are relevant to the interests of the Council.

#### 6.3.2 Accommodation

The Council will pay reasonable single accommodation costs for the Mayor or Councillors including the night before and/or after the conference where this is necessary because of travel and/or conference timetables.

#### 6.3.3 Travel

1. The Council will meet all reasonable travel costs for the Mayor, or authorised Councillors or delegates, to and from the conference location and venue. Where appropriate, travel will be provided by air (economy class). Depending upon the location or circumstances, it may be more appropriate for travel to be undertaken by car or train.
2. Where trains are used the Council will provide first class travel, including sleeping berths where available.
3. Where travel is by motor vehicle it should be undertaken by Council vehicle where available, or by private vehicle subject to prior approval of the Executive Manager Governance and Enterprise Risk or General Manager.
4. Where the Mayor or a Councillor uses their private vehicle under (c) above, they may claim the "kilometre" allowance at the date of travel as per Clause 5.1(2), subject to such cost not exceeding economy class air fares to and from the particular destination, and subject further to;
  - i. the travel is to be undertaken with all due expedition, by the shortest most practical route, to and from the conference
  - ii. the claim, on the prescribed claim form, must be made not later than three (3) months after the conclusion of the Conference.
5. Where hire cars, taxi fares and parking costs are reasonably required and incurred in attending conferences, the cost of such will be reimbursed by the Council to the Councillor upon presentation upon presentation of the appropriate claim form and original receipts.

#### 6.3.4 Out of Pocket Expenses

Reasonable out-of-pocket or incidental expenses incurred by the Mayor or a Councillor and associated with attendance at a conference, seminars or training

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courses shall be reimbursed upon presentation of the appropriate claim form and original receipts within three (3) months of their attendance for the following:

1. any hotel/motel conference related charges associated with the Conference, other than accommodation
2. all telephone, internet or facsimile calls related to Council business
3. reasonable lunches, dinners and other meals incurred whilst travelling to or from the Conference and other lunches, dinners or meals occurring during the Conference but not included in the conference registration fee up to a daily limit of \$100
4. incidental expenses including:
  - i. Taxi fares, parking fees, bridge tolls
  - ii. Refreshments
  - iii. Newspapers
  - iv. Laundry and dry cleaning
5. any optional activity in a conference program, but excluding any pre or post conference activities.

Where requested by a Councillor, consideration will be given to the provision of an advance payment of up to \$200 to cover anticipated out-of-pocket expenses. Following attendance at a conference (and no more than three (3) months after the conference concludes) the advance payment must be fully reconciled with receipts for costs associated with (1) – (5) above.

### 6.3.5 Frequent Flyer Loyalty Programs/ Points

The Mayor and Councillors shall not be entitled to claim frequent flyer or other loyalty points relating to air travel or other expenses incurred by them under this policy. In circumstances where the Mayor or a Councillor has no option but to incur any expenditure for which loyalty points accrue to his/her personal account, the Mayor or Councillor must surrender the points to the airline or service provider before reimbursement of the expense by the Council.

### 6.3.6 When a Councillor Spends Over Their Budget

Where a Councillor spends over their allocated budget they will be required to reimburse Council for this overspend. Councillors will be notified by the Deputy General Manager Corporate Services in any given month if there has been an overspend related to phone and/ or internet expenses, and any other expenses that council manages where possible. In relation to training and conferences the Deputy General Manager Corporate Services will advise Councillors when they are nearing their annual limit.

Councillors will be requested to reimburse any overspend; either by that Councillor authorising Council to withhold any overspend from their Councillor fees (this must be in writing) or through direct payment/ reimbursement to Council through customer service. Any overspend should be reimbursed within three (3) months of incurring it.

### 6.3.7 Conference Costs, Payment in Advance

The Council will normally pay registration fees, accommodation costs and airline/train tickets direct to conference organisers/travel agent in advance. This is subject to the provisions in Clause 4.2.18.

### 6.3.8 Conference Costs, Mayor and Councillors/ Delegates or Accompanying Persons

1. Where the Mayor or Councillor is accompanied at a conference all costs for, or incurred by, the accompanying person, including travel, any additional accommodation costs, breakfast, meals, registration and/or participation in any conference programs, are to be borne by the Mayor/Councillor/accompanying person and not by the Council. Council may by resolution, and in exceptional circumstances, pay the expenses of a spouse/partner/carer while travelling on

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Council business. Exceptional circumstances would only be where the Councillor is prevented by health reasons from travelling alone.

2. Accompanying person's registration, or accompanying person's program fees, are to be paid to the conference organiser, etc. and paid at time of registration. The Council is prepared to receive such registration and payments and to forward them on to the conference organiser, etc. with any Council delegates' registration.
3. Where the Council meets, on account, any expenditure or cost on behalf of an accompanying person attending a conference, such expenditure must be repaid to the Council by the Councillor/accompanying person within seven (7) days of being invoiced for such expenditure following the conclusion of the conference.

## **7. Conferences Overseas**

### **7.1 Attendance At Overseas Conferences**

1. Attendance by the Mayor or a Councillor at any conference, seminar, congress, forum, workshop, course, meeting, deputation, information or training sessions, events, etc. related to the industry of local government which are held overseas, must be authorised prior to departure by specific resolution of the Council and such resolution shall specify and detail the conditions of attendance.
2. Attendance will only be approved where direct and tangible benefits can be established for the Council and the local community.
3. Requests for attendance for overseas travel must be submitted by a report to Council, included on the Council agenda (not by mayoral minute ) and shall include the names of Councillors nominated to attend, purpose, expected benefits, duration, itinerary and approximate total costs.
4. After returning from overseas, Councillors attending shall submit to a full meeting of Council a detailed written report on the aspects of the trip relevant to Council business and/or the local community.
5. Details of overseas travel must be included in Council's annual report, including any details of trips for sister city relationships.

## **8. Legal Assistance for the Mayor and Councillors**

### **8.1 Legal and Representation Costs - Enquiries, Investigations, Hearings, etc.**

In the event of:

Any enquiry, investigation or hearing by any of:

- the Independent Commission Against Corruption,
- the Office of the NSW Ombudsman,
- the Office of Local Government
- the NSW Department of Premier and Cabinet
- the NSW Police Force,
- the Director of Public Prosecutions,
- the Local Government Pecuniary Interest and Disciplinary Tribunal, or
- Council's Conduct Review Committee/Reviewer
- Other legally constituted investigatory bodies having proper jurisdiction

into the conduct of the Mayor or a Councillor in discharging their civic office duties; or 2. Legal proceedings being taken against the Mayor or a Councillor, arising out of or in connection with the performance of his or her civic duties or exercise of his or her functions as a Mayor or Councillor.

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The Council may resolve to reimburse the Mayor or such Councillor for all legal expenses properly and reasonably incurred, given the nature of the enquiry, investigation, hearing or proceeding, on a solicitor/client basis.

Provided that:

- i. the subject of the inquiry, investigation or hearing arises from the performance in good faith of a Councillor's functions under the Act, and the matter before the investigative or review body has proceeded past any investigative phase to a formal investigation or review;
- ii. in the case of a conduct complaint made against a councillor, legal costs may only be made available where the matter has been referred by the General Manager to the Conduct Review Committee/Conduct Reviewer to make formal inquiries into the matter;
- iii. in the case of pecuniary interest or misbehaviour matters, legal costs may only be made available where a formal investigation has been commenced by the Office of Local Government;
- iv. the amount of any reimbursement of legal expenses shall be reduced by the amount of any moneys that may be or are recouped by the Mayor or Councillor on any basis;
- v. that the enquiry investigation, hearing or proceeding results in a finding substantially favourable to the Mayor or Councillor;
- vi. where an outcome of an action or investigation against the Mayor or Councillor is substantially unfavourable to that Councillor any legal expenses must be reimbursed by the Councillor;
- vii. any payment for reimbursement of any legal expenses properly incurred is subject to the approval of the Deputy General Manager Corporate Services and the Council prior to payment;
- viii. The Council at its discretion may, set a limit to the total amount of reimbursement it is prepared to approve in respect of any inquiry, investigation, hearing or proceedings being taken against a Councillor.

This policy specifically excludes the payment of legal expenses for the Mayor or Councillors where:

- i. the Mayor or Councillor initiates a legal action;
- ii. the outcome of an action or investigation against the Mayor or Councillor is substantially unfavourable to that Councillor;
- iii. the Mayor or Councillor seeks advice in respect of possible defamation, or is seeking non-litigious remedy for possible defamation.

## **9. Insurances and Health Maintenance and Assessment Programs**

### **9.1 Insurance – Mayor and Councillors**

The Council will insure, or will provide for the insurance of the Mayor and Councillors for:

#### **9.1.1 Personal Accident**

Personal injury whilst ever engaged in or on any Council activity, worldwide covering bodily injury caused by accidental, violent, external and visible means up to a sub-limit for death determined by the Council and also covering permanent disablement, temporary total disability and temporary partial disability. The cover does not include medical expenses as medical expenses cannot be included due to the provisions set down in the Health Act. The Council shall determine the distribution of any benefits arising from such insurance to the Mayor or Councillor or his/her beneficiaries.

#### **9.1.2 Professional Indemnity/Public Liability**

##### **9.1.2.1 General Liability**

To indemnify the insured for all sums they shall become legally liable to pay arising out of:

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- i. death, personal injury or illness or disease to persons;
- ii. loss or damage to property arising out of the insured's business as a Council.

**9.1.2.2 Professional Indemnity**

To indemnify the insured for all sums they shall be legally liable for arising out of any negligent act, error or omissions in the conduct of their activities as Mayor or Councillors and arising out of the insured's business as a Council. **BUT** subject to any limitations or conditions set out in the policy of insurance which is, at the direction of the Council, taken out.

To indemnify each insured person(s) (Mayor/Councillors) for all costs, charges, expenses and defence costs but excluding fines and penalties incurred in relation to any prosecution (criminal or otherwise) of any insured person(s), attendance by any insured person(s) at any official investigation, examination, inquiry or other proceedings ordered or commissioned during the period of insurance by any official body or institution that is empowered to investigate the affairs of the Council by reason of any wrongful act wherever or whenever committed or allegedly committed by the insured person(s) in their capacity as insured person(s), **BUT** subject to any limitations or conditions set out in the policy of insurance which is, at the direction of the Council.

**9.1.3 Health and Wellbeing Services**

The Mayor Councillors will have access to Council's relevant Employee Assistance Program.

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**Appendix A**

**APPENDIX A**

**Provision & Use of a Mayoral Vehicle**

**1. Introduction**

The Council's adopted Code for the Payment of Expenses & Provision of Facilities for the Mayor and Councillors stipulates that the Council will provide a suitable and appropriate vehicle for use by the Mayor for all official, executive and social duties connected with the office of Mayor and for occasional or full private or personal use.

The Council cannot make a motor vehicle, owned or leased by the Council, available for the exclusive or primary use or disposition of a particular Councillor other than a Mayor.

**2. Policy statement**

**2.1 The Council will:**

- provide servicing, maintenance, registration and insurance of a suitable vehicle,
- provide all fuel, which may be charged against fuel card, whilst the vehicle is used for Council business

**2.2 The vehicle will be registered and comprehensively insured by the Northern Beaches Council.**

**2.3 A car telephone and special accessories where required, shall be provided, fitted, installed and removed at Council's cost.**

**2.4 The vehicle shall be available for the exclusive use of the Mayor, and where available by any Councillor attending council business and as approved by the Mayor subject to the conditions of this Policy.**

**3. Principles**

**3.1 Use of Vehicle**

A vehicle is made available for use by the Mayor:

- To attend any function, activity or engagement whether associated with local government or not, both within and outside the Northern Beaches Council area, at any time and on any day, in the official capacity of Mayor.
- At any time or day to attend any meetings, inspections, sites or appointments within the Northern Beaches as Mayor, with residents, ratepayers or people associated with Council business.
- For occasional or full personal or private use. Where private or personal use is on an occasional basis, the Mayoral Allowance will be reduced on a per kilometre basis, by the rate set by the Local Government (State) Award, and in accordance with a log submitted by the Mayor on a monthly basis. Where full private or personal use is chosen, the Mayoral Allowance will be reduced, in accordance with the Light Vehicle Allocation and Private Use Car Scheme Management Policy, MGT – PL 105 (Clause 2.1 – Contract Staff – TPR Calculation).
- For travel within the Northern Beaches for any Council related purpose or function.

**3.2 Restrictions on Use of Vehicle**

The following restriction shall apply to the use of the Mayoral vehicle:

- (a) The vehicle shall only be driven by a properly licensed person, being:
- The Mayor, or
  - Council employee, or

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**Appendix A**

- a Councillor of the Northern Beaches, with the Mayor's consent
  - a member of the Mayor's immediate family, e.g. mother/father/son/daughter/brother /sister, partner/spouse, or
  - a nominated person, so long as the Mayor is a passenger in the car.
- (b) The Mayor shall not use, or allow the vehicle to be used, to compete in any car rally or competition.
- (c) The vehicle is not to be used for any trading undertaking or for any activity where remuneration is received which is not directly related to Council business or activities of the office of Mayor.

**3.3 Conditions of Use of Mayoral Vehicle**

- (a) The Mayor, if he/she intends to drive the vehicle, must show evidence of a current New South Wales driver's licence of an appropriate class, or equivalent, and be the holder of a licence for the duration of their use of the vehicle. If the Mayor loses his/her licence or is suspended from driving, they must immediately:
- forfeit use of or access to the Mayoral vehicle, or
  - provide evidence of a properly licensed person who will be the driver of the vehicle whenever used by the Mayor during such period.
- (b) Whenever the Mayor has the control of the vehicle, the Mayor must ensure that it is driven only by a responsible properly licensed person as above.
- (c) If the Mayor drives, or allows another person to drive the vehicle without a current driver's licence, or whilst disqualified for any reason, the Council may withdraw the vehicle from access by the Mayor.
- (d) All traffic fines and penalties incurred by the Mayoral vehicle will be paid by the driver. The Mayor must keep a record of any drivers of the vehicle, other than the Mayor, whom the Mayor permits to drive the vehicle.
- (e) If the Mayor or a properly licensed person, by their action, negates any motor vehicle insurance, that person will be responsible for the payment of costs as a consequence thereof.
- (f) The Mayor always remains responsible for ensuring proper and adequate care and usage of the vehicle at all times including:
- day to day routine maintenance e.g. fuel, oil, battery, radiator, tyre pressures etc. is carried out at regular intervals,
  - garaging, i.e. if available off-street and under cover,
  - the vehicle is kept in a clean condition, by making it available to Council staff weekly for this purpose,
  - all maintenance/repair issues are reported to Fleet Management without delay,
  - that any accident or damage to the vehicle is immediately reported using the appropriate Accident Report Form
  - if the Mayor or a properly licensed person, whilst driving the vehicle, is convicted of drink-driving or an offence leading to licence suspension or loss in association with an accident involving the Mayoral vehicle, the Mayor will be required to pay the cost of associated repairs in the event that Council's insurers disclaim responsibilities on the grounds of such conviction, suspension or loss.

**4. Definitions**

"Nominated person" means the holder of a current NSW driver's licence who is nominated by the Mayor, in writing to the General Manager, as a person who may regularly drive the Mayoral Vehicle whilst the Mayor is a passenger in the vehicle.

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**Appendix B**

**APPENDIX B**

**1.1 Provisions under the Local Government Act 1993**

**1.1.1 General policy-making requirements**

Section 252 of the Local Government Act requires councils to adopt or amend a policy annually for the payment of expenses and the provision of facilities to mayors, deputy mayors and other councillors. Mayors and councillors can only be reimbursed for expenses and provided with facilities in accordance with this policy.

Section 252 also makes provision for a council to reduce the amount payable to mayors and councillors (under sections 248-251 of the Act) by the amount representing any private benefit of a facility provided by the council to them. It also requires that the policy be made under the provisions of this Act, the Regulation and any relevant guidelines issued under section 23A of the Act (these guidelines).

Section 252 (Payment of expenses and provision of facilities) states:

- (1) *Within 5 months after the end of each year, a council must adopt a policy concerning the payment of expenses incurred or to be incurred by, and the provision of facilities to, the mayor, the deputy mayor (if there is one) and the other councillors in relation to discharging the functions of civic office.*
- (2) *The policy may provide for fees payable under this Division to be reduced by an amount representing the private benefit to the mayor or a councillor of a facility provided by the council to the mayor or councillor.*
- (3) *A council must not pay any expenses incurred or to be incurred by, or provide any facilities to, the mayor, the deputy mayor (if there is one) or a councillor otherwise than in accordance with a policy under this section. (4) A council may from time to time amend a policy under this section.*
- (5) *A policy under this section must comply with the provisions of this Act, the regulations and any relevant guidelines issued under section 23A.*

**1.1.2 Policy development, review and submission requirements**

Section 253 of the Act specifies actions that council must undertake before a policy concerning expenses and facilities can be adopted or amended. It requires councils to make and submit their expenses and provision of facilities policies annually to the Office of Local Government.

Section 253 (Public notice of proposed policy or amendments concerning expenses and facilities) states:

- (1) *A council must give public notice of its intention to adopt or amend a policy for the payment of expenses or provision of facilities allowing at least 28 days for the making of public submissions.*
- (2) *Before adopting or amending the policy, the council must consider any submissions made within the time allowed for submissions and make any appropriate changes to the draft policy or amendment.*
- (3) *Despite subsections (1) and (2), a council need not give public notice of a proposed amendment to its policy for the payment of expenses or provision of facilities if the council is of the opinion that the proposed amendment is not substantial.*

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- (4) *Within 28 days after adopting a policy or making an amendment to a policy for which public notice is required to be given under this section, a council is to forward to the Director-General:*
- (a) *a copy of the policy or amendment together with details of all submissions received in accordance with subsection (1), and*
  - (b) *a statement setting out, for each submission, the council's response to the submission and the reasons for the council's response, and*
  - (c) *a copy of the notice given under subsection (1).*
- (5) *A council must comply with this section when proposing to adopt a policy each year in accordance with section 252 (1) even if the council proposes to adopt a policy that is the same as its existing policy.*

Section 254 of the Act requires that a part of a council or committee meeting which considers the adopting or amending of such a policy must not be closed to the public.

### 1.1.3 The role of a councillor

Section 232 of the Local Government Act defines the role of a councillor. It provides that councillors have two distinct roles, as a member of the governing body of the council; and as an elected person. Councils as members of the governing body should work as part of a team to make decisions and policies that guide the activities of the council. The role as an elected person requires councillors to represent the interests of the community and provide leadership. Councillor expenses and facilities policies should facilitate and assist councillors to carry out their role.

Section 232 (What is the role of a councillor?) states:

- (1) *The role of a councillor is, as a member of the governing body of the council:*
- *to direct and control the affairs of the council in accordance with this Act*
  - *to participate in the optimum allocation of the council's resources for the benefit of the area*
  - *to play a key role in the creation and review of the council's policies and objectives and criteria relating to the exercise of the council's regulatory functions*
  - *to review the performance of the council and its delivery of services, and the management plans and revenue policies of the council.*
- (2) *The role of a councillor is, as an elected person:*
- *to represent the interests of the residents and ratepayers*
  - *to provide leadership and guidance to the community*
  - *to facilitate communication between the community and the council.*

### 1.1.4 Other requirements

Schedule 1 of the Government Information (Public Access) Regulation 2009 Clause (1)(h) provides that Information contained in the current version and the most recent previous version of a policy concerning the payment of expenses incurred by, and the provision of facilities to, councillors, is prescribed as open access information. Members of the public may obtain a copy, either free of charge or on payment of reasonable copying charges.

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Section 23A makes provision for the Departmental Chief Executive to prepare, adopt or vary guidelines that relate to the exercise by a council of any of its functions. It also requires that a council must take the relevant guidelines into consideration before exercising any of its functions.

### 1.2 Provisions under the Local Government (General) Regulation 2005

Clause 271 of the Regulation requires councils to include detailed information in their annual reports about the payment of expenses and facilities to councillors.

Clause 217 (Additional information for inclusion in annual reports) states in part:

- (1) *For the purposes of section 428 (2) (r) of the Act, an annual report of a council is to include the following information:*
- (a) *details (including the purpose) of overseas visits undertaken during the year by councillors, council staff or other persons while representing the council (including visits sponsored by other organisations),*
  - (a1) *details of the total cost during the year of the payment of the expenses of, and the provision of facilities to, councillors in relation to their civic functions (as paid by the council, reimbursed to the councillor or recognised with the councillor), including separate details on the total cost of each of the following:*
    - (i) *the provision during the year of dedicated office equipment allocated to councillors on a personal basis, such as laptop computers, mobile telephones and landline telephones and facsimile machines installed in councillors' homes (including equipment and line rental costs and internet access costs but not including call costs),*
    - (ii) *telephone calls made by councillors, including calls made from mobile telephones provided by the council and from landline telephones and facsimile services installed in councillors' homes,*
    - (iii) *the attendance of councillors at conferences and seminars,*
    - (iv) *the training of councillors and the provision of skill development for councillors,*
    - (v) *interstate visits undertaken during the year by councillors while representing the council, including the cost of transport, the cost of accommodation and other out-of-pocket travelling expenses,*
    - (vi) *overseas visits undertaken during the year by councillors while representing the council, including the cost of transport, the cost of accommodation and other out-of-pocket travelling expenses,*
    - (vii) *the expenses of any spouse, partner or other person who accompanied a councillor in the performance of his or her civic functions, being expenses payable in accordance with the Guidelines for the payment of expenses and the provision of facilities for Mayors and Councillors for Local Councils in NSW prepared by the Director-General from time to time,*
    - (viii) *expenses involved in the provision of care for a child of, or an immediate family member of, a councillor, to allow the councillor to undertake his or her civic functions.*

Clause 403 disallows the payment of a general expense allowance and for a vehicle to be made available for the exclusive use of a councillor other than the mayor.

Clause 403 (Payment of expenses and provision of facilities) states:

*A policy under section 252 of the Local Government Act 1993 must not include any provision enabling a council:*

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- (a) to pay any councillor an allowance in the nature of a general expense allowance, or
- (b) to make a motor vehicle owned or leased by the council available for the exclusive or primary use or disposition of a particular councillor other than a mayor.

### 1.3 Other NSW Government policy provisions

#### 1.3.1 Office of Local Government Guidelines

As noted above under section 252(5) of the *Local Government Act 1993* the council expenses policy must comply with these guidelines issued under section 23A of the Act.

#### 1.3.2 Circulars to Councils

The policy must take into account the following Circulars.

Circular 08/24 *Misuse of council resources.*

Circular 08/37 *Council decision making prior to ordinary elections*

As previously stated, these guidelines replace any previous versions of these Guidelines and Circular 04/60 *Policy on payment of facilities to the mayor, deputy mayor and other councillors.*

#### 1.3.3 The Model Code of Conduct for Local Councils in NSW (OLG)

The policy should be consistent with the *Office of Local Government – Model Code of Conduct for Local Councils in NSW*. The following parts of the code are particularly relevant to s252 policies.

##### Use of council resources (pp 17)

- 7.12 *You must use council resources ethically, effectively, efficiently and carefully in the course of your official duties, and must not use them for private purposes (except when supplied as part of a contract of employment) unless this use is lawfully authorised and proper payment is made where appropriate.*
- 7.14 *You must be scrupulous in your use of council property, including intellectual property, official services and facilities, and must not permit their misuse by any other person or body.*
- 7.15 *You must avoid any action or situation that could create the appearance that council property, official services or public facilities are being improperly used for your benefit or the benefit of any other person or body.*
- 7.16 *You must not use council resources, property or facilities for the purpose of assisting your election campaign or the election campaign of others unless the resources, property or facilities are otherwise available for use or hire by the public and any publicly advertised fee is paid for use of the resources, property or facility.*
- 7.18 *You must not convert any property of the council to your own use unless properly authorised.*

#### 1.3.4 Councillor Induction and Professional Development Guide (OLG)

The policy provisions on training and development should integrate with any training and development policy, plan or program developed by the council. The Office has produced a *Councillor Induction and Professional Development Guide – A Guide for Councils* (2012) to assist councils to develop these programs.

#### 1.3.5 No Excuse for Misuse, preventing the misuse of council resources (ICAC)

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Councils should also be aware of and take account of the Independent Commission Against Corruption (ICAC) publication *No Excuse for Misuse, preventing the misuse of council resources (Guidelines 2)* November 2002. This publication is available on the ICAC website in at [www.icac.nsw.gov.au](http://www.icac.nsw.gov.au).

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**Appendix C**

**APPENDIX C**

**POLICY**

**Payment and Reimbursement of Expenses Incurred by, and Provision of Facilities to, the Mayor, Deputy Mayor and Councillors**

**1. Purpose of Policy**

This Policy is made under the *Local Government Act 1993* (the Act) including Sections 252 to 254A (see Appendix B.) The Act requires that the Council must adopt a policy concerning the payment of expenses incurred by, and the provision of facilities to, the Mayor, the Deputy Mayor and other Councillors.

**2. Principles**

- To provide for the fair and equitable payment and reimbursement of certain expenses not considered to be included in the annual fees payable under Sections 248-254A of the Local Government Act, where such expenses are incurred by the Mayor, Deputy Mayor, Councillors or Administrator (where one is in place) in discharging the functions of civic office.
- To provide adequate facilities for use by the Mayor, Deputy Mayor, Councillors and Administrator to enable them to discharge the functions of civic office.

See Attachment A for further principles.

**3. Authorisation**

This Policy was adopted by Council on **[INSERT DATE]**

It is due for review within the first 12 months of each term of a council *Local Government Amendment Act (Governance and Planning) 2016*, Section 252.

**4. Amendments**

| Revision | Date       | Change  | TRIM Ref    |
|----------|------------|---|-------------|
| 1        | 27/09/2016 | First Northern Beaches Council Policy for Payment and Reimbursement of Expenses Incurred by, and the Provision of Facilities to the Mayor, Deputy Mayor and Councillors for public exhibition | 2016/314096 |

**5. Whose is Responsible for Implementing this Policy?**

Deputy General Manager Corporate Services

**6. Document Owner**

General Manager

**7. Related Council Documents**

Nil

**8. Legislation and References**

- *Local Government Act 1993*
- *Local Government (General) Regulation 2005*
- Division of Local Government (DLG), Department of Premier and Cabinet (now the OLG) – Guidelines for the Payment of Expenses and the Provision of Facilities to the Mayors and Councillors in NSW, October 2009
- *Local Government (Council Amalgamations) Proclamation 2016*

September 2016

\_\_\_\_\_ (                      ) \_\_\_\_\_

## NORTHERN BEACHES COUNCIL

### Investment Policy

#### 1 Purpose of Policy

To ensure Council maintains an investment policy that complies with the Act, the Local Government (General) Regulation 2005 (LGGR) and the Ministerial Investment Order and ensures it or its representatives exercise care, diligence and skill that a prudent person would exercise in investing council funds.

#### 2 Policy Statement

The objectives of this policy are to provide a framework for the investing of Council's funds at the most favourable return available to it at the time whilst having due consideration of risk and security for that investment type and ensuring that Council's liquidity requirements are being met.

Investments must only be made in compliance with the most current Ministerial Investment Order that has been issued by the NSW Minister for Local Government and in accordance with this Policy.

When exercising the power of investment, Council should consider, but not be limited by:

- The risk of capital or income loss or depreciation;
- The likely income return and the timing of income return;
- The length of the term of the proposed investment;
- The liquidity and marketability of the proposed investment;
- The likelihood of inflation affecting the value of the proposed investment; and
- The costs (including commissions, fees, charges and duties payable) of making the proposed investment.

Preservation of capital is the principal objective of the investment portfolio. Investments are to be placed in a manner that seeks to ensure security and safeguarding the investment portfolio.

Investments are expected to achieve a market average rate of return in line with the Council's risk tolerance.

#### 3 Principles

##### 3.1 Investment Strategy

An Investment Strategy will run in conjunction with the Investment Policy. The Investment Strategy will be reviewed with an independent investment advisor once a year. The Strategy will outline:

- Council's cash flow expectations;
- Optimal target allocation of investment types, credit rating exposure and term to maturity exposure; and
- Appropriateness of overall investment types for Council's portfolio.

##### 3.2 Investment Advisor

Council's investment advisor must be approved by Council and licensed by the Australian Securities and Investments Commission. The advisor must be an independent person who has no actual or potential conflict of interest in relation to

investment products being recommended and is free to choose the most appropriate product within the terms and conditions of the investment policy.

The independent advisor is required to provide written confirmation that they do not have any actual or potential conflicts of interest in relation to the investments they are recommending or reviewing, including that they are not receiving any commissions or other benefits in relation to the investments being recommended or reviewed.

### **3.3 Approved Investments**

Investments are limited to those allowed by the most current Ministerial Investment Order that has been issued by the NSW Minister for Local Government. Approved investments include:

- Commonwealth/State/Territory Government security eg bonds;
- Interest bearing deposits with, or any debentures or bonds, issued by an authorised deposit taking institution (ADI) (as defined In the Banking Act 1959 (Cwth)), but excluding subordinated debt obligations; Bills of exchange, (<200 days duration), issued and/or accepted by an authorised deposit taking institution (ADI);
- Debentures issued by NSW Local Government;
- Deposits with NSW Treasury &/or Investments in T Corp's Hour Glass Facility; and
- Investments grandfathered under the previous Ministerial Investment Order.

### **3.4 Prohibited Investments**

This investment policy prohibits but is not limited to any investment carried out for speculative purposes, including;

- Derivative based instruments;
- Principal only investments or securities that provide potentially nil or negative cash flow; and
- Stand alone securities issued that have underlying futures, options, forwards contracts and swaps of any kind.

This policy also prohibits the use of leveraging (borrowing to invest) of an investment.

### **3.5 Prudent Person Standard**

Council has a fiduciary responsibility when investing. The investment will be managed with the care, diligence and skill that a prudent person would exercise. As trustees of public monies, officers are to manage Council's investment portfolio to safeguard the portfolio in accordance with the spirit of this Investment Policy, and not for speculative purposes.

### **3.6 Ethics and Conflicts of Interest**

Officers shall refrain from personal activities that would conflict with the proper execution and management of Council's investment portfolio. This policy requires officers to disclose any conflict of interest to the General Manager.

Independent advisors are also required to declare that they have no actual or perceived conflicts of interest.

Where financial institutions are offering equivalent investment returns with the same credit ratings and the investment conforms with the Investment Policy then preference will be given to institutions demonstrating environmental and social responsibility.



### 3.7 Audit, Risk and Improvement Committee

The policy must be reviewed annually by the Audit, Risk and Improvement Committee. Such review to be carried out prior to the annual review of the policy that is required under Clause 7.

### 3.8 Linking Investments to Underlying Liabilities

Investments should seek to maximise return whilst having regard to the timing and nature of future liabilities and Council's cash flow profile. Liquidity requirements have due regard to the timing and nature of both future liabilities and Council's cash flow requirements.

## 4 Guidelines

### 4.1 Risk Management Guidelines

Investments are expected to achieve a market average rate of return in line with Council's risk tolerance.

- **Preservation of Capital** – the requirement for preventing losses in an investment portfolio's total value;
- **Diversification** – the requirement to place investments in a broad range of products so as not to be over exposed to a particular sector of the investment market;
- **Market Risk** - the risk that the fair value or future cash flows of an investment will fluctuate due to changes in market prices;
- **Liquidity Risk** - the risk an investor is unable to redeem the investment at a fair price within a timely period;
- **Maturity Risk** - the risk relating to the length of term to maturity of the investment. The larger the term, the greater the length of exposure and risk to market volatilities; and
- **Leveraging Risk** - the magnification of an investor's risk and return that occurs when the investor takes on financial leverage through an investment product.

### 4.2 Credit and Maturity Guidelines

Investments are to comply with three key criteria relating to:

- **Overall Portfolio Credit Framework**- limit overall market credit exposure of the portfolio;
- **Institutional Credit Framework**- limit exposure to individual institutions based on their credit ratings; and
- **Term to Maturity Framework**- limits based upon maturity of securities.

#### 4.2.1 Overall Portfolio Credit Framework

To control the credit quality of the entire portfolio, the following credit framework limits the percentage of the portfolio exposed within the market to any particular credit rating category.

| S&P Long Term Rating*                         | S&P Short Term Rating* | Maximum % |
|---|------------------------|-----------|
| AAA<br>(incl. government guaranteed deposits) | A-1+                   | 100%      |
| AA+   |                        |           |
| AA  |                        |           |
| AA-   |                        |           |

|           |           |      |
|-----------|-----------|------|
| A+        | A-1       | 100% |
| A         |           |      |
| A-        |           |      |
| BBB+      | A-2       | 80%  |
| BBB       |           |      |
| BBB-      |           |      |
| Unrated** | Unrated** | 20%  |

\* or Moody's / Fitch equivalents

\*\* Unrated Category is restricted to eligible managed funds such as the NSW Treasury Corporation Hour Glass Facilities.

#### 4.2.2 Institutional Credit Framework

Exposure to an individual institution will be restricted by their credit rating so that single entity exposure is limited, as detailed in the table below:

| S&P Long Term Rating*                         | S&P Short Term Rating* | Maximum % |
|---|------------------------|-----------|
| AAA<br>(incl. government guaranteed deposits) | A-1+                   | 50%       |
| AA+   |                        |           |
| AA  |                        |           |
| AA-   |                        |           |
| A+  | A-1                    | 40%       |
| A   |                        |           |
| A-  |                        |           |
| BBB+  | A-2                    | 30%       |
| BBB   |                        |           |
| BBB-  |                        |           |
| Unrated**                                     | Unrated**              | 10%       |

\* or Moody's / Fitch equivalents

\*\* Unrated Category is restricted to eligible managed funds such as the NSW Treasury Corporation Hour Glass Facilities.

If any of Council's investments are downgraded such that they no longer fall within the investment policy, they will be divested as soon as practicable.

The short-term credit rating limit will apply in the case of discrepancies between short and long-term ratings.

#### 4.2.3 Term to Maturity Framework

The investment portfolio is to be invested within the following maturity constraints:

| Overall Portfolio Term to Maturity Limits |         |          |
|---|---------|----------|
| Portfolio % <1 year                       | Min 40% | Max 100% |
| Portfolio % >1 year ≤3 year               | Min 0%  | Max 60%  |
| Portfolio % >3 year ≤5 year               | Min 0%  | Max 30%  |

## **5 Reporting Requirements**

### **5.1 Reporting and Reviewing of Investments**

Documentary evidence must be held for each investment and details thereof maintained in an Investment Register. The documentary evidence must provide Council legal title to the investment.

Certificates must be obtained from the financial institutions confirming the amounts of investments held on the Council's behalf as at 30 June each year and reconciled to the Investment Register.

All investments are to be appropriately recorded in Council's financial records and reconciled at least on a monthly basis.

A monthly report will be provided to Council. The report will detail the investment portfolio in terms of performance, percentage exposure of total portfolio, maturity date and changes in market value.

By resolution Council will adopt an Investment Policy that is consistent with the Ministerial Investment Order and any guidelines issued by the Chief Executive (Local Government), Department of Premier and Cabinet from time to time.

This Investment Policy will be reviewed at least once a year or as required in the event of legislative changes. The Investment Policy may also be changed as a result of other amendments that are to the advantage of Council and in the spirit of this policy. Any amendment to the Investment Policy must be by way of Council resolution.

### **5.2 Measurement**

The investment return for the portfolio is to be regularly reviewed by an independent financial advisor by assessing the market value of the portfolio. The market value is to be assessed at least once a month to coincide with monthly reporting. Any changes to the market value that have not been accounted for will be brought to account on a mark-to-market basis.

### **5.3 Performance Benchmarks**

The performance of the investment portfolio shall be measured against the industry standard Bloomberg AusBond Bank Bill Index and/or the Official Cash Rate. The performance of investments with terms greater than 2 years will also be measured against the Bloomberg Ausbond Composite 2-5 year index.

## **6 Delegation of Authority**

Authority for implementation of the Investment Policy is delegated by Council to the General Manager in accordance with the Local Government Act 1993.

The General Manager may in turn delegate the day-to-day management of Council's investments to the Responsible Accounting Officer or senior staff, subject to regular reviews.

Officers' delegated authority to manage Council's investments shall be recorded and required to acknowledge they have received a copy of this policy and understand their obligations in this role.

The General Manager or any other staff member, with delegated authority by Council to invest funds on behalf of Council must do so in accordance with the adopted investment policy.

## **7 Authorisation**

This policy was adopted by Council on [insert date here]

The policy is due for review at least once per year or as required in the event of legislative changes. The policy is due for review on [insert date here]

## **8 Amendments**

The General Manager or his delegated representative be authorised to approve variations to investment options that may not be consistent with this policy, if the investment is to Council's advantage and/or due to revised legislation.

All such variations are to be reported to Council within 14 days.

## **9 Who is responsible for implementing this Policy?**

Chief Financial Officer

## **10 Document Owner**

Deputy General Manager Corporate Services

## **11 Legislation and References**

All investments are to comply with the following:

- Local Government Act 1993;
- Local Government (General) Regulation 2005;
- Ministerial Investment Order 2011;
- Local Government Code of Accounting Practice and Financial Reporting;
- Australian Accounting Standards; and
- Office of Local Government Circulars

## **12 Definitions**

- Act - Local Government Act 1993;
- LGGR - Local Government (General) Regulation 2005;

## **13 Document History**

| Revision | Date       | Change   | TRIM Ref    |
|----------|------------|--|-------------|
| 1        | 27/09/2016 | First Northern Beaches Council Investment Policy for public exhibition | 2016/314426 |
|          |            |  |             |
|          |            |  |             |



## **SCHEDULE 1: Extracts of Legislative Requirements**

### **LOCAL GOVERNMENT ACT 1993 - SECT 412 & 625**

#### **Section 412 Accounting Records**

- 1) A council must keep such accounting records as are necessary to correctly record and explain its financial transactions and its financial position.
- 2) In particular, a council must keep its accounting records in a manner and form that facilitate:
  - (a) the preparation of financial reports that present fairly its financial position and the results of its operations, and
  - (b) the convenient and proper auditing of those reports.

#### **Section 625 How May Councils Invest?**

- 1) A council may invest money that is not, for the time being, required by the council for any other purpose.
- 2) Money may be invested only in a form of investment notified by order of the Minister published in the Gazette.
- 3) An order of the Minister notifying a form of investment for the purposes of this section must not be made without the approval of the Treasurer.
- 4) The acquisition, in accordance with section 358, of a controlling interest in a corporation is not an investment for the purposes of this section.

### **LOCAL GOVERNMENT (GENERAL) REGULATION 2005 - REG 206 & 212**

#### **206 Accounting records and accounting practices to accord with the Code**

- 1) A council's accounting records must be kept in a form that accords with the Code.
- 2) A council's accounting practices must accord with the Code.

#### **212 Reports on council investments**

- 1) The responsible accounting officer of a council:
  - (a) must provide the council with a written report (setting out details of all money that the council has invested under section 625 of the Act) to be presented:
    - (i) if only one ordinary meeting of the council is held in a month, at that meeting, or
    - (ii) if more than one such meeting is held in a month, at whichever of those meetings the council by resolution determines, and
  - (b) must include in the report a certificate as to whether or not the investment has been made in accordance with the Act, the regulations and the council's investment policies.
- 2) The report must be made up to the last day of the month immediately preceding the meeting.

### **LOCAL GOVERNMENT CODE OF ACCOUNTING PRACTICE AND FINANCIAL REPORTING – CL 11.3.4 & 11.3.5**

- 11.3.4 Councils must maintain a separate record of money it has invested under section 625 of the LGA. The record must specify:
  - (a) the source and the amount of money invested; and
  - (b) particulars of the security or form of investment in which the money is invested; and
  - (c) if appropriate, the rate of interest to be paid, and the amount of money that the council has earned, in respect of the money invested.
- 11.3.5 Council must maintain an investment policy that complies with the Act and ensures it or its representatives exercise care, diligence and skill that a prudent person would exercise in investing council funds.



Circular No. 11-01  
Date 17 February 2011  
Doc ID. A232163

Contact Finance Policy Section  
02 4428 4100  
dlg@dlg.nsw.gov.au

#### REVISED MINISTERIAL INVESTMENT ORDER

A revised Investment Order pursuant to section 625 of the *Local Government Act 1993* has been issued. The Minister for Local Government signed the revised Order on 12 January 2011 and it was published in the NSW Government Gazette on 11 February 2011. It replaces the Order dated 31 July 2008. The revised Order is attached to this circular.

Changes to the Investment Order include:

- the removal of the ability to invest in the mortgage of land (part (c) of the Investment Order dated 31 July 2008)
- the removal of the ability to make a deposit with the Local Government Financial Services Pty Ltd (part (f) of the order dated 31 July 2008)
- the addition of "Key Considerations" in the revised Investment Order, which includes a comment that a council's General Manager, or any other staff, with delegated authority by a council to invest in funds on behalf of the council must do so in accordance with the council's adopted investment policy.

Councils are reminded that on 25 May 2010 the Division of Local Government issued Investment Policy Guidelines (Circular to Councils 10-11 refers). It is expected that all councils will by now have adopted an Investment Policy in accordance with the Guidelines.

**Ross Woodward**  
Chief Executive, Local Government  
A Division of the Department of Premier and Cabinet

Department of Local Government  
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**LOCAL GOVERNMENT ACT 1993 – INVESTMENT ORDER**  
(Relating to investments by councils)

I, the Hon. Barbara Perry MP, Minister for Local Government, in pursuance of section 625(2) of the *Local Government Act 1993* and with the approval of the Treasurer, do, by this my Order, notify for the purposes of section 625 of that Act that a council or county council may only invest money (on the basis that all investments must be denominated in Australian Dollars) in the following forms of investment:

- (a) any public funds or securities issued by or guaranteed by, the Commonwealth, any State of the Commonwealth or a Territory;
- (b) any debentures or securities issued by a council (within the meaning of the *Local Government Act 1993* (NSW));
- (c) interest bearing deposits with, or any debentures or bonds issued by, an authorised deposit-taking institution (as defined in the *Banking Act 1959* (Cwth)), but excluding subordinated debt obligations;
- (d) any bill of exchange which has a maturity date of not more than 200 days; and if purchased for value confers on the holder in due course a right of recourse against a bank which has been designated as an authorised deposit-taking institution by the Australian Prudential Regulation Authority;
- (e) a deposit with the New South Wales Treasury Corporation or investments in an Hour-Glass investment facility of the New South Wales Treasury Corporation;

All investment instruments (excluding short term discount instruments) referred to above include both principal and investment income.

Transitional Arrangements

- (i) Subject to paragraph (ii) nothing in this Order affects any investment made before the date of this Order which was made in compliance with the previous Ministerial Orders, and such investments are taken to be in compliance with this Order.
- (ii) Paragraph (i) only applies to those investments made before the date of this Order and does not apply to any restructuring or switching of investments or any re-investment of proceeds received on disposal or maturity of such investments, which for the avoidance of doubt must comply with this Order.

Key Considerations

An investment is not in a form of investment notified by this order unless it also complies with an investment policy of council adopted by a resolution of council.

All councils should by resolution adopt an investment policy that is consistent with this Order and any guidelines issued by the Chief Executive (Local Government), Department of Premier and Cabinet, from time to time.

The General Manager, or any other staff member, with delegated authority by a council to invest funds on behalf of a council must do so in accordance with the council's adopted investment policy.

Councils have a fiduciary responsibility when investing. Councils should exercise the care, diligence and skill that a prudent person would exercise in managing the affairs of other persons.

When exercising the power of investment councils should consider, but not be limited by, the risk of capital or income loss or depreciation, the likely income return and the timing of income return, the length of the term of the proposed investment, the liquidity and marketability of the proposed investment, the likelihood of inflation affecting the value of the proposed investment and the costs (including commissions, fees, charges and duties payable) of making the proposed investment.

Dated this 12<sup>th</sup> day of January 2011

  
Hon BARBARA PERRY MP  
Minister for Local Government



| <b><u>Submission</u></b> |   | <b><u>Council Comment / Recommended Action</u></b>   |
|--------------------------|---|--|
| <b>1</b>                 | Thank you for the opportunity to comment on the investment policy. I would like to have another clause added, that any investments through ADIs must be ethical and environmentally responsible (eg. no investment in fossil fuels). Thank you. | <p>Council acknowledges the importance of environmental responsibility and making ethical and socially responsible investment decisions. These principles need to be considered in light of the objectives stated in Council's Investment Policy and in the Local Government Act 1993 (the Act).</p> <p>The draft Policy states that the objectives of the policy are to provide a framework for the investing of Council's funds at the most favourable return available to it at the time whilst having due consideration of risk and security for that investment type and ensuring that Council's liquidity requirements are being met. The draft Policy also states that preservation of capital is the principal objective of the investment portfolio.</p> <p>An objective of the Act is "to provide the legal framework for an effective, efficient, environmentally responsible open system of local government within NSW".</p> <p>Consistent with the above objectives, the draft Investment Policy has been amended to provide that where financial institutions are offering equivalent investment returns with the same credit ratings and the investment conforms with the Investment Policy then preference will be given to institutions demonstrating environmental and social responsibility.</p> |
| <b>2</b>                 | Council should not be investing funds at all if they are generating excess cash they should be reducing rates, returning rates and cutting spending. Council is not an investment bank, they are a service provider, that's it, nothing more.   | <p>Council is required to maintain an appropriate level of working capital to fund its ongoing operations and provide sufficient liquidity to provide against unforeseen and unbudgeted expenditure such as storm events.</p> <p>Investing working capital is a prudent and appropriate strategy. This provides funds for medium to longer-term requirements and to fund specific community projects. It also allows Council to be in a position to respond on timely basis in relation to unexpected expenditure demands (like costs incurred responding to storms and other emergencies). The funds invested generate interest returns to Council that assist Council to keep rate increases to a minimum. In addition, if Council did not retain appropriate cash reserves it would have to rely on more expensive funding options such as bank overdrafts and loans to fund specific projects and/or unforeseen and unbudgeted expenditures such as funding emergency responses.</p>   |

|          | <u><b>Submission</b></u>  | <u><b>Council Comment / Recommended Action</b></u>  |
|----------|---|---|
| <b>3</b> | <p>I refer to the Northern Beaches Council Investment Policy that is currently on public exhibition and provide the following comments from the Natural Environment &amp; Climate Change Group.</p> <p>The first stated objective within the Local Government Act, 1993 is "to provide the legal framework for an effective, efficient, environmentally responsible open system of local government within NSW". As such, it would be appropriate to consider environmental responsibility within the Investment Policy and I would suggest the following:</p> <p>"Environmentally and socially responsible investments will be assessed on the same basis as other investment opportunities and Council will select its investment that best meets its overall investment selection criteria".</p> | <p>This submission is consistent with the suggestion noted by submission number 1.</p> <p>Consistent with the recommended action for submission number 1 the draft Investment Policy has been amended to provide that where financial institutions are offering equivalent investment returns with the same credit ratings and the investment conforms with the Investment Policy then preference will be given to institutions demonstrating environmental and social responsibility.</p>  |
| <b>4</b> | <p>Submission on Investment policy: Given this policy is reviewed annually and should reflect current risks and return outlooks the following suggestions are made on this policy:</p>  | <p>See comments against each item below:</p>  |
|          | <p><b>a:</b> The Risk and Audit Committee should approve the policy (if they have not already done so) before the policy is approved by Council.</p>  | <p>The draft Investment Policy has been amended to provide for an annual review by the Audit, Risk and Improvement Committee.</p>   |
|          | <p><b>b:</b> Page 4 Diversification Suggest it should insert after products "among those permitted by the Ministerial Investment Order" and at the end." The requirement to place investments with a range of providers rather than be overexposed to one institution.</p>  | <p>The proposals contained in this submission are already adequately provided for in the draft Investment Policy:</p> <p>Clause 2 of the draft Investment Policy states that investments must only be made in compliance with the most current Ministerial Investment Order.</p> <p>Investment allocation limits are already provided in Clause 4 whereby there is a requirement to place investments in a broad range of products so as not to be over exposed to a particular sector of the investment market. The credit framework limits in Clause 4 have been reviewed by Council's Investment Advisors and confirmed as appropriate to ensure adequate diversification of the portfolio.</p> <p>No amendment to the draft policy is considered necessary.</p> |
|          | <p><b>c:</b> Page 4 Leveraging risk This statement looks at conflict with 3.4 page 3 which prohibits the use of leveraging and therefore that should be stated here</p>   | <p>The statement regarding leveraging risk explains the nature of this risk along with other risks associated with an investment portfolio. The exclusion of leverage is appropriately detailed under Clause 3.4 Prohibited Investments.</p>  |

| <u>Submission</u>   | <u>Council Comment / Recommended Action</u>   |
|---|---|
| <p><b>d:</b> Page 5 4.2.1 Portfolio Credit Framework The % in some of the lower rated products look too high Currently the policy allows a portfolio of 30 % A-3 and 70 % A-2 investment which I accept may never be done but why have a policy that allows it Suggest 60 % limit for A-2 and 30 % A-2 and zero for A-3. If there is to be any A-3 allowed would like to see the justification as the council never seem to have any A-3 investments</p>                                    | <p>The credit framework limits/percentages in Clause 4 have been reviewed by Council's Investment Advisors and confirmed as appropriate.</p> <p>No amendment to the draft policy is considered necessary.</p>   |
| <p><b>e:</b> page 5 4.2.2 Institutional Credit Framework The % in the institutional framework look too high Currently the policy allows you to have just two institutions of A-1+ with all the investments which I accept you may never do but again why have a policy that allows it. The policy does not ensure diversification. Suggest A-1+ be a maximum of 40 %, A-1 30 % and A-2 20 % and zero for A-3 If any A-3 is be allowed would like to see justification</p>                   | <p>The institutional credit framework limits/percentages in Clause 4 have been reviewed by Council's Investment Advisors and confirmed as appropriate.</p> <p>No amendment to the draft policy is considered necessary.</p>   |
| <p><b>f:</b> Page 6 4.2.3 Term to maturity Framework There is an inconsistency in that if the minimum in &lt; one year is 40 % then the maximum between one year (and should be &lt; 3) cannot be 70 % With that change the % look fine</p>   | <p>The draft investment policy has been amended to reduce the maximum for the 1-3 year period to 60%.</p>   |
| <p><b>g:</b> Page 6 5.1 Reporting and Reviewing of investments Para 4 A monthly report should also detail not only the absolute figures but the changes from the last month. The critical report is to know if the Council during the month when renewing the investments and if it had moved the exposure to different credit ratings of investments and institutions and a change the maturity profile. This should be accompanied by commentary on why these changes are being made.</p> | <p>The reporting requirements included in the draft Investment Policy comply with The Local Government Act 1993 and with clause 212 of the Local Government (General) Regulation 2005. They are also consistent with reporting requirements contained in the Office of Local Government's "Investment Policy Guidelines – May 2010".</p> <p>No amendment to the draft Investment Policy is required.</p>  |
| <p><b>h:</b> Page 6 5.3 Performance Benchmarks These two benchmarks do not give a good measure of the performance of the fund as any investment with any duration should perform above these indexes Unless a better index can be found then I suggest that you would expect the portfolio to perform at least 0.25 % above the Bank bill index and 0.5% above the Official Cash rate and those rates be set as a benchmark. The current is a very soft measure of performance.</p>         | <p>The draft Investment Policy states that Council's investments are expected to achieve a market average rate of return. The benchmarks included in the draft Investment Policy have been recommended by Council's Investment Advisors as relevant indicators of the performance of Council's portfolio. These indices are widely used as performance benchmarks by a significant number of Australian financial institutions.</p> <p>No amendment to the draft Investment Policy is required.</p> |
| <p><b>i:</b> Amendments To allow the General Manager to approve variations to investment options that may not be consistent with this policy just because the investment is to the Councils advantage negate the point of having a policy. This permission should be deleted from the policy.</p>   | <p>This clause allows flexibility to ensure Council continues to meet legislative requirements and requires all variations under this clause to report to Council within 14 days.</p> <p>No amendment to the draft Investment Policy is required.</p>   |



| <u><b>Submission</b></u> |  | <u><b>Council Comment / Recommended Action</b></u>  |
|--------------------------|--|---|
| <b>5</b>                 | <p><u>Review by Investment Advisors – Laminar Capital</u></p> <p>The only changes required to the draft policy are to revise the year ranges in 4.2.3 Term to Maturity Framework as follows :</p> <p><u>Change:</u></p> <p>“Portfolio % &gt;1 year: Max 70%”</p> <p>to be:</p> <p>“Portfolio % &gt; 1 year ≤ 3 Years: Max 60%”</p>   | <p>The draft Investment Policy has been amended as recommended.</p>   |
| <b>6</b>                 | <p><u>Review by NSW Treasury Corporation (TCorp)</u></p> <p>TCorp provided the following comments:</p> <p><b>a:</b> The opening paragraph under 'Policy Statement' on page one appears to be in conflict with the order of the bullet points listed later in the section and the comments in the penultimate paragraph. We would suggest substitution of the following for the first paragraph.</p> <p>'The objectives .... . .... Council's funds with a view to minimising the risk of loss of capital or interest, to ensure that liquidity requirements are observed and after due consideration of these two prime objectives, to seek to achieve the best rates of return available.</p> <p>For consistency you may care to amend the order of the second, third, fourth, fifth and sixth bullet points in this section.</p> <p><b>b:</b> We normally see a 'Definitions ' section close to the beginning of the policy. Inserting 'Definitions 'after Section 2 'Policy Statement ' would seem appropriate. Examples would include:</p> <ul style="list-style-type: none"> <li>• Bill of exchange</li> <li>• Bloomberg Ausbond Bank Bill Index</li> <li>• Debenture, and</li> <li>• Floating rate Notes.</li> </ul> <p><b>c:</b> 'Investment Advisor.' 'Australian Securities and Investment Commission', line two.</p> | <p>Reordering of the bullet points as suggested would not provide greater consistency with the policy objectives.</p> <p>No amendment to the draft policy is considered necessary.</p> <p>We note this comment however we also note that no such definitions are included in Treasury Management Policy from NSW Treasury that was provided by TCorp nor are they provided in the example investment policy provided in the OLG's Investment Policy Guidelines.</p> <p>We do not believe that providing such definitions would add to the policy.</p> <p>Noted and amended.</p> |

| <u><b>Submission</b></u>  | <u><b>Council Comment / Recommended Action</b></u>  |
|---|---|
| <p><b>d: 'Approved Investments.'</b></p> <ol style="list-style-type: none"> <li>1) Delete the repeated 'issued by' in line one of the second bullet point commencing 'Interest bearing deposits with. . . . .'</li> <li>2) 'Bills of Exchange' line four of the same bullet point. The 2011 Investment Order states that councils may invest in a Bill of Exchange which confers on the holder a right of recourse to an authorised deposit-taking institution (ADI). This means the bill must either be issued by an ADI or issued by another party and accepted by an ADI. An ADI issuer would not need to guarantee its own paper (bills) and the practice for ADI's that add their name to bills of exchange is known as 'acceptance'.</li> </ol>   | <ol style="list-style-type: none"> <li>1) Noted and amended.</li> <li>2) Noted, changed to "issued and/or accepted"</li> </ol>  |
| <p><b>e: 'Maturity Risk' on page three. We question the statement 'the larger (longer?) the term, the greater the length of exposure and risk to market volatilities '. Please see the third paragraph under 'Investment Horizon Limits' on page two of this letter for commentary on why we question this statement.</b></p>   | <p>The information provided in the third paragraph fails to take account of inherent risks as detailed in the OLG's Investment Policy Guidelines with which Council's risk definition is consistent.</p> <p>No amendment to the draft policy is considered necessary.</p>   |
| <p><b>f: Overall Portfolio Credit Framework and Institutional Credit Framework:</b></p> <ol style="list-style-type: none"> <li>1) Table at the top of page four. Council, in pursuing its risk minimisation policy might consider reducing the portfolio percentage cap applicable to long-term rated A (A+ through A) entities from 100% to 40%. Single counterparty exposure caps (Table 4.2 .2) to A+ through A rated ADI's at 20% would normally be prudent but noting the size of the Council's investment portfolio, we suggest this be reduced to 10% for the time being.</li> <li>2) Again, in light of the size of the investment portfolio, Council might like to consider reducing the single counterparty exposure cap for BBB+ to BBB rated entities from 10% to 5% and perhaps even less, while the portfolio remains above \$200m.</li> <li>3) Continuing along with the 'risk ' theme, while portfolio allocations to BBB- rated ADIs is permitted under the Investment Order, in the absence of community considerations, we would suggest investment in these entities be avoided or managed within the limits of the Commonwealth Guarantee (Financial Claims Scheme) .</li> </ol> | <ol style="list-style-type: none"> <li>1) This has been reviewed by Council's Investment Advisors and enables Council the flexibility of only investing with the most highly rated institutions subject to the other components of the framework.</li> </ol> <p>No amendment to the draft Investment Policy is required.</p> <ol style="list-style-type: none"> <li>2) The investment portfolio will only remain at above \$200m in the very short term. Again, the policy limits have been reviewed by Council's Investment Advisors and confirmed as appropriate.</li> </ol> <p>No amendment to the Investment Policy is required.</p> <ol style="list-style-type: none"> <li>3) Northern Beaches Council has not to date invested in BBB rated ADIs. The policy is governed by measures to ensure it or its representatives exercise care, diligence and skill that a prudent person would exercise in investing council funds.</li> </ol> <p>No amendment to the draft Investment Policy is required.</p> |

| <u><b>Submission</b></u>  | <u><b>Council Comment / Recommended Action</b></u>  |
|---|---|
| <p><b>g:</b> Investment Horizon Limits. We would enquire as to the basis for the allocations outlined in the table on page five. In any event we suggest the term to maturity allocations be reviewed periodically to confirm alignment with the forecast cash flows identified in Council's Long Term Financial Plan.</p> <p>We believe the objective of pursuing a degree of asset and liability matching should be included as a factor determining allocations to duration. Currently, real returns from short term investments are incompatible with the cost of providing infrastructure assets which typically rise in line with the Cost Construction Index (1.0%- 1.5% above CPI). In this regard and after analysis of Council's longer term cash flow requirements, it may be appropriate to review the maximum allocation to long term funds along with the maximum investment horizon.</p> <p>The capital preservation objective does not preclude Council from considering longer term investments such as TCorp's Hour-Glass Medium and Long Term Growth Funds. When investments in diversified funds such as these are considered in the context of the investment time frame, the risk of a negative return (i.e. capital degradation) actually falls over time. The attached slide shows how the risk of a negative return falls the longer the investment is held. These Funds provide the potential for Council to generate a higher return without breaching the capital preservation objective (when capital preservation is measured over the appropriate time frame). For example, the Hour-Glass Medium Term Growth Fund has a three to seven year time horizon and has returned 6.36% pa over the last five years. The Hour-Glass Medium Term Growth Fund has a very small (1%) probability of a negative return over a five year period (again, we refer to the slide attached).</p> | <p>The draft Investment Policy has been amended to provide that investments should seek to maximise return whilst having regard to the timing and nature of future liabilities and Council's cash flow profile.</p> <p>The final paragraph in this submission point is promotional in nature relating to TCorp's own investment products. As such this represents a potential conflict of interest between TCorp providing an independent review of Council's policy that is without bias whilst at the same time seeking an opportunity to promote specific TCorp investment products.</p> |
| <p><b>h:</b> 'Measurement' Page five. Substitute 'have' for 'has' in line four</p>  | <p>Noted and amended.</p>   |
| <p><b>i:</b> Performance benchmarks. While we agree the Bloomberg Ausbond Bank Bill Index is an appropriate benchmark for shorter term investments, the Bloomberg Ausbond Composite 2-5 year index is a more appropriate benchmark for investments extending beyond two years. You can view this index on the Bloomberg website at <a href="http://www.bloombergindices.com/ausbond">http://www.bloombergindices.com/ausbond</a>.</p>   | <p>The Investment policy has been amended to include the Bloomberg Ausbond Composite 2-5 year index for assessing the performance of longer termed investments.</p>   |

| <b><u>Submission</u></b> |  | <b><u>Council Comment / Recommended Action</u></b>   |
|--------------------------|--|--|
|                          | <p><b>j:</b> Delegation of Authority - page five.</p> <p>1) Many similar organisations have a Finance Committee, or similar governing body, to oversee the investment policy, portfolio and to make strategic decisions. It is not clear if Council has such a body and it appears that responsibility is delegated from Council to the General Manager who can delegate the investment function to skilled and experienced staff.</p> <p>2) Paragraph one on page six. Substitute 'Officers ' for 'Officer's' in line one.</p>  | <p>1) The draft Investment Policy has been amended to provide for an annual review by the Audit, Risk and Improvement Committee.</p> <p>2) Noted and amended.</p>  |
|                          | <p><b>k:</b> Legislation and References- page six. Substitute '2011' for '2008' in the third bullet point.</p>   | <p>Noted and amended.</p>  |
|                          | <p><b>l:</b> Working Capital Funds. We suggest the allocation of funds to meet Council's working capital requirements be expressed as a liquidity provision, stating both a percentage of investments and a minimum of three months' forecast cash flow. This would more closely align the investment policy with Council's normal operating liquidity requirements, allowing Council to pursue more competitive rate terms without the imposition of liquidity driven maturity dates. TCorp's Hour-Glass Cash Fund is an option for the liquidity provision given the same day access feature and consistent above-cash rates of return since the Fund was established in 1989.</p> | <p>The draft Investment Policy has been amended to provide that investments should seek to maximise return whilst having regard to the timing and nature of future liabilities or Council's cash flow profile. Clause 2 of the Policy also includes a requirement that Council's liquidity requirements are being met when investing Council funds.</p> <p>The final part of this submission point is promotional in nature relating to TCorp's own investment products. As such this represents a potential conflict of interest between TCorp providing an independent review of Council's policy that is without bias whilst at the same time seeking an opportunity to promote specific TCorp investment products.</p> |





## **Rates and Annual Charges Hardship Policy**

### **1 Purpose of Policy**

To fulfil the statutory requirements of the Local Government Act, 1993 (the Act) with respect to both the recovery of outstanding Rates, Annual Charges and Interest and the provision of assistance to those ratepayers who are experiencing genuine financial hardship with the payment of their Rates and Annual Charges.

### **2 Policy Statement**

Council acknowledges that ratepayers will, for various reasons from time to time, fail to pay rates when they become due and payable to Council. It is not the intention to cause hardship to any ratepayer through Council's recovery procedures and consideration will be given to acceptable arrangements to clear the debt prior to the end of the current financial year, where possible.

The General Manager has the delegated authority to approve or reject payment arrangement plans from any customer after receiving a written request. The General Manager may in turn delegate the day to day responsibility for approving or rejecting payment arrangement plans to senior staff as considered appropriate provided that such plans or arrangements are determined to be in Council's best interest.

The General Manager has the delegated authority to proceed with legal action to recover outstanding rates and charges where an arrangement plan has defaulted or if the ratepayer has failed and/or neglected to pay one or more instalments or a suitable attempt has not been made to clear the outstanding balance within a time specified as reasonable by Council.

Council recognises there are cases of genuine financial hardship requiring respect and compassion in special circumstances. This policy establishes guidelines for assessment of a hardship application applying the principles of fairness, integrity, confidentiality and compliance with statutory requirements. It applies to all applications for waiving, alternative payment arrangements or writing off rates, fees, annual charges and interest accrued on such debts.

The General Manager has the delegated authority to assess applications due to hardship and payment arrangement plans from any customer after receiving a formal application for hardship assistance.

### **3 Principles**

#### **3.1 Debt Recovery**

Council has a responsibility to recover monies owing to it in a timely, efficient and effective manner to finance its operations and ensure effective financial management.

Council aims to ensure effective control over debts owed to Council, including overdue rates, charges and interest and to establish debt management procedures for the efficient collection of receivables and the recovery of outstanding debts including deferment and alternative payment arrangements.

The other key principles that will apply to the collection of overdue rates and charges are as follows:

- a) Council's aim is to collect all rates and charges by the end of each rating year;
- b) A fair and reasonable approach to recovery will apply;

- c) Council will individually assess cases of financial hardship;
- d) Council will not reduce rates or charges, but will consider alternative approaches to dealing with cases of financial hardship;
- e) Council will consider periodical payment arrangements in cases of hardship or extenuating circumstances;
- f) Council will utilise the services of Mercantile Agents where required;
- g) Council will aim to keep its Rates and Annual Charges Ratio at or below Industry Best Practice however, it will not pursue through legal action the collection of outstanding Rates and Annual Charges from pensioners;
- h) Council will apply the provisions of the Act relating to the sale of land to recover overdue Rates, Annual Charges and Interest when appropriate.

### **3.2 Hardship Assistance**

This policy recognises that due to exceptional circumstances, owners may at times encounter difficulty in paying rates and charges as they fall due, or adhere to a regular payment arrangement.

The Act provides Council with the following options for providing assistance to ratepayers who are finding it difficult to pay their rates and charges because of financial hardship:

#### **3.2.1 Assistance by Periodical Payment Arrangements**

Section 564 of the Act provides that Council may accept payment of rates and charges due and payable by a person in accordance with an agreement made with the person and may write off or reduce interest accrued on rates or charges if the person complies with the agreement.

#### **3.2.2 Assistance by writing off accrued interest and costs**

Under Section 567 of the Act Council may write off accrued interest on rates or charges payable by a person if, in its opinion

- a) the person was unable to pay the rates or charges when they became due and payable for reasons beyond the person's control, or
- b) the person is unable to pay the accrued interest for reasons beyond the person's control, or
- c) payment of the accrued interest would cause the person hardship.

#### **3.2.3 Assistance to extend pensioner concession to avoid hardship**

Section 577 of the Act, enables Council to make an order deeming certain persons who are jointly liable with an eligible pensioner(s) or solely liable, but who are not themselves eligible, to be eligible pensioners for the purpose of a mandatory reduction in rates and charges to avoid hardship.

#### **3.2.4 Abandonment of Pensioners' Rates and Charges**

Under Section 582 of the Act Council may waive or reduce rates, charges and interest due by any person who receives a pension, benefit or allowance under Chapter 2 of the Social Security Act 1991 of the Commonwealth and is the holder of a pensioner concession card issued by or on behalf of the Commonwealth Government.

### **3.2.5 Assistance due to General Revaluation of Land in the Local Government Area and Changes to the Rating Category of Properties.**

Under Section 601 of the Act a ratepayer who incurs a rate increase in the first year following a revaluation of land and suffers substantial hardship, may apply to Council for relief.

A ratepayer who incurs a rate increase in the first year following a change in the rating category of their property and suffers substantial hardship, may apply to Council for relief.

Council has the discretion to waive, reduce or defer the payment of the whole or any part of the increase in the amount of the rate payable by the ratepayer in such circumstances, for such period and subject to such conditions as it thinks fit.

### **3.2.6 Deferral of Recovery Proceedings against Eligible Pensioners that are entitled to receive a Rebate of Rates and Charges**

Where in Council's opinion payment of Rates and Charges would cause hardship eligible pensioners over the accepted retirement age may be allowed to accrue Rates and Charges against their estate. Interest charges are to accrue on overdue Rates and Charges on a daily basis in accordance with s566 of the Act. Accrued interest is to be applied to assessments on a weekly basis subject to procedures for issuing Notices.

Council recognises the large number of pensioner ratepayers in the community and recognises the difficulties some pensioner ratepayers have in meeting their Rates and Annual Charges payments.

Under Section 712 of the Act proceedings for the recovery of a rate or charge may commence at any time within nineteen years from the date when the rate or charge became due and payable. The Local Government Rating and Revenue manual advises Councils have discretion to accrue rates, charges and interest against a pensioner's estate. The Office of Local Government advises if Councils wish to utilise this discretion, agreement is required from the pensioner ratepayer.

Where the eligible pensioner requests a delay in recovery action to allow outstanding rates, charges and interest to accrue against their estate and is willing to enter into an agreement, Council will:

- a) Provide an annual rates notice of all outstanding rates, charges and interest as it does for all ratepayers as well as instalment reminders.
- b) Not commence recovery action until there is a change in ownership of the property, either or both ratepayers leave the property (except where the pensioner is in a care facility on a temporary basis being less than 12 months) or either or both become ineligible for a concession. Should any of these events occur, rates and annual charges will become due and payable.
- c) However, given the constraints set out in Section 712 of the Act, Council will require pensioners to commence payment of overdue Rates and Annual Charges such that their total debt to Council does not exceed nineteen years.

## **4 Procedures**

### **4.1 Payment Arrangements and Debt Recovery**

#### **4.1.1 Payment Arrangements**

Council recognises that some owner may experience financial difficulties in meeting their Rates commitments. Council will seek to assist owner to make arrangements that are consistent with the owner's capacity to make regular payments.

- a) An owner may at any time make arrangements to pay off their outstanding rates and annual charges by regular payments, subject to the following guidelines:
  - i) The amount and frequency of the payments under the arrangement are to be acceptable to Council.
  - ii) Arrangements should seek to have the outstanding rates and annual charges cleared within a period of 12 months, where possible.
- b) All owners who enter into an arrangement will continue to have interest charged on the outstanding amount in accordance with Section 566 of the Act, (unless there are extenuating circumstances).
- c) However, where an owner has not honoured a previous arrangement, Council has the discretion as to whether to accept a new arrangement or continue with further recovery action.
- d) In the event that an owner fails to make a payment in full under an arrangement and does not notify Council of any financial difficulties, the total amount outstanding becomes payable and is subject to Council's normal recovery procedures.

#### **4.1.2 Debt Recovery Action**

To achieve the outcomes covered in this policy, staff must follow the recovery processes set out in the Debt Recovery Guidelines attached to this Policy. These recovery processes are attached to this Policy for guidance only and may be subject to change from time to time without the requirement for such amendments to be approved by Council.

### **4.2 Hardship Assistance**

All applications for Hardship Assistance must be made on the Hardship Rate Relief Application Form attached to this Policy. This form is subject to change from time to time to comply with changes in legislation or other relevant requirements and the form may be amended to incorporate such changes without any requirement to report such changes to Council. This form is also available from Council's website or Customer Service Centre.

#### **4.2.1 Assessment Process**

Upon receipt an applicant's Hardship Rate Relief Application will be assessed by the relevant Council Officers. If Council is satisfied it falls within a category of hardship, it has the discretion defer the payment, and write off any accrued interest at its sole discretion, subject to the following conditions:

In determining eligibility Council will use the criteria used by Centrelink for granting of a pensioner concession, including the assets and income test.

- a) The applicant must be a resident owner, part owner of the property or a resident liable for the payment of the rates on the property.



The property for which the hardship application applies must be the principal place of residency of the applicant/s.

- c) The property for which the hardship application applies must be categorised as "Residential" for rating purposes.
- d) The application for hardship must be accompanied with supporting documentation which may include but is not limited to:-
  - i) Reasons why the person was unable to pay the rates and charges when they became due and payable.
  - ii) Copy of recent bank statements for all accounts.
  - iii) Details of income and expenditure.
- e) It is Council's intention that whilst rates will not be reduced or waived, Council has the authority to defer payment of rates for a maximum period of 2 years once a hardship application is approved. This ensures that Council's Rate revenue is protected. Where the application is approved and payment of the increased Rates is made in accordance with the arrangement, interest charges will be written off.
- f) This policy applies to all rateable owners whose land value has increased by more than the average increase for the particular rating category. An application to defer Rates payment due to hardship under Sec 601 is to be assessed based on:
  - i) The percentage increase in land value.
  - ii) The corresponding ownership interest in the rateable property;
  - iii) Any arrears of rates & charges at the time of application.

#### **4.3 Writing off of Rates, Annual Charges and Interest**

In the cases where Council determines to write off Rates, Annual Charges or Interest, the General Manager shall have a delegation to do so for an individual ratepayer to an amount not exceeding \$10,000 per assessment and report such write off at a meeting of Council. Any amount above that may only be approved by Council resolution.

#### **5 Authorisation**

This Policy was adopted by Council on [insert date here]

The Policy is due for review in four years. The next review is due on [insert date here]

#### **6 Who is responsible for implementing this Policy?**

Chief Financial Officer

#### **7 Document owner**

Deputy General Manager Corporate Services

#### **8 Legislation and references**

Local Government Act 1993

Local Government (General) Regulation 2005

Civil Procedures Act 2005

Corporations Act 2001

Division of Local Government – Council Rating and Revenue Raising Manual

**9 Definitions**

|                    |   |
|--------------------|---|
| Arrangement        | An agreement accepted by Council or its agents to repay a debt within a specific period of time.  |
| Statement of Claim | Court issued document defining the amount due and the debt that is due to be paid. Debtors have 28 days from being served this document to lodge a defence. |
| Judgment           | Court issued statement acknowledging the debt recorded against the debtor.  |
| Garnishee          | Court order to withhold funds from a debtors pay or bank account  |
| Examination Order  | Court issued order to have their financial affairs "examined" for the purposes of determining their capacity to make payments.                              |
| Writ               | Court issued document identifying goods to be sold in order to liquidate the judgement debt.  |

**10 Document History**

| Revision | Date       | Change   | TRIM Ref    |
|----------|------------|--|-------------|
| 1        | 27/09/2016 | First Northern Beaches Council Rates and Annual Charges Hardship and Recovery Policy for public exhibition | 2016/314431 |
|          |            |  |             |
|          |            |  |             |

**NORTHERN BEACHES**  
COUNCIL

**HARDSHIP RATE RELIEF APPLICATION FORM**

**APPLICATION FOR HARDSHIP RATE RELIEF FOR THE WHOLE OR PART OF  
THE YEAR COMMENCING 1 JULY 20**

1. Please answer all questions relevant to you using block letters and ticking appropriate boxes.

Rates Reference Number:   
(please refer to your Council rates and charges notice)

I,   
(Full name in block letters)

of  D.O.B   
(Address)

Telephone number  apply for a hardship relief on the basis of financial hardship.

|                                 |                      |
|---------------------------------|----------------------|
| Property Description (Lot/Plan) | <input type="text"/> |
| (Office Use Only)               |                      |

2. I am the sole owner or part owner of the property

Yes ☐

No ☐

3. I am liable for the payment of rates and charges on this property, together with others as listed below  
(if no others write "SOLE OWNER").

Yes ☐

No ☐

ALL OTHER OWNERS including your spouse or de facto partner should be listed.

| Name | PCC Holder (Y/N) | Pension No | Date of Grant | Relationship to Me (eg Spouse, Parent Co-owner De facto etc) | Resident of Property (Y/N) | % of Ownership |
|------|------------------|------------|---------------|--|----------------------------|----------------|
|      |                  |            |               |  |                            |                |
|      |                  |            |               |  |                            |                |
|      |                  |            |               |  |                            |                |
|      |                  |            |               |  |                            |                |

☐ Evidence of joint ownership is attached; or

☐ Evidence of joint ownership has been provided to council previously

**Note: if the rateable property is jointly owned by more than one person, each of whom are individually seeking hardship relief then each individual must complete a Hardship Rate Relief Application Form.**

**Please provide a copy of your Pensioner Concession Card with this application**

4. The property to which this hardship application applies is my sole / principal place of residence

Yes ☐ If Yes, has been since

No ☐

5. Is the property owned as shares in a company title?

Yes ☐

No ☐

If you do not own or rent the property, please explain and provide evidence as to why you are liable to pay the rates

6. (a) Are there people living at the property other than those listed at Question 3 above?

Yes ☐

No ☐

(b) How many people live at the property?

(c) Please indicate who these people are?

☐ Self

☐ Spouse

☐ Children (State ages )

☐ Boarders

☐ Relatives

☐ Other (please specify)

7. Do you receive any pensions or benefits?

Yes ☐ If Yes, continue to question 8

No ☐ If No, continue to question 9

**Please provide a copy of your Pensioner Concession Card with this application**



8(a). I am the holder of a current Centrelink or Veterans' Affairs Pensioner Concession Card (PCC) issued by the Commonwealth Government through Centrelink or the Department of Veterans' Affairs

Applicant Name:

PCC No:

Card Start Date:

OR

8(b). I am NOT the holder of a Pensioner Concession Card. I am the holder of a Gold Card issued by the Department of Veterans' Affairs (DVA) under the *Veterans' Entitlement Act (VEA)* or *Military Rehabilitation and Compensation Act 2004 (MRCA)* and embossed with either:

☐ Totally & Permanently Incapacitated (TPI)

or

☐ Extreme Disablement Adjustment (EDA)

or

☐ War Widow/er (WW)

All DVA Applicants are also required to complete the following details:

File No.

Date of Grant of TPI, EDA or WW under VEA

Date of eligibility for Special Rate Disability Pension (SRDP)\* or wholly dependent partner payment\*\* under the MRCA

\* date of eligibility for SRDP is the eligibility date as notified in the letter from the DVA.

\*\* date of eligibility for wholly dependent partner payment is the date of your partner's death.

TPI/EDA applicants will need to submit a copy of DVA letter of grant.

MRCA applicants will need to obtain a letter from DVA confirming eligibility. Call the DVA on telephone number: 133254, to obtain a letter.

9. Have you claimed a pensioner concession on any other property this year?

Yes ☐

No ☐

If Yes, state the address of the other property:

**Please provide a copy of your Pensioner Concession Card with this application**

10. Do you own (either fully or partially) any other land or buildings?

Yes ☐

No ☐

If Yes, list addresses

11. How many children do you support?  State their ages

12. What is the cause of financial hardship? (Please attach extra page if necessary)

13. How long have you been experiencing hardship?

14. Please state gross fortnightly amounts recieved from the following sources of income:

|  |    |                      |
|--|----|----------------------|
| a) Pensions and benefits   | \$ | <input type="text"/> |
| b) Compensation, superannuation insurance or retirement benefits | \$ | <input type="text"/> |
| c) Spouse's income   | \$ | <input type="text"/> |
| d) Income of other residents of the property                     | \$ | <input type="text"/> |
| e) Employment Income   | \$ | <input type="text"/> |
| f) Family Allowance  | \$ | <input type="text"/> |
| g) Interest from banks/credit unions/building societies          | \$ | <input type="text"/> |
| h) Income from shares  | \$ | <input type="text"/> |
| i) Rent from other properties                                    | \$ | <input type="text"/> |
| j) Business income   | \$ | <input type="text"/> |
| k) Any other form of income                                      | \$ | <input type="text"/> |
| <b>Total</b>   | \$ | <input type="text"/> |

15. Please provide name and current balance of all bank, credit union or building society accounts held by you (either wholly or jointly owned).

**Please provide a copy of your Pensioner Concession Card with this application**

16. Please state details of fortnightly outgoings.

| Outgoing                       | Owed to | Amount \$ |
|--------------------------------|---------|-----------|
| Rent / Home Loan               |         |           |
| Other Mortgages                |         |           |
| Personal Loans / Hire Purchase |         |           |
| Health Costs                   |         |           |
| Council Rates and Charges      |         |           |
| Other - Please specify         |         |           |

17. Please provide details of any assets other than your principal home, including household contents, land, furniture etc?

| Type of Asset | Estimated Value \$ |
|---------------|--------------------|
|               |                    |
|               |                    |
|               |                    |
|               |                    |
| Total         |                    |

18. Please attach a separate page with any other relevant information you feel may assist your application.

\* Please include copies of any documents which may support your application, examples of which may include but are not limited to a Last Will and Testament, Documents from the owner showing you are responsible for paying the rates or showing you have life tenancy or a life lease etc.

**Please provide a copy of your Pensioner Concession Card with this application**

### DECLARATION

I hereby declare that the information provided is true and correct. If you make a false statement in an application you may be guilty of an offence and fined up to \$2,200.

|   |   |
|---|---|
| Applicant Signature: <input style="width: 90%;" type="text"/> | Date <input style="width: 90%;" type="text"/> |
|---|---|

### APPLICATION CONSENT

I,  authorise  
(Applicant's name)

- Council to use Centrelink Confirmation eServices to perform an enquiry of my Centrelink or Department of Veterans' Affairs Customer details and concession card status in order to enable the Council to determine if I qualify for a concession; and
- The Australian Government Department of Human Services (the department) to provide the results of that enquiry to the Council. This involves electronically matching details I have provided to the Council with Centrelink or Department of Veterans' Affairs (DVA) records to confirm whether or not I am currently receiving a Centrelink or DVA benefit.

I understand that the department will use information I have provided to the Council to confirm my eligibility for the concession and will disclose to the Council personal information including my name, address, payment and concession card type and status.

I understand that this consent, once signed, remains valid while I am a customer of the Council unless I withdraw it by contacting the Council or the department.

I can obtain proof of my circumstances/details from the department and provide it to the Council so that my eligibility for the concession can be determined.

I understand if I withdraw my consent or do not alternatively provide proof of my circumstances/details, I may not be eligible for the concession provided by the Council.

I also understand that this consent, which is ongoing, can be revoked any time by giving notice to the Council.

(Further information about the Centrelink Confirmation eServices is available on Centrelink's website at [www.humanservices.gov.au](http://www.humanservices.gov.au)).

I agree that, unless I revoke my consent, this Applicant Consent record is a permanent consent, and may be relied on by the Council until such time as I revoke it.

**I acknowledge that I have read and understood this Customer Consent record.**

|                     |   |
|---------------------|---|
| Applicant Signature | <input style="width: 100%;" type="text"/> |
| Date                | <input style="width: 100%;" type="text"/> |



**Return To**

Rates Team  
Northern Beaches Council  
725 Pittwater Road  
DEE WHY NSW 2099  
Phone: 02 9942 2922  
Fax: 02 9971 4522  
Email: [council@northernbeaches.nsw.gov.au](mailto:council@northernbeaches.nsw.gov.au)

**Please provide a copy of your Pensioner Concession Card with this application**



**PRIVACY AND PERSONAL INFORMATION PROTECTION ACT 1998**  
**Compliance with Section 10**

The information contained in this application form and any information requested is for the sole purpose of assessing eligibility for hardship relief, as required under the Local Government Act 1993.

This information is required before your application for hardship can be processed.

The information is private and confidential and council must not disclose the information to any person or body if it is not directly related to the purpose for which the information was collected.

If you have a complaint about the use of your personal information, contact the council's Public Officer. The information contained or referred to in this application form may be corrected and updated by you, by contacting the council.

**Please provide a copy of your Pensioner Concession Card with this application**

### الغرض من هذا النموذج

يتم إكمال هذا النموذج بواسطة دافعي الرسوم البلدية، والراغبين في استلام الخصم على رسوم الممتلكات البلدية. ويتم لدافعي الرسوم المسجلين استلام مبلغ يصل إلى:

- \$ 250,00 على الرسوم العادية والتكاليف لخدمات إدارة المخابز المسجلة
- \$ 87,50 من الرسوم السنوية وتكاليف السداد
- \$ 87,50 من الرسوم السنوية وتكاليف تصريف مياه المجاري

بصفة عامة، فإن الخصومات مناسبة للمتقاعدين المؤهلين، ومع ذلك فقد تسمح الخصومات لدافعي الرسوم الذين يعانون مناع مالية في حالات خاصة.

المعلومات المسفورة بإكمال هذا النموذج سوف تعمل الممتلكات البلدية فادراً على العديد الأهلية لاستلام الخصم، ومستوى الخصم الذي يمنحه دافع الرسوم.

### 此表格的用途

此表格供希望獲得市政稅優惠的納稅人填寫。符合資格的納稅人最高可獲得以下減價優惠：

普通市政稅及垃圾管理費減價250.00澳元  
年度水費及管理費減價87.50澳元  
年度廢水處理稅及管理費減價87.50澳元

符合資格的福利金領取者一般可獲得這些減價優惠。但是在某些情況下，有經濟困難的納稅人也可獲得這些優惠。

在此表格內填寫的訊息可協助市政會決定該納稅人是否有資格獲得減價優惠，以及優惠的等級。

### A cosa serve questo modulo

Questo modulo deve essere riempito dai contribuenti che desiderano ricevere riduzioni sulle imposte comunali. I contribuenti che soddisfano i requisiti necessari possono ricevere le seguenti riduzioni:

- fino a \$250.00 sulle imposte comunali ordinarie e sulla bolletta per l'asporto dei rifiuti domestici;
- fino a \$87.50 sulla imposta annuale e bolletta dell'acqua;
- fino a \$87.50 sulla imposta annuale e bolletta delle fognature.

In linea generale le riduzioni vengono concesse solo ai pensionati aventine diritto ma, in alcune circostanze, possono essere estese anche ai contribuenti che si trovino in difficili situazioni economiche.

Le informazioni fornite riempiendo questo modulo consentiranno al Comune di determinare se il contribuente ha diritto alle riduzioni d'imposta e l'ammontare delle riduzioni stesse.

### OBJETIVO DE ESTE FORMULARIO

Los contribuyentes que deseen recibir una rebaja en las contribuciones municipales deben responder a este formulario. Quienes reúnan los requisitos podrán recibir hasta:

- \$250.00 en contribuciones y tarifas ordinarias por servicios de administración de desechos domésticos.
- \$87.50 de rebaja anual en las contribuciones y tarifas por agua potable.
- \$87.50 de rebaja anual en las contribuciones y tarifas por alcantarillado.

En general, las rebajas están a disposición de los pensionados que reúnan los requisitos. Sin embargo, se podrán conceder rebajas a los contribuyentes que pasen por privaciones económicas en ciertas circunstancias.

La información que se proporcione respondiendo a este formulario permitirá al municipio determinar tanto si el contribuyente reúne los requisitos para recibir una rebaja como el monto de la rebaja a la cual tendrá derecho el contribuyente.

### MỤC ĐÍCH CỦA ĐƠN NÀY

Đơn này cho những người đóng thuế địa phương muốn xin giảm thuế và lệ phí. Những người đóng thuế và lệ phí địa phương có thể được giảm đến:

- \$250 cho thuế địa phương thường và lệ phí cho dịch vụ đổ rác
- \$87.50 cho tiền nước và lệ phí hàng năm
- \$87.50 tiền cống rãnh và lệ phí hàng năm

Nói chung, những người hội đủ điều kiện để lãnh trợ cấp xã hội được giảm thuế và lệ phí địa phương, tuy nhiên trong một số trường hợp, những người gặp khó khăn về tiền bạc cũng có thể được giảm thuế và lệ phí.

Những chi tiết diễn trong đơn này sẽ giúp hội đồng thành phố (council) ấn định xem quý vị có hội đủ điều kiện hay không và mức độ được giảm thuế và lệ phí.

## **Attachment 2: Debt Recovery Guidelines**

### **Recovery Action**

Recovery of rates and charges is to be conducted according to the following:

- a) All owners are to be issued with an Annual Rates Notice in accordance with Section 546 of the Act and, where required, Rates Instalment Notices in accordance with Section 562 of the Act;
- b) The Rates Instalment Notice is to include any amount that is overdue. This amount is to be shown separately and identified as being overdue and subject to interest charges;
- c) An Instalment Reminder Notice will be issued to all owners who have not paid the instalment due amount in full, approximately 14 days after the due date;
- d) Interest charges are to accrue on overdue Rates and Annual Charges on a daily basis in accordance with Section 566 of the Act. Accrued interest is to be applied to assessments on a weekly basis subject to procedures for issuing Notices;
- d) Where an owner has rates and charges that are overdue (excluding accruing pensioners Rates staff will issue a letter (Final Notice) requiring payment or a mutually agreeable payment arrangement of the overdue amounts within 14 days from receipt of the letter;
- e) If rates and charges remain unpaid after the expiry of the Final Notice, Rates staff (or Council's agent) will forward a letter of demand allowing for seven days payment prior to instigation of legal action. Generally the legal action starts with a Statement of Claim, and where necessary, is followed by Judgment then a Writ of Execution or Garnishee Order, and/or other enforcement procedures as required.

If no payment is received or no arrangement made following the issue of the notice of intent, a statement of Claim will be prepared, issued and served by Council or its recovery agent. Following the expiration of the statutory period, to protect Council's interest in the matter and all available actions to recover the amount outstanding, if the debt is not cleared, a Notice of Motion Default Judgment will be lodged.

Recovery action by Council or it's agent to recover outstanding debts that will be considered include, but not be limited to a garnishee of income; a writ of execution on goods and chattels, an examinations summons, a service or a rent order where the property is tenanted and/or other enforcement procedures as required.

- f) In accordance with Section 459 of the Corporations Act 2001, where the ratepayer is a company and has been served with a creditors statutory demand (Section 459E of the Corporations Act 2001) and the ratepayer has not complied within the 21 day period, Council has the right to commence proceedings to have the debtor company wound up and a liquidator appointed. All debts regarding the issue of a creditors' statutory demand must exceed the sum of \$2,000.00;
- g) All legal costs and expenses incurred in recovering outstanding rates and charges shall be charged against the property in accordance with Section 605 of the Act;
- h) Arrangements for payment may be accepted after legal action has commenced, subject to the continuation of legal action should the ratepayer not adhere to the approved arrangement;
- i) As a result of Council entering judgment, debtors will automatically be listed on the Credit Reference Listing by credit listing bodies.
- j) Where legal action is unsuccessful and Rates and Annual Charges remain overdue for more than 5 years the property is to be sold by public auction in accordance with Section 713 of the Act, subject to a resolution of Council

| <u><b>Submission</b></u> |  | <u><b>Council Comment / Recommended Action</b></u>   |
|--------------------------|--|--|
| <b>1</b>                 | <p>If a ratepayer is having difficulty paying their rates due to financial problems, it doesn't make any sense to penalise them for paying their rates late. That just makes them pay more when their problem in the first place was that they are having financial difficulties. Perhaps council could allow them 6 months rate free and then pay their rates over the following 6 months with 6 equal payments.</p>  | <p>The accrual of interest on overdue rates and charges is a legislative requirement in accordance with Section 566 of the Local Government Act 1993 (the Act). The Act does not provide for Councils to provide rate-free periods and/or to cease accruing interest on overdue rates and charges.</p> <p>No amendment to the draft Rates and Annual Charges Hardship Policy is considered necessary.</p>  |
| <b>2</b>                 | <p><u>First Submission Received:</u><br/>As highlighted in the manly daily letters page today the rise in charges for parking stickers hits renters on the northern beaches hardest. It is chiefly renters whose landlords keep all the stickers and are regular beach users whom are hit hardest by the massive x300% rise in parking stickers. Surely, if residents can prove their residency then they shouldn't have to purchase parking stickers at this greatly increased price as they are the most likely to suffer hardship as a result.</p> <p><u>Second Submission Received:</u><br/>Please reconsider the hike in prices of purchasing car window stickers for residents. Often land owners take them all meaning that the vast majority of purchased tickets are for renters, often they are the poorest. Please consider exemption for people who live in the area, even if renters The recent massive hike hits the poorest hard.</p>   | <p>The issues raised in these submissions have been considered when developing the Beach Parking Permit Scheme Policy. The draft Beach Parking Permit Scheme Policy was recently placed on public exhibition as part of the public consultation process (exhibition closed on 11 August 2016).</p> <p>The circumstances of non-ratepayer residents were considered at the time when the Administrator declared the one Northern Beaches Beach Parking Permit scheme. The decision to allow free permits to ratepayers has been the practice for many years under the former Warringah and Pittwater Councils and it was considered appropriate to maintain this approach.</p> <p>Council recognises residents and provides a discount price of \$200. The normal price for non-residents is \$500. Whilst the fee has increased from last year, this new permit allows permit holders to park free in 40 beach parking reserves, extending from Manly to Palm Beach.</p> <p>No amendment to the draft Rates and Annual Charges Hardship Policy is considered necessary in relation to this matter.</p> |
| <b>3</b>                 | <p>As an asset-rich, cash-poor penurious pensioner, I found the hardship recovery of rates process in action in the former Warringah Council perfect for my needs and fair to both the administration of Council affairs and financial burden of other rate-payers within the Warringah Council rate-paying area. All rates and/or charges accruing on my property are to be collected on either its sale or my death, whichever comes first. Since I cannot conceive of my debt accruing to even 10% the worth of my property (I bought well in 1978), rate and charges recovery will not be endangered. When the amalgamation was first mooted (even before sanity prevailed), I wrote Premier Baird, querying the position we hardship pensioners would be in. He assured me that our position would remain the same. May I submit that the position held by ex-Warringah Council pensioner hardship cases be adopted for all Northern Beaches Council pensioner rate-payers who qualify?</p> | <p>The terms and conditions included in the draft Rates and Annual Charges Hardship Policy are in line with legislative requirements and are largely consistent with the prior policy of the former Warringah Council and also with the policies and/or processes of the former Pittwater and Manly Council's.</p> <p>Implementation of the draft Rates and Annual Charges Hardship Policy will ensure that a consistent approach is adopted to managing hardship cases across the Northern Beaches Council Local Government Area.</p>   |







## MONA VALE DEVELOPMENT FEASIBILITY MEMO

### 1.1 BACKGROUND

Kinesis was engaged by Pittwater Council to provide an analysis of the current conditions and development potential of Mona Vale with a focus on providing affordable housing.

This analysis provides:

- (1) an evidence base to demonstrate challenges and opportunities and
- (2) an outline of the approaches needed to deliver a substantial amount of affordable housing and housing choice in the centre

A decision to pursue these approaches will inform and influence the future vision.

Analysis of the development potential of four sites in Mona Vale centre was undertaken. A range of design options considered:

- retention of existing structures with development of underutilised land
- demolition and redevelopment of the entire site
- varying the amount and type of car parking,
- varying building heights for current controls.

The analysis showed these factors as well as the ownership pattern, existing zoning and specific housing types and choices taken together determined whether a development was viable and feasible.

The findings of this study showed that due to the sensitivity of the feasibility to this wide range of factors, and the particular characteristics of each site, each site needed to be considered individually and a generic adjustments to planning controls would be unlikely to achieve the desired outcome.

The analysis showed that it should be possible to achieve social and environmental objectives, but this will require a more proactive, site based approach by Council.

.....  
[www.kinesis.org](http://www.kinesis.org)

1



## 1.2 KEY FINDINGS

- **Affordable housing vs lower cost dwellings**

The analysis of the current condition shows that Mona Vale faces a challenge to retain young people. In addition to this, the demographic analysis shows that the largest group (29%) of the individual workforce is on the lowest income quartile. Considering that housing is the second biggest household expenditure after food, it is essential that the future strategy should include a form of affordable housing. The analysis shows that providing options for lower cost dwellings will not deliver affordable housing objectives. An integrated approach which includes some concessions and interventions for eligible intensified/redevelopment sites, is recommended to deliver the preferred outcome.

- **IN2 zone and it's potential for 'SEPP (Affordable Rental Housing) 2009' and/or New Generation Boarding House**

Pittwater has a high level of containment, 42% of employed local residents work within Pittwater and a further 18% work in neighbouring Warringah. Mona Vale IN2 zone is strategically located within a 400m radius of the town centre, which means that this area can share most of the amenities that the centre offers. Selected sites on Darley and Harkeith Streets have potential to continue the ground floor light industrial employment generating uses with potential opportunities to introduce affordable housing residential uses on the upper floors. This will require a Local Environmental Plan (LEP) amendment and negotiation with the Department of Planning & Environment. Affordable housing would be permitted, subject to; the consent authority being satisfied that it is provided in accordance with the objective of the zoning and the vision of the Mona Vale Place Plan; is compatible with existing, approved and permissible uses in the vicinity; comprises non-residential uses on the ground floor; and will not have an adverse effect on the environment.



- **Potential Redevelopment of B4 Zone**

Sites located within the B4 zones are not without challenges. Some of these sites are quite narrow, fine-grain, and consist of fragmented ownership. However, selected sites within the existing B4 zone have opportunities for intensification and/or redevelopment. The test sites show a common result for feasibility analysis. They are feasible and viable for Affordable Housing sites, but less viable as 'market' housing. The redevelopment of these sites is subject to the fulfilment of the zone objectives and protection of the existing retail and commercial space. Ground floor and first floor are generally allocated for non-residential uses.

- **Reduction of on-site car parking provision**

Pittwater Development Control Plan (DCP) 21 requires higher on-site car parking provision in comparison to Road and Maritime Services (RMS) and other Local Government Area (LGA) such as Warringah. Considering the cost of providing parking on-site, whether it is at grade or basement parking, the analysis shows that all test sites are neither feasible nor viable to comply with the current provision. In light of the Pittwater Council Active Transport Strategy vision, the centre will benefit from improved public transport services and walking/cycling infrastructure augmentation. Comprehensive car parking strategies that reduce on-site parking requirements in conjunction with the Active Transport Strategy are integral to housing affordability, and essential to foster sustainable growth in the long term.

- **Existing building height.**

The analysis shows that B4 zone height limit (13m or 4 storeys) does not comply with the revised height definitions in the Standard instrument and the recommended floor to floor dimension in the Apartment Design Guide. In light of the recent redevelopment pattern and the feasibility of selected





test sites, greater heights such as 6 storeys can be suggested where there is no adverse impact to amenity.

- **Block planning and site amalgamation**

During the analysis it has become clear that approaching renewal on a site by site basis has limitation and that approaching the design of entire street block may have significant urban design and financial benefits. There are a number of mechanisms that may be worth investigating further, including tradable development rights and 'land re-adjustment' techniques. The incentive/stimulus for such an approach would need to be a significant increase in land value, which could be achieved through changes to the permissible uses, floor space ratio, heights or a combination of all three. This concession will be subject to the fulfilment of the vision of the Mona Vale Place Plan, to express the existing Mona Vale fine-grain, human-scale and village character.

- **Opportunities for increasing housing diversity and density around the centre**

The study shows opportunities for updating Council planning controls to provide for an increase in density around the centre with providing extensions and/or modification to accommodate ancillary dwellings in the areas within a 1km radius of the centre. Existing R2 zone within a 400m radius of the town centre such as areas fronting Dygal Street, can also benefit from up-zoning to R3 to allow development of residential apartments.

- **Increased amenities within redevelopment sites**

The potential of roof terraces to provide common open space which would provide high amenity and have little impact on adjoining sites, should be considered and allowed for in the DCP.



### 1.3 CONCLUSION

In the course of testing the feasibility of both 'conventional market housing' and 'affordable housing' options, the need for changes to planning controls (additional permitted uses, building heights and roof terrace), strategic planning (car parking), and planning mechanisms for more holistic planning, has become apparent.

It is important to recognise and integrate the Affordable Housing State Environmental Policy into the planning for housing choice in Mona Vale. There is a great opportunity to tailor this policy within the LEP and DCP by definitive provisions in relation to height, car parking and other potential concessions.

### 1.4 POSSIBLE FUTURE WORK REQUIRED

- (1) Undertake further work to develop a policy which includes legal and planning processes for the delivery of affordable housing, and for Council's potential role and involvement.
- (2) Undertake more detailed feasibility costing for selected development sites that may engage local landowners via transparent and equitable processes defined in step (1).
- (3) Undertake an analysis of potential for value adding/sharing between local landowners and Council via S94 or other mechanisms.
- (4) Undertake more detailed demand and supply analysis of residential, employment and industrial lands in Mona Vale.
- (5) Undertake work to amend Council's Planning Controls including the discrepancies between existing and standard LEP definitions, and the incorporation of policy and strategic considerations.



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## Mona Vale Town Centre

### For Pittwater Council

Traffic and Parking Strategy

4 May 2016





## Document Control

Our Reference: T2-1504, Mona Vale Town Centre, Traffic and Parking Strategy

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## Executive Summary

This study has been prepared in the context of the Place Planning process being undertaken by Pittwater Council in relation to the Mona Vale Town Centre.

The aims of the study are to assess the road network capacity by way of traffic modelling and the current parking activity across the study area, providing Council with the information required to develop Place Planning improvements and a parking strategy.

The study has involved the collection of data through extensive surveys of the road network and parking usage as well as a public consultation process. This data has been modelled in relation to the future parking demands and traffic impacts across the Town Centre road network.

### 1.1 Primary Findings

#### 1.1.1 Road Network Operation

- In 2021 the traffic growth is relatively evenly distributed across the network and causes mainly even impacts at each intersection,
- The primary impact of the Place Planning Works (PPW) will be the distribution of increased traffic along Darley Street. This will require the extension of the right turn lane on the southbound Barrenjoey Road approach to Darley Street,
- The increase in traffic along Darley Street increases the delays at each end for vehicles joining Barrenjoey Road and Pittwater Road, although both intersections continue to operate within capacity,
- The Mona Vale Road / Pittwater Road intersection reaches a Level of Service C during the evening peak, which is consistent with the AECOM findings,
- The PPW constrain Pittwater Road and Park Street, so while the traffic volumes reduce, the delays remain relatively unchanged.
- The PPW result in only minor impacts on the Town Centre Road network.
- It should be noted that a traffic growth rate of 1% per year was adopted, although current records indicate zero growth over the past 5 years. The adopted rate of 1% is therefore considered to provide a robust assessment and is also inclusive of the growth associated with the Ingleside development.

The results of the traffic modelling are detailed in Section 5.

#### 1.1.2 Parking Strategy

- The parking surveys confirm that parking turnover within the Town Centre is high with a relatively short average length of stay, which is entirely appropriate within commercial centres.
- The surveys indicate a high degree of all day parking within the light industrial area surrounding Darley Street, which is indicative of commuters and workers. This type of activity prevents use by visitors and shoppers and therefore decreases the value of the parking spaces.
- The Town Centre is primarily subject to a 1 hour parking limit, while no restrictions apply to roads in close proximity to the Town Centre, which provides an opportunity for all-day parking, which in turn may encourage car usage.





- While the Place Planning may result in the loss of some on-street within the Town Centre, this could be offset through improved signage and connectivity of the Bungan Lane car park, and the addition of approximately 120 spaces within the proposed car park beneath Civic Square.
- A comparison of current planning controls with neighbouring Councils indicates that the minimum parking requirements are high in the context of a Town Centre and could be either reduced or converted to maximum limits in or to discourage car ownership and usage. This must however, be done in the context of the density of the Town Centre, access to employment and services, and public transport.
- There is high demand for drop-off and pick-up parking associated with the Mona Vale Public school, which impacts on the operation of Bungan Street and Waratah Street. This could be better managed through the provision of 5min parking controls during the School Zone times.

The Parking Strategy recommendations are detailed in Section 6.

### 1.1.3 Impact on User Groups

- **Commuters** – Will be subject to longer journey times along the Barrenjoey Road and Mona Vale Road corridors, mainly as a result of traffic growth. The implementation of restricted parking on Darley Street and increased parking restrictions within the residential area will increase the parking distance to the public transport locations on Barrenjoey Road.
- **Shoppers** – Some increased delay getting to/from the Town Centre but balanced impacts within the Town Centre, i.e. delays at some intersections, offset by lower volumes and reduced delay at others. Increased access to short-term parking if parking restrictions are applied to Darley Street and the residential area.
- **School Drop-off, Pick-up** – Some additional delay east-west along Bungan Street and accessing Pittwater Road as a result of traffic growth and the reduced speed limit within the proposed Shared Zone. Improved parking efficiency if a formal kiss and drop area is provided along the Bungan Street frontage.



## 1 Background

### 1.1 Introduction

The Mona Vale Traffic Flow and Parking Strategy has been prepared as an outcome of the Place Planning project being undertaken by Pittwater Council for Mona Vale Town Centre. Parking and Traffic Consultants Pty Ltd (PTC) has been engaged by Council to undertake an assessment of traffic conditions and road network performance under existing and future scenarios and to develop a parking strategy to manage the existing and future parking supply.

The study has involved the collection of traffic and parking data through surveys and open forums with the public and local business community.

### 1.2 Place Planning

Between January 2014 and July 2015 Council undertook a Place Planning process, which involved public consultation and the documentation of ideas relating to the future planning of Mona Vale Town Centre. The primary goals of the process were to assist Council to:

- Create places designed for people,
- Attract the right uses to the right places,
- Provide a focal point for employment and a choice of affordable housing typology,
- Improve connectivity in and around the centre, especially for pedestrians,
- Recognise the importance of streets as community spaces and destinations.

### 1.3 Aims of Study

This study has been prepared to inform the Place Planning project being undertaken by Council as described above. Putting people rather than vehicles at the centre of Place Planning requires a change in focus towards connectivity for pedestrians, cyclists and public transport, a de-emphasis of vehicle access and the road network and a change to the management and priority of parking.

In this regard it is important to establish a balance between place making (an environment that is attractive for people to work, shop and live) and the transport network (the movement of vehicles around and through an area and the ability to accommodate parking).

The study brief detailed the following aims for this study:

- Prepare a traffic model(s) that will:
  - Assess the long-term traffic implications from the potential growth of the Mona Vale Town Centre
  - Provide a base line model to inform development assessment, traffic and transport strategy development in Mona Vale Town Centre
  - Review the performance of the existing public transport networks, especially to support the planned strategic bus corridors (BRT), and provide recommendations for improvements to cater for future growth and demands.



- Test the role and function of the proposed new finer grain road network, including possibility/feasibility of potential future connections.
- Test scenarios for reduction of traffic i.e. "pedestrian focussed" environment on central streets such as Pittwater Road, Bungan and Park Streets.
- Be used as community engagement tool and can be adapted to local traffic characteristic. Colour coded and easily understood graphic presentations are preferred.
- Review the existing parking capacity and real demand for parking including commuter parking, in terms of current population and future growth of population
- Provide a strategy for provision of parking which promotes more active mode of transport and efficient land use.

#### 1.4 Study Area

The Mona Vale Town Centre comprises a well-defined commercial centre, with an adjoining light industrial area to the north and low density residential areas to the west and south. Barrenjoey Road forms the south-eastern edge of the Town Centre with the Mona Vale Golf Course and Hospital abutting the coast.

The brief defines the Town Centre in terms of two radii from a central location within the Town Centre, being the 'Study Area = 400m Radius' and the 'Zone of Influence = 800m Radius' as illustrated in Figure 1.

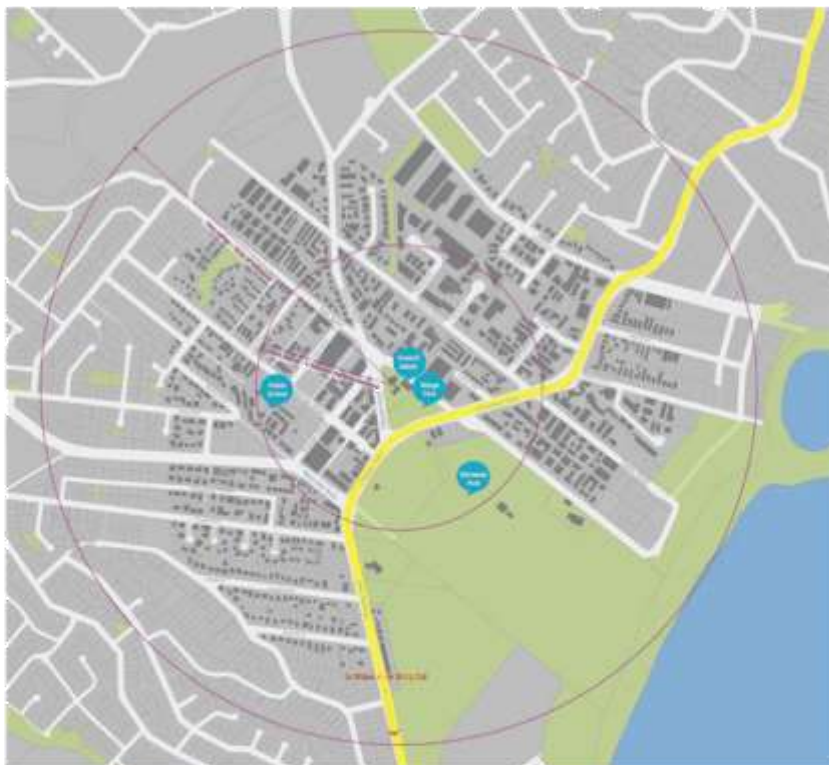


Figure 1 - Study Area

Mona Vale Town Centre, T2-1504

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4 May 2016



During the assessment of parking and connectivity it became apparent that the Study Area comprises three distinct land use categorisations, which is evidenced by the type of parking activity observed during the study. The three areas are illustrated in Figure 2 and comprise:

- Commercial Area (including schools and Council administration),
- Light Industrial Area,
- Residential Area.



Figure 2 - Land Use Areas



## 2 Research and Data

### 2.1 Types of Survey

In order to assess the current operation of the Town Centre and model future scenarios, both relating to the movement of vehicles and parking demands, a number of surveys were undertaken using various methods to best suit the type of data required. The surveys are detailed in the following.

#### 2.1.1 Intersection Counts

Intersection Counts were undertaken at the key intersections within the study area. The intersection count locations are illustrated in Figure 3 below. The surveys were undertaken using multiple cameras at each intersection and timed to coincide with the morning and afternoon peak periods, which includes the mid-afternoon school pick-up peak.



Figure 3 - Intersection Survey Locations



Table 1 - Intersection Traffic Controls

| Intersection   | Control Type    |
|--|-----------------|
| 1. Pittwater Road / Mona Vale Road   | Traffic Signals |
| 2. Pittwater Road / Waratah Street   | Give Way        |
| 3. Pittwater Road / Barrenjoey Road  | Traffic Signals |
| 4. Pittwater Road / Bungan Street  | Roundabout      |
| 5. Pittwater Road / Park Street  | Give Way        |
| 6. Pittwater Road / Darley Street  | Traffic Signals |
| 7. Barrenjoey Road / Park Street   | Traffic Signals |
| 8. Barrenjoey Road / Darley Street   | Traffic Signals |
| 9. Mona Vale Road / Bungan Street  | Traffic Signals |
| 10. Bungan Street / Waratah Street (Includes the influence of Mona Vale Public School) | Roundabout      |
| 11. Waratah Street / Keenan Street   | Give Way        |
| 12. Waratah Street / Dygal Street  | Give Way        |
| 13. Park Street / Keenan Street (Includes the influence of Sacred Heart School)        | Give Way        |
| 14. Park Street / Dygal Street   | Give Way        |
| 15. Mona Vale Road / Bungan Lane   | Give Way        |
| 16. Waratah Street / Bungan Lane   | Give Way        |
| 17. Pittwater Road and Bungan Lane   | Give Way        |

The intersection surveys were undertaken at 17 intersections, which make up the basis for the road network model. The results of the surveys are presented as Attachment 1 in the format provided by Austraffc Pty Ltd.

The results indicate that the morning peak occurs between 8:30 – 9:30, while the PM peak occurs between 15:30 and 16:30, with only a few intersections subject to a slightly later peak. This indicates that pick-up activity associated with the schools in the area has a notable influence on the road network. This is not unexpected given that there are three schools within proximity of the study area and that the commuter peak would occur later and be somewhat diluted (spread through several hours) given the location of Mona Vale in relation to major employment centres.

The peak periods recorded by the surveys have been applied to all of the road network modelling scenarios, in order to assess the worst-case moments within a typical day.

### 2.1.2 Automatic Counters

Automated tube counters were used on the following roads, which lie outside of the study area (and did not form part of the model), but require comment in relation to rat-run usage, general capacity and the impact of school traffic.

- Golf Avenue
- Cabbage Tree Road
- Brinawa Street
- Vineyard Street
- Darley Street West
- Vesper Street east of Wangara Street



- Wangara Street south of Vesper Street (near Emma Street)
- Emma Street west of Wangara Street
- Oliver Way south of Emma Street.

The results of these surveys are presented in Attachment 2 in the format provided by Austraffic Pty Ltd and indicate:

- Cabbage Tree Road – The results indicate a baseline traffic volume of 300 vehicles per hour throughout the weekends and weekends, with a noticeable peak during the weekday morning and afternoon periods, which is indicative of rat-run activity. However, the additional volume above the 300vtp/h baseline is 100 vehicles, which represents a 25% increase, but does not exceed the environmental capacity of the road (500 vtp/h).
- Vesper Street, Wangara Street, Emma Street and Oliver Way – The survey results indicated a consistent baseline on each road of approximately 40 vtp/h, however each road displays a concentrated peak during the morning period where volumes reached up to 140 vtp/h. The route of this traffic was from Waratah Street to Mona Vale Road on each road, indicating that this traffic is associated with the Public School drop-off activity.

### 2.1.3 Travel Time

Travel Time Surveys were undertaken as a means of validating the base model. These are required by RMS to ensure that the travel times represented in the base model reflect the reality on the particular day of the surveys. The surveys involved multiple trips along the following routes recording the time to make each trip:

- Pittwater Road from Mona Vale Road to Darley Street,
- Pittwater Road / Barrenjoey Road from Mona Vale Road to Darley Street.

### 2.1.4 Origin and Destination

Origin and Destination surveys were undertaken which involve the recording of numberplates at specific locations coinciding with the intersection count periods. The surveys recorded light and heavy vehicle classes at the following stations:

- Pittwater Road south of Mona Vale Road
- Mona Vale Road west of Bungan Street
- Waratah Street north of Keenan Street
- Park Street north of Keenan Street
- Pittwater Road north of Darley Street
- Barrenjoey Road east of Darley Street

## 2.2 On-street Parking Inventory

Each on-street parking control and parking space was recorded in order to establish an inventory of available parking. This is required in order to compare the occupancy and turnover against the availability, having regard for the various parking controls (time restrictions etc.).





The results of the surveys were referenced in order to provide heat maps illustrating in colour coded form, the utilisation of on-street parking. The full results of the on-street parking surveys and the heat maps are presented in Attachment 3.

### **2.3 Parking Demand**

The demand for parking was recorded through manual counts of every on-street parking space within the study area during a weekday and a Saturday. The counts were undertaken every hour to provide a usage profile throughout the day.

### **2.4 Average Length of Stay and Turnover**

During the parking surveys part of the registration number of each vehicle was recorded so that each hourly count can be compared to determine the length of stay of each vehicle. This enables the calculation of the average length of stay within each surveys zone, and how many times during a typical day the spaces turnover. This is useful to determine the type of use of each space, e.g. long term usage indicates use by workers or commuters, short term use indicates use by shoppers etc. The turnover figures also provide an indication of how many cars can visit the Town Centre each day. The results of the surveys are included with the results presented in Attachment 3.

### **2.5 Intercept Questionnaire**

The traffic and parking surveys related primarily to car usage, which is vital to the preparation of the road network model and the parking strategy, however they do not address other transport modes. Intercept surveys were undertaken during the days of the parking and traffic surveys to determine the transport mode share. The questions included how visitors to the study area travelled to the Town Centre, why they made that choice, etc. The results of the Intercept Surveys are presented in Attachment 4.

### **2.6 Online Questionnaire**

In order to broaden the reach of the questionnaire surveys beyond the intercept surveys, the questionnaire was hosted online at SurveyMonkey.com. The survey was publicised by Council through a range of correspondence and public notices and was responded to by 425 people. The results of the online survey are presented in Attachment 4.

### **2.7 Online School Questionnaire (Students and Staff)**

Mona Vale Public School is located within the Town Centre and as a major land use within the study area contributes to the traffic and parking activity during peak drop-off and pick-up periods. As such it is important to understand the travel characteristics associated with students and staff at the school in isolation from the broader traffic movement and parking surveys. In this regard, online questionnaire surveys were undertaken by staff and students, which are used to establish the mode split and car usage.

### **2.8 Public Consultation**

During the preparation of the study, 2 public forums were facilitated by Council in order to record the views and opinions of the community with regard to getting to/from and around the Town Centre. The responses were varied but highlighted detailed issues relating to the road network and pedestrian facilities, particularly the lack of crossings on Pittwater Road (particularly at the Bungan Street roundabout) and the grades of the residential roads to the north of the Town Centre, which contribute towards an increased car usage rather than walking. Other local issues such as gaps in the footpaths where the grass verges still exist and poor sight lines around landscaping/planting were raised. All comments raised by the public were recorded by Council representatives and considered as part of this study.



### 3 Transport Network

#### 3.1 Road Network

Primary access to the Mona Vale Town Centre is served by three (3) state roads which provide primary north-south connectivity into the area as serving as the primary gateway into the Sydney Northern Beaches. These connections are illustrated in Figure 4.



Figure 4 - Road Hierarchy (Source: RMS Road Hierarchy Review, 2009)

The NSW administrative road hierarchy comprises the following road classifications, which align with the generic road hierarchy as follows:

- **State Roads** - Freeways, Motorways and Primary Arterials (RMS Managed)
- **Regional Roads** - Secondary or sub arterials (Council Managed, Part funded by the State)
- **Local Roads** - Collector and local access roads (Council Managed)

The key roads servicing the study area are described in Tables below.



| <b>Barrenjoey Road</b>     |  |
|----------------------------|--|
| Road Classification        | State Road - Arterial  |
| Alignment                  | North-south  |
| Number of Lanes            | 3 lanes in each direction, southbound lane provides a short ancillary right turn lane into Park Street. Between Park Street and Pittwater Road an additional short bus lane is provided. |
| Carriageway Type           | Divided  |
| Carriageway Width          | 28m  |
| Speed Limit                | 60kph  |
| School Zone                | No   |
| Parking Controls           | No Stopping  |
| <b>Forms Site Frontage</b> | No   |

| <b>Pittwater Road (South of Barrenjoey Road)</b> |  |
|--|--|
| Road Classification                              | State Road - Arterial  |
| Alignment  | East-West  |
| Number of Lanes                                  | 3 lanes northbound   |
| Carriageway Type                                 | Divided  |
| Carriageway Width                                | 25m  |
| Speed Limit                                      | 60kph  |
| School Zone                                      | No   |
| Parking Controls                                 | Within the nearside lane, between 3pm to 7pm weekdays a bus lane is in operation, 1/2hour parking is permitted between 8:30am to 3:00pm (Monday to Friday) and 8:30am to 12:30pm (Saturday). Outside of these periods unrestricted parking is permitted. |
| <b>Forms Site Frontage</b>                       | Yes  |

| <b>Mona Vale Road</b>      |   |
|----------------------------|---|
| Road Classification        | State Road - Arterial   |
| Alignment                  | East-West   |
| Number of Lanes            | Typically 2 lanes in each direction west of Bungan Street. Between Bungan Street and Pittwater Road 3 lanes are provided in each direction of travel. |
| Carriageway Type           | Divided   |
| Carriageway Width          | 24m   |
| Speed Limit                | 60kph   |
| School Zone                | No  |
| Parking Controls           |   |
| <b>Forms Site Frontage</b> | Yes   |

| <b>Pittwater Road (North of Barrenjoey Road)</b> |                        |
|--|------------------------|
| Road Classification                              | Regional Road          |
| Alignment  | East-West              |
| Number of Lanes                                  | 2 lanes each direction |
| Carriageway Type                                 | Divided                |
| Carriageway Width                                | 20m                    |
| Speed Limit                                      | 60kph                  |



|                     |  |
|---------------------|--|
| School Zone         | No   |
| Parking Controls    | Parallel 1 hour parking permitted between 8:30am to 6:00pm (Monday to Friday) and 8:30am to 12:30pm (Saturday) within northbound lane, whilst southbound lane provides 2 hour rear to kerb parking between identical time periods. |
| Forms Site Frontage | No   |

In addition to the key access routes illustrated above, the Mona Vale Town Centre is also served by a number of local roads which include:

- **Bungan Street** - The carriageway is generally 12m wide and carries one lane in each direction. On street parking is provided on both sides of the carriageway. Bungan Street has a posted speed limit of 40km/hr.
- **Park Street** - The carriageway is generally 10m wide and carries one lane in each direction. Within the western road verge, it provides 90degree parking whilst within the eastern road verge an on-street bus zone is provided. Park Street has a posted speed limit of 40km/hr.
- **Waratah Street** - The carriageway is generally 10m wide, carries one lane in each direction. Timed, on street parking is provided on both sides of the carriageway. Waratah Street has a posted speed limit of 40km/hr.
- **Darley Street** - The carriageway generally, carries one lane in each direction, with an on street parking provided on both sides of the carriageway. Darley Street has a posted speed limit of 40km/hr.

### 3.2 Pedestrian Facilities

Pedestrian footpaths are provided on both sides of most roads within the Town Centre with grassed verges within the residential area to the west of the Town Centre. Specific facilities relating to pedestrian access are presented in the following:

- Pedestrian crossings at most approaches to the traffic signal controlled intersections on Pittwater Road / Barrenjoey Road. While these provide protected crossing facilities, the crossings are lengthy and often involve multiple crossings on a particular route.
- Marked pedestrian crossings on all of the approaches to the Bungan Street and Waratah Street roundabout,
- Midblock zebra crossings on Bungan Street between Waratah Street and Mona Vale Road, and Waratah Street and Pittwater Road,
- Limited footpaths along the southern side of Bungan Lane north of Mona Vale Road and no footpaths between Waratah Street and Pittwater Road (the character of Bungan Lane is more of a car park than a carriageway),
- No pedestrian crossings at the roundabout intersection of Pittwater Road and Bungan Street,
- A pedestrian refuge island on Pittwater Road at the Akuna Lane intersection.

### 3.3 Cycling Facilities

Pittwater Council is presently reviewing the current Pedestrian and Cycling Infrastructure Plans which is aimed at encouraging residents of LGA to adopt cycling as a travel choice through the improvement of local



cycle connections. The current bike plan was published in 2003 and identifies three (3) primary cycle routes traversing through the Mona Vale Town Centre which include:

- Narrabeen to Bayview via Warriewood,
- Narrabeen to Mona Vale, and
- Bayview to Avalon.

### 3.4 Public Transport

The NSW Planning Guidelines for Walking and Cycling (2004) suggests a distance of 800m is a walkable catchment to Public Transport. With this in mind, the surrounding region was reviewed for proximate public transport services. The region is served by buses which primarily serve the Northern Beaches, whilst all Limited (L) and Express (E) bus services terminate at Mona Vale. The various bus routes which serve Mona Vale are illustrated in Figure 5.



Figure 5 - Bus Routes Serving Mona Vale Town Centre





Table 2 - Mona Vale Bus Service Frequency Details

| Route No.            | Frequency  | Coverage   | Route  |
|----------------------|--|--|--|
| <b>151</b>           | Weekdays: Every 60 minutes<br>Weekends: Every 30-60 minutes<br>Operates only between 12:00am to 4:00am | City to Mona Vale via North Sydney                               | Via Pittwater Road (South) onto Pittwater Road (North) terminating |
| <b>155</b>           | Weekdays: Every 30-60 minutes<br>Weekends: Every 30-60 minutes   | Manly to Bayview Village   | Via Waratah Street, Bungan Street to Pittwater Road (North)        |
| <b>156</b>           | Weekdays: Every 60 minutes<br>Weekends: Every 60 minutes   | Manly to McCarrs Creek to Manly                                  | Via Pittwater Road (South) onto Pittwater Road (North)             |
| <b>182</b>           | Weekdays: 30-60 minutes<br>Weekends: every 120 minutes   | Narrabeen to Mona Vale via Elanora Heights                       | Via Mona Vale Road onto Pittwater Road (South)                     |
| <b>185</b>           | Weekdays: 30-60 minutes<br>Weekends: Every 30-60 minutes   | City to Warriewood/Mona Vale                                     | Via Waratah Street, Bungan Street to Pittwater Road (North)        |
| <b>188/ L88/ E88</b> | Weekdays: 30-60 minutes<br>Weekends: Every 30-60 minutes.  | City to Avalon   | Via Pittwater Road (South) Continuing onto Barrenjoey Road         |
| <b>L87</b>           | Weekdays: 30-60 minutes<br>Weekends: Every 30-60 minutes   | City to Newport (Limited Stops)                                  | Via Pittwater Road (South) Continuing onto Barrenjoey Road         |
| <b>189/ E89/ L89</b> | Weekdays: Every 30-60 minutes<br>Weekends: Every 30-60 minutes   | Dee Why to Avalon (Including Limited Stops and Express Services) | Via Pittwater Road (South) Continuing onto Barrenjoey Road         |
| <b>192</b>           | Weekends: Every 30-60 minutes.   | Stokes Point to Avalon Loop                                      | Via Pittwater Road (South) Continuing onto Barrenjoey Road         |

### 3.5 Constraints and Opportunities

The Town Centre is served by three state road and one regional road approaches, which provides efficient road connectivity to the surrounding areas, i.e. Barrenjoey Road to the north, Pittwater Road to the south and Mona Vale Road to the west. While this arrangement presents opportunities in the sense that traffic and buses are provided with suitable infrastructure to access/depart Mona Vale efficiently, the proximity to arterial roads also presents some constraints and challenges that can be counter to the desirable character of a town centre.

The particular layout of the arterial roads at Mona Vale defines a very distinct Town Centre Area in that Barrenjoey Road and Mona Vale Road define the southern and eastern edges of the town centre. This is beneficial in that the major traffic flow is directed around the town centre, unlike other linear commercial centres (Neutral Bay, Cremorne, Dee Why) where an arterial road forms the central spine of the commercial area. However, in the case of Mona Vale, the arterial roads restrain the physical growth of the town centre and present barriers to access from the east and south. In this regard, the primary retail centre has developed within the triangle formed by Mona Vale Road, Barrenjoey Road and Pittwater Road (a regional road north of Barrenjoey Road).



Figure 6 - Arterial and Regional Road Constraints

While the Town Centre extends on the northern side of Pittwater Road, to include Park Street and the light industrial area along Darley Street, it is clear that this regional road route divides the town centre and forms a constraint to accessibility between the east and west parts of the town centre. The diagram presented in Figure 6 highlights that without the constraint presented by Pittwater Road, the Town Centre forms a well-defined rectangular area bounded to the north-east by Darley Street. In this regard, Darley Street may present an opportunity to redirect the major traffic flow around the Town Centre enabling a reduction in the status and physical impact of Pittwater Road. Detailed constraints and opportunities are described in the following subsections.

### 3.5.1 Constraints

Considering the high level constraints, it is evident that the arterial road network and the regional road section of Pittwater Road (to the north of Barrenjoey Road) create constraints in that they bind the Town Centre to a certain area, and present barriers for connectivity, particularly by pedestrians and cyclists. Specifically:

- At its widest point, Barrenjoey Road accommodates eight traffic lanes (including a Bus Lane and turning lanes) and has a width of approximately 30 metres between the kerbs.
- The intersection of Pittwater Road and Barrenjoey Road comprises seven lanes on Barrenjoey Road and left turn slip lanes with associated islands on Pittwater Road. The layout of the intersection is very much established to prioritise the movement of vehicles with the left turn slip lanes providing very little constraint to vehicle speeds / delay when passing through the intersection. This also means that the intersection has a large footprint, which ultimately increases pedestrian walking distances and impacts on the perception of accessibility.
- A pedestrian crossing is located across Barrenjoey Road on the northern approach to the Pittwater Road intersection. This crossing has a length of 25 metres and is subject to delays associated with the operation of the traffic signals. At the standard walking rate of 1.2 metres per second, it would take the average



walker 20 seconds to walk across the carriageway. There are a further two crossings across Pittwater Road to access the Town Centre, totalling a distance of 60 metres between the Town Centre and Kitchener Park.

- The crossing distance between the western part of the Town Centre and the Village Park is 48 metres involving three separate crossings. A shorter mid-block crossing is available on Pittwater Road however this is located 130 metres to the north and does not suit the desire line along the northern side of Barrenjoey Road.
- Two crossings are located across Barrenjoey Road at the Park Street intersection, each having a length of 30 seconds and a walking time of 25 seconds for the average walker.
- There are multiple crossings located at the intersection of Pittwater Road and Mona Vale Road, which are all separately timed to suit the traffic signal operation. Crossing between the Town Centre and Kitchener Park involves the use of four crossings with a total walking distance of 71 metres. The walking time is 60 seconds, but each crossing is further delayed by the traffic signals, meaning that it takes at least 2 minutes to perform this crossing.
- The roundabout at the intersection of Pittwater Road, Bungan Street and Park Street does not include any facilities for pedestrian crossings activity. Footpaths are not provided on the eastern corners so that pedestrians are not encouraged to cross at the roundabout. The mid-block crossing on Pittwater Road provides an alternative, however is located 52 metres to the south and off the desire line between Bungan Street and Park Street.
- There are no marked or controlled pedestrian crossings across Pittwater Road to the north of the roundabout. A pedestrian refuge island is located adjacent to the Park Street intersection, however community feedback indicates that this crossing is subject to conflicting traffic movements associated with Park Street and Akuna Lane. There is also a lane merge on Pittwater Road at this location, which attracts driver's attention, rather than the pedestrian activity.
- In terms of planning changes to the road network, constraints are presented by the requirement to retain property access and existing bus routes. There may be parts of the Town Centre where the closure, or reduction in road space is desirable, however this may not be achievable due to these constraints. In relation to bus routes, the impact of bus turning paths and the specific requirements of the bus operators need to be considered. This is most likely prevalent in any proposal to amend Pittwater Road, Park Street and the intersection roundabout.
- The geography of the Town Centre, particularly the rise in level to the north presents a constraint in relation to an increase in active transport. The results of the community surveys recorded a number of comments relating to the grade, citing it as a significant reason for using a car to travel to the Town Centre.

### 3.5.2 Opportunities

Having regard for the constraints described above, there are many opportunities presented by the Mona Vale Town Centre and associated road network. The location of two arterial routes bounding the southern and western sides of the Town Centre provide a physical constraint, but enable efficient access around the Town Centre rather than through it. The regional road section of Pittwater Road does bring through-traffic through the Town Centre, however Darley Street presents an opportunity to provide an alternative route through management of signage, road space (e.g. constraining Pittwater Road) and intersection controls (e.g. improvements to traffic signal efficiency to promote the use of Darley Street). More specifically the opportunities comprise:

- The promotion of Darley Street as an alternative to Pittwater Road to reduce traffic volumes on Pittwater Road, enabling its demotion within the road hierarchy.





- Through the demotion of Pittwater Road, a reduction in the scale of the Barrenjoey Road intersection would provide the opportunity for improved pedestrian and cyclist connectivity as well as the removal of the left turn slip lanes, which would reduce the traffic speeds along Pittwater Road (along with other measures). This would facilitate the overall reduction of Pittwater Road improving the environment between the Town Centre and the Council office precinct.
- The redistribution of traffic away from Pittwater Road could enable the removal of the roundabout at Bungan Street / Park Street, further improving east-west connectivity.
- The network of lanes and private access roads in the block bounded by Waratah Street, Bungan Street and Pittwater Road provide an opportunity to raise the priority of pedestrians and cyclists over vehicles through the implementation of a Shares Zone. This could also incorporate the section of Bungan Street between Waratah Street and Pittwater Road.
- The roads extending through the residential area to the north of the Town Centre provide an opportunity to accommodate parking associated with the activity of the Town Centre, through amendments to the existing parking controls.
- The extensive unrestricted parking along Darley Street presents an opportunity to increase the quantum of short-term parking, which provides higher value parking rather than catering for commuters or workers.





## 4 Improvement Options

Through the development of this study, a number of improvement options have been assessed and developed along with urban design concepts being prepared by Council to achieve the goals of Place Planning.

The options recognise the need to manage the road network and the volumes of traffic using the network now and in the future, while improving the environment for pedestrians and other road users. In this regard, the arterial road network, comprising Barrenjoey Road and Mona Vale Road remain largely unchanged, although improvements to the intersection of Pittwater Road and Barrenjoey Road are proposed.

Each of the improvement options has been assessed using traffic modelling to ascertain the impacts on the performance of the road network, and to assist with ascertaining mitigation options (e.g. promoting alternative routes).

The primary proposal are presented in the following sections.

### 4.1 Intersection Reduction, Pittwater Road / Barrenjoey Road

The intersection of Pittwater Road and Barrenjoey services the connection of an arterial road and a regional road and as such plays a prominent role in the road network, however this comes at a cost in terms of pedestrian connectivity and also the character of the section of road between the intersection and the Bungan Street roundabout. The provision of left turn slip lanes is suitable for the connection of higher speed roads, where it is important to minimise friction to traffic flow and where the associated roads provide sufficient capacity to facilitate free flow through the intersection. However in the subject case, it is apparent that the arrangement encourages northbound vehicles to maintain flow and speed from the northbound arterial road and into the Town Centre environment, which cannot support the continuation of higher speeds (i.e. the presence of a mid-block crossing and the Bungan Street roundabout limit the benefit of the northbound slip lane).

In this regard, it is proposed that the slips be removed which will provide the following benefits:

- Reduced vehicle speeds on Pittwater Road (north of the intersection),
- Demotion of this route for through traffic,
- Reduced crossing lengths for pedestrians,
- Ability to reduce the number of lanes on Pittwater in line with the urban design improvements prepared by Council.

### 4.2 Pittwater Road (between Barrenjoey Road and Bungan Street)

The current configuration of Pittwater Road presents a barrier between the north and south areas of the Town Centre, including Council's administration offices located on the southern corner of Pittwater Road and Park Street. The park located to the south of the Council offices forms an important facility within the Town Centre, however it is cut-off from the main retail areas. Access to this area is provided via crossings on Park Street, where connectivity is good, but only via the three crossings required to be used at the Barrenjoey Road intersection and a mid-block crossing south of the Bungan Road roundabout, which results in poor access from the south.



The adjustments to the intersection of Barrenjoey Road and Pittwater Road will facilitate a reduction in the carriageway width along the southern section of Pittwater Road. This will enable a shortening of the mid-block crossing and increased footpath width along both sides, which will be further enhanced through the provision of parallel parking spaces rather than the existing angled parking.

Pedestrian safety will also be enhanced through the provision of larger footpath areas (landings) surrounding the intersection, and the removal of the need for pedestrians to stand and wait on crossings having trafficable lanes on all sides, as per the current arrangement.



Figure 7 - Improvements to Pittwater Road and the Barrenjoey Road Intersection

### 4.3 Bungan Street / Pittwater Road Intersection

The demolition of Pittwater Road within the road network provides the opportunity to assess the appropriateness of the roundabout traffic control at the intersection of Pittwater Road, Bungan Street and Park Street, which comprises a two-lane circulation road, with no provisions for pedestrian crossings. With a reduction in traffic volumes associated with the Pittwater Road regional route (subject to the adoption of Darley Street as a viable alternative) the intersection could be remodelled to suit the future traffic volumes, and include improved pedestrian facilities.

The current arrangement being assessed by Council includes the removal of the roundabout and the provision of two separate priority controlled intersections, being Bungan Street and Park Street.



Figure 8 - Conversion of Bungan Street Roundabout to Priority Intersections

The separation of the intersections could accommodate a marked pedestrian crossing across Pittwater Road as an alternative to the existing pedestrian refuge island adjacent to Akuna Lane. The current arrangement was the subject of numerous comments by the community and is clearly a cause for concern for residents who use this route regularly.



#### 4.4 Bungan Street and Bungan Lane Shared Zone

Shared Zones are applied to roads where it is proposed that pedestrians have the right-of-way over vehicles, and are applied in areas where pedestrian activity has sufficient density and where vehicle movements can be realistically slowed. This is ideal in Town Centre situations where low speed limits are generally applied, and where traffic density and parking activity is such that vehicle speeds are naturally limited, regardless of a Shared Zone control.

The section of Bungan Street between Waratah Street and Pittwater Road, and the network of lanes to the southeast of Bungan Street provide an opportunity to establish a significant area of Shared Zone connecting numerous retail and commercial businesses along with parking located on adjoining private properties. There are some section of roadway that are within private property and consultation with these land-owners would be required with the primary aim of providing a uniform traffic and pedestrian environment.

The conversion of Bungan Lane between Mona Vale Road and Waratah Street to a shared zone will improve pedestrian access to/from the Bungan Lane car park. It is noted that the parking surveys indicate regular availability of parking within the car park, during periods when the on-street parking is at capacity. It is likely that the use of the car park can be increased (i.e. removing some demand from the on-street parking), through improved pedestrian access and improved wayfinding signage (also recommended in the Parking Strategy). The improved connectivity and increased use of the car park will contribute towards offsetting any loss of parking associated with the PPW.



Figure 9 - Bungan Street / Lane Shared Zone

#### 4.5 Other Improvements

The items listed above represent significant works to the road network which would bring an associated level of benefit. Other measures are also available that do not require much in the way of physical works, but will contribute towards the overall strategy.





#### 4.5.1 Arterial and Regional Road Signage

The state road signage could be amended to prioritise Barrenjoey Road and Darley Street as the primary route from the south to Church Point and beyond. In conjunction with the reduction in the scale of the Barrenjoey Road / Pittwater Road intersection, this will remove Pittwater Road through the Town Centre as the primary route.

#### 4.5.2 Parking Restrictions, Bungan Street

It is apparent from discussions with the community and the traffic and parking surveys that Bungan Street experiences a short but heightened traffic peak associated with the Mona Vale Public School. This is in part due to limited short term parking along the frontages of the school. The introduction of 5P (minute) parking restriction should be considered along the northern side of Bungan Street between Mona Vale Road and Waratah Street, to align with the School Zone times. This will provide the ability for vehicles to drop-off and pick-up pupils without queuing within the carriageway, while these spaces are used by longer-term parkers.

#### 4.5.3 Split Phase Signal Operation at Pittwater Road / Darley Street

It is apparent from discussions with the community and the traffic surveys that the right turn movements from Darley Street onto Pittwater Road (whether approaching from the north or south) experience delays and are subject to restricted sight lines due to the angled alignment of the intersection.

In line with the proposal to prioritise Darley Street as an alternative to Pittwater Road, to facilitate the reduction in traffic through the Town Centre, the conversion of the intersection to a Split Phase arrangement should be pursued. A split phase arrangement would maintain priority to Pittwater Road, but would allow separate green phases for the north and south Darley Street approaches. This enables these right turn movements to be made with no opposing vehicles, improving safety. The additional phase does not necessarily mean that the performance of the intersection will improve overall (split approach is not considered the most optimal phase sequence), however the modelling results indicate that the intersection will continue to operate with an overall Level of Service of B during the morning and afternoon peak periods.

## 5 Traffic Modelling

The study involves the assessment of potential changes to the road network and in this regard, traffic modelling provides the most suitable tool to determine the effects on the road network. Modelling provides the ability to test numerous scenarios either relating to growth in traffic volumes, or physical amendments to the road network, e.g. closing roads, adding lanes, changing parking controls etc.'

The modelling undertaken in relation to this study comprises a base model of a typical weekday, which has been prepared and validated in accordance with the RMS requirements. The validation process ensures that the model reflects the existing situation. This is achieved by comparing queue lengths, the number of vehicles passing through each intersection and the journey times across the network with the data recorded in the study area, as described in Section 2.1.

The model has been prepared using the Vissim software, which presents the detailed operating results in the form of typical assessment criteria (Level of Service, Queue Lengths, Degree of Saturation etc.) and also as an animate representation of the road network with vehicles moving in real-time through the network. A screenshot of the model while running is presented as Figure 10 below.

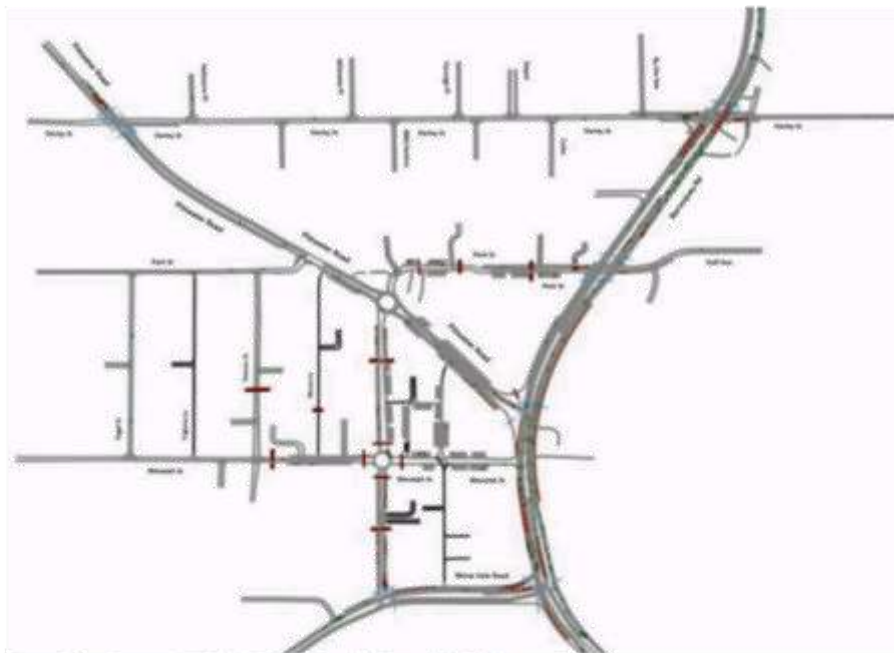


Figure 10 - Screenshot of the Vissim Road Network Model

### 5.1 Aims

The primary aim of the traffic model is to be able to test future scenarios associated with the study and to be provided with key results and a visual interpretation of the resulting impacts. Models allow future scenarios to be tested with a high degree of certainty as to the outcomes of any proposals and are typical used to assess:



- Traffic / Transport growth scenarios (i.e. the impact of more movements across the road network),
- Physical changes to the road network, either increasing or decreasing road capacity,
- A combination of growth and physical changes.

The use of contemporary modelling software such as Linsig provides an animated output with the aim of being able to be viewed and readily understood by the viewer, which is ideally suited when presenting the results to the community.

## 5.2 Inputs

The model is prepared on the basis of many input parameters, a number of which are constant to most models within a particular area (e.g. vehicle characteristics, driver characteristics, tolerance for tolls versus longer journeys, and other parameter relating to the road network standards). In relation to the Mona Vale network model, the following project specific inputs were collected and applied to the model:

- Road geometry,
- Traffic signal arrangements (phase sequence and timing, coordination between intersections etc.), which were provided by Transport NSW,
- Traffic controls (prohibited turning movements etc.),
- Traffic and pedestrian movements collected through traffic surveys,
- Origin and destination data, and
- On-street parking activity.

During the coding of the road network and traffic volumes, observations are taken of the study area to ensure that the model is developed to reflect the existing situation and any unique local condition that affect the operation of the network (e.g. sun glare, damaged road surface, sight line constraints etc.).

## 5.3 Outputs

As described in Section 5.1, the aim of the model is to be able to test scenarios relating to traffic volumes and the road arrangements. Typically there are four performance indicators used to summarise the performance of the road network, being:

- Degree of Saturation – The total usage of the intersection expressed as a factor of 1 with 1 representing 100% use/saturation. (e.g. 0.8 = 80% saturation)
- Average Delay – The average delay encountered by all vehicles passing through the intersection. It is often important to review the average delay of each approach as a side road could have a long delay time, while the large free flowing major road traffic will provide an overall low average delay.
- Level of Service – This is a categorisation of average delay, intended for simple reference. RMS adopts the bands, defined in Table 3 below.
- 95% Queue lengths (Q95) - is defined to be the queue length in metres that has only a 5-percent probability of being exceeded during the analysis time period.



Table 3 - Road Network Performance - Levels of Service

| Level of Service | Average Delay (secs/vehicle) | Traffic Signals, Roundabout   | Give Way & Stop Signs                     |
|------------------|------------------------------|---|---|
| A                | <14                          | Good operation  |   |
| B                | 15 to 28                     | Good with acceptable delays & spare capacity  | Acceptable delays & spare capacity        |
| C                | 29 to 42                     | Satisfactory  | Satisfactory, but accident study required |
| D                | 43 to 56                     | Operating near capacity   | Near capacity & accident study required   |
| E                | 57 to 70                     | At capacity. At signals, incidents would cause excessive delays. Roundabouts require other control mode | At capacity, requires other control mode  |
| F                | >70                          | Extra capacity required   | Extreme delay, major treatment required   |

#### 5.4 Scenarios

The road network study requires the development of three scenarios for the peak periods being modelled, as follows:

- Scenario 1 (Base case), 2016 existing situation,
- Scenario 2 (Do nothing), 2021 with the existing road arrangements, with traffic volume growth at 1% per annum over 5 years,
- Scenario 3 (Proposed PPW), 2021 with the potential changes to the road network and the traffic volumes adopted from Scenario 2.

#### 5.5 Results

The results of the traffic modelling are presented in the following tables, while the findings are described in Section 5.6.

For ease of comparing the results, the tables are presented on the following 3 pages so that the AM and PM peak results for all three scenarios are aligned horizontally when printed.





Table 4 - Modelling Results - AM Peak - Scenario 1 – 2015 Existing Situation

| Intersection                        | Traffic Volume | Average Delay | Level of Service |
|-------------------------------------|----------------|---------------|------------------|
| 1. Pittwater Road / Mona Vale Road  | 4883           | 26.8          | B                |
| 2. Pittwater Road / Waratah Street  | 1942           | 3.1           | A                |
| 3. Pittwater Road / Barrenjoey Road | 4102           | 13.5          | A                |
| 4. Pittwater Road / Bungan Street   | 1472           | 4.9           | A                |
| 5. Pittwater Road / Park Street     | n/a            | n/a           | n/a              |
| 6. Pittwater Road / Darley Street   | 1537           | 24.6          | B                |
| 7. Barrenjoey Road / Park Street    | 4087           | 29.1          | C                |
| 8. Barrenjoey Road / Darley Street  | 4282           | 43.2          | D                |
| 9. Mona Vale Road / Bungan Street   | 2223           | 15.5          | B                |
| 10. Bungan Street / Waratah Street  | 1117           | 4.7           | A                |
| 11. Waratah Street / Keenan Street  | 861            | 1.1           | A                |
| 12. Waratah Street / Dygal Street   | 584            | 0.8           | A                |
| 13. Park Street / Keenan Street     | 1005           | 3.3           | A                |
| 14. Park Street / Dygal Street      | 409            | 0.6           | A                |
| 15. Mona Vale Road / Bungan Lane    | 825            | 1.0           | A                |
| 16. Waratah Street / Bungan Lane    | 575            | 0.7           | A                |
| 17. Pittwater Road and Bungan Lane  | 357            | 0.6           | A                |

Table 5 - Modelling Results - PM Peak - Scenario 1 – 2015 Existing Situation

| Intersection                        | Traffic Volume | Average Delay | Level of Service |
|-------------------------------------|----------------|---------------|------------------|
| 1. Pittwater Road / Mona Vale Road  | 4835           | 24.4          | B                |
| 2. Pittwater Road / Waratah Street  | 1919           | 3.4           | A                |
| 3. Pittwater Road / Barrenjoey Road | 4118           | 10.8          | A                |
| 4. Pittwater Road / Bungan Street   | 1429           | 5.3           | A                |
| 5. Pittwater Road / Park Street     | n/a            | n/a           | n/a              |
| 6. Pittwater Road / Darley Street   | 1629           | 23.2          | B                |
| 7. Barrenjoey Road / Park Street    | 3959           | 27.6          | B                |
| 8. Barrenjoey Road / Darley Street  | 4018           | 33.6          | C                |
| 9. Mona Vale Road / Bungan Street   | 2043           | 20.4          | B                |
| 10. Bungan Street / Waratah Street  | 1088           | 6.6           | A                |
| 11. Waratah Street / Keenan Street  | 598            | 1.0           | A                |
| 12. Waratah Street / Dygal Street   | 584            | 0.8           | A                |
| 13. Park Street / Keenan Street     | 885            | 4.1           | A                |
| 14. Park Street / Dygal Street      | 373            | 0.5           | A                |
| 15. Mona Vale Road / Bungan Lane    | 955            | 1.7           | A                |
| 16. Waratah Street / Bungan Lane    | 296            | 0.3           | A                |
| 17. Pittwater Road and Bungan Lane  | 454            | 1.6           | A                |



Table 6 - Modelling Results - AM Peak - Scenario 2 - Existing Arrangement with 2021 Traffic Volumes

| Intersection                        | Traffic Volume | Average Delay | Level of Service |
|-------------------------------------|----------------|---------------|------------------|
| 1. Pittwater Road / Mona Vale Road  | 5054           | 27.7          | B                |
| 2. Pittwater Road / Waratah Street  | 2081           | 3.2           | A                |
| 3. Pittwater Road / Barrenjoey Road | 4243           | 17.2          | B                |
| 4. Pittwater Road / Bungan Street   | 1503           | 13.5          | A                |
| 5. Pittwater Road / Park Street     | n/a            | n/a           | n/a              |
| 6. Pittwater Road / Darley Street   | 1614           | 26.4          | B                |
| 7. Barrenjoey Road / Park Street    | 4165           | 31.1          | C                |
| 8. Barrenjoey Road / Darley Street  | 4384           | 45.9          | D                |
| 9. Mona Vale Road / Bungan Street   | 2291           | 15.8          | B                |
| 10. Bungan Street / Waratah Street  | 1146           | 7.3           | A                |
| 11. Waratah Street / Keenan Street  | 905            | 2.7           | A                |
| 12. Waratah Street / Dygal Street   | 674            | 1.3           | A                |
| 13. Park Street / Keenan Street     | 1043           | 15.2          | B                |
| 14. Park Street / Dygal Street      | 466            | 0.8           | A                |
| 15. Mona Vale Road / Bungan Lane    | 892            | 0.6           | A                |
| 16. Waratah Street / Bungan Lane    | 613            | 0.7           | A                |
| 17. Pittwater Road and Bungan Lane  | 388            | 0.6           | A                |

Table 7 - Modelling Results - PM Peak - Scenario 2 - Existing Arrangement with 2021 Traffic Volumes

| Intersection                        | Traffic Volume | Average Delay | Level of Service |
|-------------------------------------|----------------|---------------|------------------|
| 1. Pittwater Road / Mona Vale Road  | 4419           | 24.8          | B                |
| 2. Pittwater Road / Waratah Street  | 2641           | 5.1           | A                |
| 3. Pittwater Road / Barrenjoey Road | 3766           | 10.7          | A                |
| 4. Pittwater Road / Bungan Street   | 1248           | 7.2           | A                |
| 5. Pittwater Road / Park Street     | n/a            | n/a           | n/a              |
| 6. Pittwater Road / Darley Street   | 1456           | 27.5          | B                |
| 7. Barrenjoey Road / Park Street    | 3645           | 31.6          | C                |
| 8. Barrenjoey Road / Darley Street  | 3701           | 38.5          | C                |
| 9. Mona Vale Road / Bungan Street   | 1811           | 19.2          | B                |
| 10. Bungan Street / Waratah Street  | 947            | 9.2           | A                |
| 11. Waratah Street / Keenan Street  | 626            | 1.5           | A                |
| 12. Waratah Street / Dygal Street   | 341            | 0.9           | A                |
| 13. Park Street / Keenan Street     | 889            | 9.1           | A                |
| 14. Park Street / Dygal Street      | 382            | 0.7           | A                |
| 15. Mona Vale Road / Bungan Lane    | 1028           | 2.3           | A                |
| 16. Waratah Street / Bungan Lane    | 345            | 3.2           | A                |
| 17. Pittwater Road and Bungan Lane  | 465            | 1.6           | A                |



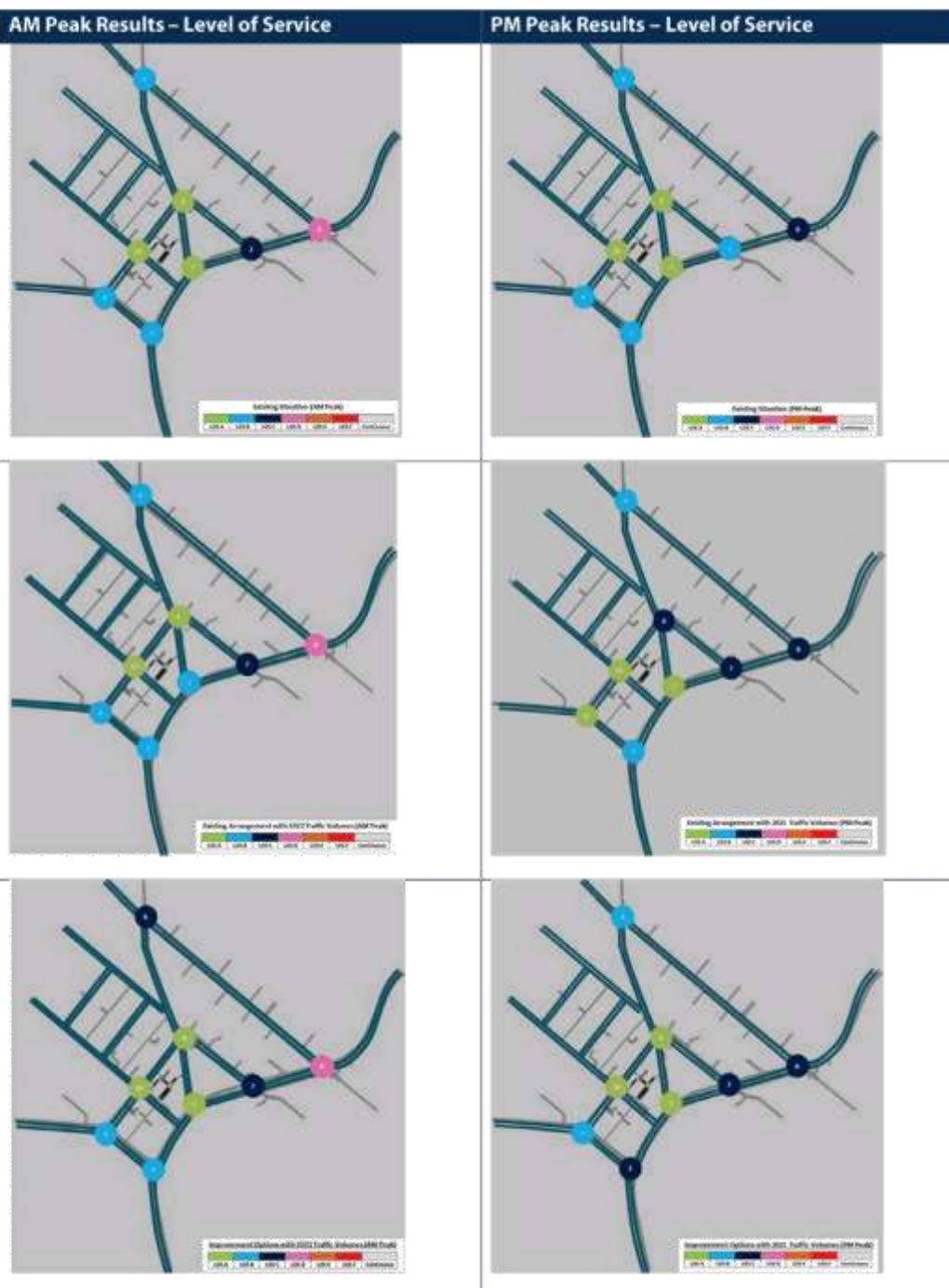
Table 8 - Modelling Results - AM Peak - Scenario 3 - Improvement Options with 2021 Traffic Volumes

| Intersection                        | Traffic Volume | Average Delay | Level of Service |
|-------------------------------------|----------------|---------------|------------------|
| 1. Pittwater Road / Mona Vale Road  | 4729           | 26.6          | B                |
| 2. Pittwater Road / Waratah Street  | 20             | 45.3          | D                |
| 3. Pittwater Road / Barrenjoey Road | 2271           | 9.8           | B                |
| 4. Pittwater Road / Bungan Street   | 783            | 12.5          | A                |
| 5. Pittwater Road / Park Street     | 197            | 38.4          | C                |
| 6. Pittwater Road / Darley Street   | 1526           | 29.8          | C                |
| 7. Barrenjoey Road / Park Street    | 4241           | 39.4          | C                |
| 8. Barrenjoey Road / Darley Street  | 4061           | 56.0          | D                |
| 9. Mona Vale Road / Bungan Street   | 2271           | 14.3          | B                |
| 10. Bungan Street / Waratah Street  | 1289           | 11.7          | A                |
| 11. Waratah Street / Keenan Street  | 733            | 3.2           | A                |
| 12. Waratah Street / Dygal Street   | 652            | 1.1           | A                |
| 13. Park Street / Keenan Street     | 844            | 2.0           | A                |
| 14. Park Street / Dygal Street      | 501            | 1.2           | A                |
| 15. Mona Vale Road / Bungan Lane    | 655            | 67.8          | E                |
| 16. Waratah Street / Bungan Lane    | 778            | 1.0           | A                |
| 17. Pittwater Road and Bungan Lane  | 182            | 1.0           | A                |

Table 9 - Modelling Results - PM Peak - Scenario 3 - Improvement Options with 2021 Traffic Volumes

| Intersection                        | Traffic Volume | Average Delay | Level of Service |
|-------------------------------------|----------------|---------------|------------------|
| 1. Pittwater Road / Mona Vale Road  | 4889           | 35.5          | C                |
| 2. Pittwater Road / Waratah Street  | 2706           | 2.9           | A                |
| 3. Pittwater Road / Barrenjoey Road | 2088           | 9.8           | B                |
| 4. Pittwater Road / Bungan Street   | 569            | 3.2           | A                |
| 5. Pittwater Road / Park Street     | 587            | 1.9           | A                |
| 6. Pittwater Road / Darley Street   | 1414           | 22.4          | B                |
| 7. Barrenjoey Road / Park Street    | 4002           | 29.7          | C                |
| 8. Barrenjoey Road / Darley Street  | 3967           | 42.0          | C                |
| 9. Mona Vale Road / Bungan Street   | 2088           | 24.1          | B                |
| 10. Bungan Street / Waratah Street  | 1018           | 7.9           | A                |
| 11. Waratah Street / Keenan Street  | 583            | 0.7           | A                |
| 12. Waratah Street / Dygal Street   | 364            | 0.8           | A                |
| 13. Park Street / Keenan Street     | 852            | 4.0           | A                |
| 14. Park Street / Dygal Street      | 408            | 0.7           | A                |
| 15. Mona Vale Road / Bungan Lane    | 1234           | 20.0          | B                |
| 16. Waratah Street / Bungan Lane    | 335            | 0.2           | A                |
| 17. Pittwater Road and Bungan Lane  | 378            | 1.6           | A                |

The overall intersection results are illustrated on the network in the following images (full size images are reproduced in Attachment 7 as part of the Traffic Modelling Presentation).



Mona Vale Town Centre, T2-1504

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4 May 2016



**AM Peak Results – Approach Delay (seconds)**

**PM Peak Results – Approach Delay (seconds)**





## 5.6 Findings

The traffic modelling confirms that the road network can accommodate some growth within the existing configuration, and as evident in the Level of Service Results for each intersection, there is little depreciation of LoS within the three scenarios.

The intersections where the LoS is affected include:

- Pittwater Road and Mona Vale Road - Delay is seen to increase in all scenarios, however it remains within the range of LoS B with the exception of the 2016 PM peak PPW scenario whereby the LoS drops from B to C.
- Pittwater Road and Darley Street - Delay is seen to increase in all scenarios, however it remains within the range of LoS B with the exception of the 2016 AM peak PPW scenario whereby the LoS drops from B to C. This is due to the increased traffic volumes being diverted to Darley Street, away from the existing Pittwater Road corridor, which is proposed to be reduced in width within the PPW scenario.
- Park Street and Barrenjoey Road – The LoS increases to B during the 2016 PM peak prior to the PPW, and this is due to the background traffic growth.
- Pittwater Road and Barrenjoey Road – The LoS increases to B during the 2016 AM peak due to the background traffic growth, however the performance improves following the PPW as traffic is redistributed to Darley Street.

The first run of the future scenarios found that the delays increase in relation to the right turn movements from Barrenjoey Road from the southbound carriageway. Essentially there are only four opportunities to turn right to enter the Town Centre or the area to the north, being Darley Street, Park Street, Pittwater Road and Mona Vale Road. The first run model indicated that during 2021, the queue generated by the right turn into Darley Street extends beyond the length of the right turn lane (the model does not include any optimisation or changes to the traffic signal timing). When this occurs, the model determined that it is more time/cost effective to reroute traffic to the other right turn locations, which increases demand at each intersection. It is apparent that the length of the right turn lane at Darley Street will need to be extended within the existing grassed median in response to background growth in the area, based on a growth scenario of 1% per annum.

The model has been run with the extended right turn lane, which results in less growth on the intersections to the south of Darley Street, although the demands on Darley Street increase, as a result, which is to be expected.

The PPW outlined for Pittwater Road slightly reduces the capacity of this route, therefore the model indicates a larger impact at the Mona Vale Road intersection, as more vehicles are rerouted to this intersection and through the northern part of the Town Centre. Again, the extension of the right turn lane at Darley Street and potentially amendments to the traffic signal timing will likely resolve this impact.

Generally the road network will continue to operate within capacity following the addition of background traffic growth and the PPW. Further intersection modelling may be required to assess the individual intersections where changes are proposed (e.g. the proposed split phasing arrangement at the intersection of Darley Street and Pittwater Road).

## 6 Parking Strategy

### 6.1 Framework

In implementing any strategy a robust framework is required to manage change. Council will follow the framework detailed in Figure 11 below before implementing any change.



Figure 11 - Strategy Framework

- **Document Supply** – it is important Council has up to date records of the parking supply both on street and off street recording use (e.g. loading zone, disabled parking etc.) and time restrictions (1/2P, 1P, permit parking etc.) which provides a base position from which to manage future change.
- **Measure Demand** – Regular occupancy and length of stay surveys are required to measure demand at different times of the day to ensure appropriate parking controls and compliance thereof.
- **Implement Solutions** – As parking occupancy in a given area approaches 85%, being practical capacity, proposed solutions to be implemented in a controlled manner after community consultation. Supply records to be updated for any change accordingly.
- **Review and Monitor results** – it is important to monitor the outcome of any change through regular surveys to ensure appropriate parking controls are in place.
- **Identify Sites for Future Off Street Car Parks** – Council will incorporate potential sites for off street car parks into their overall development masterplan to ensure appropriate planning controls are in place when the need arises

All change will be referenced back to the current situation to measure success. It is also proposed that the community consultation process will continue as part of the above framework and that information about parking strategies and implementation plans will be incorporated into Council's website, the local newspaper and other communication tools, including social media as appropriate.

The collection of parking data and information on an ongoing basis is imperative to enable Council to measure the success of implemented strategies. To ensure this is undertaken in a cost effective manner Council will:

- Prepare a specification for documenting and updating parking inventory inclusive of number of spaces and type of restrictions
- Develop a program for conducting occupancy and average length of stay surveys in accordance with an agreed timetable and encompassing different times of day, days of the week and with regard to seasonal impacts, and



- Develop a reporting package incorporating graphs for use in future reporting of parking demand and the effects of implementing change.

## 6.2 Strategy

Parking is a finite resource which is expensive to supply and maintain. It also competes with other land uses within the local community (e.g. public spaces, parks, shared road space, commercial and residential developments). Contemporary literature (domestic and international) advocates for local government to reduce demand for parking by encouraging other means of transport, rather than increase supply<sup>1</sup>. It also proposes:

- Short term parking should be closest to desired locations;
- Parking spaces should be prioritised for desired users over others considering the parking needs of both private (commercial tenants and residents) and public users;
- Parking controls should be undertaken in conjunction with the promotion of alternate transport modes, which includes encouraging businesses to provide initiatives for their employees to use alternate modes;
- Parking should be easy to locate and managed by appropriate and easy to understand signage; and
- Parking management strategies should consider both the management of current supply and the needs of the future.

Free parking is subsidised by ratepayers and those that don't drive. It is expensive to provide and regulate and is socially, economically and environmentally unsustainable. Contemporary literature suggests parking users should pay market prices for the space they occupy and the revenue used to improve public amenity<sup>2</sup>.

In 2011, Mona Vale suburb had around 10,000 residents and has grown at a rate of around 70 persons per year (approx. 0.7%- 0.75% pa.) over the 10 year period from 2001 to 2011. The population growth of Mona Vale has been driven by the net gain in dwellings of almost 30 per year over the 10 year period from 2001 to 2011.<sup>3</sup> For the Pittwater LGA the estimated population growth since 2011 has been 1.3% (2012, 2013)-2.06% (2014) pa.

This growth, together with the dominance of car ownership; 57% of households in Mona Vale had access to two or more vehicles in 2011<sup>4</sup>, means that parking availability is likely to worsen contributing to:

- Increased traffic congestion
- Associated environmental effects and
- Driver frustration.

In 2011, the majority of employed persons in Mona Vale travelled to work by car, either as a driver or passenger (approximately 65.2%)<sup>5</sup>. The net change since 2001 is illustrated in Figure 12. Figure 12 also shows there has been an increase in the use of public transport (bus), walking and people working at home.

<sup>1</sup> D Shoup (2000), *The High Cost of Free Parking*, p.229

<sup>2</sup> Christian Seibert Vol.24 No 2 Winter 2008 POLICY, *There's No Such Thing as a Free Parking Space* p 12

<sup>3</sup> expert.id Mona Vale Suburb Profile November 2014, page 23

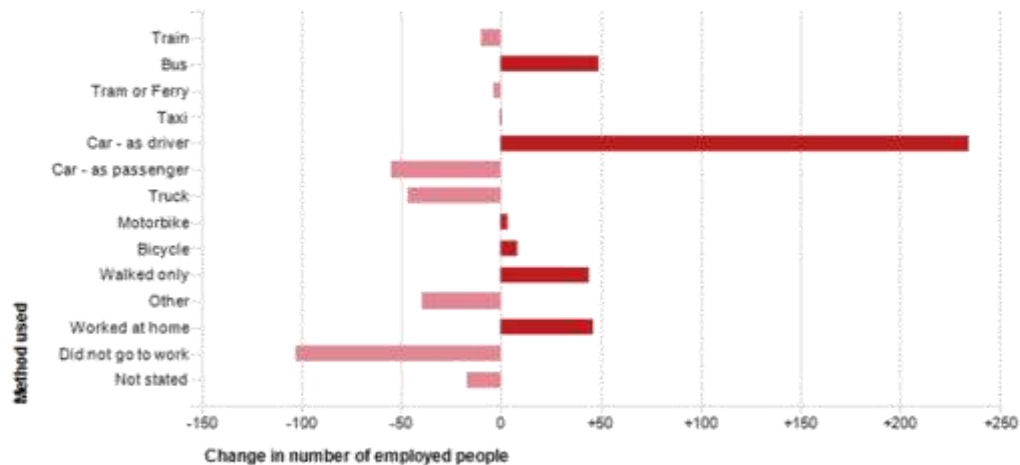
<sup>4</sup> <http://profile.id.com.au/pittwater/car-ownership?WebID=150>

<sup>5</sup> <http://profile.id.com.au/pittwater/travel-to-work?EndYear=2001&WebID=150>



## Change in method of travel to work, 2001 to 2011

Mona Vale - Total employed persons



Source: Australian Bureau of Statistics, Census of Population and Housing, 2001 and 2011 (Enumerated data)  
Compiled and presented in profile.id by .id, the population experts.

**.id**  
the population experts

Figure 12- Change in Method of travel to work, 2001-2011 Mona Vale

Of the resident's that travelled to work by car it is reasonable to assume a significant number work in the area based on data for Pittwater Council; in 2011 39.1% of Pittwater Council residents lived and worked in the area as illustrated in Figure 13, compared to 16.7% in the adjoining Warringah area<sup>6</sup>.

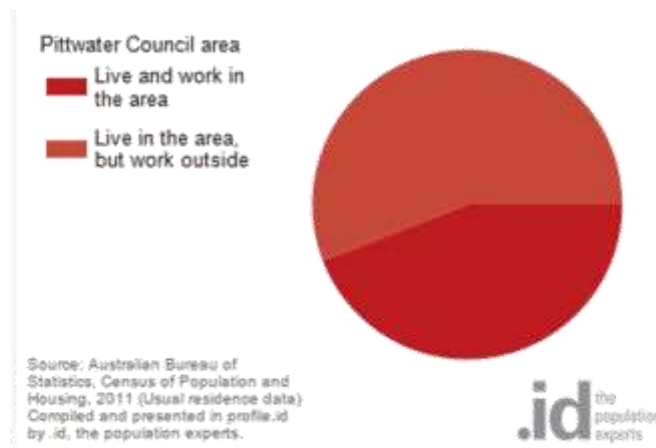


Figure 13 - Employment location of Pittwater Council residents

<sup>6</sup> <http://profile.id.com.au/pittwater/residents?EndYear=2001&WebID=150>



### 6.3 User groups

Our parking survey data has identified three (3) main user groups contributing to parking demand in the area:

- Residents
- Commuters and workers in the area
- Visitors for business or social purposes

Each user group has its own distinct needs for parking in the area and compete for available parking spaces with the other groups. Any strategies pursued by the council will need to be analysed in terms of how they will affect each user group.

#### 6.3.1 Residents

Residents predominantly require parking both overnight and on weekends with some vehicles remaining on-street throughout the weekday. The parking surveys provide an estimate of the demand for resident parking based on the 7am occupancy figures as it is assumed the majority of vehicles parked on street in residential areas at this time belong to residents.

#### 6.3.2 Commuters and Workers in the Area

On-street unrestricted car spaces were at or close to practical occupancy (85%<sup>2</sup> occupancy) from 7.00am to 3pm on a weekday in the industrial zone. Similarly the unrestricted off-street council owned car parks (excluding Bungan Lane) were also at practical capacity from 8.00am – 4.00pm on a weekday. The peak weekday occupancy in the 8P area of the Bungan Lane car park was 67.2% at 12.00-1.00pm indicating available capacity for workers in the area. It is unlikely these spaces would be used by commuters as they would require parking for a period greater than 8 hours.

#### 6.3.3 Visitors for Business and Social purposes

In many ways this is the most critical user group and any strategies should be aimed at ensuring the availability of parking spaces for the visitors for business purposes. A visitor for business activity includes people using local merchants such as doctors, grocers, pharmacies, retail and restaurants. Therefore the availability of parking, for this user group, has a direct effect on the economic prosperity and vibrancy of the town centre.

### 6.4 Current Peak Demand

Peak demand for parking on street and in Council owned off street parking was recorded at 83% at approximately 10.00- 11am on a weekday as per the following table.

Table 10 - Peak parking demand for Council owned parking

|                                      | Supply | Peak Demand | Peak Occupancy | Availability |
|--------------------------------------|--------|-------------|----------------|--------------|
| <b>On-Street restricted spaces</b>   | 325    | 273         | 84%            | 52           |
| <b>On-Street unrestricted spaces</b> | 462    | 402         | 87%            | 60           |
| <b>Off-Street restricted</b>         | 59     | 57          | 96.6%          | 2            |

<sup>2</sup> Concept of practical capacity; being the level of utilization at which potential parkers perceive parking is full



|  |              |            |            |            |
|--|--------------|------------|------------|------------|
| spaces (excl Bungan Lane)                                      |              |            |            |            |
| Off-Street unrestricted spaces (excl Bungan Lane)              | 128          | 118        | 92.2%      | 10         |
| Bungan Lane car park 8P restricted spaces                      | 58           | 38         | 65.5%      | 20         |
| Bungan Lane other restricted spaces                            | 149          | 92         | 61.7%      | 57         |
| <b>Total Spaces Available for Council owned public parking</b> | <b>1,181</b> | <b>980</b> | <b>83%</b> | <b>201</b> |

Privately owned car parks such as Pittwater Place (437<sup>8</sup> spaces), Woolworths (376<sup>8</sup> spaces) and Aldi were outside of the scope of our surveys.

Peak occupancy was distributed by land use as follows,

Table 11 - Peak occupancy by land use

| Demand Drivers        | 2015         |             |                  |              |
|-----------------------|--------------|-------------|------------------|--------------|
|                       | Supply       | Peak Demand | Peak Occupancy % | Availability |
| <b>WEEKDAYS</b>       |              |             |                  |              |
| <b>Commercial</b>     | 687          | 569         | 83%              | 118          |
| <b>Residential</b>    | 216          | 152         | 70%              | 64           |
| <b>Industrial</b>     | 278          | 259         | 93%              | 19           |
| <b>TOTAL</b>          | <b>1,181</b> | <b>980</b>  |                  | <b>201</b>   |
| <b>Peak Occupancy</b> |              | <b>83%</b>  |                  |              |

At peak demand there were 980 cars parked in council managed public car spaces in the study area; 422 (273+57+92) in restricted spaces (excluding 8P) and 558 (402+118+38) in 8P plus unrestricted spaces.

Of the 201 available spaces at peak 118 spaces (59%) were located in the commercial zone. Of these spaces, 77 (65%) were located in the Bungan Lane car park; 20(26%) in the 8P parking and 57 (74%) elsewhere in the car park. 32% of available spaces were located in the residential zone, predominantly in the unrestricted on street parking areas.

Table 12 below shows how long each car, that was present at the time of peak demand, stayed in the area that day.

<sup>8</sup> Mona Vale Shopping Centre Parking Report 11/09/2007 issue 8 Page 4



Table 12 - Length of stay for vehicles present at peak demand

|                      | Number of cars | Restricted (excl 8P) | Unrestricted (incl 8P) |
|----------------------|----------------|----------------------|------------------------|
| Less than 2 hours    | 303            | 282                  | 21                     |
| 2 – 5 hours          | 137            | 77                   | 60                     |
| Greater than 5 hours | 540            | 65                   | 475                    |
| <b>Total</b>         | <b>980</b>     | <b>424</b>           | <b>556</b>             |

These figures indicate that at least 440 vehicles, (calculated by the sum of all cars with a length of stay less than 5 hours 303+137), present during the peak demand period relate to short stay parkers, being visitors to the surrounding businesses and/or residences, although they are not necessarily parked in the time restricted spaces, particularly those staying for greater than 2 hours. Table 12 shows that 82% of these were parked in time restricted parking spaces (excluding 8P). The remaining 540 vehicles would be made up of workers in the area, commuters and residents leaving their vehicles on-street throughout the day. Approximately 12% were parked in restricted spaces which may indicate a need to review enforcement management as time restrictions are only effective if appropriately enforced.

Based on the above analysis, we estimated the supply and demand for each of the main user groups that require parking in the area during weekday peak periods in Table 13 below.

Table 13 - Supply and Demand for the Main User Groups

| User Group  | Supply       | Demand     | Excess     |
|---|--------------|------------|------------|
| Commuters, workers in the area and residents – Unrestricted + 8P spaces | 648          | 540        | 108        |
| Visitors for Business and Social purposes – Restricted Spaces (excl 8P) | 533          | 440        | 93         |
| <b>Total</b>  | <b>1,181</b> | <b>980</b> | <b>201</b> |

These estimates confirm there is available parking in the study area for all user groups at peak however not necessarily easy to locate (e.g. Bungan Lane car park) or in the most convenient location (unrestricted spaces in the residential zone).

The perception that parking is not available may be due to the following:

- Drivers prefer to on-street close to their destination rather than off street and walk;
- Drivers are unaware that there is parking available;
- Drivers wish to find parking for a time period longer than that available; and
- Drivers expect to find parking close to their desired location.

## 6.5 Future unconstrained parking demand

To determine the effect of future parking demand on the parking supply we developed a model to evaluate current parking supply and forecast future levels of parking demand which is attached as Attachment 3. The model is a forecasting tool which determines the excess or shortfall in parking supply over time using existing data based on:





- council controlled public parking supply, plus
- peak occupancy data by parking restriction

The model is based on peak occupancy as determined by our surveys. Peak occupancy was used as it represents the 'worst' case scenario with regards to parking demand when estimating the likely excess or shortfall in supply.

The model uses the survey data to establish the present parking supply and demand. These figures are then extrapolated in 5 year increments (up to 20 years) to predict future demand using a growth factor.

Extrapolation of the data has been performed using a population growth factor to estimate future peak demand as follows:

Table 14 - Population Growth Factors

| YEAR 5   | YEAR 10  | YEAR 15  | YEAR 20  |
|----------|----------|----------|----------|
| % Growth | % Growth | % Growth | % Growth |
| 6.59%    | 6.59%    | 6.59%    | 6.59%    |

The population growth factor was determined by reviewing historical population growth for the Pittwater Council area for the period 2003-2014<sup>9</sup> (average 6.73% per 5 years) and the SHOROC estimated population growth for the period 2011-2031 (average 6.45% per 5 years). We note that there are a number of reasoned growth factors that can be applied to forecast future parking demand. We have selected the above after consultation with Council.

The projected future excess / (shortfall) in parking supply, assuming no changes to supply during the period, is detailed in Attachment 3 and summarised below. Once the final public domain plan is complete, the overall loss of on-street parking will need to be incorporated into the model.

Table 15 - Projected Spaces Used by % Growth based on population growth

| WEEKDAYS | 2015         |               |        | YEAR 5       |               |        | YEAR 10      |               |        | YEAR 15      |               |        | YEAR 20      |               |        |
|----------|--------------|---------------|--------|--------------|---------------|--------|--------------|---------------|--------|--------------|---------------|--------|--------------|---------------|--------|
|          | # Car Spaces | # Spaces Used | Excess | # Car Spaces | # Spaces Used | Excess | # Car Spaces | # Spaces Used | Excess | # Car Spaces | # Spaces Used | Excess | # Car Spaces | # Spaces Used | Excess |
| TOTAL    | 1,181        | 980           | 201    | 1,181        | 1,045         | 136    | 1,181        | 1,112         | 68     | 1,181        | 1,107         | -74    | 1,181        | 1,260         | -80    |
| WEEKENDS |              |               |        |              |               |        |              |               |        |              |               |        |              |               |        |
| TOTAL    | 1,195        | 766           | 429    | 1,195        | 817           | 378    | 1,195        | 871           | 324    | 1,195        | 928           | 267    | 1,195        | 980           | 215    |

Whilst the projections show the overall parking supply exceeds the projected peak demand for the next 10 years peak occupancy levels after Year 5 will exceed 85% (practical capacity), assuming no change to travel mode, leading to congestion as cars circulate to locate a parking space.

An allowance for varying the results in future time periods is incorporated in the model, so that the effects of changes in travel behaviour in response to changes in transport options can be reflected. For the purposes of this projection we assumed a 5% change in travel mode over each 5 year period.

The projected future excess / (shortfall) in parking supply, assuming no change to supply during the period, is detailed in Attachment 3 and summarised below:

<sup>9</sup> Source: Australian Bureau of Statistics, Regional Population Growth, Australia (3218.0). Compiled and presented in profile.id by id, the population experts.



Table 16 - Projected Spaces Used by % Growth based on population growth – 5% change travel mode

| WEEKDAYS | 2015         |               |        | YEAR 5       |               |                           | YEAR 10      |               |                           | YEAR 15      |               |                           | YEAR 20      |               |                           |
|----------|--------------|---------------|--------|--------------|---------------|---------------------------|--------------|---------------|---------------------------|--------------|---------------|---------------------------|--------------|---------------|---------------------------|
|          | # Car Spaces | # Spaces Used | Access | # Car Spaces | # Spaces Used | Adj change in Travel Mode | # Car Spaces | # Spaces Used | Adj change in Travel Mode | # Car Spaces | # Spaces Used | Adj change in Travel Mode | # Car Spaces | # Spaces Used | Adj change in Travel Mode |
| TOTAL    | 1,181        | 980           | 201    | 1,181        | 1,045         | 18%                       | 1,181        | 1,113         | 12%                       | 1,181        | 1,187         | 9%                        | 1,181        | 1,265         | 21%                       |
| WEEKENDS |              |               |        |              |               |                           |              |               |                           |              |               |                           |              |               |                           |
| TOTAL    | 1,195        | 766           | 429    | 1,195        | 817           | 41%                       | 1,195        | 871           | 36%                       | 1,195        | 928           | 33%                       | 1,195        | 980           | 25%                       |

The projections show the overall parking supply exceeds the projected peak demand for the next 15 years and peak occupancy will exceed 85% (practical capacity) after 10 years.

As proposed in Section 6.6 below Council has the option of increasing supply by reviewing the current time restrictions bearing in mind the success of this strategy is reliant on an effective enforcement system. Also Council needs to be aware of the potential impact of displaced all day parkers spilling into surrounding residential streets if unrestricted all day parking is reduced.

As mentioned above this model considers Council controlled parking only and does not include available parking privately controlled (e.g. shopping centres etc.) which were outside the scope of our surveys.

## 6.6 Proposed Parking Strategies

Potential strategies Council could consider adopting to make better use of parking supply and/or constrain future parking demand are detailed in Attachment 6 and summarised below:

Table 17 - Proposed Strategies

| Strategy                               |  | Recommendation  |
|--|--|---|
| <b>Improve Use of Existing Supply</b>  | <i>The closer the parking supply is to the commercial hubs, the shorter the time restriction</i> | <ul style="list-style-type: none"> <li>Adopt a general principle that where occupancy exceeds 85% (practical capacity) on a consistent basis, consideration is given to changing time restrictions and/or implementing paid parking to manage parking demand</li> <li>Introduce time restrictions into the residential and industrial zones (Darley Street) adjoining commercial zone (e.g. 2P).</li> </ul> |
|  | <i>Shorter time restrictions on street vs off street.</i>  | <ul style="list-style-type: none"> <li>Consider converting off street car parks in the commercial zone (car parks A and B and Bungan Lane car park Levels 1 and 2) to 2P weekdays. The time restrictions will still be greater than on street (1P). Similarly 8P parking in the Bungan Lane car park could be converted to 3P parking.</li> </ul>   |
| <b>On Street User Group Allocation</b> | <i>Council to consider the needs and priorities of the various user groups to create a safe</i>  | <ul style="list-style-type: none"> <li>Work with the local schools to investigate alternative drop off /pick up zones (e.g. rear of Mona</li> </ul>   |

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| Strategy                            |  | Recommendation  |
|-------------------------------------|--|---|
|                                     | <i>environment and improve kerbside road efficiency whilst fostering a vibrant town centre environment.</i>                                  | Vale Primary site) and the efficient management of existing drop off/ pick up areas.  |
| <b>Signage and Wayfinding</b>       | <i>Install a town centre signage plan to direct parkers to available parking.</i>  | <ul style="list-style-type: none"> <li>• Develop a town centre signage plan to direct parkers to available parking to minimise circulating traffic (e.g. the Bungan Lane car park).</li> <li>• Consider dynamic signage as part of the signage plan.</li> </ul>   |
| <b>Encourage More Non Car Trips</b> | <i>Reduce car dependency particularly for local trips by providing incentives to use alternate modes of transport</i>                        | <ul style="list-style-type: none"> <li>• Consider car share schemes.</li> <li>• Incentivise employers to introduce car-pooling and/or public transport for staff</li> </ul>   |
|                                     | <i>Ensure a safe and accessible environment for pedestrians and cyclists</i>   | <ul style="list-style-type: none"> <li>• Install Bike racks.</li> <li>• Work with local schools and businesses to promote travel smart initiatives (e.g. car-pooling, walking and cycling to school, etc.)</li> </ul>   |
| <b>Planning</b>                     | <i>No new sites to be built unless there is a justifiable business case. Encourage reduced provision for sites close to public transport</i> | <ul style="list-style-type: none"> <li>• Develop overflow parking plans for peak periods. Potential sites for overflow parking on weekends include School parking.</li> <li>• Unbundle parking in new developments.</li> <li>• Reduce parking requirements for new developments, particularly those adjacent to public transport hubs – assess parking demand before creating parking.</li> </ul> |

It should be noted that the parking strategies listed above recommend the better use of the existing parking supply through changes to the parking restrictions and an expansion of the restrictions. This may need to be undertaken in conjunction with the PPW, which will likely result in a reduction in the on-street parking provision. The strategy would counteract some of this loss, however the construction of a new car park beneath Civic Square would accommodate approximately 120 parking spaces, which would more than compensate for the loss of on-street parking. Changes to the parking restrictions would be best made around the time of the completion of the car park and the PPW in order to transition from the current all-day parking availability (on the fringe of the Town Centre) to the car park.

In implementing any strategy Council would need to engage with key stakeholders such as the management of the private shopping centres to understand how changes in their parking controls could impact Council





controlled parking e.g. proposed introduction of license plate recognition cameras in Pittwater Place to enforce time restrictions.

### 6.7 Planning Control Parking Rates

The planning controls for the Town Centre set the requirements for development and as such are the means by which Council can implement its policies such as building heights, FSR and parking provisions. At present, Part B of the Pittwater DCP sets minimum parking requirements for developments, which means there is effectively no limit on the number of parking spaces provided within a development (within reason). Parking within new developments is often related to the market demand for parking, balanced with the cost of construction. Generally there is a trend for more parking rather than less where the market can support the construction cost.

In recent years some Councils have implemented limits on parking supply by applying the planning controls as maximum parking rates. This is typically implemented where there is good supporting public transport and services surrounding the site. For example, the City of Sydney adopts low parking provision maximum limits in light of the need to reduce car usage within the inner city, which is viable due to the density of services and the large choice of public transport options. Other Councils are increasingly adopting maximum parking rates (typically within Town Centres) to limit parking with the ultimate aim of reducing car ownership and usage.

The following table presents the current parking provision policies for multi-unit residential, office and retail developments within Pittwater, Warringah and Manly (specifically Manly Town Centre).

Table 18 - Development Parking Provision Policy Comparison

| Ref Document                              | Land Use Group  | Land Use Activity (Primary) | Rate type                         | Parking Provision Requirement |       |     |            |  |
|---|---|-----------------------------|-----------------------------------|-------------------------------|-------|-----|------------|--|
| Pittwater – DCP Part B – Version 21/11/15 |   |                             |                                   |                               |       |     |            |  |
| DCP Part B Ver 25/11/15                   | Multi Dwelling Housing, Residential Flat Buildings and Shop-Top Housing   | 1 bedroom                   | minimum                           | 1.0                           | space | per | dwelling   |  |
| DCP Part B Ver 25/11/15                   | Multi Dwelling Housing, Residential Flat Buildings and Shop-Top Housing   | 2 or more bedroom dwelling  | minimum                           | 2.0                           | space | per | dwelling   |  |
| DCP Part B Ver 25/11/15                   | Business Premises and Office Premises   |                             | Minimums                          | 2.5                           | space | per | 100sqm GLA |  |
| DCP Part B Ver 25/11/15                   | Retail Premises (Not including Shopping Centre Developments)  |                             | Minimums                          | 1.0                           | space | per | 30sqm GLA  |  |
| Warringah – DCP 2011 – Version 9/12/11    |   |                             |                                   |                               |       |     |            |  |
| DCP 2011 Ver 9/12/11                      | Multi Dwelling Housing, Residential Flat Buildings, Serviced Apartments (including holiday flats), Shop-Top Housing (residential component) | 1 bedroom                   | "Adequate Parking to be Provided" | 1.0                           | space | per | dwelling   |  |
| DCP 2011 Ver 9/12/11                      | Multi Dwelling Housing, Residential Flat Buildings, Serviced Apartments (including holiday flats), Shop-Top Housing (residential component) | 2 bedroom                   | "Adequate Parking to be Provided" | 1.2                           | space | per | dwelling   |  |
| DCP 2011                                  | Multi Dwelling Housing, Residential Flat  | 3 bedroom                   | "Adequate                         | 1.5                           | space | per | dwelling   |  |

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|  |   |                              |                                   |      |               |     |              |
|--|---|------------------------------|-----------------------------------|------|---------------|-----|--------------|
| <b>Ver 9/12/11</b>                                     | Buildings, Serviced Apartments (including holiday flats), Shop-Top Housing (residential component)  |                              | Parking to be Provided"           |      |               |     |              |
| <b>DCP 2011 Ver 9/12/11</b>                            | Multi Dwelling Housing, Residential Flat Buildings, Serviced Apartments (including holiday flats), Shop-Top Housing (residential component)                       |                              | "Adequate Parking to be Provided" | 1.0  | visitor space | per | 5 dwellings  |
| <b>DCP 2011 Ver 9/12/11</b>                            | Office Premises   |                              | "Adequate Parking to be Provided" | 1.0  | space         | per | 40 sqm GFA   |
| <b>DCP 2011 Ver 9/12/11</b>                            | Retail Shop (includes retail / business component of shop top housing, retail premises and neighbourhood shop)  |                              | "Adequate Parking to be Provided" | 6.1  | space         | per | 100 sqm GLFA |
| <b>Manly Town Centre – DCP 2013 – Version 12/12/15</b> |   |                              |                                   |      |               |     |              |
| <b>DCP 2013 Ver 12/12/15</b>                           | Residential Flat Buildings, Multi Dwelling Housing, Shop Top Housing, Attached Dwellings, Boarding Houses, Dual Occupancies, Group Homes, Hostels, Senior Housing | 1 bedroom dwelling or studio | Minimum                           | 0.6  | space         | per | dwelling     |
| <b>DCP 2013 Ver 12/12/15</b>                           | Residential Flat Buildings, Multi Dwelling Housing, Shop Top Housing, Attached Dwellings, Boarding Houses, Dual Occupancies, Group Homes, Hostels, Senior Housing | 2 bedroom dwelling           | Minimum                           | 1.0  | space         | per | dwelling     |
| <b>DCP 2013 Ver 12/12/15</b>                           | Residential Flat Buildings, Multi Dwelling Housing, Shop Top Housing, Attached Dwellings, Boarding Houses, Dual Occupancies, Group Homes, Hostels, Senior Housing | 3 or more bedroom dwelling   | Minimum                           | 2.0  | space         | per | dwelling     |
| <b>DCP 2013 Ver 12/12/15</b>                           | Residential Flat Buildings, Multi Dwelling Housing, Shop Top Housing, Attached Dwellings, Boarding Houses, Dual Occupancies, Group Homes, Hostels, Senior Housing |                              | Minimum                           | 0.16 | visitor space | per | dwelling     |

The comparison confirms that each planning control sets a minimum requirement (i.e. no limit on the provision) although the Manly DCP permits the lowest provision in light of the density of services and access by public transport. The Pittwater controls require the largest parking provision and this may in some part be due to the geographic location of the Town Centre on the northern part of the Northern Beaches Peninsular. This is also reflected in current car ownership data, courtesy of Profile.id "Analysis of car ownership in 2011, indicates 62% of households in Pittwater Council area had access to two or more motor vehicles, compared to 44% in Greater Sydney."

A simple comparison with the neighbouring Councils on the Peninsular indicate that a reduction in the minimum parking provisions could be implemented within the Town Centre. An alternative would be to convert the existing minimum rates to maximum rates, which limits the growth in parking provision as car ownership and provides developers with the option of providing less parking if this reflects the needs of the market. This is associated with housing affordability whereby a notable proportion of the market elect to not purchase a dwelling with a parking space. In conjunction with either reducing the minimum requires, or conversion to maximum rates, parking can be provided in an unbundled format, i.e. the dwellings and the parking spaces are purchased separately according to the wishes of the market. This is particularly relevant for 2 and 3 bedroom apartments, where under the current DCP, all purchasers are required to purchase 2 parking spaces regardless of need.



In relation to retail and commercial developments, the conversion of the DCP rates would not impact car ownership, but would encourage shoppers and workers to travel by alternative means, leaving the car at home. Those who have no viable transport alternative are reliant on the provision of on-street parking, which relates to the discussion in the sections above regarding the control of time limits on the road network.

Any reduction in private parking must be implemented in the context of the public parking surrounding the area. For example, the restriction of parking within a large residential development would place additional demand on the surrounding on-street parking supply if appropriate controls are not in place, or where the maximum parking policy is adopted in areas where there are insufficient alternative forms of transport and a reduction in car ownership cannot be supported. In the context of Mona Vale any restriction to the private parking provision will need to be determined in conjunction with an assessment of the on-street parking provision. This study has determined that the residential area in close proximity to the Town Centre is currently not subject to any parking restrictions, which potentially encourages car usage by commuters and future residents of the Town Centre (if a restricted parking policy is adopted).



## 7 Pedestrian Strategy

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As part of a package of studies being undertaken by Council in relation to the Place Planning project, Walk Mona Vale (Pedestrian Access & Mobility Plan for Mona Vale) has been prepared by Cardno for Council.



## 8 Cycling Strategy

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As part of a package of studies being undertaken by Council, Bike Pittwater (investigating cycling options for the Mona Vale Town Centre) has been developed by Council as part of the Active Travel Strategy.





## 9 Conclusion

### 9.1 Road Network Findings

- The operational capacity of the road network has been assessed through modelling, based on peak hour traffic surveys, traffic signal data and a simulation of the road layout and traffic controls. The model confirms that the existing road network operates within capacity during the daily peak periods and that there is spare capacity to accommodate future growth in traffic activity.
- The model tested a future scenario whereby the existing traffic activity was increased by 1% per annum (accumulatively) to 2021. This scenario confirms that the road network can accommodate this level of growth, although there are indications that certain intersections will require adjustments to the traffic signal timing or some physical works (primarily within the state roads).
- The proposed PPW were applied to the road network model to assess the impacts on the road network. The results indicate that the works can be undertaken with some relatively minor mitigate works required. The primary impact results from redirecting traffic along Darley Street, whereby the right turn movement from Barrenjoey Road generates a queue that extends beyond the existing right turn lane, which then blocks a southbound lane. This will likely require an adjustment to the traffic signal timing and an extension to the right turn lane. It is evident that natural traffic growth will require these changes regardless of the PPW.

### 9.2 Road Network Recommendations

- Continue to develop the PPW plan on the basis that the traffic modelling confirms that the road network will still operate with a good level of service, subject to some mitigating works being undertaken;
- Develop the proposal for a Shared Zone along Bungan Street and the adjacent lanes to the south including Bungan Lane between Mona Vale Road and Pittwater Road, which will improve pedestrian access to/from the Bungan Lane car park;
- Liaise with RMS and develop concept plans in relation to changes to the arterial roads, particularly the proposal to reduce the intersection of Pittwater Road and Barrenjoey Road;
- Develop a concept plan of the intersections of Pittwater Road with Bungan Street and Park Street in the context that the modelling has confirmed that the removal of the existing roundabout can be achieved in relation to road capacity.

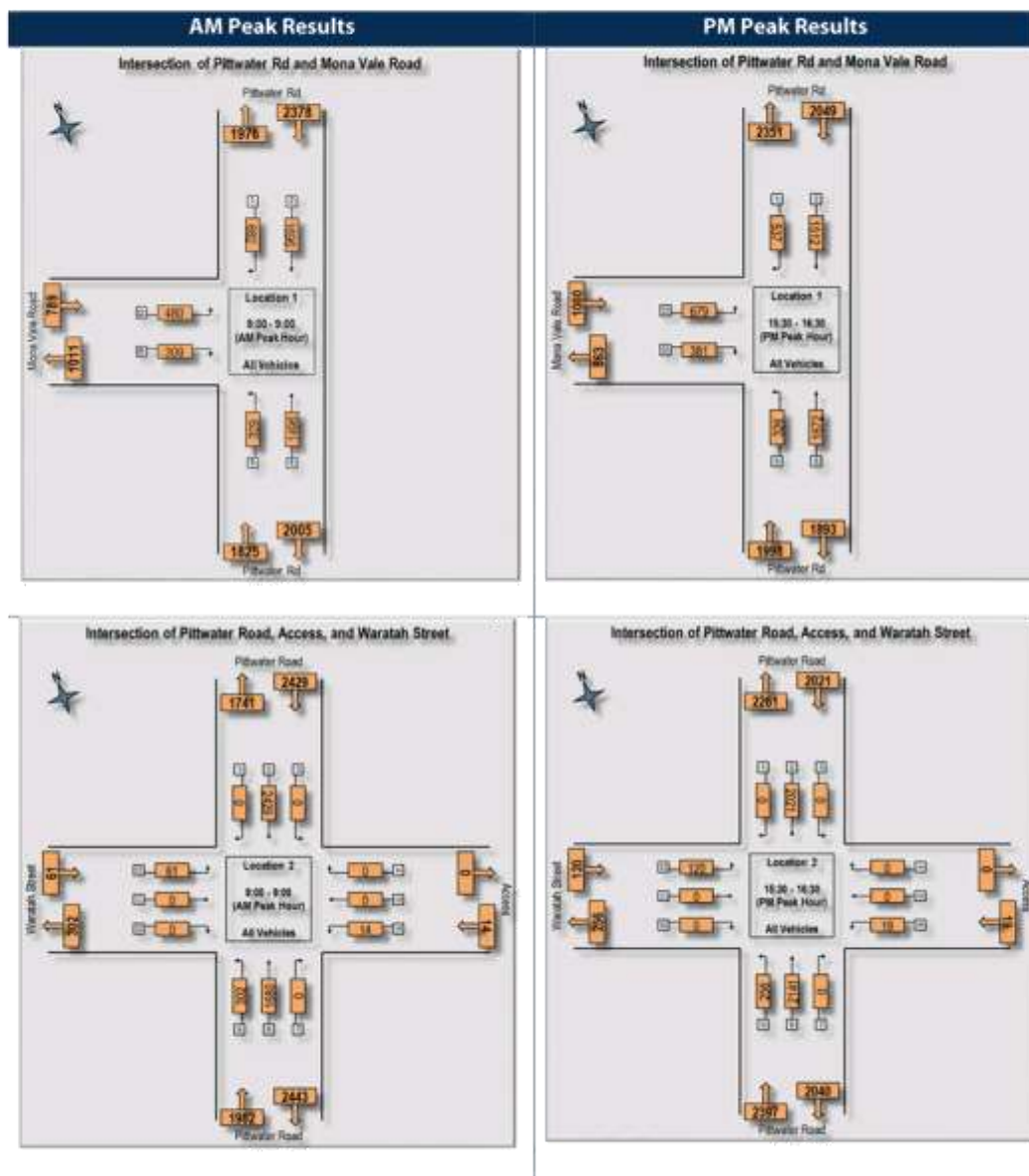
### 9.3 Parking Strategy Recommendations

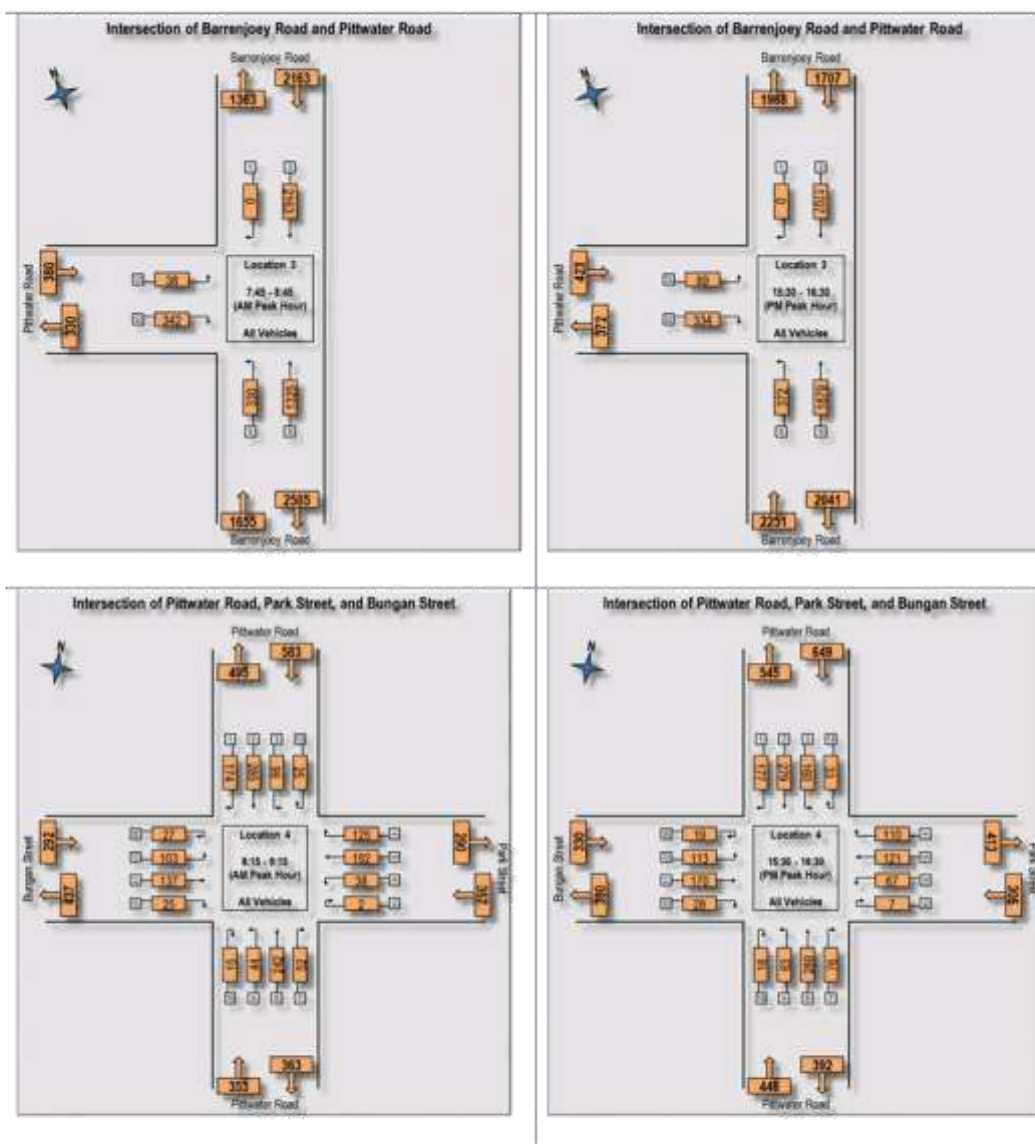
- Adopt a general principle that where occupancy exceeds 85% (practical capacity) on a consistent basis, consideration is given to changing time restrictions and/or implementing paid parking to manage parking demand;
- Introduce time restrictions into the residential and industrial zones (Darley Street) adjoining commercial zone (e.g. 2P);
- Consider converting off street car parks in the commercial zone (car parks A and B and Bungan Lane car park Levels 1 and 2) to 2P weekdays;
- The time restrictions will still be greater than on street (1P);



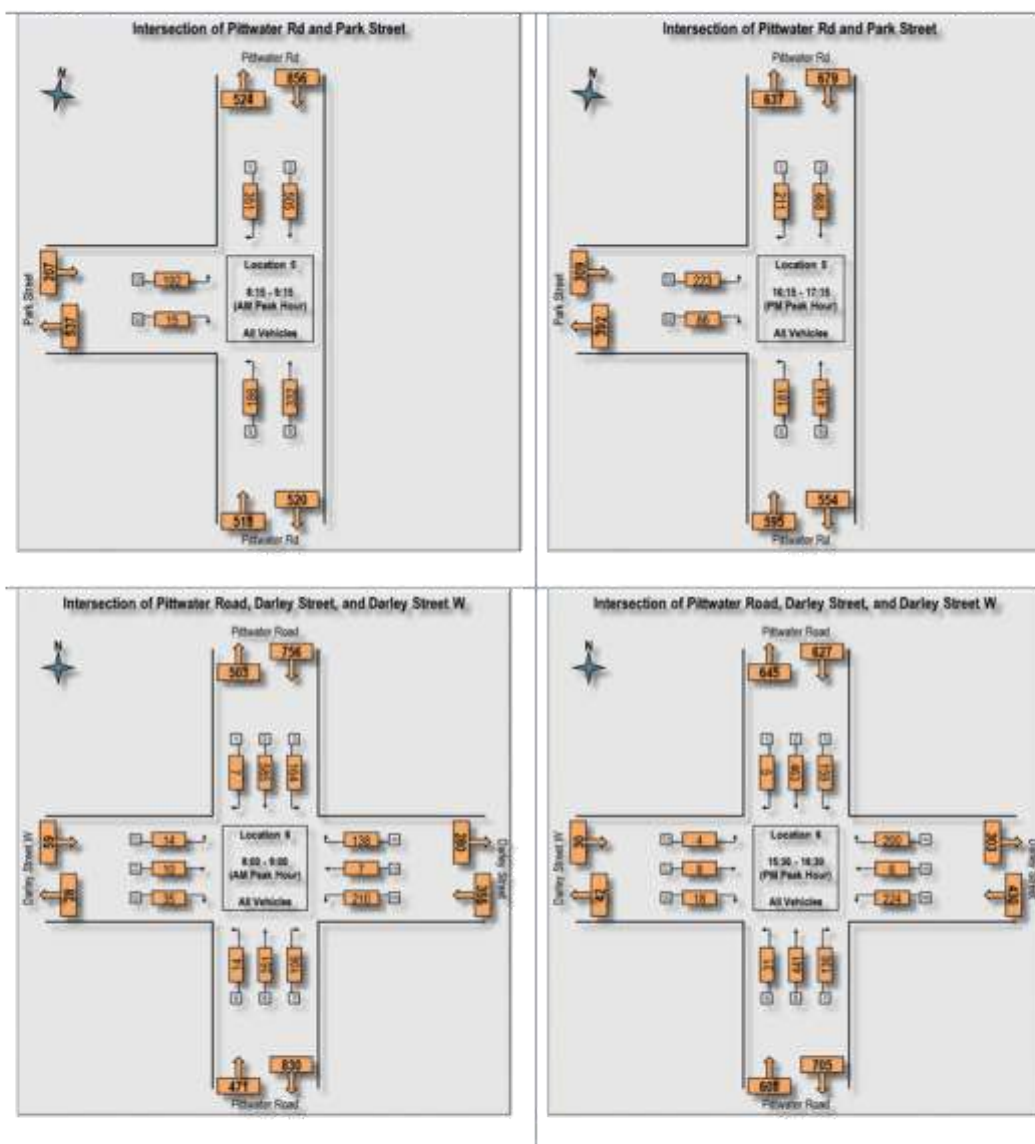
- Similarly 8P parking in the Bungan Lane car park could be converted to 3P parking;
- Consider either a reduction in the current parking requirements for developments, or the conversion of the existing rates to maximum limits, rather than minimum requirements;
- Work with the local schools to investigate alternative drop off /pick up zones (e.g. rear of Mona Vale Primary site) and the efficient management of existing drop off/ pick up areas;
- Develop a town centre signage plan to direct parkers to available parking to minimise circulating traffic (e.g. the Bungan Lane car park);
- Consider dynamic signage as part of the signage plan;
- Consider encouraging car share schemes through the provision of 'pods' in lieu of on-street parking spaces;
- Incentivise employers to introduce car-pooling and/or public transport for staff;
- Install Bike racks within strategic locations and in close proximity to major destinations (e.g. the front door of supermarkets or within the eat-street areas once established);
- Work with local schools and businesses to promote travel smart initiatives (e.g. car-pooling, walking and cycling to school, etc.);
- Develop overflow parking plans for peak periods. Potential sites for overflow parking on weekends include School parking;
- Unbundle parking in new developments;
- Reduce parking requirements for new developments, particularly those adjacent to public transport hubs – assess parking demand before creating parking.

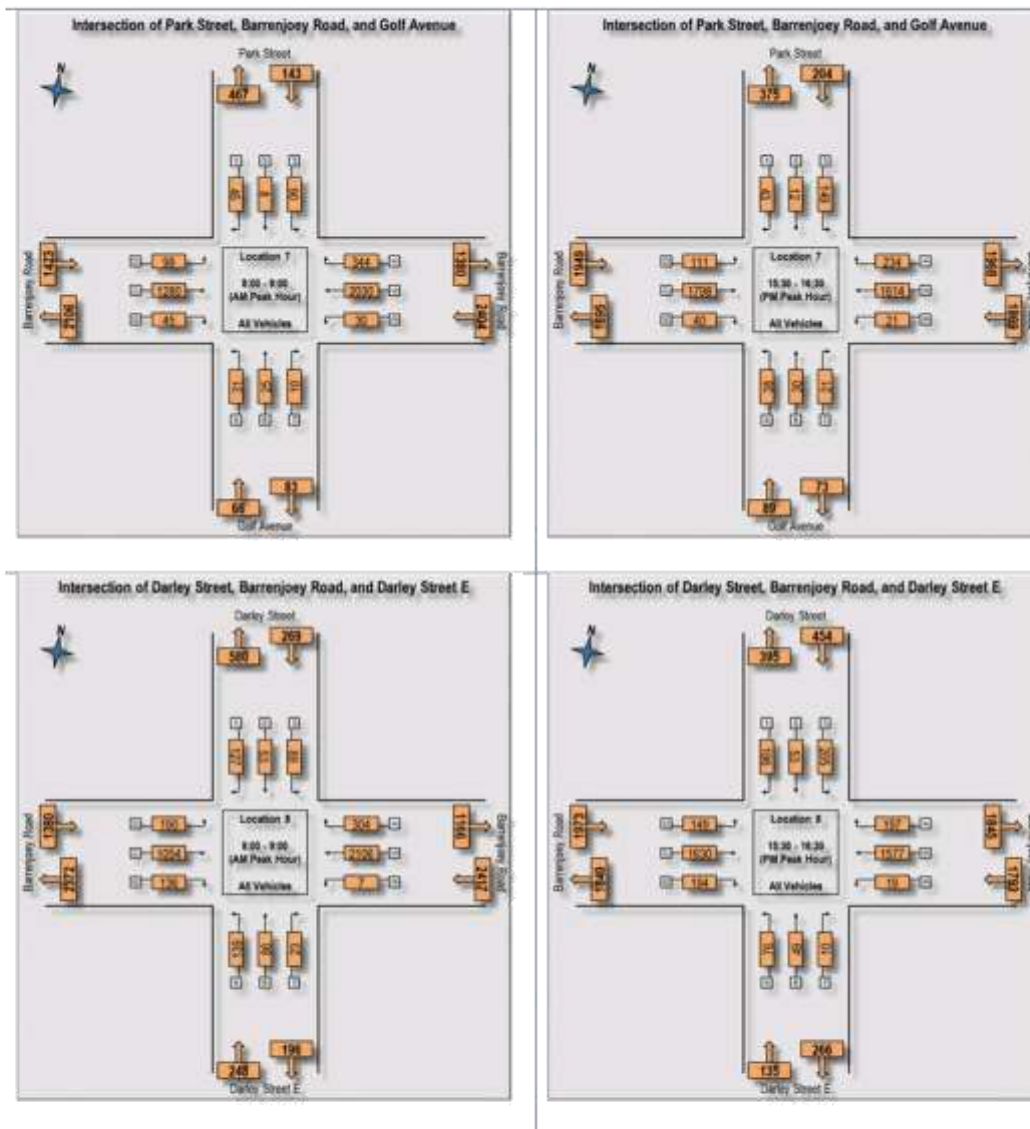
## Attachment 1 - Intersection Traffic Survey Results

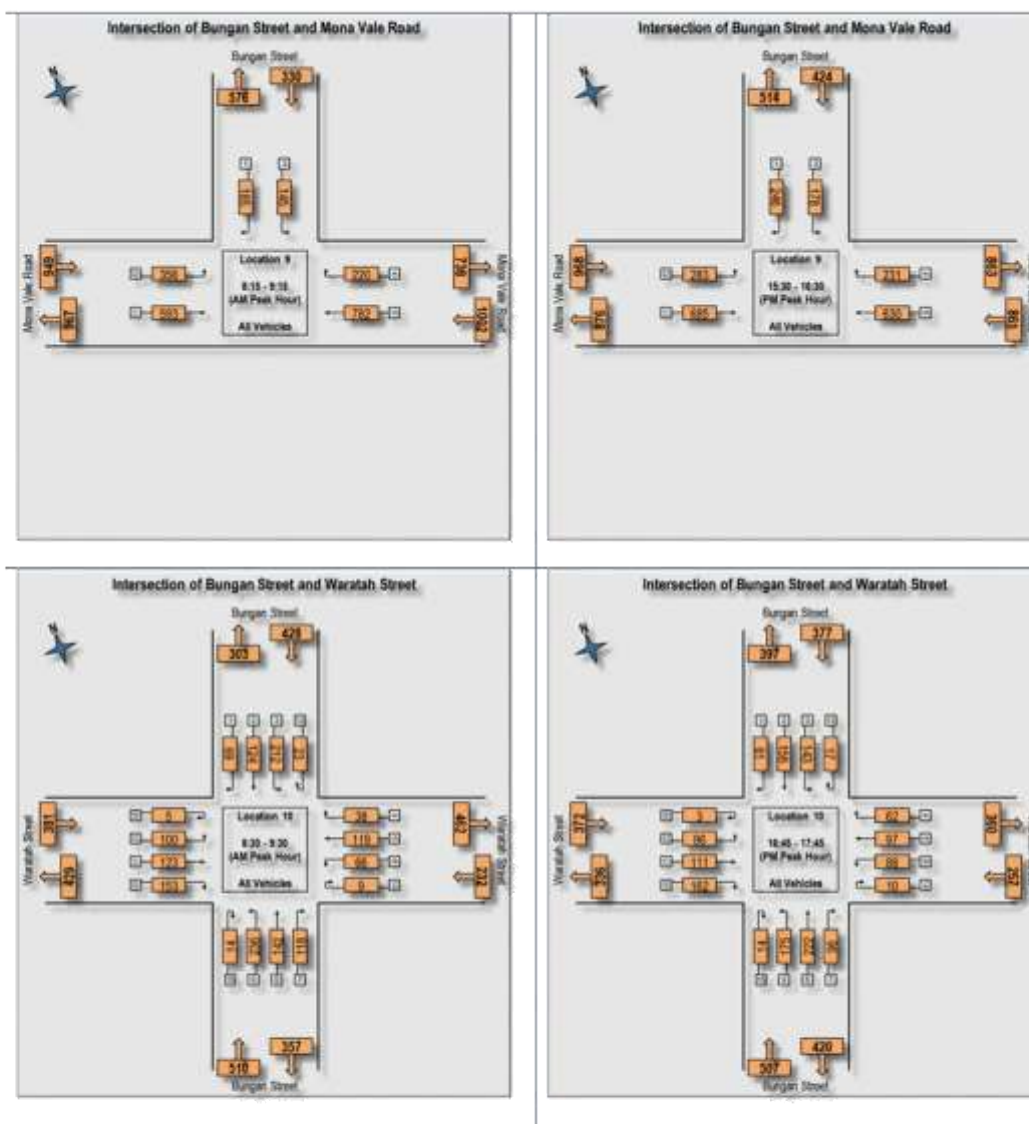


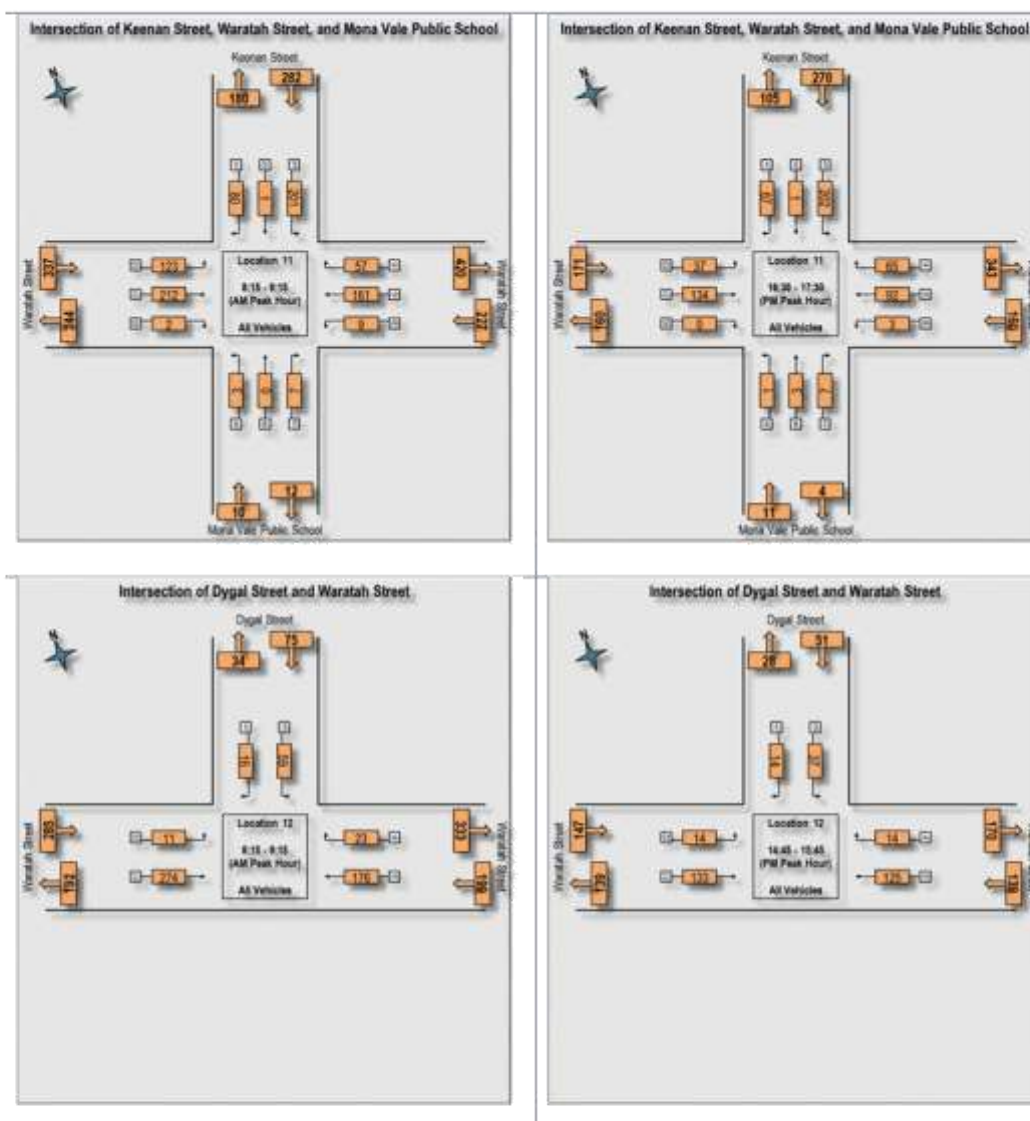




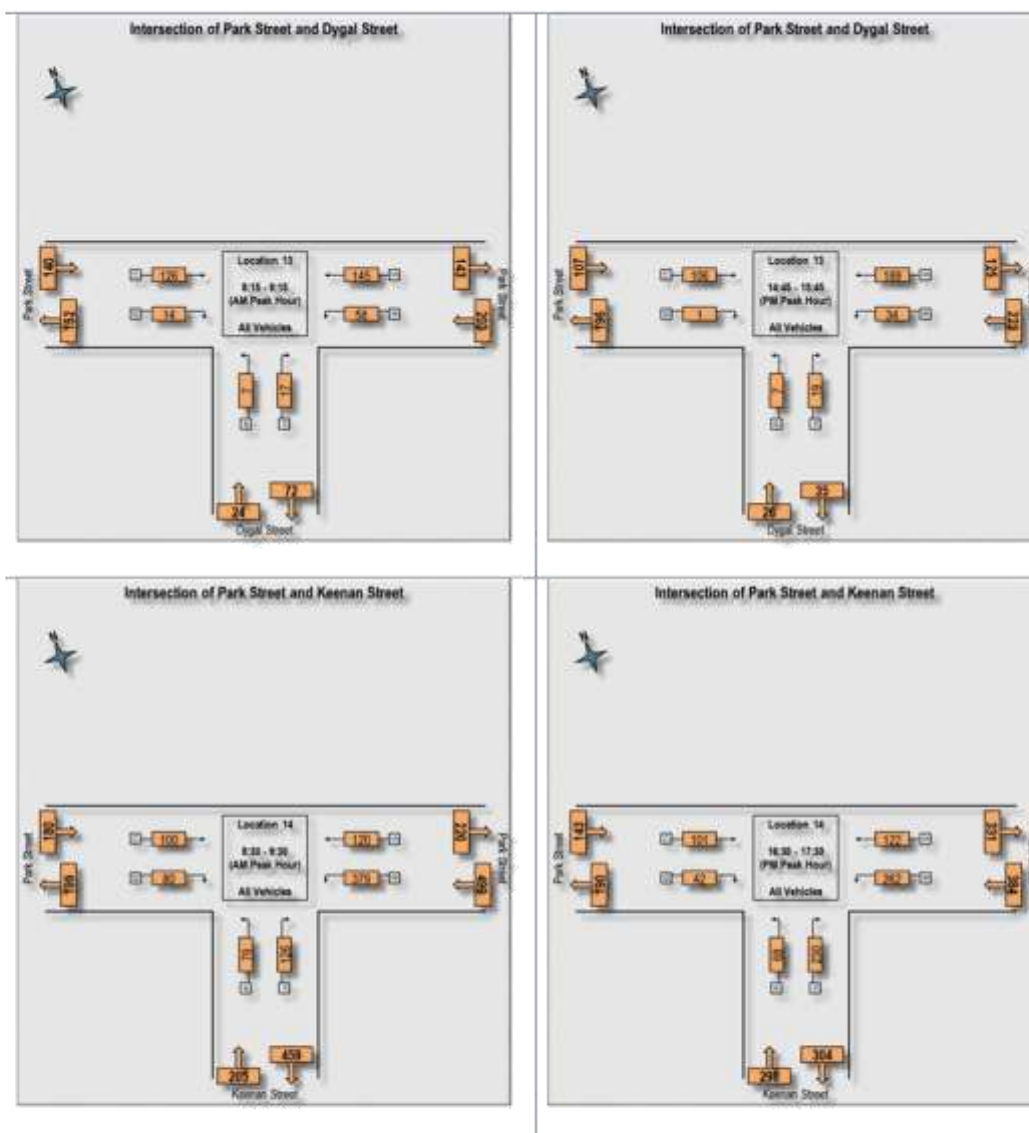














## Attachment 2 - Automated Counter Results

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Summary - Matrix Data Tables / Graphical Presentation

#### Parking and Traffic Consultants

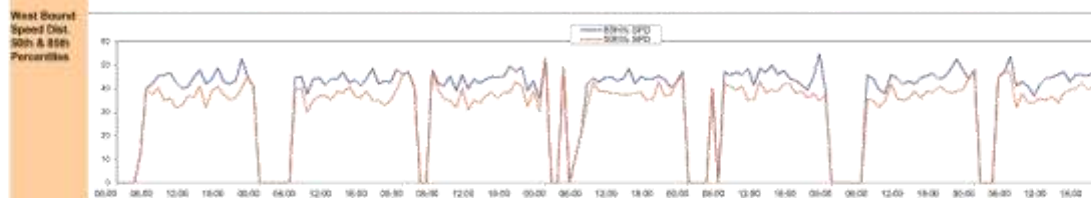
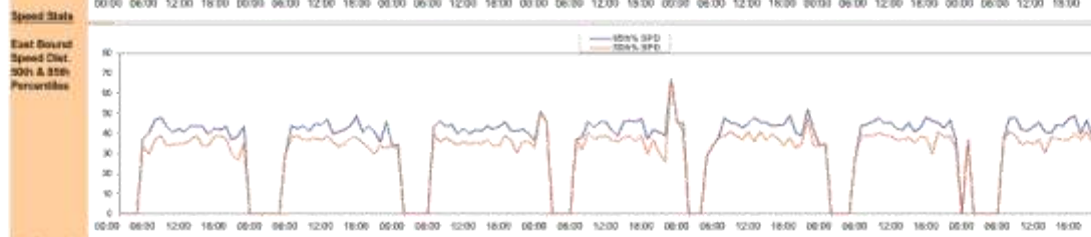
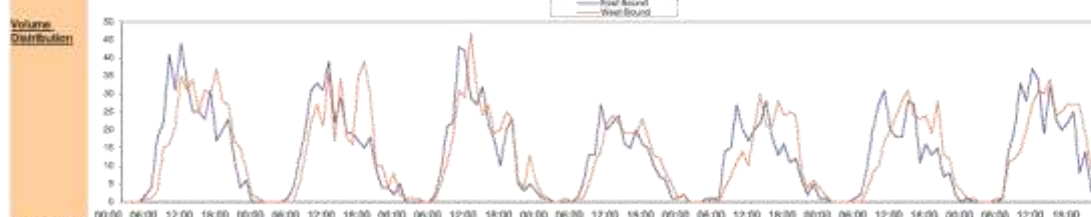
Ref: 7001 - 2 - Cowley Street W. west of Pitt

Darley Street W west of Pittwater Road

|         |         |
|---------|---------|
| Saturn  | Monriva |
| Shield  | 2       |
| Speed 1 | 40      |

|         |      |
|---------|------|
| Job     | 7081 |
| Man Ref |      |

| Date Report        | Thursday 22/10/2015 |       |       | Friday 23/10/2015 |       |       | Saturday 24/10/2015 |       |       | Sunday 25/10/2015 |       |       | Monday 26/10/2015 |       |       | Tuesday 27/10/2015 |       |       | Wednesday 28/10/2015 |       |       |       |
|--------------------|---------------------|-------|-------|-------------------|-------|-------|---------------------|-------|-------|-------------------|-------|-------|-------------------|-------|-------|--------------------|-------|-------|----------------------|-------|-------|-------|
| Report Name        | 50                  | 100   | 150   | 50                | 100   | 150   | 50                  | 100   | 150   | 50                | 100   | 150   | 50                | 100   | 150   | 50                 | 100   | 150   | 50                   | 100   | 150   |       |
| Start              | %                   | 95%   | 98%   | 96%               | 96%   | 95%   | 97%                 | 97%   | 98%   | 97%               | 96%   | 96%   | 95%               | 97%   | 97%   | 94%                | 96%   | 96%   | 93%                  | 96%   | 96%   |       |
| End                | %                   | 7%    | 2%    | 2%                | 2%    | 2%    | 0%                  | 1%    | 1%    | 1%                | 1%    | 1%    | 2%                | 2%    | 2%    | 5%                 | 2%    | 2%    | 1%                   | 1%    | 1%    |       |
| 200%               | %                   | 0%    | 0%    | 0%                | 0%    | 0%    | 0%                  | 0%    | 0%    | 0%                | 0%    | 0%    | 0%                | 0%    | 0%    | 0%                 | 0%    | 0%    | 0%                   | 0%    | 0%    |       |
| Item-Vol           | Vol                 | 335   | 330   | 665               | 293   | 328   | 801                 | 308   | 306   | 614               | 211   | 209   | 423               | 219   | 236   | 455                | 244   | 256   | 600                  | 301   | 298   | 599   |
| Item-Vol           | Vol                 | 381   | 379   | 760               | 334   | 347   | 681                 | 336   | 346   | 692               | 235   | 241   | 478               | 251   | 268   | 516                | 274   | 299   | 697                  | 341   | 347   | 699   |
| Include            | Vol                 | 43.9  | 45.3  | 44.0              | 44.9  | 44.7  | 44.3                | 44.0  | 45.5  | 44.0              | 45.0  | 45.5  | 48.0              | 47.0  | 46.0  | 46.0               | 45.5  | 46.5  | 44.7                 | 46.3  | 45.5  | 45.0  |
| Item-Spl           | Vol                 | 36.9  | 36.9  | 36.4              | 36.5  | 37.1  | 36.9                | 36.2  | 36.4  | 36.3              | 37.4  | 36.3  | 37.9              | 38.0  | 38.9  | 38.9               | 38.2  | 38.0  | 38.1                 | 36.6  | 37.3  | 37.0  |
| Item-Den           | Vol                 | 9.0   | 9.2   | 9.1               | 9.1   | 8.2   | 8.7                 | 7.5   | 9.2   | 8.6               | 8.9   | 8.4   | 8.5               | 9.1   | 8.8   | 9.0                | 8.7   | 8.2   | 8.5                  | 9.6   | 9.9   | 9.8   |
| AM-PK Interval Vol | Vol                 | 44    | 35    | 79                | 39    | 56    | 75                  | 43    | 47    | 78                | 27    | 24    | 46                | 27    | 21    | 41                 | 31    | 24    | 46                   | 37    | 31    | 65    |
| AM-PK Factor       | Vol                 | 0.12  | 0.09  | 0.10              | 0.12  | 0.10  | 0.11                | 0.13  | 0.14  | 0.11              | 0.11  | 0.10  | 0.15              | 0.11  | 0.08  | 0.08               | 0.11  | 0.08  | 0.09                 | 0.11  | 0.09  | 0.06  |
| AM-PK 10%          | Vol                 | 42.4  | 42.5  | 43.0              | 42.7  | 41.5  | 44.8                | 40.0  | 40.0  | 40.5              | 45.0  | 45.0  | 45.5              | 44.9  | 41.6  | 45.7               | 45.0  | 44.4  | 44.0                 | 43.5  | 42.1  | 44.3  |
| AM-PK 5%           | Vol                 | 10.00 | 10.00 | 10.00             | 11.00 | 11.00 | 11.00               | 09.00 | 11.00 | 11.00             | 09.00 | 11.00 | 11.00             | 08.00 | 11.00 | 11.00              | 09.00 | 11.00 | 09.00                | 10.00 | 11.00 | 11.00 |
| PM-PK Interval Vol | Vol                 | 31    | 37    | 51                | 25    | 39    | 63                  | 32    | 30    | 59                | 24    | 23    | 46                | 28    | 30    | 52                 | 28    | 31    | 59                   | 32    | 34    | 66    |
| PM-PK Factor       | Vol                 | 0.08  | 0.10  | 0.08              | 0.09  | 0.11  | 0.09                | 0.10  | 0.09  | 0.09              | 0.10  | 0.10  | 0.15              | 0.11  | 0.11  | 0.10               | 0.10  | 0.11  | 0.10                 | 0.09  | 0.10  | 0.06  |
| PM-PK 10%          | Vol                 | 38.7  | 44.0  | 41.0              | 41.5  | 41.7  | 43.0                | 41.2  | 44.0  | 44.0              | 38.0  | 45.1  | 42.5              | 45.4  | 48.5  | 48.0               | 45.4  | 43.4  | 44.3                 | 40.2  | 44.9  | 43.0  |
| PM-PK 5%           | Vol                 | 15.00 | 16.00 | 15.00             | 12.00 | 12.00 | 13.00               | 12.00 | 12.00 | 12.00             | 12.00 | 12.00 | 12.00             | 13.00 | 12.00 | 13.00              | 12.00 | 13.00 | 12.00                | 13.00 | 13.00 | 13.00 |

[illegible]

|           |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Price Min | 29.0 | 30.0 | 30.0 | 33.5 | 30.0 | 50.0 | 29.0 | 31.0 | 29.0 | 28.0 | 32.0 | 31.0 | 31.0 | 32.0 | 33.0 | 32.0 | 31.0 | 31.0 | 30.0 | 33.0 | 30.0 |
| Actual    | 71%  | 69%  | 69%  | 71%  | 75%  | 73%  | 73%  | 68%  | 69%  | 69%  | 73%  | 70%  | 71%  | 73%  | 72%  | 70%  | 72%  | 71%  | 70%  | 68%  | 68%  |

### Definition

85th Percentile Speed = The speed at or below which 85% of volume is observed to travel

15mph Pace Speed = The 15mph speed range within which the largest percentage of volume is observed to travel

Unless otherwise stated all summary information is relevant to a 24 hour day  
Data, Speed/Class Overview

Copeia, 1983(2): 124-127, 1980

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Summary - Matrix Data Tabular / Graphical Presentation

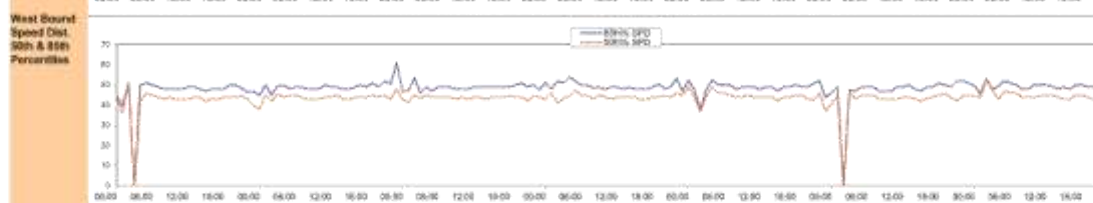
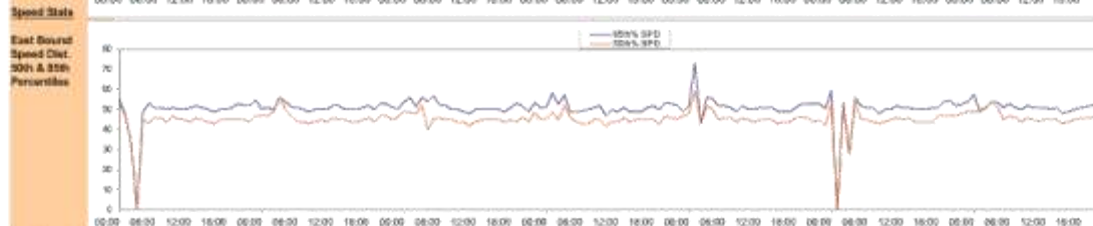
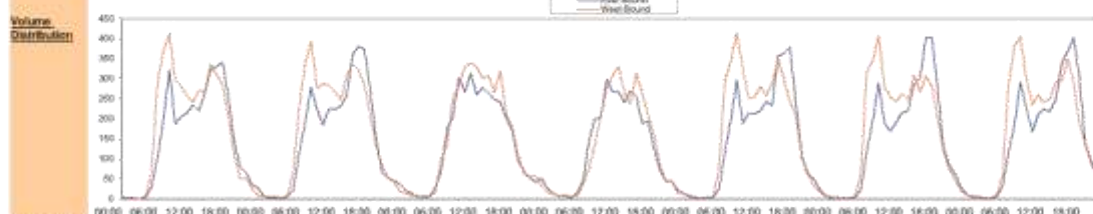
Parking and Traffic Consultants

Ref: 7061 - 1 - Cabbage Tree Road west of

### Cabbage Tree Road west of Pittwater Road

Suburb: Mona Vale  
Site: 1  
Speed Limit: 50  
Job: 7061  
Map Ref:

| Date Record:   | Thursday 22/10/2015 | Friday 23/10/2015 | Saturday 24/10/2015 | Sunday 25/10/2015 | Monday 26/10/2015 | Tuesday 27/10/2015 | Wednesday 28/10/2015 |
|----------------|---------------------|-------------------|---------------------|-------------------|-------------------|--------------------|----------------------|
| Interval (min) | 50                  | 50                | 50                  | 50                | 50                | 50                 | 50                   |
| Start          | 90%                 | 90%               | 90%                 | 90%               | 90%               | 90%                | 90%                  |
| Med            | 4%                  | 2%                | 3%                  | 3%                | 1%                | 2%                 | 3%                   |
| Long           | 0%                  | 0%                | 0%                  | 0%                | 0%                | 0%                 | 0%                   |
| Flow (m)       | 3597                | 3537              | 6634                | 3209              | 3564              | 6773               | 2836                 |
| Flow (m)       | 3502                | 4151              | 7743                | 3713              | 4225              | 7938               | 3388                 |
| Flow (m)       | 50.2                | 48.0              | 49.0                | 51.0              | 49.0              | 50.0               | 50.0                 |
| Flow (m)       | 44.8                | 44.2              | 44.5                | 44.8              | 44.4              | 44.6               | 44.2                 |
| Flow (m)       | 6.6                 | 5.2               | 5.9                 | 6.7               | 5.4               | 6.0                | 7.0                  |
| Flow (m)       | 322                 | 415               | 735                 | 279               | 383               | 672                | 314                  |
| Flow (m)       | 0.09                | 0.10              | 0.09                | 0.08              | 0.09              | 0.08               | 0.09                 |
| Flow (m)       | 50.0                | 48.0              | 48.0                | 49.0              | 48.0              | 48.0               | 48.0                 |
| Flow (m)       | 56.00               | 08.00             | 08.00               | 08.00             | 08.00             | 08.00              | 11.00                |
| Flow (m)       | 341                 | 337               | 660                 | 381               | 338               | 704                | 275                  |
| Flow (m)       | 0.09                | 0.08              | 0.09                | 0.10              | 0.08              | 0.09               | 0.08                 |
| Flow (m)       | 50.0                | 47.0              | 48.0                | 50.0              | 49.0              | 49.0               | 50.0                 |
| Flow (m)       | 17.00               | 15.00             | 15.00               | 16.00             | 15.00             | 16.00              | 13.00                |



| Category          | 3,407 | 4,023 | 7,430 | 3,529 | 4,077 | 7,586 | 3,231 | 3,630 | 6,061 | 2,823 | 3,001 | 5,824 | 3,382 | 4,656 | 7,368 | 3,388 | 3,503 | 7,331 | 3,478 | 4,055 | 7,533 |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1: Car/Motorcycle | 25    | 31    | 56    | 39    | 42    | 81    | 47    | 42    | 89    | 48    | 55    | 103   | 31    | 30    | 61    | 22    | 25    | 47    | 38    | 28    | 64    |
| 2: Car + Trailer  | 150   | 89    | 239   | 154   | 98    | 252   | 96    | 50    | 146   | 69    | 23    | 82    | 156   | 86    | 242   | 172   | 107   | 279   | 161   | 89    | 250   |
| 3: 2 axle truck   | 4     | 6     | 10    | 3     | 5     | 8     | 4     | 2     | 6     | 0     | 0     | 0     | 2     | 7     | 9     | 0     | 6     | 6     | 3     | 2     | 5     |
| 4: 3 axle truck   | 2     | 1     | 3     | 0     | 2     | 2     | 7     | 3     | 10    | 15    | 0     | 15    | 5     | 4     | 9     | 4     | 2     | 6     | 4     | 1     | 5     |
| 5: 4 axle truck   | 1     | 0     | 1     | 3     | 0     | 3     | 3     | 1     | 4     | 4     | 1     | 5     | 0     | 0     | 0     | 1     | 0     | 1     | 5     | 0     | 5     |
| 6: 5 axle truck   | 1     | 1     | 2     | 1     | 0     | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 1     | 0     | 1     | 0     | 1     | 1     | 1     | 0     | 1     |
| 7: 6 axle truck   | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 1     | 0     | 1     | 0     | 0     | 0     | 0     | 0     | 0     |
| 8: 7 axle truck   | 1     | 0     | 1     | 1     | 0     | 1     | 1     | 0     | 1     | 4     | 0     | 4     | 0     | 1     | 1     | 0     | 0     | 0     | 3     | 1     | 4     |
| 9: 8 axle truck   | 0     | 0     | 0     | 1     | 0     | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     |
| 10: 9 axle truck  | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     |
| 11: Road Train    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     |
| 12: Road Train    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     |
| 13: Unknown       | 1     | 0     | 1     | 2     | 1     | 3     | 9     | 2     | 11    | 5     | 2     | 7     | 2     | 0     | 2     | 2     | 0     | 2     | 4     | 0     | 4     |
| 14: Unknown       | 27    | 56    | 85    | 36    | 48    | 84    | 95    | 67    | 162   | 112   | 54    | 166   | 46    | 43    | 89    | 29    | 40    | 89    | 39    | 47    | 86    |
| Unspecified       | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     |

| Price Min | 38.0 | 38.0 | 37.0 | 37.5 | 36.0 | 37.0 | 37.0 | 37.0 | 37.0 | 38.0 | 36.0 | 37.0 | 37.0 | 37.0 | 37.0 | 37.0 | 37.0 | 37.0 | 38.0 | 37.0 | 37.0 |
|-----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| %Vol      | 81%  | 92%  | 80%  | 80%  | 89%  | 85%  | 87%  | 88%  | 84%  | 79%  | 89%  | 84%  | 81%  | 89%  | 80%  | 82%  | 90%  | 86%  | 82%  | 89%  | 80%  |

Definitions  
85th Percentile Speed = The speed at or below which 85% of volume is observed to travel  
15th Percentile Speed = The 15th speed range within which the largest percentage of volume is observed to travel

Unless otherwise stated all summary information is relevant to a 24 hour day  
Date, Speed Class Overview

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Summary - Matrix Data Tables / Graphical Presentation

#### Parking and Traffic Consultants

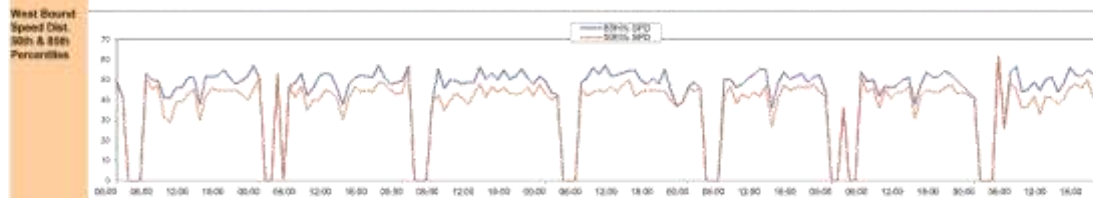
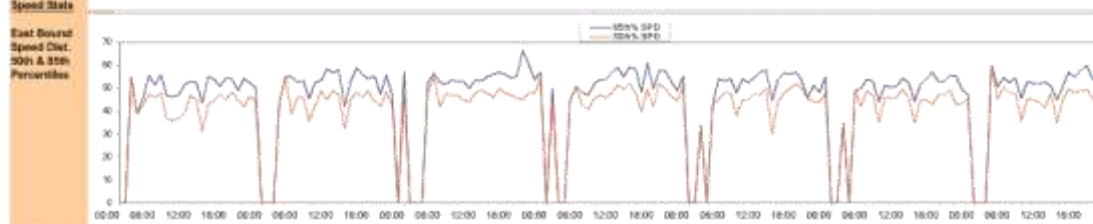
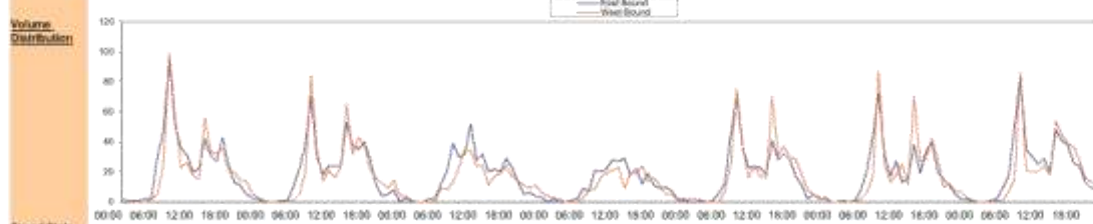
Ref: 7001 - 5 - Eureka Street west of Oliver

## Emma Street west of Oliver Way

|               |            |
|---------------|------------|
| Saturb        | Monte Vaso |
| Sited         | 5          |
| Speed / level | 80         |

|         |      |
|---------|------|
| Job     | 7081 |
| Man Ref |      |

| Date Report      | Thursday 22/10/2015 |         |       |                  |       |         | Friday 23/10/2015 |                  |       |         |       |                  | Saturday 24/10/2015 |         |       |                  |       |         | Sunday 25/10/2015 |                  |       |         |       |                  | Monday 26/10/2015 |         |     |                  |     |         | Tuesday 27/10/2015 |  |  |  |  |  | Wednesday 28/10/2015 |  |  |  |  |  |
|------------------|---------------------|---------|-------|------------------|-------|---------|-------------------|------------------|-------|---------|-------|------------------|---------------------|---------|-------|------------------|-------|---------|-------------------|------------------|-------|---------|-------|------------------|-------------------|---------|-----|------------------|-----|---------|--------------------|--|--|--|--|--|----------------------|--|--|--|--|--|
| Referral (total) | SO                  | not met | met   | Referral (total) | SO    | not met | met               | Referral (total) | SO    | not met | met   | Referral (total) | SO                  | not met | met   | Referral (total) | SO    | not met | met               | Referral (total) | SO    | not met | met   | Referral (total) | SO                | not met | met | Referral (total) | SO  | not met | met                |  |  |  |  |  |                      |  |  |  |  |  |
| SBart            | %                   | 96%     | 98%   | 96%              | 96%   | 99%     | 98%               | 98%              | 97%   | 98%     | 98%   | 98%              | 100%                | 100%    | 98%   | 98%              | 98%   | 98%     | 98%               | 96%              | 98%   | 95%     | 96%   | 98%              | 95%               | 96%     | 97% | 97%              | 98% | 97%     |                    |  |  |  |  |  |                      |  |  |  |  |  |
| Red              | %                   | 0%      | 0%    | 0%               | 2%    | 1%      | 1%                | 1%               | 2%    | 0%      | 0%    | 0%               | 0%                  | 0%      | 0%    | 2%               | 2%    | 2%      | 2%                | 2%               | 2%    | 2%      | 2%    | 2%               | 2%                | 2%      | 2%  | 2%               | 2%  | 2%      |                    |  |  |  |  |  |                      |  |  |  |  |  |
| 0000             | %                   | 0%      | 0%    | 0%               | 0%    | 0%      | 0%                | 0%               | 0%    | 0%      | 0%    | 0%               | 0%                  | 0%      | 0%    | 0%               | 0%    | 0%      | 0%                | 0%               | 0%    | 0%      | 0%    | 0%               | 0%                | 0%      | 0%  | 0%               | 0%  | 0%      |                    |  |  |  |  |  |                      |  |  |  |  |  |
| Ten-7pm          | Vis                 | 470     | 440   | 910              | 422   | 410     | 832               | 348              | 348   | 587     | 236   | 197              | 433                 | 385     | 405   | 790              | 370   | 391     | 761               | 449              | 407   | 856     | 868   |                  |                   |         |     |                  |     |         |                    |  |  |  |  |  |                      |  |  |  |  |  |
| 10am-12pm        | Vis                 | 541     | 507   | 1048             | 494   | 473     | 967               | 389              | 315   | 714     | 380   | 252              | 512                 | 428     | 453   | 881              | 435   | 439     | 874               | 517              | 466   | 983     | 983   |                  |                   |         |     |                  |     |         |                    |  |  |  |  |  |                      |  |  |  |  |  |
| 12pm-2pm         | Vis                 | 520     | 490   | 510              | 534   | 500     | 620               | 650              | 620   | 540     | 980   | 530              | 950                 | 540     | 500   | 530              | 530   | 490     | 510               | 540              | 510   | 530     | 530   |                  |                   |         |     |                  |     |         |                    |  |  |  |  |  |                      |  |  |  |  |  |
| 2pm-5pm          | Vis                 | 41.8    | 38.3  | 40.1             | 44.0  | 40.7    | 42.4              | 47.0             | 43.9  | 45.6    | 48.1  | 46.2             | 47.3                | 44.8    | 41.3  | 43.0             | 43.3  | 41.1    | 42.2              | 44.2             | 41.5  | 43.0    | 43.0  |                  |                   |         |     |                  |     |         |                    |  |  |  |  |  |                      |  |  |  |  |  |
| Week End         | Vis                 | 10.8    | 11.5  | 11.2             | 10.8  | 11.1    | 11.1              | 9.3              | 9.5   | 9.5     | 8.9   | 8.9              | 8.9                 | 10.3    | 10.1  | 9.1              | 9.1   | 8.5     | 8.6               | 10.6             | 10.3  | 10.5    | 10.5  |                  |                   |         |     |                  |     |         |                    |  |  |  |  |  |                      |  |  |  |  |  |
| AM-PK Interval   | Vis                 | 95      | 99    | 194              | 70    | 84      | 154               | 62               | 35    | 98      | 28    | 21               | 49                  | 71      | 75    | 146              | 72    | 87      | 159               | 83               | 95    | 168     | 168   |                  |                   |         |     |                  |     |         |                    |  |  |  |  |  |                      |  |  |  |  |  |
| AM-PK Tactile    | Vis                 | 0.18    | 0.20  | 0.19             | 0.14  | 0.18    | 0.16              | 0.13             | 0.11  | 0.12    | 0.10  | 0.09             | 0.16                | 0.17    | 0.17  | 0.17             | 0.17  | 0.18    | 0.20              | 0.19             | 0.16  | 0.18    | 0.17  |                  |                   |         |     |                  |     |         |                    |  |  |  |  |  |                      |  |  |  |  |  |
| AM-PK 10%        | Vis                 | 46.8    | 41.2  | 44.9             | 45.5  | 42.4    | 44.0              | 50.0             | 48.0  | 60.0    | 66.8  | 51.9             | 54.7                | 48.0    | 48.5  | 48.0             | 44.2  | 42.0    | 44.0              | 46.7             | 44.5  | 44.0    | 44.0  |                  |                   |         |     |                  |     |         |                    |  |  |  |  |  |                      |  |  |  |  |  |
| AM-PK 5%         | Vis                 | 56.00   | 08.00 | 08.00            | 08.00 | 08.00   | 08.00             | 11.00            | 10.00 | 11.00   | 11.00 | 11.00            | 11.00               | 08.00   | 08.00 | 08.00            | 08.00 | 08.00   | 08.00             | 08.00            | 08.00 | 08.00   | 08.00 |                  |                   |         |     |                  |     |         |                    |  |  |  |  |  |                      |  |  |  |  |  |
| PM-PK Interval   | Vis                 | 43      | 36    | 79               | 53    | 62      | 116               | 32               | 24    | 55      | 19    | 24               | 50                  | 41      | 70    | 111              | 40    | 70      | 108               | 48               | 54    | 102     | 102   |                  |                   |         |     |                  |     |         |                    |  |  |  |  |  |                      |  |  |  |  |  |
| PM-PK Tactile    | Vis                 | 0.08    | 0.11  | 0.09             | 0.11  | 0.14    | 0.12              | 0.08             | 0.08  | 0.08    | 0.10  | 0.10             | 0.10                | 0.10    | 0.15  | 0.13             | 0.09  | 0.16    | 0.12              | 0.09             | 0.12  | 0.10    | 0.10  |                  |                   |         |     |                  |     |         |                    |  |  |  |  |  |                      |  |  |  |  |  |
| PM-PK 10%        | Vis                 | 51.0    | 38.0  | 40.3             | 42.8  | 38.0    | 41.0              | 53.2             | 48.8  | 55.2    | 55.0  | 50.0             | 35.5                | 44.7    | 38.0  | 38.0             | 57.0  | 38.0    | 41.0              | 45.0             | 44.0  | 44.7    | 44.7  |                  |                   |         |     |                  |     |         |                    |  |  |  |  |  |                      |  |  |  |  |  |
| PM-PK 5%         | Vis                 | 13.00   | 14.00 | 14.00            | 14.00 | 14.00   | 14.00             | 13.00            | 13.00 | 13.00   | 13.00 | 13.00            | 13.00               | 14.00   | 14.00 | 14.00            | 13.00 | 14.00   | 14.00             | 14.00            | 14.00 | 14.00   | 14.00 |                  |                   |         |     |                  |     |         |                    |  |  |  |  |  |                      |  |  |  |  |  |

[illegible]

|           |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Price Min | 99.0 | 34.0 | 34.0 | 38.5 | 35.0 | 38.0 | 42.0 | 38.0 | 38.0 | 41.0 | 36.0 | 40.5 | 40.0 | 36.0 | 36.0 | 38.0 | 34.0 | 36.0 | 40.0 | 38.0 | 38.0 |
| Actual    | 55%  | 55%  | 54%  | 60%  | 59%  | 58%  | 67%  | 68%  | 67%  | 64%  | 72%  | 67%  | 59%  | 62%  | 59%  | 61%  | 65%  | 61%  | 66%  | 59%  | 57%  |

### Definition

85th Percentile Speed = The speed at or below which 85% of volume is observed to travel

15mph Pace Speed = The 15mph speed range within which the largest percentage of volume is observed to travel

Unless otherwise stated all summary information is relevant to a 24 hour day  
Data, Speed/Class Overview

Copeia, 1983, 26(4):25-26, 24-27, 290

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Summary - Matrix Data Tabular / Graphical Presentation

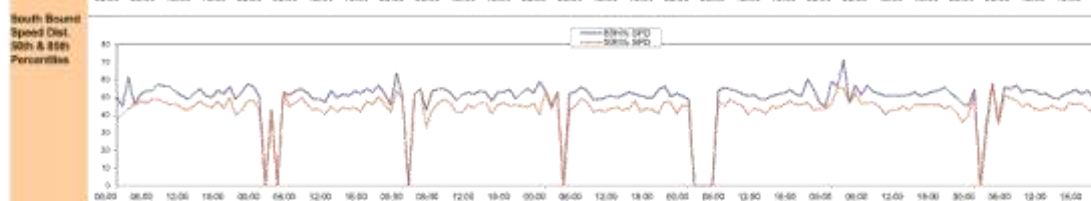
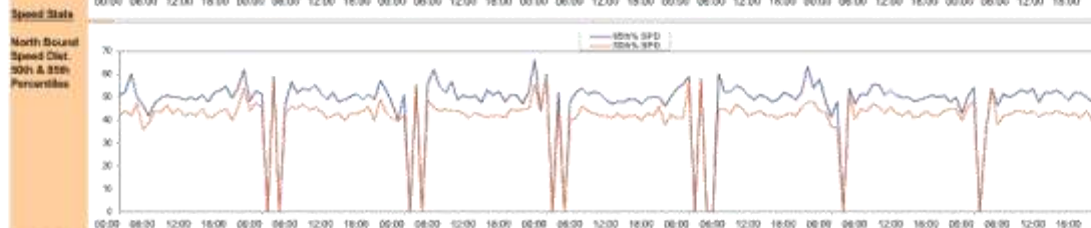
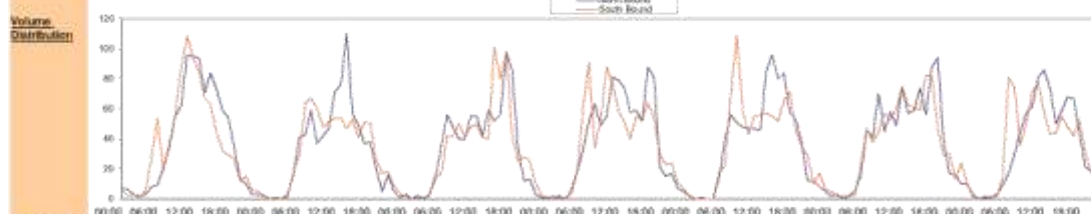
Parking and Traffic Consultants

Ref: 7001 - 7 - Golf Avenue south of Barrenjoey Road

### Golf Avenue south of Barrenjoey Road

Suburb: Mona Vale  
Shed: 7  
Speed Limit: 50  
Job: 7001  
Map Ref:

| Date Record     | Sunday 25/10/2015 |       |       |       | Monday 26/10/2015 |       |       |       | Tuesday 27/10/2015 |       |       |       | Wednesday 28/10/2015 |       |       |       | Thursday 29/10/2015 |       |       |       | Friday 30/10/2015 |       |       |       | Saturday 31/10/2015 |  |  |  |
|-----------------|-------------------|-------|-------|-------|-------------------|-------|-------|-------|--------------------|-------|-------|-------|----------------------|-------|-------|-------|---------------------|-------|-------|-------|-------------------|-------|-------|-------|---------------------|--|--|--|
| Interval (min): | 50                | 50    | 50    | 50    | 50                | 50    | 50    | 50    | 50                 | 50    | 50    | 50    | 50                   | 50    | 50    | 50    | 50                  | 50    | 50    | 50    | 50                | 50    | 50    | 50    |                     |  |  |  |
| Start           | 0%                | 0%    | 0%    | 0%    | 0%                | 0%    | 0%    | 0%    | 0%                 | 0%    | 0%    | 0%    | 0%                   | 0%    | 0%    | 0%    | 0%                  | 0%    | 0%    | 0%    | 0%                | 0%    | 0%    | 0%    |                     |  |  |  |
| End             | 1%                | 1%    | 1%    | 1%    | 1%                | 1%    | 1%    | 1%    | 1%                 | 1%    | 1%    | 1%    | 1%                   | 1%    | 1%    | 1%    | 1%                  | 1%    | 1%    | 1%    | 1%                | 1%    | 1%    | 1%    |                     |  |  |  |
| Long            | 0%                | 0%    | 0%    | 0%    | 0%                | 0%    | 0%    | 0%    | 0%                 | 0%    | 0%    | 0%    | 0%                   | 0%    | 0%    | 0%    | 0%                  | 0%    | 0%    | 0%    | 0%                | 0%    | 0%    | 0%    |                     |  |  |  |
| Flow (m)        | 799               | 722   | 1521  | 668   | 641               | 1307  | 667   | 677   | 1564               | 791   | 719   | 1510  | 750                  | 737   | 1487  | 765   | 721                 | 1486  | 723   | 693   | 1376              | 667   | 677   | 1564  |                     |  |  |  |
| Flow (m)        | 900               | 885   | 1785  | 776   | 765               | 1541  | 806   | 805   | 1611               | 914   | 903   | 1817  | 880                  | 875   | 1755  | 931   | 911                 | 1842  | 869   | 854   | 1723              | 806   | 805   | 1611  |                     |  |  |  |
| Flow (m)        | 51.0              | 53.3  | 52.0  | 52.0  | 53.0              | 53.0  | 51.0  | 53.0  | 52.0               | 50.0  | 53.0  | 51.5  | 52.0                 | 53.0  | 52.0  | 51.0  | 53.0                | 52.0  | 52.0  | 53.9  | 53.0              | 51.0  | 53.0  | 52.0  |                     |  |  |  |
| Flow (m)        | 43.4              | 45.6  | 44.8  | 43.2  | 44.5              | 43.8  | 43.4  | 44.5  | 43.9               | 42.2  | 44.0  | 43.1  | 43.3                 | 44.7  | 44.0  | 43.5  | 44.4                | 43.9  | 43.2  | 45.3  | 45.3              | 43.7  | 44.5  | 44.2  |                     |  |  |  |
| Flow (m)        | 8.9               | 9.0   | 9.0   | 9.3   | 9.7               | 9.5   | 9.2   | 10.3  | 9.8                | 9.0   | 9.4   | 9.3   | 9.6                  | 9.7   | 9.7   | 8.9   | 9.6                 | 9.3   | 9.7   | 9.7   | 9.8               | 8.7   | 9.5   | 9.8   |                     |  |  |  |
| Flow (m)        | 96                | 106   | 204   | 69    | 67                | 128   | 96    | 50    | 103                | 81    | 91    | 158   | 66                   | 109   | 160   | 70    | 60                  | 115   | 81    | 81    | 159               | 66    | 50    | 103   |                     |  |  |  |
| Flow (m)        | 0.11              | 0.12  | 0.11  | 0.08  | 0.09              | 0.08  | 0.07  | 0.06  | 0.06               | 0.09  | 0.10  | 0.09  | 0.06                 | 0.12  | 0.09  | 0.08  | 0.07                | 0.08  | 0.09  | 0.09  | 0.09              | 0.06  | 0.07  | 0.08  |                     |  |  |  |
| Flow (m)        | 49.0              | 51.0  | 51.0  | 53.0  | 53.0              | 53.0  | 52.0  | 48.5  | 51.0               | 47.0  | 54.0  | 49.0  | 52.6                 | 54.0  | 54.0  | 55.5  | 51.0                | 54.0  | 47.9  | 55.0  | 50.0              | 49.0  | 51.0  | 51.0  |                     |  |  |  |
| Flow (m)        | 11.00             | 11.00 | 11.00 | 08.00 | 08.00             | 08.00 | 07.00 | 09.00 | 11.00              | 11.00 | 07.00 | 11.00 | 07.00                | 08.00 | 08.00 | 08.00 | 11.00               | 08.00 | 11.00 | 06.00 | 11.00             | 06.00 | 11.00 | 06.00 |                     |  |  |  |
| Flow (m)        | 95                | 95    | 150   | 115   | 54                | 157   | 98    | 101   | 106                | 85    | 64    | 152   | 96                   | 71    | 151   | 94    | 82                  | 170   | 86    | 58    | 144               | 95    | 95    | 150   |                     |  |  |  |
| Flow (m)        | 0.11              | 0.11  | 0.11  | 0.14  | 0.07              | 0.10  | 0.12  | 0.13  | 0.12               | 0.10  | 0.07  | 0.08  | 0.11                 | 0.08  | 0.09  | 0.10  | 0.09                | 0.09  | 0.10  | 0.07  | 0.08              | 0.07  | 0.08  | 0.10  |                     |  |  |  |
| Flow (m)        | 50.0              | 49.0  | 50.0  | 49.0  | 54.0              | 49.0  | 48.0  | 46.0  | 52.0               | 49.8  | 50.0  | 50.0  | 48.0                 | 54.4  | 50.0  | 50.0  | 52.0                | 53.0  | 52.1  | 52.3  | 52.4              | 50.0  | 49.0  | 50.0  |                     |  |  |  |
| Flow (m)        | 12.00             | 12.00 | 12.00 | 14.00 | 12.00             | 14.00 | 17.00 | 15.00 | 17.00              | 17.00 | 17.00 | 17.00 | 14.00                | 17.00 | 14.00 | 18.00 | 16.00               | 17.00 | 12.00 | 12.00 | 12.00             | 12.00 | 12.00 | 12.00 |                     |  |  |  |



| Category          | 882 | 878 | 1,770 | 744 | 729 | 1,473 | 782 | 775 | 1,557 | 878 | 869 | 1,747 | 854 | 842 | 1,696 | 898 | 877 | 1,775 | 860 | 845 | 1,705 |
|-------------------|-----|-----|-------|-----|-----|-------|-----|-----|-------|-----|-----|-------|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| 1: Car/Motorcycle | 2   | 1   | 3     | 0   | 1   | 1     | 0   | 0   | 0     | 2   | 2   | 4     | 1   | 2   | 3     | 1   | 1   | 2     | 1   | 0   | 1     |
| 2: Car + Trailer  | 2   | 3   | 5     | 27  | 29  | 56    | 20  | 24  | 44    | 23  | 20  | 43    | 15  | 20  | 35    | 17  | 19  | 36    | 6   | 8   | 14    |
| 3: 2 axle truck   | 2   | 1   | 3     | 4   | 3   | 7     | 4   | 2   | 6     | 8   | 9   | 17    | 7   | 8   | 15    | 13  | 14  | 27    | 1   | 1   | 2     |
| 4: 3 axle truck   | 1   | 1   | 2     | 0   | 0   | 0     | 0   | 2   | 2     | 1   | 2   | 3     | 1   | 1   | 2     | 2   | 0   | 2     | 1   | 0   | 1     |
| 5: 4 axle truck   | 0   | 0   | 0     | 0   | 1   | 1     | 0   | 0   | 0     | 0   | 1   | 1     | 0   | 0   | 0     | 0   | 0   | 0     | 0   | 0   | 0     |
| 6: 5 axle truck   | 0   | 0   | 0     | 1   | 1   | 2     | 0   | 0   | 0     | 0   | 0   | 0     | 0   | 0   | 0     | 0   | 0   | 0     | 0   | 0   | 0     |
| 7: 6 axle truck   | 0   | 0   | 0     | 0   | 0   | 0     | 0   | 0   | 0     | 0   | 0   | 0     | 1   | 1   | 2     | 0   | 0   | 0     | 0   | 0   | 0     |
| 8: 7/8 axle truck | 0   | 0   | 0     | 0   | 0   | 0     | 0   | 2   | 2     | 0   | 0   | 0     | 0   | 0   | 0     | 0   | 0   | 0     | 0   | 0   | 0     |
| 9: Road Train     | 0   | 0   | 0     | 0   | 0   | 0     | 0   | 0   | 0     | 0   | 0   | 0     | 0   | 0   | 0     | 0   | 0   | 0     | 0   | 0   | 0     |
| 10: Road Train    | 0   | 0   | 0     | 0   | 0   | 0     | 0   | 0   | 0     | 0   | 0   | 0     | 0   | 0   | 0     | 0   | 0   | 0     | 0   | 0   | 0     |
| 11: Unknown       | 1   | 1   | 2     | 9   | 1   | 1     | 0   | 0   | 0     | 2   | 0   | 0     | 0   | 0   | 0     | 0   | 0   | 0     | 0   | 0   | 0     |
| 12: Unknown       | 12  | 13  | 25    | 3   | 4   | 7     | 7   | 6   | 13    | 1   | 4   | 5     | 7   | 13  | 20    | 6   | 6   | 12    | 9   | 8   | 17    |
| Unspecified       | 17  | 9   | 26    | 8   | 5   | 13    | 3   | 1   | 4     | 5   | 3   | 8     | 14  | 6   | 20    | 13  | 7   | 28    | 16  | 6   | 22    |

| Price Min | 36.0 | 40.0 | 38.0 | 37.5 | 38.0 | 39.0 | 36.0 | 38.0 | 38.0 | 34.0 | 39.0 | 37.0 | 37.0 | 39.0 | 38.0 | 36.0 | 38.0 | 37.0 | 36.0 | 40.0 | 37.0 |
|-----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| %Vol      | 71%  | 70%  | 69%  | 69%  | 69%  | 66%  | 69%  | 67%  | 67%  | 68%  | 68%  | 67%  | 65%  | 65%  | 66%  | 69%  | 67%  | 67%  | 68%  | 70%  | 69%  |

Definitions  
85th Percentile Speed = The speed at or below which 85% of volume is observed to travel  
15th Percentile Speed = The 15th speed range within which the largest percentage of volume is observed to travel

Unless otherwise stated all summary information is relevant to a 24 hour day  
Date, Speed Class Overview

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Summary - Matrix Data Tabular / Graphical Presentation

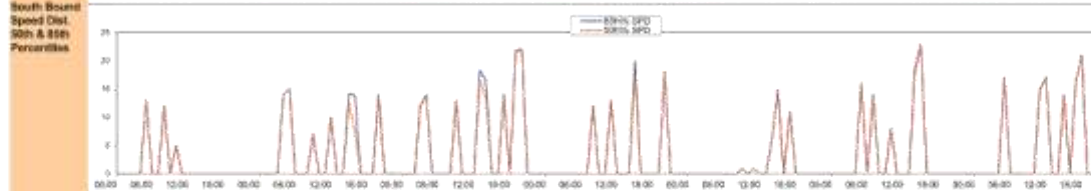
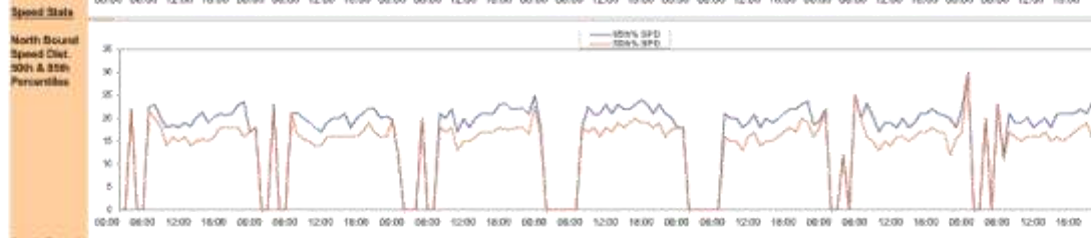
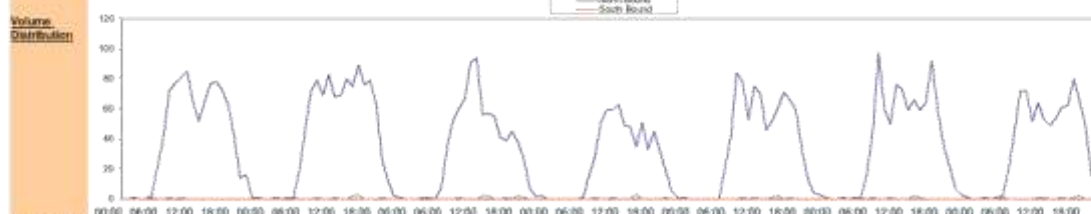
Parking and Traffic Consultants

Ref: 7001 - B - Akuna Lane north of Waratah

### Akuna Lane north of Waratah Street

Suburb: Mona Vale  
Shed: 8  
Speed Limit: 40  
Job: 7001  
Map Ref:

| Date Record:    | Thursday 22/10/2015 | Friday 23/10/2015 | Saturday 24/10/2015 | Sunday 25/10/2015 | Monday 26/10/2015 | Tuesday 27/10/2015 | Wednesday 28/10/2015 |
|-----------------|---------------------|-------------------|---------------------|-------------------|-------------------|--------------------|----------------------|
| Interval (min): | 50 min              | 50 min            | 50 min              | 50 min            | 50 min            | 50 min             | 50 min               |
| Start           | 05:00               | 05:00             | 05:00               | 05:00             | 05:00             | 05:00              | 05:00                |
| End             | 18:00               | 18:00             | 18:00               | 18:00             | 18:00             | 18:00              | 18:00                |
| Long            | 0%                  | 0%                | 0%                  | 0%                | 0%                | 0%                 | 0%                   |
| Flow (m/s)      | 627                 | 629               | 698                 | 692               | 698               | 756                | 799                  |
| Flow (m/s)      | 924                 | 927               | 1011                | 775               | 11                | 831                | 887                  |
| Flow (m/s)      | 20.0                | 11.8              | 20.0                | 21.0              | 21.4              | 21.0               | 20.0                 |
| Flow (m/s)      | 16.6                | 10.4              | 16.6                | 17.0              | 16.7              | 16.6               | 16.4                 |
| Flow (m/s)      | 4.3                 | 3.6               | 4.3                 | 4.4               | 4.2               | 4.3                | 4.2                  |
| Flow (m/s)      | 85                  | 1                 | 83                  | 91                | 1                 | 84                 | 97                   |
| Flow (m/s)      | 0.09                | 0.33              | 0.09                | 0.12              | 0.09              | 0.10               | 0.11                 |
| Flow (m/s)      | 15.0                | 13.0              | 19.0                | 18.0              | 12.0              | 20.0               | 17.0                 |
| Flow (m/s)      | 11.00               | 05.00             | 11.00               | 11.00             | 03.00             | 11.00              | 08.00                |
| Flow (m/s)      | 75                  | 0                 | 75                  | 89                | 3                 | 63                 | 71                   |
| Flow (m/s)      | 0.08                | 0.00              | 0.08                | 0.09              | 0.30              | 0.10               | 0.09                 |
| Flow (m/s)      | 20.3                | 20.3              | 20.0                | 20.0              | 20.0              | 21.0               | 21.0                 |
| Flow (m/s)      | 16.00               | 16.00             | 16.00               | 16.00             | 16.00             | 16.00              | 16.00                |



| Vehicle Type      | 85th | 95th | 85th | 95th | 85th | 95th | 85th | 95th | 85th | 95th | 85th | 95th | 85th | 95th | 85th | 95th |
|-------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1. Car/Motorcycle | 859  | 2    | 861  | 861  | 7    | 869  | 744  | 10   | 754  | 573  | 6    | 579  | 783  | 6    | 789  | 844  |
| 2. Car + Trailer  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 3. 2 axle truck   | 57   | 1    | 58   | 46   | 1    | 47   | 26   | 1    | 27   | 20   | 0    | 20   | 44   | 0    | 44   | 36   |
| 4. 3 axle truck   | 1    | 0    | 1    | 2    | 2    | 4    | 1    | 0    | 1    | 0    | 0    | 0    | 2    | 0    | 2    | 0    |
| 5. 4 axle truck   | 0    | 0    | 0    | 0    | 0    | 0    | 1    | 0    | 1    | 0    | 0    | 0    | 0    | 0    | 0    | 1    |
| 6. 5 axle truck   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 7. 6 axle truck   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 8. 7 axle truck   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 9. 8 axle truck   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 10. 9 axle truck  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 11. Road Train    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 12. Road Train    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 13. Unknown       | 7    | 0    | 7    | 2    | 0    | 2    | 3    | 0    | 3    | 2    | 0    | 2    | 4    | 0    | 4    | 4    |
| 14. Unknown       | 13   | 0    | 13   | 21   | 6    | 27   | 20   | 9    | 29   | 7    | 4    | 11   | 16   | 6    | 22   | 13   |
| Unspecified       | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |

| Price Min | 9.0 | -    | 9.0 | 8.0 | -    | 8.0 | 8.0 | 7.0  | 8.0 | 10.0 | 6.0  | 10.0 | 9.0 | -    | 9.0 | 8.0 | 8.0  |
|-----------|-----|------|-----|-----|------|-----|-----|------|-----|------|------|------|-----|------|-----|-----|------|
| %Vol      | 94% | 100% | 94% | 94% | 100% | 94% | 83% | 100% | 80% | 94%  | 100% | 95%  | 94% | 100% | 94% | 94% | 100% |

Definitions  
85th Percentile Speed = The speed at or below which 85% of volume is observed to travel  
15th Percentile Speed = The 15th speed range within which the largest percentage of volume is observed to travel

Unless otherwise stated all summary information is relevant to a 24 hour day  
Date, Speed Class Overview

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Summary - Matrix Data Tables / Graphical Presentation

#### Parking and Traffic Consultants

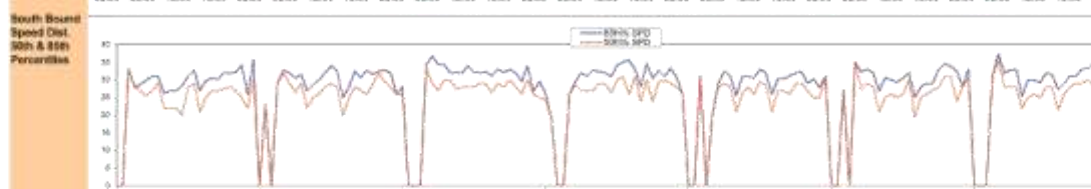
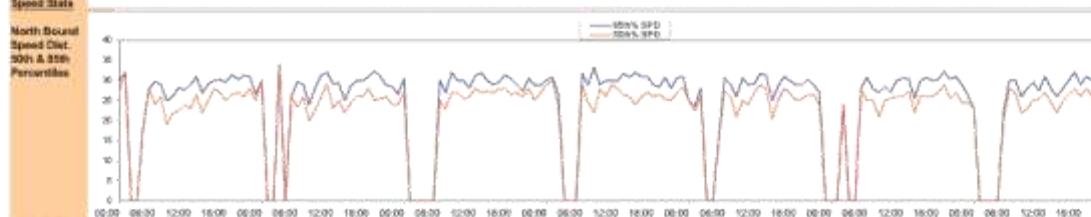
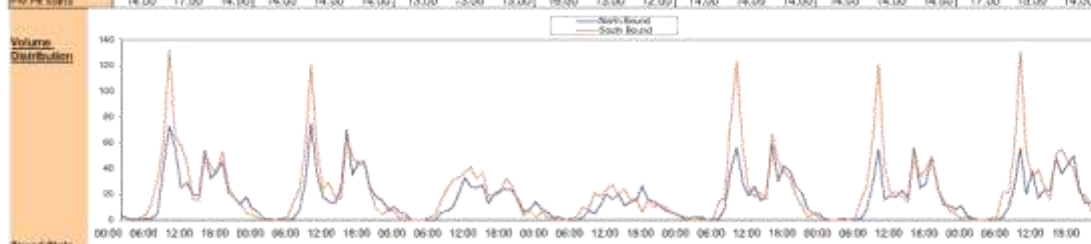
Ref: 7001 - 6 - Oliver Way south of Emma's

Oliver Way south of Emma Street

|            |             |
|------------|-------------|
| Saturn     | Monte Carlo |
| Silver     | 8           |
| Speed 1000 | 40          |

|         |      |
|---------|------|
| Job     | 7061 |
| Man Ref |      |

| Date/Event        | Thursday 22/10/2015 |       |       | Friday 23/10/2015 |       |       | Saturday 24/10/2015 |       |       | Sunday 25/10/2015 |       |       | Monday 26/10/2015 |       |       | Tuesday 27/10/2015 |       |       | Wednesday 28/10/2015 |       |       |
|-------------------|---------------------|-------|-------|-------------------|-------|-------|---------------------|-------|-------|-------------------|-------|-------|-------------------|-------|-------|--------------------|-------|-------|----------------------|-------|-------|
| (Interval: min)   | 50                  | 100   | 150   | 50                | 100   | 150   | 50                  | 100   | 150   | 50                | 100   | 150   | 50                | 100   | 150   | 50                 | 100   | 150   | 50                   | 100   | 150   |
| Start             | %                   | 95%   | 99%   | 98%               | 97%   | 99%   | 98%                 | 94%   | 99%   | 97%               | 98%   | 100%  | 96%               | 99%   | 98%   | 98%                | 98%   | 97%   | 96%                  | 99%   | 99%   |
| End               | %                   | 0%    | 1%    | 2%                | 3%    | 1%    | 2%                  | 6%    | 1%    | 3%                | 4%    | 0%    | 2%                | 3%    | 1%    | 2%                 | 4%    | 2%    | 3%                   | 4%    | 1%    |
| Feed              | %                   | 0%    | 0%    | 0%                | 0%    | 0%    | 0%                  | 0%    | 0%    | 0%                | 0%    | 0%    | 0%                | 0%    | 0%    | 0%                 | 0%    | 0%    | 0%                   | 0%    | 0%    |
| Item/Type         |                     | 453   | 695   | 1048              | 429   | 643   | 972                 | 252   | 353   | 605               | 178   | 205   | 381               | 397   | 539   | 836                | 359   | 499   | 858                  | 404   | 566   |
| Start-Vol         |                     | 506   | 686   | 1212              | 496   | 612   | 1109                | 315   | 458   | 723               | 218   | 254   | 472               | 452   | 590   | 1045               | 414   | 572   | 886                  | 464   | 645   |
| End-Vol           |                     | 29.0  | 30.0  | 30.0              | 29.6  | 31.0  | 30.0                | 31.0  | 33.0  | 32.0              | 30.0  | 33.0  | 32.0              | 29.0  | 31.0  | 30.0               | 30.0  | 31.0  | 30.0                 | 29.0  | 31.0  |
| Mean Spd          |                     | 24.5  | 24.5  | 24.5              | 24.8  | 24.8  | 24.9                | 24.7  | 28.1  | 28.3              | 27.1  | 29.3  | 28.3              | 25.4  | 26.0  | 25.8               | 25.5  | 26.0  | 25.8                 | 25.2  | 26.4  |
| Min Spd           |                     | 5.5   | 5.5   | 5.5               | 5.5   | 5.5   | 5.5                 | 3.9   | 4.4   | 4.3               | 4.0   | 4.3   | 4.3               | 4.4   | 4.5   | 4.5                | 4.4   | 4.5   | 4.4                  | 4.5   | 4.5   |
| Max Spd           |                     | 73    | 132   | 205               | 75    | 121   | 196                 | 73    | 121   | 196               | 73    | 121   | 196               | 66    | 123   | 178                | 65    | 121   | 178                  | 56    | 131   |
| Min Int. Interval |                     | 0.14  | 0.19  | 0.17              | 0.1   | 0.20  | 0.18                | 0.10  | 0.10  | 0.10              | 0.09  | 0.11  | 0.09              | 0.12  | 0.21  | 0.17               | 0.13  | 0.21  | 0.18                 | 0.12  | 0.20  |
| Max Int. Interval |                     | 25.0  | 28.2  | 26.0              | 24.0  | 27.0  | 26.0                | 30.0  | 34.0  | 31.5              | 30.0  | 31.0  | 31.0              | 28.0  | 25.6  | 26.0               | 27.0  | 26.9  | 27.0                 | 26.0  | 25.4  |
| Min Int. Rate     |                     | 56.00 | 56.00 | 56.00             | 56.00 | 56.00 | 56.00               | 56.00 | 56.00 | 56.00             | 56.00 | 56.00 | 56.00             | 56.00 | 56.00 | 56.00              | 56.00 | 56.00 | 56.00                | 56.00 | 56.00 |
| Max Int. Rate     |                     | 54    | 53    | 104               | 70    | 64    | 134                 | 27    | 37    | 64                | 26    | 24    | 39                | 59    | 67    | 126                | 56    | 53    | 109                  | 50    | 85    |
| Min Int. Factor   |                     | 0.10  | 0.08  | 0.09              | 0.14  | 0.10  | 0.12                | 0.08  | 0.08  | 0.09              | 0.12  | 0.09  | 0.08              | 0.13  | 0.11  | 0.12               | 0.14  | 0.09  | 0.11                 | 0.11  | 0.08  |
| Max Int. Factor   |                     | 26.9  | 30.1  | 27.0              | 25.0  | 25.0  | 25.0                | 32.0  | 32.0  | 32.0              | 31.0  | 35.0  | 33.0              | 25.0  | 26.0  | 25.1               | 25.6  | 25.1  | 25.7                 | 32.0  | 29.0  |
| Min Int. Vol      |                     | 16.00 | 13.00 | 14.00             | 16.00 | 14.00 | 14.00               | 13.00 | 13.00 | 13.00             | 14.00 | 13.00 | 13.00             | 14.00 | 16.00 | 14.00              | 14.00 | 16.00 | 14.00                | 13.00 | 15.00 |
| Max Int. Vol      |                     | 16.00 | 13.00 | 14.00             | 16.00 | 14.00 | 14.00               | 13.00 | 13.00 | 13.00             | 14.00 | 13.00 | 13.00             | 14.00 | 16.00 | 14.00              | 14.00 | 16.00 | 14.00                | 13.00 | 15.00 |

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|           |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Price Min | 16.0 | 16.0 | 16.0 | 17.5 | 17.0 | 17.0 | 19.0 | 21.0 | 20.0 | 18.0 | 21.0 | 20.0 | 17.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 17.0 | 18.0 | 18.0 |
| Actual    | 88%  | 87%  | 87%  | 89%  | 89%  | 89%  | 90%  | 94%  | 90%  | 93%  | 90%  | 90%  | 92%  | 90%  | 90%  | 93%  | 89%  | 91%  | 90%  | 91%  | 90%  |

### Definition

85th Percentile Speed = The speed at or below which 85% of volume is observed to travel

15mph Pace Speed = The 15mph speed range within which the largest percentage of volume is observed to travel

Unless otherwise stated all summary information is relevant to a 24 hour day  
Date: Spent/Class Overview

Copeia, 1983, 26(4):25-26, 24-27, 290

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Summary - Matrix Data Tables / Graphical Presentation

#### Parking and Traffic Consultants

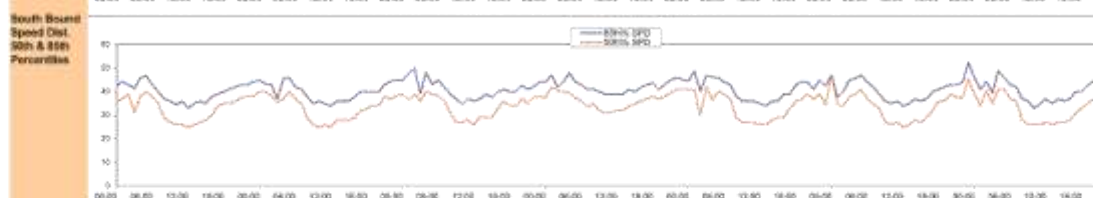
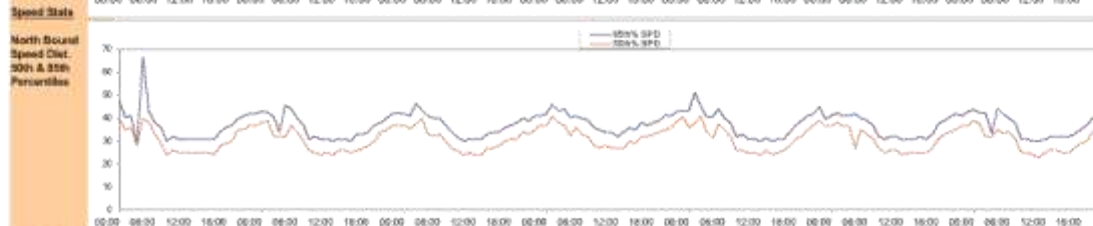
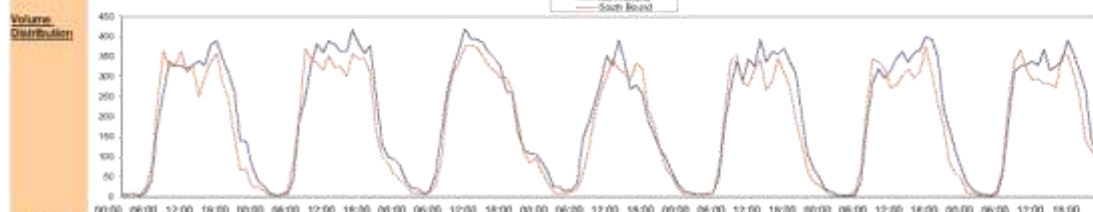
Ref: 7001 - 9 - Pittwater Road north of Bunc

Pittwater Road north of Bungan Lane

|             |             |
|-------------|-------------|
| Saturn      | Monte Carlo |
| Size        | 9           |
| Speed Limit | 60          |

|         |      |
|---------|------|
| Job     | 7081 |
| Map Ref |      |

| Date Report    | Thursday 22/10/2015 |         |         | Friday 23/10/2015 |         |         | Saturday 24/10/2015 |         |         | Sunday 25/10/2015 |         |         | Monday 26/10/2015 |         |         | Tuesday 27/10/2015 |         |         | Wednesday 28/10/2015 |         |         |
|----------------|---------------------|---------|---------|-------------------|---------|---------|---------------------|---------|---------|-------------------|---------|---------|-------------------|---------|---------|--------------------|---------|---------|----------------------|---------|---------|
| Report Name    | 60 min              | 120 min | 180 min | 60 min            | 120 min | 180 min | 60 min              | 120 min | 180 min | 60 min            | 120 min | 180 min | 60 min            | 120 min | 180 min | 60 min             | 120 min | 180 min | 60 min               | 120 min | 180 min |
| Start          | 94%                 | 95%     | 94%     | 94%               | 94%     | 94%     | 95%                 | 97%     | 96%     | 96%               | 97%     | 96%     | 93%               | 94%     | 93%     | 93%                | 94%     | 93%     | 94%                  | 95%     | 95%     |
| End            | 69%                 | 87%     | 94%     | 5%                | 5%      | 5%      | 0%                  | 0%      | 0%      | 3%                | 7%      | 6%      | 7%                | 6%      | 6%      | 7%                 | 6%      | 6%      | 6%                   | 5%      | 5%      |
| 200%           | 0%                  | 0%      | 0%      | 0%                | 0%      | 0%      | 0%                  | 0%      | 0%      | 0%                | 0%      | 0%      | 0%                | 0%      | 0%      | 0%                 | 0%      | 0%      | 0%                   | 0%      | 0%      |
| 10m-7m         | 394                 | 3903    | 7757    | 4365              | 4033    | 8391    | 4103                | 3873    | 7978    | 3279              | 3205    | 8484    | 4040              | 3399    | 7839    | 4134               | 3710    | 7844    | 4051                 | 3722    | 7771    |
| 30m-15m        | 4907                | 4487    | 9394    | 5390              | 4816    | 10121   | 4669                | 4361    | 9590    | 3936              | 3634    | 7579    | 4764              | 4200    | 8964    | 4988               | 4402    | 9391    | 4660                 | 4463    | 9423    |
| 1hr-30m        | 34.0                | 39.0    | 37.0    | 35.0              | 38.0    | 37.0    | 35.0                | 38.0    | 38.0    | 37.0              | 41.0    | 40.0    | 35.0              | 40.0    | 38.0    | 35.0               | 39.0    | 38.0    | 35.0                 | 39.0    | 37.0    |
| 1hr-30m        | 27.5                | 30.5    | 28.5    | 27.5              | 30.5    | 28.9    | 28.1                | 31.3    | 29.6    | 36.2              | 33.8    | 31.9    | 28.1              | 31.2    | 29.5    | 28.2               | 31.0    | 28.5    | 27.8                 | 30.7    | 28.1    |
| Week End       | 7.9                 | 8.5     | 8.4     | 7.7               | 8.5     | 8.3     | 7.8                 | 8.5     | 8.3     | 7.5               | 8.1     | 8.5     | 8.3               | 8.3     | 8.0     | 7.5                | 8.3     | 8.2     | 7.8                  | 8.0     | 8.5     |
| AM-PK Interval | 338                 | 364     | 691     | 390               | 370     | 743     | 420                 | 378     | 698     | 353               | 343     | 671     | 344               | 354     | 695     | 345                | 345     | 697     | 338                  | 368     | 694     |
| AM-PK Traffic  | 0.07                | 0.08    | 0.07    | 0.07              | 0.08    | 0.07    | 0.08                | 0.08    | 0.08    | 0.09              | 0.09    | 0.09    | 0.07              | 0.08    | 0.06    | 0.07               | 0.08    | 0.07    | 0.07                 | 0.08    | 0.07    |
| AM-PK 10%      | 30.0                | 40.0    | 32.0    | 31.5              | 41.0    | 33.0    | 30.0                | 37.0    | 33.0    | 34.0              | 37.0    | 31.0    | 31.0              | 38.0    | 36.0    | 32.0               | 42.0    | 37.0    | 30.0                 | 37.0    | 34.0    |
| AM-PK 5%       | 26.00               | 37.00   | 10.00   | 11.00             | 11.00   | 07.00   | 11.00               | 10.00   | 11.00   | 10.00             | 10.00   | 11.00   | 10.00             | 08.00   | 08.00   | 11.00              | 07.00   | 08.00   | 10.00                | 06.00   | 06.00   |
| PM-PK Interval | 390                 | 359     | 749     | 417               | 358     | 775     | 384                 | 375     | 769     | 392               | 333     | 772     | 393               | 347     | 737     | 399                | 376     | 775     | 381                  | 354     | 745     |
| PM-PK Traffic  | 0.08                | 0.08    | 0.08    | 0.08              | 0.07    | 0.08    | 0.08                | 0.08    | 0.08    | 0.10              | 0.09    | 0.09    | 0.08              | 0.08    | 0.08    | 0.08               | 0.08    | 0.08    | 0.08                 | 0.08    | 0.08    |
| PM-PK 10%      | 51.0                | 38.0    | 35.0    | 36.0              | 36.0    | 33.0    | 31.0                | 36.0    | 34.0    | 32.0              | 40.0    | 36.0    | 30.0              | 38.0    | 32.0    | 31.0               | 37.0    | 35.0    | 32.0                 | 37.0    | 34.0    |
| PM-PK 5%       | 19.00               | 15.00   | 15.00   | 15.00             | 15.00   | 15.00   | 13.00               | 13.00   | 13.00   | 13.00             | 15.00   | 13.00   | 13.00             | 15.00   | 13.00   | 15.00              | 15.00   | 15.00   | 15.00                | 15.00   | 15.00   |

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|           |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Price Min | 19.0 | 24.0 | 21.0 | 20.5 | 23.0 | 22.0 | 21.0 | 24.0 | 23.0 | 22.0 | 27.0 | 24.0 | 20.0 | 24.0 | 21.0 | 20.0 | 24.0 | 22.0 | 19.0 | 22.0 | 20.0 |
| Actual    | 72%  | 62%  | 62%  | 73%  | 64%  | 68%  | 72%  | 64%  | 68%  | 74%  | 69%  | 68%  | 73%  | 61%  | 68%  | 74%  | 63%  | 67%  | 74%  | 61%  | 67%  |

### Definitions

85th Percentile Speed = The speed at or below which 85% of volume is observed to travel

15mph Pace Speed = The 15mph speed range within which the largest percentage of volume is observed to travel

Unless otherwise stated all summary information is relevant to a 24 hour day  
Data, Speed/Class Overview

Copeia 1993(4): 1063-1074

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Summary - Matrix Data Tabular / Graphical Presentation

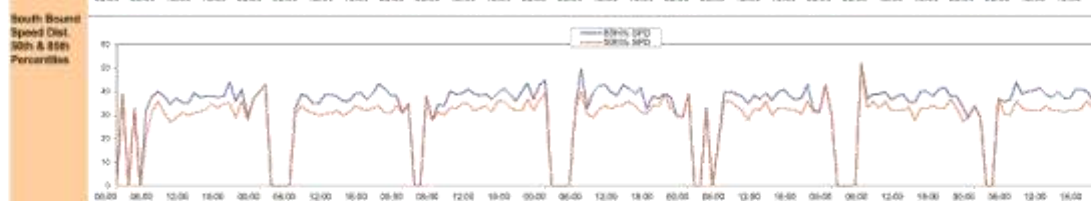
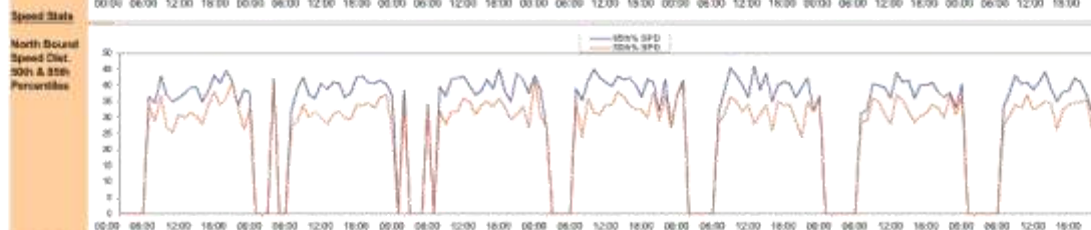
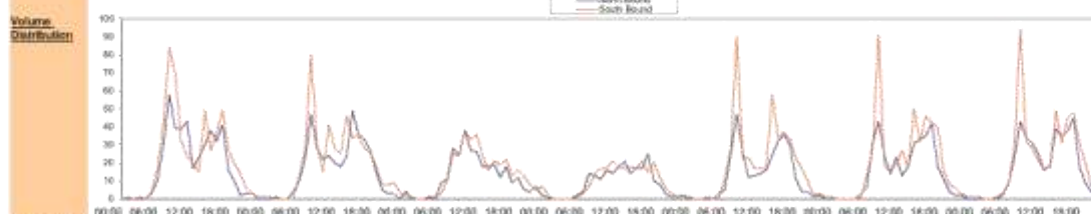
Parking and Traffic Consultants

Ref: 7061 - 3 - Vesper Street north of Cove

### Vesper Street north of Government Road

Suburb: Mona Vale  
Shed: 3  
Speed Limit: 50  
Job: 7061  
Map Ref:

| Date Record:       | Thursday 22/10/2015      | Friday 23/10/2015           | Saturday 24/10/2015         | Sunday 25/10/2015           | Monday 26/10/2015           | Tuesday 27/10/2015          | Wednesday 28/10/2015        |
|--------------------|--------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Interval (min):    | 5D with 10min sub-hourly | 10min with 10min sub-hourly | 10min with 10min sub-hourly | 10min with 10min sub-hourly | 10min with 10min sub-hourly | 10min with 10min sub-hourly | 10min with 10min sub-hourly |
| Start              | 07%                      | 04%                         | 06%                         | 06%                         | 04%                         | 06%                         | 07%                         |
| Med                | 2%                       | 0%                          | 0%                          | 0%                          | 0%                          | 0%                          | 0%                          |
| Long               | 0%                       | 0%                          | 0%                          | 0%                          | 0%                          | 0%                          | 0%                          |
| 10th-90th          | 406                      | 474                         | 880                         | 351                         | 416                         | 767                         | 248                         |
| 2nd-98th           | 437                      | 540                         | 977                         | 392                         | 478                         | 870                         | 292                         |
| 85thile            | 40.0                     | 38.0                        | 39.0                        | 40.2                        | 38.0                        | 39.0                        | 42.0                        |
| Mean Spd           | 31.8                     | 31.9                        | 31.9                        | 32.1                        | 32.2                        | 32.2                        | 34.5                        |
| Std Dev            | 8.2                      | 7.4                         | 7.7                         | 8.1                         | 7.5                         | 7.8                         | 7.3                         |
| AM PK Interval Vol | 58                       | 84                          | 142                         | 47                          | 80                          | 127                         | 38                          |
| AM PK Factor       | 0.13                     | 0.16                        | 0.15                        | 0.12                        | 0.17                        | 0.15                        | 0.13                        |
| AM PK 85th         | 27.0                     | 38.0                        | 37.7                        | 37.0                        | 38.0                        | 38.0                        | 43.0                        |
| AM PK 95th         | 56.00                    | 68.00                       | 68.00                       | 68.00                       | 68.00                       | 68.00                       | 10.00                       |
| PM PK Interval Vol | 41                       | 49                          | 90                          | 49                          | 46                          | 83                          | 26                          |
| PM PK Factor       | 0.09                     | 0.09                        | 0.09                        | 0.13                        | 0.10                        | 0.10                        | 0.09                        |
| PM PK 85th         | 40.7                     | 37.7                        | 39.0                        | 37.7                        | 36.0                        | 37.0                        | 37.1                        |
| PM PK 95th         | 17.00                    | 14.00                       | 17.00                       | 16.00                       | 14.00                       | 15.00                       | 12.00                       |



| 1: Car/Motorcycle | 424 | 510 | 894 | 377 | 450 | 827 | 294 | 325 | 609 | 295 | 219 | 424 | 294 | 428 | 722 | 339 | 444 | 783 | 379 | 481 | 880 |
|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 2: Car + Trailer  | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 1   | 2   | 2   | 0   | 2   | 0   | 0   | 0   | 0   | 1   | 1   | 0   | 3   | 3   |
| 3: 2 axle truck   | 10  | 27  | 37  | 10  | 25  | 35  | 7   | 11  | 18  | 3   | 12  | 15  | 7   | 16  | 23  | 11  | 28  | 39  | 12  | 16  | 26  |
| 4: 3 axle truck   | 2   | 0   | 2   | 3   | 2   | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 1   | 2   | 2   | 1   | 3   | 0   | 0   | 0   |
| 5: 4 axle truck   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 6: 5 axle truck   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 7: 6 axle truck   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 8: 7 axle truck   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 9: 8 axle truck   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 10: 9+ axle truck | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 11: Road Train    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 12: Road Train    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 13: Unknown       | 1   | 1   | 2   | 1   | 0   | 1   | 0   | 0   | 0   | 2   | 0   | 2   | 3   | 0   | 3   | 1   | 1   | 2   | 1   | 0   | 1   |
| 14: Motorcycle    | 9   | 6   | 15  | 4   | 10  | 14  | 7   | 5   | 12  | 8   | 8   | 16  | 14  | 7   | 21  | 8   | 6   | 14  | 9   | 8   | 17  |
| Unspecified       | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |

| Price Min | 24.0 | 25.0 | 24.0 | 24.0 | 25.0 | 25.0 | 27.0 | 25.0 | 27.0 | 28.0 | 25.0 | 25.0 | 27.0 | 25.0 | 25.0 | 27.0 | 25.0 | 25.0 | 26.0 | 27.0 | 26.0 |
|-----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| %Vol      | 66%  | 75%  | 70%  | 67%  | 77%  | 72%  | 73%  | 81%  | 77%  | 69%  | 75%  | 72%  | 69%  | 79%  | 79%  | 74%  | 80%  | 77%  | 73%  | 80%  | 76%  |

Definitions  
85th Percentile Speed = The speed at or below which 85% of volume is observed to travel  
15th PACE Speed = The 15th speed range within which the largest percentage of volume is observed to travel



### **Attachment 3 - On-street Parking Survey Results**

---

**Mona Vale Town Centre Parking Study Analysis - Weekday**

|                             |                           |                               |                              |                              |                 |
|-----------------------------|---------------------------|-------------------------------|------------------------------|------------------------------|-----------------|
| WEDNESDAY SUMMARY BY STREET | WEDNESDAY SUMMARY BY AREA | WEDNESDAY SUMMARY OF CAR PARK | WEDNESDAY ON-STREET ANALYSIS | WEDNESDAY CAR PARKS ANALYSIS | WED-CLEAN2 DATA |
|-----------------------------|---------------------------|-------------------------------|------------------------------|------------------------------|-----------------|

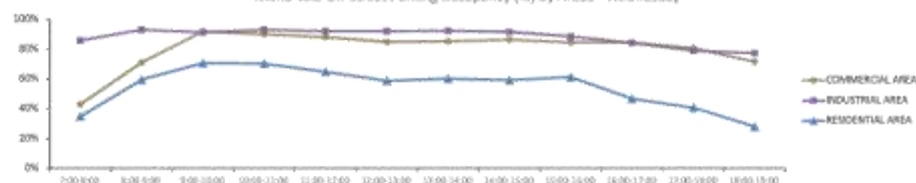
**Wednesday On-street Parking Analysis**  
\* Only Included Public Parking Bays

|                   |               |                          |               |                        |               |
|-------------------|---------------|--------------------------|---------------|------------------------|---------------|
| <b>Total</b>      |               |                          |               |                        |               |
| Total Cars:       | 2806 Cars     | Unrestricted Parking:    | 619 Cars      | Restricted Parking:    | 2187 Cars     |
| Ave. Capacity:    | 775 Bays      | Ave. Unrestricted Bays:  | 450 Bays      | Ave. Restricted Bays:  | 325 Bays      |
| Max. Capacity:    | 796 Bays      | Max. Unrestricted Bays:  | 462 Bays      | Max. Restricted Bays:  | 334 Bays      |
| Total Turnover:   | 3.62 Cars/Bay | Unrestricted Turnover:   | 1.37 Cars/Bay | Restricted Turnover:   | 6.73 Cars/Bay |
| Total ALOS:       | 2.53 Hrs/Car  | Unrestricted ALOS:       | 6.78 Hrs/Car  | Restricted ALOS:       | 1.31 Hrs/Car  |
| Total Ave. Occ %: | 76.3%         | Unrestricted Ave. Occ %: | 78.4%         | Restricted Ave. Occ %: | 73.4%         |
| Total Peak Occ %: | 86.5%         | Unrestricted Peak Occ %: | 87.8%         | Restricted Peak Occ %: | 84.7%         |

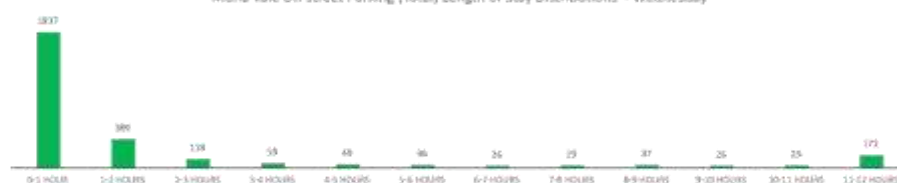
**By Areas**

|                        |               |                        |               |                         |               |
|------------------------|---------------|------------------------|---------------|-------------------------|---------------|
| <b>Commercial Area</b> |               | <b>Industrial Area</b> |               | <b>Residential Area</b> |               |
| Total Cars:            | 2112 Cars     | Total Cars:            | 378 Cars      | Total Cars:             | 316 Cars      |
| Ave. Capacity:         | 290 Bays      | Ave. Capacity:         | 278 Bays      | Ave. Capacity:          | 207 Bays      |
| Max. Capacity:         | 300 Bays      | Max. Capacity:         | 278 Bays      | Max. Capacity:          | 218 Bays      |
| Total Turnover:        | 7.29 Cars/Bay | Total Turnover:        | 1.36 Cars/Bay | Total Turnover:         | 1.52 Cars/Bay |
| Total ALOS:            | 1.32 Hrs/Car  | Total ALOS:            | 7.71 Hrs/Car  | Total ALOS:             | 4.27 Hrs/Car  |
| Total Ave. Occ %:      | 80.2%         | Total Ave. Occ %:      | 88.4%         | Total Ave. Occ %:       | 54.6%         |
| Total Peak Occ %:      | 92.0%         | Total Peak Occ %:      | 93.2%         | Total Peak Occ %:       | 70.7%         |

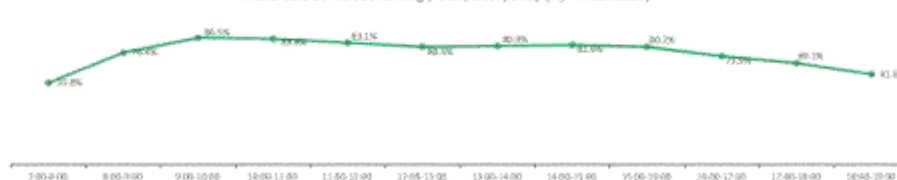
Mona Vale On-street Parking Occupancy (%) By Areas - Wednesday



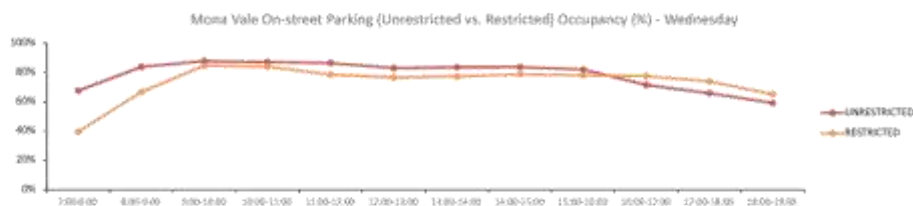
Mona Vale On-street Parking (Total) Length of Stay Distributions - Wednesday



Mona Vale On-street Parking (Total) Occupancy (%) - Wednesday





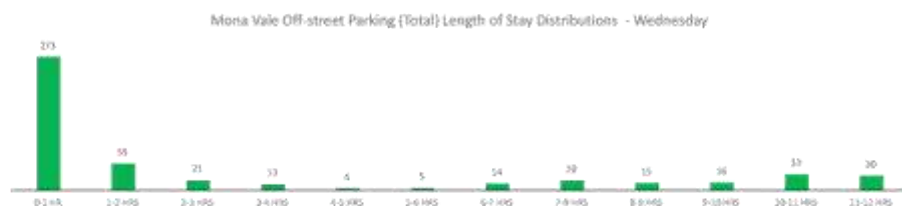


#### Wednesday Off-Street Car Park Parking Analysis

\* Only included Public Parking Bays

##### Weekday At-grade Car Park Analysis

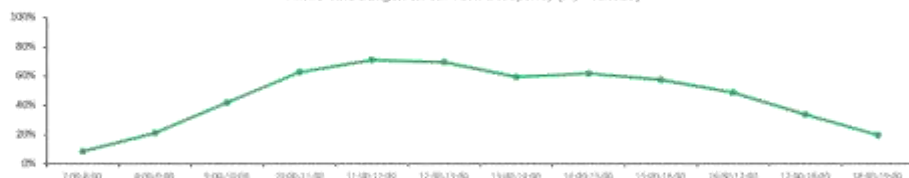
|                   |               |                          |               |                        |               |
|-------------------|---------------|--------------------------|---------------|------------------------|---------------|
| Total Cars:       | 499 Cars      | Unrestricted Parking:    | 150 Cars      | Restricted Parking:    | 349 Cars      |
| Total Capacity:   | 187 Bays      | Unrestricted Bays:       | 128 Bays      | Restricted Bays:       | 59 Bays       |
| Total Turnover:   | 2.67 Cars/Bay | Unrestricted Turnover:   | 1.17 Cars/Bay | Restricted Turnover:   | 5.92 Cars/Bay |
| Total ALOS:       | 3.66 Hrs/Car  | Unrestricted ALOS:       | 8.25 Hrs/Car  | Restricted ALOS:       | 1.68 Hrs/Car  |
| Total Ave. Occ %: | 81.2%         | Unrestricted Ave. Occ %: | 80.7%         | Restricted Ave. Occ %: | 82.3%         |
| Total Peak Occ %: | 95.2%         | Unrestricted Peak Occ %: | 95.3%         | Restricted Peak Occ %: | 98.3%         |



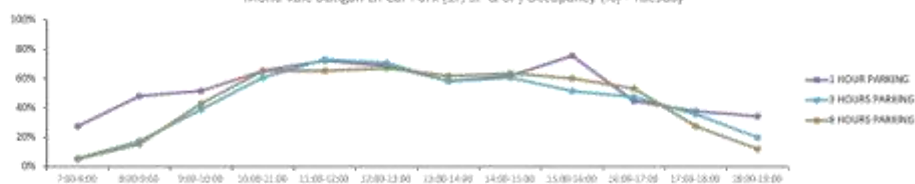
**Weekday Bungan Ln Car Park Analysis**

|                   |               |                |               |                |               |                |               |
|-------------------|---------------|----------------|---------------|----------------|---------------|----------------|---------------|
| Total Cars:       | 356 Cars      | 1P Parking:    | 120 Cars      | 3P Parking:    | 193 Cars      | 8P Parking:    | 43 Cars       |
| Total Capacity:   | 207 Bays      | 1P Bays:       | 29 Bays       | 3P Bays:       | 120 Bays      | 8P Bays:       | 58 Bays       |
| Total Turnover:   | 1.72 Cars/Bay | 1P Turnover:   | 4.14 Cars/Bay | 3P Turnover:   | 1.61 Cars/Bay | 8P Turnover:   | 0.74 Cars/Bay |
| Total ALOS:       | 3.24 Hrs/Car  | 1P ALOS:       | 1.57 Hrs/Car  | 3P ALOS:       | 3.37 Hrs/Car  | 8P ALOS:       | 7.97 Hrs/Car  |
| Total Ave. Occ %: | 46.4%         | 1P Ave. Occ %: | 54.0%         | 3P Ave. Occ %: | 45.1%         | 8P Ave. Occ %: | 45.2%         |
| Total Peak Occ %: | 71.6%         | 1P Peak Occ %: | 75.9%         | 3P Peak Occ %: | 73.9%         | 8P Peak Occ %: | 67.2%         |

Mona Vale Bungan Ln Car Park Occupancy (%) - Tuesday



Mona Vale Bungan Ln Car Park (1P, 3P & 8P) Occupancy (%) - Tuesday



**Mona Vale Town Centre Parking Study Analysis - Weekend**

|                            |                          |                              |                             |                            |                  |
|----------------------------|--------------------------|------------------------------|-----------------------------|----------------------------|------------------|
| SATURDAY SUMMARY BY STREET | SATURDAY SUMMARY BY AREA | SATURDAY SUMMARY OF CAR PARK | SATURDAY ON-STREET ANALYSIS | SATURDAY CAR PARK ANALYSIS | NOT CLEANED DATA |
|----------------------------|--------------------------|------------------------------|-----------------------------|----------------------------|------------------|

**Saturday On-street Parking Analysis**

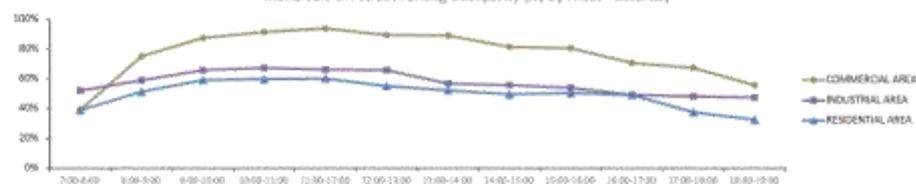
\* Only Included Public Parking Bays

|                   |               |                          |               |                        |               |
|-------------------|---------------|--------------------------|---------------|------------------------|---------------|
| <b>Total</b>      |               |                          |               |                        |               |
| Total Cars:       | 2555 Cars     | Unrestricted Parking:    | 569 Cars      | Restricted Parking:    | 1986 Cars     |
| Ave. Capacity:    | 792 Bays      | Ave. Unrestricted Bays:  | 455 Bays      | Ave. Restricted Bays:  | 337 Bays      |
| Max. Capacity:    | 796 Bays      | Max. Unrestricted Bays:  | 458 Bays      | Max. Restricted Bays:  | 338 Bays      |
| Total Turnover:   | 5.23 Cars/Bay | Unrestricted Turnover:   | 1.25 Cars/Bay | Restricted Turnover:   | 5.89 Cars/Bay |
| Total ALOS:       | 2.32 Hrs/Car  | Unrestricted ALOS:       | 5.55 Hrs/Car  | Restricted ALOS:       | 1.40 Hrs/Car  |
| Total Ave. Occ %: | 62.5%         | Unrestricted Ave. Occ %: | 57.8%         | Restricted Ave. Occ %: | 68.5%         |
| Total Peak Occ %: | 74.8%         | Unrestricted Peak Occ %: | 68.5%         | Restricted Peak Occ %: | 84.8%         |

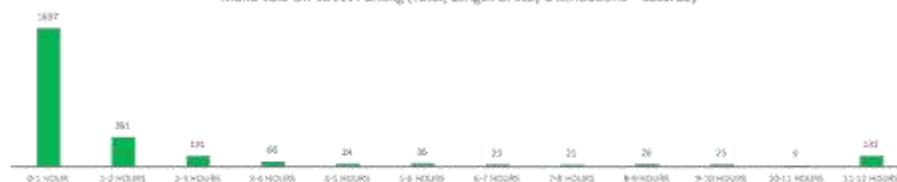
**By Areas**

|                        |               |                        |               |                         |               |
|------------------------|---------------|------------------------|---------------|-------------------------|---------------|
| <b>Commercial Area</b> |               | <b>Industrial Area</b> |               | <b>Residential Area</b> |               |
| Total Cars:            | 1947 Cars     | Total Cars:            | 313 Cars      | Total Cars:             | 295 Cars      |
| Ave. Capacity:         | 297 Bays      | Ave. Capacity:         | 278 Bays      | Ave. Capacity:          | 217 Bays      |
| Max. Capacity:         | 300 Bays      | Max. Capacity:         | 278 Bays      | Max. Capacity:          | 218 Bays      |
| Total Turnover:        | 6.55 Cars/Bay | Total Turnover:        | 1.13 Cars/Bay | Total Turnover:         | 1.36 Cars/Bay |
| Total ALOS:            | 1.40 Hrs/Car  | Total ALOS:            | 6.07 Hrs/Car  | Total ALOS:             | 4.40 Hrs/Car  |
| Total Ave. Occ %:      | 76.7%         | Total Ave. Occ %:      | 57.3%         | Total Ave. Occ %:       | 48.7%         |
| Total Peak Occ %:      | 93.9%         | Total Peak Occ %:      | 67.3%         | Total Peak Occ %:       | 60.2%         |

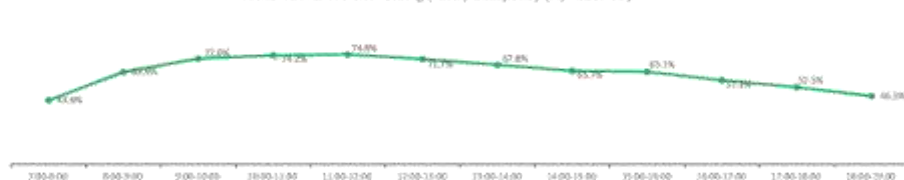
Mona Vale On-street Parking Occupancy (%) By Areas - Saturday

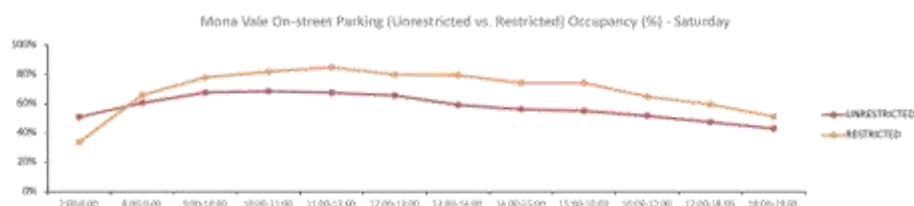


Mona Vale On-street Parking (Total) Length of Stay Distributions - Saturday



Mona Vale On-street Parking (Total) Occupancy (%) - Saturday



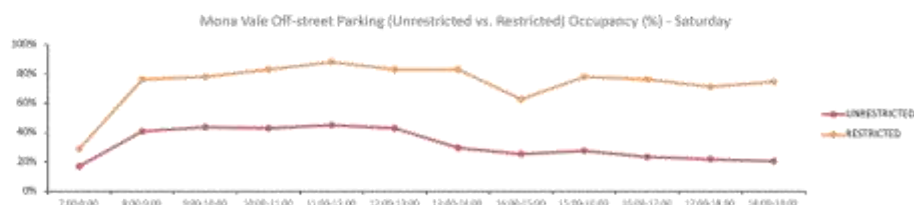
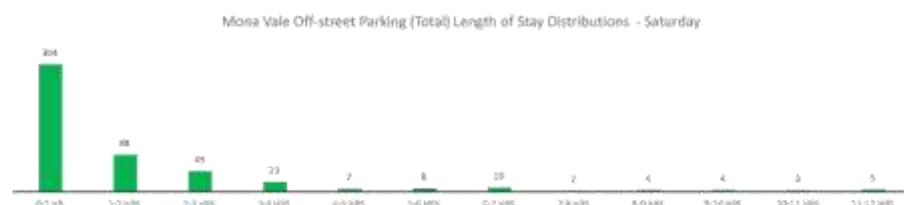


#### Saturday Off-Street Car Park Parking Analysis

\* Only included Public Parking Bays

##### Weekend At-grade Car Park Analysis

|                   |               |                          |               |                        |               |
|-------------------|---------------|--------------------------|---------------|------------------------|---------------|
| Total Cars:       | 507 Cars      | Unrestricted Parking:    | 172 Cars      | Restricted Parking:    | 335 Cars      |
| Total Capacity:   | 201 Bays      | Unrestricted Bays:       | 142 Bays      | Restricted Bays:       | 59 Bays       |
| Total Turnover:   | 2.52 Cars/Bay | Unrestricted Turnover:   | 1.21 Cars/Bay | Restricted Turnover:   | 5.68 Cars/Bay |
| Total ALOS:       | 2.08 Hrs/Car  | Unrestricted ALOS:       | 3.12 Hrs/Car  | Restricted ALOS:       | 2.55 Hrs/Car  |
| Total Ave. Occ %: | 44.0%         | Unrestricted Ave. Occ %: | 32.7%         | Restricted Ave. Occ %: | 73.6%         |
| Total Peak Occ %: | 57.7%         | Unrestricted Peak Occ %: | 45.1%         | Restricted Peak Occ %: | 88.1%         |







## **Attachment 4** - Intercept and Online Questionnaire Surveys

---

## Mona Vale Town Centre Visitor Parking Survey

(untitled)

---

1. What is the purpose of your to Mona Vale today? \*

- ☐ Shopping
- ☐ Work
- ☐ Social (Gym, Lunch, Leisure etc)
- ☐ The School Run
- ☐ Other

(untitled)

---

2. What was your **principal** mode of transport today? \*

- ☐ Car
- ☐ Public Transport (Bus)
- ☐ Taxi
- ☐ Bicycle
- ☐ Walk
- ☐ Other (Please specify)

(untitled)

---

3. Were you . . . \*

- ☐ the driver
- ☐ a passenger
- ☐ dropped-off

(untitled)

---

4. You indicated you travelled by car, how many people were in the car (including the driver)? \*

- ☐ Driver alone
- ☐ 2 People
- ☐ 3 People
- ☐ 4 People
- ☐ 5 People

(untitled)

---

5. Where did you park? \*

- ☐ On-street parking
- ☐ A council car park
- ☐ On-site parking associated with the destination
- ☐ Other car park

(untitled)

---

6. Was it difficult to find a parking space near your preferred location (estimate of "cruising time")? \*

- ☐ 1 min or less
- ☐ 2 mins
- ☐ 5 mins
- ☐ 10 mins
- ☐ 15 mins or more

(untitled)

---

7. How far did you have to walk to your destination? \*

- ☐ 50 m or less
- ☐ 100 m
- ☐ 150 m
- ☐ 200 m or more

(untitled)

---

8. If you cycled where did you park your bike? \*

- ☐ Within a building
- ☐ At a council bike rack/rail
- ☐ At a tree, lamppost or sign etc

(untitled)

---



9. To get to Mona Vale, would you ... \*

|                      | Yes                   | No                    |
|----------------------|-----------------------|-----------------------|
| Use public transport | <input type="radio"/> | <input type="radio"/> |
| Ride a bike          | <input type="radio"/> | <input type="radio"/> |
| Walk                 | <input type="radio"/> | <input type="radio"/> |

(untitled)

10. How long is your visit to Mona Vale today? \*

- ☐ 10 mins or less
- ☐ 30 mins
- ☐ 1 hour
- ☐ 2 hours
- ☐ Half a day
- ☐ All day

(untitled)

11. How many times per week do you visit Mona Vale? \*



## Attachment 5 - Parking Demand Model

---

|    | A                                   | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T |
|----|-------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1  | PITWATER COUNCIL                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 2  | MONA VALE PARKING DEMAND MODEL      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 3  | ASSUMPTIONS                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 4  |                                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 5  | 1 INVENTORY - Weekday               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 6  | INVENTORY 2015                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 7  | PARKING INVENTORY 2015              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 8  | Restriction                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 9  | PS-1P                               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 10 | 2P                                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 11 | 3P                                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 12 | 4P                                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 13 | 5P                                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 14 | Unrestricted - All Day              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 15 | Unrestricted - Partial Day          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 16 | Public Spaces*                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 17 | Permit Holders                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 18 | Disabled                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 19 | Loading Zone                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 20 | No Parking                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 21 | TOTAL SUPPLY                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 22 | Manual Entry                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 23 | Analyst based on public spaces only |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 24 |                                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 25 | INVENTORY 5 YEARS                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 26 | PARKING INVENTORY 5 YEARS           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 27 | Restriction                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 28 | PS-1P                               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 29 | 2P                                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 30 | 3P                                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 31 | 4P                                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 32 | 5P                                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 33 | Unrestricted - All Day              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 34 | Unrestricted - Partial Day          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 35 | Public Spaces                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 36 | Permit Holders                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 37 | Disabled                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 38 | Loading Zone                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 39 | No Parking                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 40 | TOTAL SUPPLY                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 41 | Manual Entry                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 42 |                                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 43 |                                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 44 |                                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 45 |                                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 46 |                                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 47 |                                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 48 |                                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 49 |                                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 50 |                                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 51 |                                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 52 |                                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 53 |                                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 54 |                                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 55 |                                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 56 |                                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 57 |                                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 58 |                                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 59 |                                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 60 |                                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |



|    | A                                   | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T |
|----|-------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1  | PITTWATER COUNCIL                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 2  | MONA VALE PARKING DEMAND MODEL      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 3  | Growth Rates                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 3a | % Growth                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|    | Land use                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|    | Commercial                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|    | Residential                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|    | Industrial                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|    | Less Adjustment to Growth           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|    | Commercial                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|    | Residential                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|    | Industrial                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|    | Total                               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|    | Commercial                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|    | Residential                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|    | Industrial                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|    | % Growth                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 3b | Population Growth                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|    | YEAR 5 - % Growth                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|    | YEAR 10 - % Growth                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|    | YEAR 15 - % Growth                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|    | YEAR 20 - % Growth                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 4  | Modal Shift Factor                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|    | Reduction for change in travel mode |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|    | YEAR 5 - % Change                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|    | YEAR 10 - % Change                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|    | YEAR 15 - % Change                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|    | YEAR 20 - % Change                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 5  | Parking Supply                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 6  | Base Year                           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|    | 2015                                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

Only public on street and off street spaces available for parking included in our analysis



|                  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |   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    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     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     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|------------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|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| WATERWAY COUNCIL | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 171 | 172 | 173 | 174 | 175 | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 | 208 | 209 | 210 | 211 | 212 | 213 | 214 | 215 | 216 | 217 | 218 | 219 | 220 | 221 | 222 | 223 | 224 | 225 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 239 | 240 | 241 | 242 | 243 | 244 | 245 | 246 | 247 | 248 | 249 | 250 | 251 | 252 | 253 | 254 | 255 | 256 | 257 | 258 | 259 | 260 | 261 | 262 | 263 | 264 | 265 | 266 | 267 | 268 | 269 | 270 | 271 | 272 | 273 | 274 | 275 | 276 | 277 | 278 | 279 | 280 | 281 | 282 | 283 | 284 | 285 | 286 | 287 | 288 | 289 | 290 | 291 | 292 | 293 | 294 | 295 | 296 | 297 | 298 | 299 | 300 | 301 | 302 | 303 | 304 | 305 | 306 | 307 | 308 | 309 | 310 | 311 | 312 | 313 | 314 | 315 | 316 | 317 | 318 | 319 | 320 | 321 | 322 | 323 | 324 | 325 | 326 | 327 | 328 | 329 | 330 | 331 | 332 | 333 | 334 | 335 | 336 | 337 | 338 | 339 | 340 | 341 | 342 | 343 | 344 | 345 | 346 | 347 | 348 | 349 | 350 | 351 | 352 | 353 | 354 | 355 | 356 | 357 | 358 | 359 | 360 | 361 | 362 | 363 | 364 | 365 | 366 | 367 | 368 | 369 | 370 | 371 | 372 | 373 | 374 | 375 | 376 | 377 | 378 | 379 | 380 | 381 | 382 | 383 | 384 | 385 | 386 | 387 | 388 | 389 | 390 | 391 | 392 | 393 | 394 | 395 | 396 | 397 | 398 | 399 | 400 | 401 | 402 | 403 | 404 | 405 | 406 | 407 | 408 | 409 | 410 | 411 | 412 | 413 | 414 | 415 | 416 | 417 | 418 | 419 | 420 | 421 | 422 | 423 | 424 | 425 | 426 | 427 | 428 | 429 | 430 | 431 | 432 | 433 | 434 | 435 | 436 | 437 | 438 | 439 | 440 | 441 | 442 | 443 | 444 | 445 | 446 | 447 | 448 | 449 | 450 | 451 | 452 | 453 | 454 | 455 | 456 | 457 | 458 | 459 | 460 | 461 | 462 | 463 | 464 | 465 | 466 | 467 | 468 | 469 | 470 | 471 | 472 | 473 | 474 | 475 | 476 | 477 | 478 | 479 | 480 | 481 | 482 | 483 | 484 | 485 | 486 | 487 | 488 | 489 | 490 | 491 | 492 | 493 | 494 | 495 | 496 | 497 | 498 | 499 | 500 | 501 | 502 | 503 | 504 | 505 | 506 | 507 | 508 | 509 | 510 | 511 | 512 | 513 | 514 | 515 | 516 | 517 | 518 | 519 | 520 | 521 | 522 | 523 | 524 | 525 | 526 | 527 | 528 | 529 | 530 | 531 | 532 | 533 | 534 | 535 | 536 | 537 | 538 | 539 | 540 | 541 | 542 | 543 | 544 | 545 | 546 | 547 | 548 | 549 | 550 | 551 | 552 | 553 | 554 | 555 | 556 | 557 | 558 | 559 | 560 | 561 | 562 | 563 | 564 | 565 | 566 | 567 | 568 | 569 | 570 | 571 | 572 | 573 | 574 | 575 | 576 | 577 | 578 | 579 | 580 | 581 | 582 | 583 | 584 | 585 | 586 | 587 | 588 | 589 | 590 | 591 | 592 | 593 | 594 | 595 | 596 | 597 | 598 | 599 | 600 | 601 | 602 | 603 | 604 | 605 | 606 | 607 | 608 | 609 | 610 | 611 | 612 | 613 | 614 | 615 | 616 | 617 | 618 | 619 | 620 | 621 | 622 | 623 | 624 | 625 | 626 | 627 | 628 | 629 | 630 | 631 | 632 | 633 | 634 | 635 | 636 | 637 | 638 | 639 | 640 | 641 | 642 | 643 | 644 | 645 | 646 | 647 | 648 | 649 | 650 | 651 | 652 | 653 | 654 | 655 | 656 | 657 | 658 | 659 | 660 | 661 | 662 | 663 | 664 | 665 | 666 | 667 | 668 | 669 | 670 | 671 | 672 | 673 | 674 | 675 | 676 | 677 | 678 | 679 | 680 | 681 | 682 | 683 | 684 | 685 | 686 | 687 | 688 | 689 | 690 | 691 | 692 | 693 | 694 | 695 | 696 | 697 | 698 | 699 | 700 | 701 | 702 | 703 | 704 | 705 | 706 | 707 | 708 | 709 | 710 | 711 | 712 | 713 | 714 | 715 | 716 | 717 | 718 | 719 | 720 | 721 | 722 | 723 | 724 | 725 | 726 | 727 | 728 | 729 | 730 | 731 | 732 | 733 | 734 | 735 | 736 | 737 | 738 | 739 | 740 | 741 | 742 | 743 | 744 | 745 | 746 | 747 | 748 | 749 | 750 | 751 | 752 | 753 | 754 | 755 | 756 | 757 | 758 | 759 | 760 | 761 | 762 | 763 | 764 | 765 | 766 | 767 | 768 | 769 | 770 | 771 | 772 | 773 | 774 | 775 | 776 | 777 | 778 | 779 | 780 | 781 | 782 | 783 | 784 | 785 | 786 | 787 | 788 | 789 | 790 | 791 | 792 | 793 | 794 | 795 | 796 | 797 | 798 | 799 | 800 | 801 | 802 | 803 | 804 | 805 | 806 | 807 | 808 | 809 | 810 | 811 | 812 | 813 | 814 | 815 | 816 | 817 | 818 | 819 | 820 | 821 | 822 | 823 | 824 | 825 | 826 | 827 | 828 | 829 | 830 | 831 | 832 | 833 | 834 | 835 | 836 | 837 | 838 | 839 | 840 | 841 | 842 | 843 | 844 | 845 | 846 | 847 | 848 | 849 | 850 | 851 | 852 | 853 | 854 | 855 | 856 | 857 | 858 | 859 | 860 | 861 | 862 | 863 | 864 | 865 | 866 | 867 | 868 | 869 | 870 | 871 | 872 | 873 | 874 | 875 | 876 | 877 | 878 | 879 | 880 | 881 | 882 | 883 | 884 | 885 | 886 | 887 | 888 | 889 | 890 | 891 | 892 | 893 | 894 | 895 | 896 | 897 | 898 | 899 | 900 | 901 | 902 | 903 | 904 | 905 | 906 | 907 | 908 | 909 | 910 | 911 | 912 | 913 | 914 | 915 | 916 | 917 | 918 | 919 | 920 | 921 | 922 | 923 | 924 | 925 | 926 | 927 | 928 | 929 | 930 | 931 | 932 | 933 | 934 | 935 | 936 | 937 | 938 | 939 | 940 | 941 | 942 | 943 | 944 | 945 | 946 | 947 | 948 | 949 | 950 | 951 | 952 | 953 | 954 | 955 | 956 | 957 | 958 | 959 | 960 | 961 | 962 | 963 | 964 | 965 | 966 | 967 | 968 | 969 | 970 | 971 | 972 | 973 | 974 | 975 | 976 | 977 | 978 | 979 | 980 | 981 | 982 | 983 | 984 | 985 | 986 | 987 | 988 | 989 | 990 | 991 | 992 | 993 | 994 | 995 | 996 | 997 | 998 | 999 | 1000 | 1001 | 1002 | 1003 | 1004 | 1005 | 1006 | 1007 | 1008 | 1009 | 1010 | 1011 | 1012 | 1013 | 1014 | 1015 | 1016 | 1017 | 1018 | 1019 | 1020 | 1021 | 1022 | 1023 | 1024 | 1025 | 1026 | 1027 | 1028 | 1029 | 1030 | 1031 | 1032 | 1033 | 1034 | 1035 | 1036 | 1037 | 1038 | 1039 | 1040 | 1041 | 1042 | 1043 | 1044 | 1045 | 1046 | 1047 | 1048 | 1049 | 1050 | 1051 | 1052 | 1053 | 1054 | 1055 | 1056 | 1057 | 1058 | 1059 | 1060 | 1061 | 1062 | 1063 | 1064 | 1065 | 1066 | 1067 | 1068 | 1069 | 1070 | 1071 | 1072 | 1073 | 1074 | 1075 | 1076 | 1077 | 1078 | 1079 | 1080 | 1081 | 1082 | 1083 | 1084 | 1085 | 1086 | 1087 | 1088 | 1089 | 1090 | 1091 | 1092 | 1093 | 1094 | 1095 | 1096 | 1097 | 1098 | 1099 | 1100 | 1101 | 1102 | 1103 | 1104 | 1105 | 1106 | 1107 | 1108 | 1109 | 1110 | 1111 | 1112 | 1113 | 1114 | 1115 | 1116 | 1117 | 1118 | 1119 | 1120 | 1121 | 1122 | 1123 | 1124 | 1125 | 1126 | 1127 | 1128 | 1129 | 1130 | 1131 | 1132 | 1133 | 1134 | 1135 | 1136 | 1137 | 1138 | 1139 | 1140 | 1141 | 1142 | 1143 | 1144 | 1145 | 1146 | 1147 | 1148 | 1149 | 1150 | 1151 | 1152 | 1153 | 1154 | 1155 | 1156 | 1157 | 1158 | 1159 | 1160 | 1161 | 1162 | 1163 | 1164 | 1165 | 1166 | 1167 | 1168 | 1169 | 1170 | 1171 | 1172 | 1173 | 1174 | 1175 | 1176 | 1177 | 1178 | 1179 | 1180 | 1181 | 1182 | 1183 | 1184 | 1185 | 1186 | 1187 | 1188 | 1189 | 1190 | 1191 | 1192 | 1193 | 1194 | 1195 | 1196 | 1197 | 1198 | 1199 | 1200 | 1201 | 1202 | 1203 | 1204 | 1205 | 1206 | 1207 | 1208 | 1209 | 1210 | 1211 | 1212 | 1213 | 1214 | 1215 | 1216 | 1217 | 1218 | 1219 | 1220 | 1221 | 1222 | 1223 | 1224 | 1225 | 1226 | 1227 | 1228 | 1229 | 1230 | 1231 | 1232 | 1233 | 1234 | 1235 | 1236 | 1237 | 1238 | 1239 | 1240 | 1241 | 1242 | 1243 | 1244 | 1245 | 1246 | 1247 | 1248 | 1249 | 1250 | 1251 | 1252 | 1253 | 1254 | 1255 | 1256 | 1257 | 1258 | 1259 | 1260 | 1261 | 1262 | 1263 | 1264 | 1265 | 1266 | 1267 | 1268 | 1269 | 1270 | 1271 | 1272 | 1273 | 1274 | 1275 | 1276 | 1277 | 1278 | 1279 | 1280 | 1281 | 1282 | 1283 | 1284 | 1285 | 1286 | 1287 | 1288 | 1289 | 1290 | 1291 | 1292 | 1293 | 1294 | 1295 | 1296 | 1297 | 1298 | 1299 | 1300 | 1301 | 1302 | 1303 | 1304 | 1305 | 1306 | 1307 | 1308 | 1309 | 1310 | 1311 | 1312 | 1313 | 1314 | 1315 | 1316 | 1317 | 1318 | 1319 | 1320 | 1321 | 1322 | 1323 | 1324 | 1325 | 1326 | 1327 | 1328 | 1329 | 1330 | 1331 | 1332 | 1333 | 1334 | 1335 | 1336 | 1337 | 1338 | 1339 | 1340 | 1341 | 1342 | 1343 | 1344 | 1345 | 1346 | 1347 | 1348 | 1349 | 1350 | 1351 | 1352 | 1353 | 1354 | 1355 | 1356 | 1357 | 1358 | 1359 | 1360 | 1361 | 1362 | 1363 | 1364 | 1365 | 1366 | 1367 | 1368 | 1369 | 1370 | 1371 | 1372 | 1373 | 1374 | 1375 | 1376 | 1377 | 1378 | 1379 | 1380 | 1381 | 1382 | 1383 | 1384 | 1385 | 1386 | 1387 | 1388 | 1389 | 1390 | 1391 | 1392 | 1393 | 1394 | 1395 | 1396 | 1397 | 1398 | 1399 | 1400 | 1401 | 1402 | 1403 | 1404 | 1405 | 1406 | 1407 | 1408 | 1409 | 1410 | 1411 | 1412 | 1413 | 1414 | 1415 | 1416 | 1417 | 1418 | 1419 | 1420 | 1421 | 1422 | 1423 | 1424 | 1425 | 1426 | 1427 | 1428 | 1429 | 1430 | 1431 | 1432 | 1433 | 1434 | 1435 | 1436 | 1437 | 1438 | 1439 | 1440 | 1441 | 1442 | 1443 | 1444 | 1445 | 1446 | 1447 | 1448 | 1449 | 1450 | 1451 | 1452 | 1453 | 1454 | 1455 | 1456 | 1457 | 1458 | 1459 | 1460 | 1461 | 1462 | 1463 | 1464 | 1465 | 1466 | 1467 | 1468 | 1469 | 1470 | 1471 | 1472 | 1473 | 1474 | 1475 | 1476 | 1477 | 1478 | 1479 | 1480 | 1481 | 1482 | 1483 | 1484 | 1485 | 1486 | 1487 | 1488 | 1489 | 1490 | 1491 | 1492 | 1493 | 1494 | 1495 |
|------------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|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|    | A                                       | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V |
|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1  | PITTWATER COUNCIL                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 2  | MONA VALE PARKING DEMAND MODEL          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 3  | PROJECTIONS EXCESS PARKING SUPPLY       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 4  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 5  | CALCULATIONS based on % Growth Land Use |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 6  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 7  | By Land Use                             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 8  | Demand Drivers                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 9  | WEEKENDS                                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 10 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 11 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 12 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 13 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 14 | TOTAL                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 15 | Peak Occupancy                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 16 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 17 | WEEKENDS                                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 18 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 19 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 20 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 21 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 22 | TOTAL                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 23 | Peak Occupancy                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 24 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 25 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 26 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 27 | CALCULATIONS based on Population Growth |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 28 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 29 | WEEKENDS                                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 30 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 31 | TOTAL                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 32 | WEEKENDS                                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 33 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 34 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 35 | TOTAL                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |




## Attachment 6 - Proposed Parking Strategies

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| STRATEGIES   | ACTION   | PROS  | CONS   |
|--|--|---|--|
| <b>The closer the parking supply is to the commercial hubs, the shorter the time restriction</b> | <p>55% of council managed public parking supply in the Town Centre is 8P or unrestricted (71% on street, 29% off street)</p> <p>There is predominantly 1P parking in the commercial zone (excluding Bungan Lane car park), 3P or &gt; in the residential zone and unrestricted parking in the industrial zone. Unrestricted parking does not necessarily increase the commercial viability of the town centre – factors such as retail mix and the surrounding environment are more important to attracting visitors<sup>10</sup>. Free parking is socially, economically and environmentally unsustainable.</p> <p><b>Recommendation:</b></p> <ul style="list-style-type: none"> <li>• Adopt a general principle that where occupancy exceeds 85% (practical capacity) on a consistent basis, consideration is to be given to a change to time restrictions and/or implementation of paid parking to manage parking demand (we acknowledge it is difficult to implement paid parking when free private parking is available e.g. Woolworths, Aldi, Pittwater Place).</li> </ul> | <ul style="list-style-type: none"> <li>• Increased turnover leads to increased supply.</li> <li>• Increased parking availability will attract more visitors.</li> <li>• The capital cost of introducing additional time restrictions is lower than the construction cost of building more parking.</li> </ul> | <ul style="list-style-type: none"> <li>• Displaced all day parkers will move into other unrestricted parking areas.</li> <li>• Require enforcement to be effective.</li> <li>• May require a residents/ visitors parking scheme in the residential zone. The Roads and Maritime Services (RMS) have published a guideline to Permit Parking (January 2011) (previously Permit Parking 2001) which provides mandatory procedures and guidelines for Council to follow when introducing a Resident Parking Scheme. These procedures and guidelines recommend a maximum of two permits per eligible household (house or semi-detached dwelling); one permit per unit (for multiple dwellings). Residents with no off street parking are to be prioritised.</li> <li>• There may be FBT implications for employers if paid parking is introduced where the daily rate is greater than the FBT threshold (currently \$8.26 per day).</li> </ul> |

<sup>10</sup> The Means 2012

| STRATEGIES  | ACTION  | PROS  | CONS   |
|---|---|---|--|
|   | <ul style="list-style-type: none"> <li>• Paid parking is generally perceived by the community as revenue raising – unless benefits can be clearly articulated and excess funds reinvested into community projects which enhance street vitality and encourage alternative travel options, parking management and improvements</li> <li>• Could consider introducing time restrictions into the residential and industrial zones (Darley Street) adjoining commercial zone (e.g. 2P).</li> </ul> |   |  |
| <p><b>Shorter time restrictions on street vs off street.</b></p>  | <p>This is currently in place in the commercial zone.</p> <p><b>Recommendation:</b></p> <ul style="list-style-type: none"> <li>• Consider converting off street car parks in the commercial zone (car parks A and B and Bungan Lane car park Levels 1 and 2) to 2P weekdays.</li> </ul> <p>The time restrictions will still be greater than on street (1P). Similarly 8P parking in the Bungan Lane car park could be converted to 3P parking.</p>  | <ul style="list-style-type: none"> <li>• Increase turnover and therefore supply.</li> </ul> | <ul style="list-style-type: none"> <li>• Require enforcement to be effective.</li> </ul> |

<sup>11</sup> Parking Basics, Institute for Transportation and Development Policy, July 2015

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| STRATEGIES   | ACTION   | PROS   | CONS  |
|--|--|--|---|
| <b>Council to consider the needs and priorities of the various user groups to create a safe environment and improve kerbside road efficiency whilst fostering a vibrant town centre environment.</b> | <b>Recommendation:</b> <ul style="list-style-type: none"> <li>Work with the local schools to investigate alternative drop off /pick up zones (e.g. rear of Mona Vale Primary site) and the efficient management of existing drop off/pick up areas.</li> </ul>   | <ul style="list-style-type: none"> <li>Minimise traffic congestion at peak times</li> <li>Improve pedestrian safety</li> </ul>                         |   |
| <b>Install a town centre signage plan to direct parkers to available parking.</b>  | <p>The physical layout of the town centre and current parking locations are an issue. Parking is available but patrons may not know where to find it. (Refer Section 5.2 of our Report).</p> <b>Recommendation:</b> <ul style="list-style-type: none"> <li>Develop a town centre signage plan to direct parkers to available parking to minimise circulating traffic (e.g. the Bungan Lane car park)</li> <li>Could consider dynamic signage as part of the signage plan.</li> </ul> | <ul style="list-style-type: none"> <li>Minimise traffic congestion, driver frustration and the environmental impact of circulating traffic.</li> </ul> | <ul style="list-style-type: none"> <li>Capital cost of implementation</li> <li>Challenge of incorporating non council car parks into Town Centre signage plan.</li> </ul> |
| <b>Reduce car dependency particularly for local trips by providing incentives to use alternate modes of transport.</b>   | <b>Recommendation :</b> <ul style="list-style-type: none"> <li>Consider car share schemes</li> <li>Incentivise employers to introduce car-pooling and/or public transport for staff</li> </ul>   | <ul style="list-style-type: none"> <li>Reduces the reliance on the car for trips to and from the Centre.</li> </ul>                                    | <ul style="list-style-type: none"> <li>Forgone parking space for car share.</li> </ul>  |
| <b>Ensure a safe and accessible environment for pedestrians and cyclists</b>   | <b>Recommendation :</b> <ul style="list-style-type: none"> <li>Install Bike racks</li> <li>Work with local schools and businesses to promote travel smart initiatives (e.g. car-pooling, walking</li> </ul>  | <ul style="list-style-type: none"> <li>Reduces the reliance on the car for trips to and from the Centre.</li> </ul>                                    |   |

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| STRATEGIES  | ACTION   | PROS  | CONS   |
|---|--|---|--|
| <p><b>No new sites to be built unless there is a justifiable business case.</b></p> <p><b>Encourage reduced provision for sites close to public transport</b></p>  <p>12</p> | <p>and cycling to school, etc.)</p> <p>Mona Vale is a car centric community. If Council build more car parks more people will drive. <i>"If you plan for cars and traffic – you get cars and traffic, if you plan for people and places – you get people and places"</i><sup>12</sup></p> <p><b>Recommendation:</b></p> <ul style="list-style-type: none"> <li>• Develop overflow parking plans for peak periods. Potential sites for overflow parking on weekends include School parking.</li> <li>• Unbundle parking in new developments</li> <li>• Reduce parking requirements for new developments, particularly those adjacent to public transport hubs – assess parking demand before creating parking.</li> </ul> | <ul style="list-style-type: none"> <li>• Match supply with demand.</li> </ul> | <ul style="list-style-type: none"> <li>• Acceptance by developers</li> </ul> |

<sup>12</sup> Parking Basics, Institute for Transportation and Development Italia, July 2015

<sup>13</sup> Fred Kent Projects for Public Spaces

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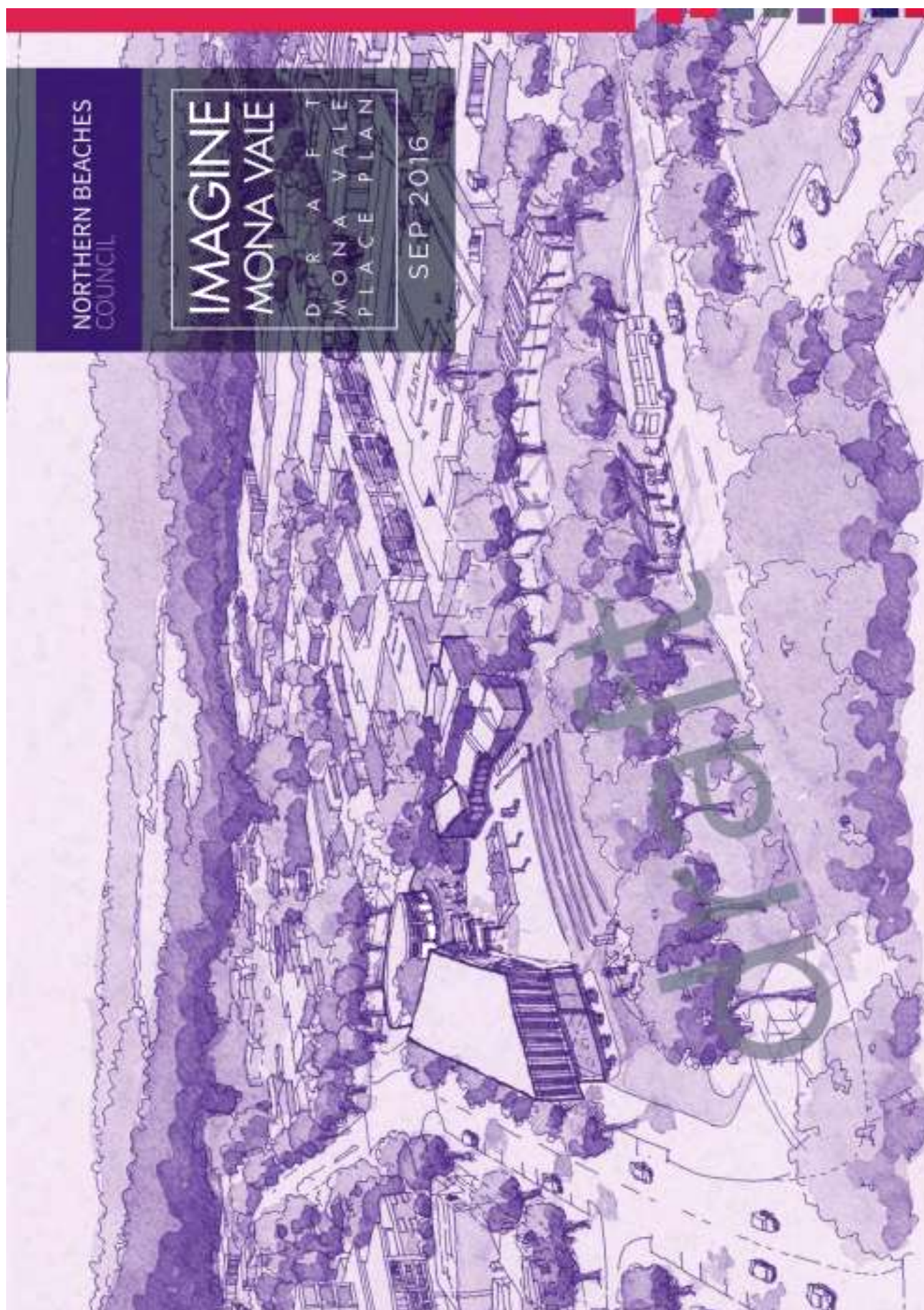
## Attachment 7 - Traffic Modelling Presentation

Presented as a separate document / file

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"There is no logic that can be super-  
imposed on the city; people make it,  
and it is to them, not buildings, that  
we must fit our plans."  
Jane Jacobs

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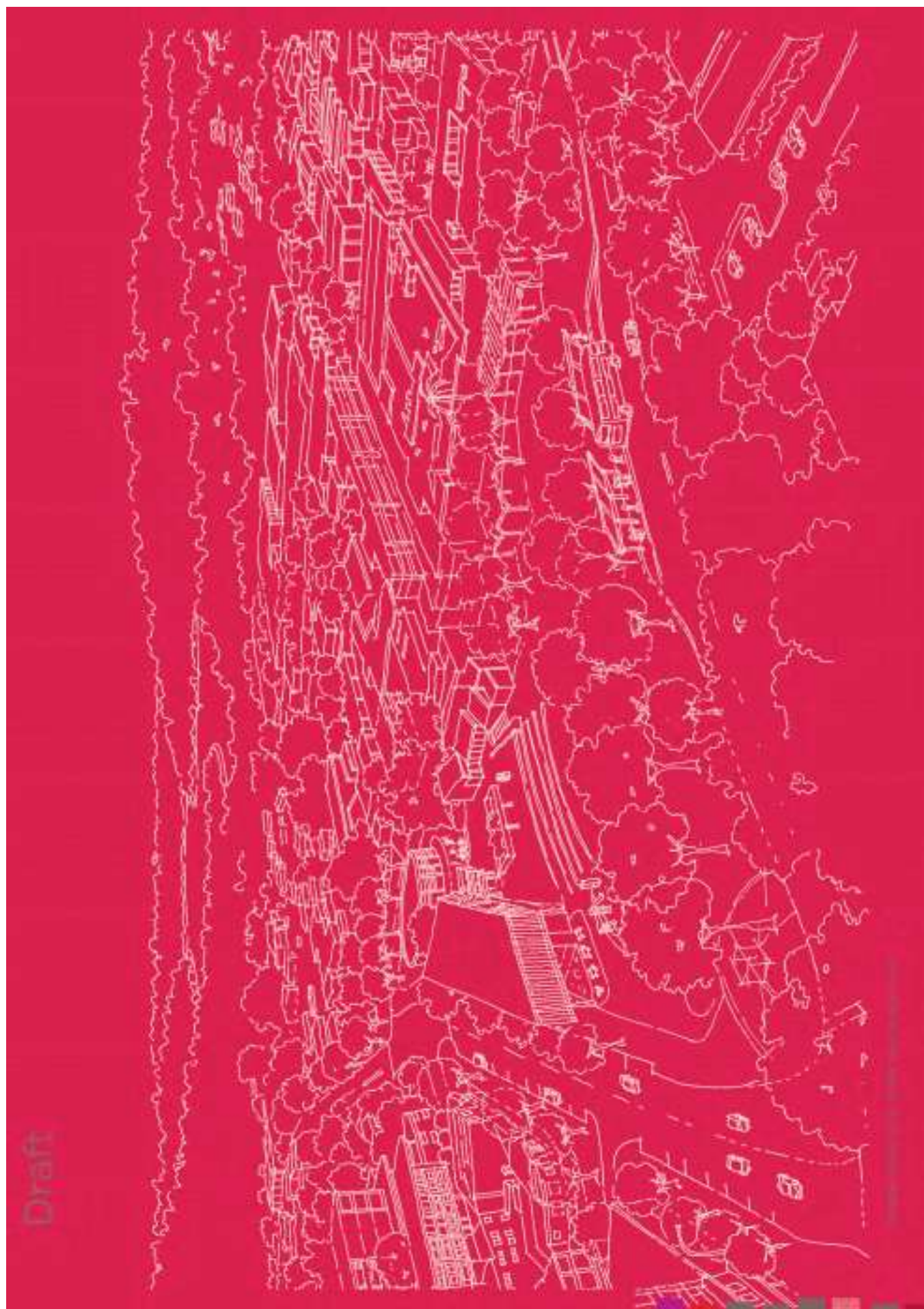
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## WHAT IS A PLACE PLAN

A Place Plan is a tactical and action-oriented strategy focused on the community's connection to place. It establishes a vision and path forward for an area, allowing incremental change that is aligned with the current and future needs of the community.

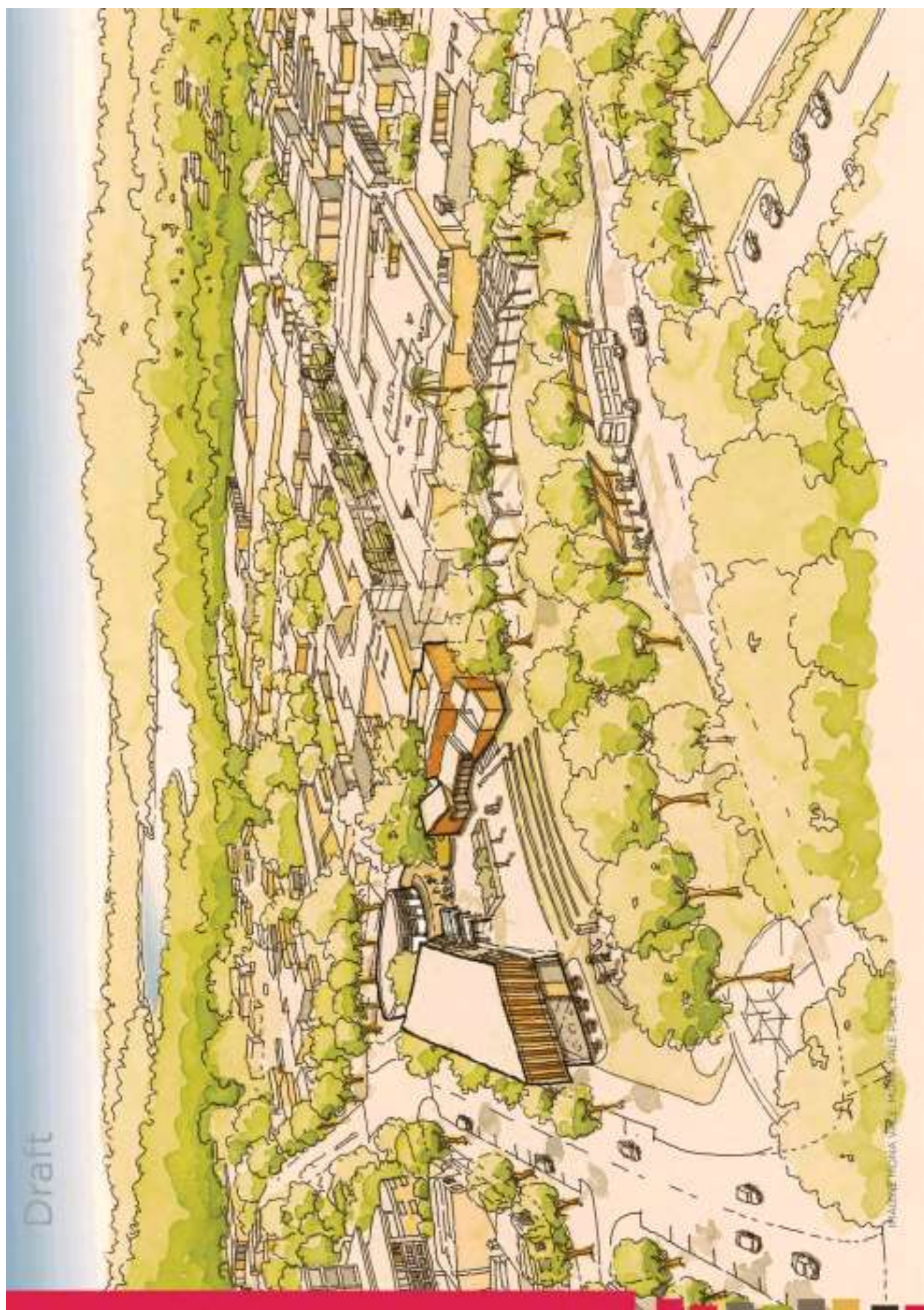
A Place Plan identifies the infrastructure and investment needs within a community and seeks to identify the local priorities so that resources can be targeted appropriately.

Mona Vale Place Plan is important to ensure the delivery of a sustainable place. Sustainability is based on many different factors and what is needed to make and maintain a sustainable community in one place may differ to another. This is a bespoke plan that details the priorities, needs and aspirations specific to Mona Vale.

To date, the place planning process has been informed by a 'conversation' with the community, infrastructure and service providers and local businesses. This 'conversation' has enabled the plan to provide an up to date record of infrastructure and investment needs within the Mona Vale area.

This document, 'Imagining Mona Vale - Mona Vale Place Plan' translates the ideas and aspirations from the community, combined with an assessment of challenges and opportunities and analysis by a panel of experts resulting in a coherent and integrated place-based planning and design strategy. **This document will set the scene for the development of future planning controls.**





# MONA VALE

a vibrant urban heart of the northern peninsula;  
a creative arts and culture hub where the relaxed lifestyle extends from the bush to the beach;  
a well connected place with a village atmosphere;  
a civic space which offers diverse activities from daytime to nighttime, weekday to weekend;  
an innovative environment which offers local employment, affordable housing choice and expanded education opportunities;  
a place for people - with local, contemporary and coastal character which showcases the best principles of sustainable growth planning, and design.



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## JOURNEY SO FAR...

Mona Vale Place Plan went through an extensive activation and community engagement process from January 2014 - June 2015. Information gathered from the community feedback has been grouped into key themes to provide a framework for capturing community ideas and opinions for the future of Mona Vale. The summary of the outcomes was outlined in 'Imagine Mona Vale - Engagement Summary for Mona Vale Place Plan' which was released in August 2015. This document - 'The Mona Vale Place Plan' is the final instalment in the series of 'Imagine Mona Vale'.

**In order to create a future community for Mona Vale that is viable, sustainable, and reflects its community's aspirations, changes need to be made.** These changes will require some compromise and adjustments to the way we do things. As with other suburban communities around the world, the evolution will take time and occur gradually. Mona Vale Place Plan has been created to facilitate this evolution, describing the ideal place-focused scenario along with guidelines to illustrate the potential physical changes in store for Mona Vale.

## COMMUNITY ASPIRATIONS

### TOP TRENDING COMMUNITY IDEAS AND ASPIRATIONS\*

#### RETAIL & ECONOMICS

29%

suggested greater diversity of commercial and business offering

21%

suggested more shopsfronts, outdoor cafe seating and street markets

#### URBAN FABRIC & PUBLIC REALM

43%

suggested diversity in housing types

22%

suggested more mixed use developments, particularly in the industrial area

#### PEOPLE & DESTINATIONS

33%

suggested recreational infrastructure such as an aquatic centre

28%

suggested institutions such as museums, art galleries, or a library

#### ACCESS & LINKAGES

27%

suggested improvements in pedestrian experience

14%

suggested better management of traffic, issue school for school, vehicle pools

13%

suggested better connectivity - more a wider to get to different parts of the estate

\* From over 38 months intensive community engagement events including the Urban Fabric Series, a large mixing events, 8 workshops and open houses, 355 place audits, 200 Imagine Mona Vale bubbles, 1500 community comments, 2000+ social media engagements, 5305 website views, 10000+ people attended or participated in events.

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# 1.0 UNDERSTANDING MONA VALE

## 1.1 OPPORTUNITIES

### Mona Vale Town Centre

- is located only 10m or 10 minute walk from the beach.
  - is equipped with a large number of open spaces such as a central Village Park, Kitchener Park, Mona Vale State Park, Waveremmy Bay and privately and publicly owned golf courses.
  - is a thriving centre at decline during the week.
  - is relatively connected with a network of streets and lanes.
  - is a unique self contained centre which has a diverse community and mixture of uses such as residential, retail, commercial, educational, community based and light industrial.
  - is a proposed location of B-Line Bus Terminus with 150 commuter parking spaces.
  - has a high proportion of housing ownership and lower proportion of rental housing compared to Greater Sydney.
- Opportunities to address the need of young people and the area's low to moderate income households with some affordable housing choices.

## 1.2 CHALLENGES

### Mona Vale Town Centre

- is divided by busy roads such as Pittwater and Burnessley Roads.
- is divided by an under-utilised Village Park.
- is partially affected by "flooding" (see areas shown with a light blue colour with a dark blue outline on plan) and will require some flood mitigation measures.
- has limited choice of affordable housing. The high housing cost makes it difficult to retain young people. The next generation of local being priced out of the housing market.
- has a largely fine-grained subdivision pattern with some existing under-capitalised single titled buildings. The combination of fractured ownership and high land values may inhibit redevelopment.

\*Source: McCarran Creek, Mona Vale & Bayview Flood Study



view of streets and lanes



under-utilised Village Park



high cost housing



fine-grained, fragmented ownership



Opportunities and Challenges - The Water Area

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# 1.0 UNDERSTANDING MONA VALE



DISPERSED AND CHALLENGES - MONA VALE TOWN CENTRE CORE

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## 2.0 DESIGN INTENT

### 2.1 TOWN CENTRE CORE

Drawing from the community aspirations, the Place Plan strives to create a sustainable community which incorporates a balance of environmental, social and economic objectives.

The Plan intends to facilitate a revitalisation that integrates with the existing communities and surrounding areas. The provision of safer, better connectivity and access to all parts of the Centre will create a synergy between distinct activities in the area.

Village Park, Council Administration and Mona Vale Library can be enhanced to create a 'Heart' that will provide a strong visual identity for Mona Vale.

The network of streets and spaces will create opportunities for diverse activities and housing choices that will generate a lifestyle associated with sustainable urban living.

### 2.2 WIDER AREA

The strong message from the community during the workshop events reinforced that both the Wider Area and Town Centre Core need to be integrated primarily to ensure that the Core is accessible to

everyone. Community members also suggested a number of ways that the wider area could be improved, including:

- safer pedestrian and cycling networks throughout the area
- connecting Mona Vale's natural assets such as the beach and open spaces
- more spaces for a range of recreational activities, art and culture
- more mixed use development, especially around the light industrial area
- densifying the Town Centre. Core streets as pedestrian, cyclist friendly streets and improving access to local and specialty shops

- a range of housing, including affordable housing for young people

- strengthening the sense of community by providing more opportunities for social interaction with better access to community services and facilities

This Place Plan offers a framework that allows for planned development of this diverse area as a successful centre as well as ensuring its integration with the neighbouring areas.



Wendell Bay



Mona Vale Beach



pedestrian and cyclist friendly streets and local shops



Village Park








Wider Area Plan

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## 2.0 DESIGN INTENT

| KEY IDEAS UNDERLYING THE PLACE PLAN  |   |  |   |  |  |
|--|---|--|---|--|--|
| <b>The Heart</b><br>Enhancement of existing asset as a focal point of activity and local landmark. This 'Heart' will contain a range of community based uses as well as supporting retail and commercial use to ensure viability in the long term.<br>Public transport and a new civic square underpin the site creating a place for residents and visitors.   |  | <b>A Connected Community</b><br>New linkages are proposed to improve connectivity with the neighbouring streets, and integrating with the existing network. This provides a seamless connection to the external street network for vehicle, cycle and pedestrian movement.<br>An informal but open, semi-public pedestrian link that is characteristic of the area will be maintained and encouraged for new development.  |  | <b>Green Links</b><br>The stormwater network overlays the street network. This creates opportunities for landscape spaces and streets.<br>Landscaped streets and linkages (green line) are proposed to enhance pedestrian experience and to connect recreational spaces. |  |
| <b>Mix of Activities</b><br>Provision of non-singular uses to promote mixed activities will maximise opportunity for social interaction and natural surveillance.<br>LEIGHND<br>1. Clinic, supporting commercial/retail, recreation, transport<br>2. Education, retail, commercial, residential including some affordable housing choice<br>3. Mostly residential<br>4. Light industrial and initial exploration of the 'Affordable Housing for the Next Generation' (AHNG)<br>5. Light industrial with ancillary uses |    | <b>Housing Choice</b><br>A diversity of housing types is proposed to accommodate more people in the Centre. The AHNG will address the housing supply gap for young people.<br>The scale and form of housing provides a transition around the centre fringe ensuring its character is commensurate with existing context.<br>LEIGHND<br>1. Mixed use and affordable housing<br>2. Transition from low to medium density housing<br>3. Initial investigation of AHNG.<br>4. Further expansion of AHNG to be investigated having regard to detailed analysis of land use compatibility, residential amenity, protection of industrial-related functions and employment, and the performance and impact of AHNG in area 2. |    |  |  |

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## 3.0 MONA VALE TOWN CENTRE

### 3.1 PRECINCTS

Three core precincts have been identified based on the existing and potential future activities: Civic, Village and Industrial Precincts. Considering the vicinity of the Centre to the beach and its influence on the identity, the Beach Precinct is included as one of the precincts within the Place Plan.



#### 3.1.1 CIVIC PRECINCT

This centrally located precinct houses a number of community and civic spaces, including Mona Vale Library, Memorial Hall, Northern Beaches Council North office and Village Park.



#### 3.1.2 VILLAGE PRECINCT

This precinct is characterised by the existing fine-grain subdivision pattern and occasional large lots associated with a 'big boy' shopping mall. The fine-grain character of a traditional town centre will be maintained to create pedestrian friendly community.



#### 3.1.3 INDUSTRIAL PRECINCT

This precinct consists of mainly light industrial and ancillary retail/commercial uses. A potential redevelopment on selected compatible sites was explored to incorporate the AHMG above street level with a view of maintaining this precinct's contribution of its employment and service function.



#### 3.1.4 BEACH PRECINCT

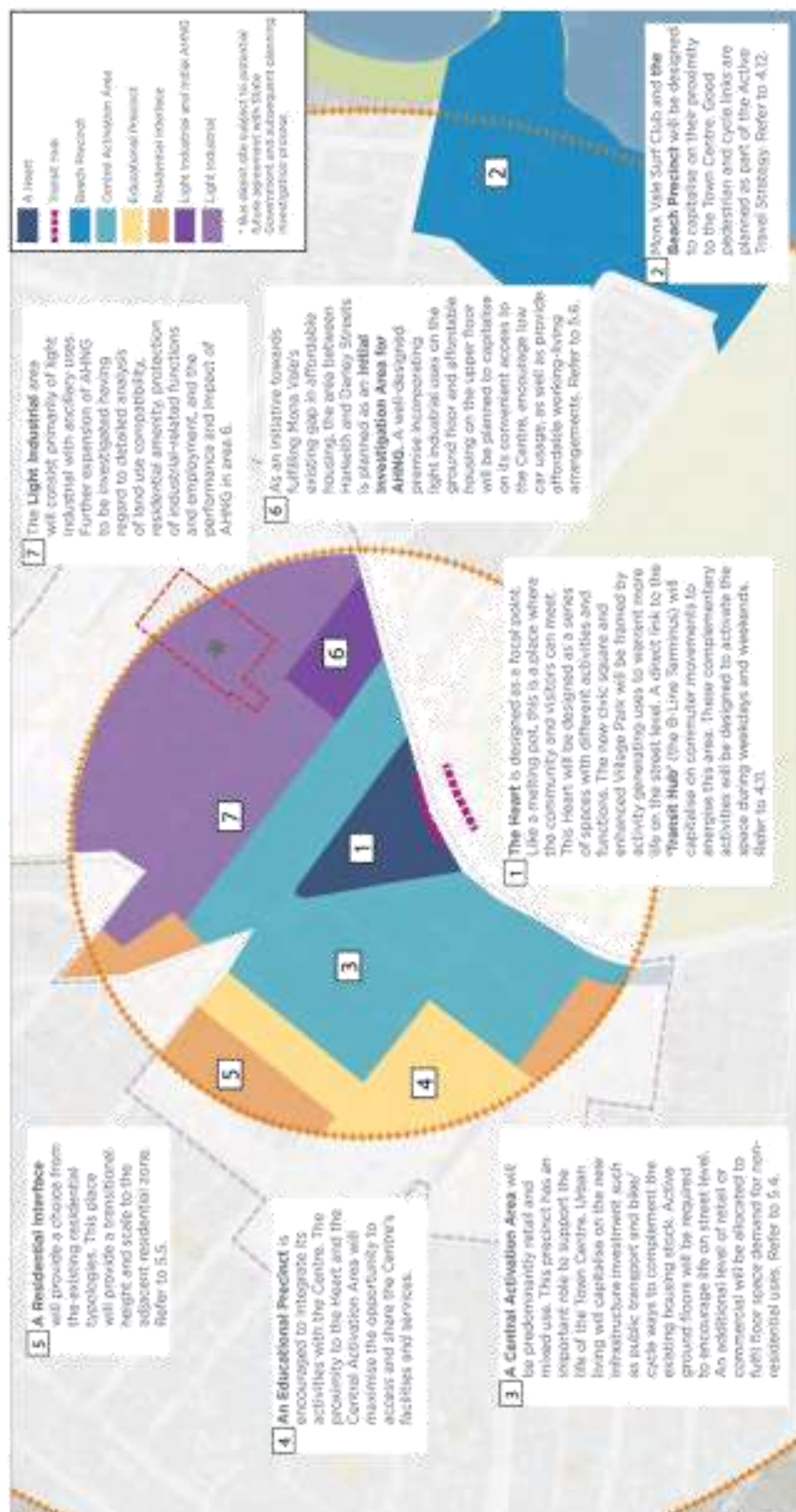
Mona Vale Beach is located only 1km away from the Town Centre. Although this precinct is not within the core area, it is well-served by local cafes, restaurants and a playground.

Mona Vale Surf Club future redevelopment should be integrated with the existing character and complement the vision of Mona Vale Town Centre. Pedestrian and cycle links will connect this precinct to the Centre.

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## 3.0 MONA VALE TOWN CENTRE





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## 3.0 MONA VALE TOWN CENTRE

### 3.2 KEY ELEMENTS

The place plan lays the foundations for the creation of a vibrant community which capitalises on existing assets, better access to public transport and a connective street network. It enables innovative building responses which are shaped by the character unique to Mona Vale.

#### Key elements of Mona Vale Town Centre Core

- 1 **The Heart:** a central community space which is vibrant and defines the identity of Mona Vale. It consists of a Village Park, Knowledge, Community, Cultural and Transit Hubs.
- 2 **Village Park:** redefining the role of Village Park not just as a central open space, but more as a community focussed leisure space with supporting daytime and night-time activities.
- 3 **Mona Vale Library:** expansion as the new **'Knowledge Hub'**, recognising the role of a modern library as a place of social interaction and facilitating the local enterprises/ business incubator on the upper floor.

- 4 **Existing Council Office and potential future 'Cultural Hub':** 'open up' part of the building to improve building relationship with outdoor spaces. Future 'Art in Residence' exhibit.

- 5 **New Civic Square and Auditorium:** as the new **'Community Hub'**, reimagines centrally located land from car spaces to become people's spaces.

- 6 **Transit Hub:** incorporating the B-Line Terminus as one of the key activity generators and to enhance the arrival experience.

- 7 **Street:** enhancing the existing local retail precinct as a street based shopping precinct with some opportunity for outdoor dining and residential intensification above street level.

- 8 **Pittwater Road as the 'boulevard':** increase the space for pedestrians and cyclists to improve the relationship between the two sides of the street and Village Park.

- 9 **Park Street:** reconfiguration of the street to facilitate safer pedestrian movements and ground floor activation.

- 10 **Connections and On-site Links:** Encourage the activation of the existing links. Support the creation of new links in addition to the existing links to facilitate easy access to/from the industrial zone. Better access will encourage more walking.

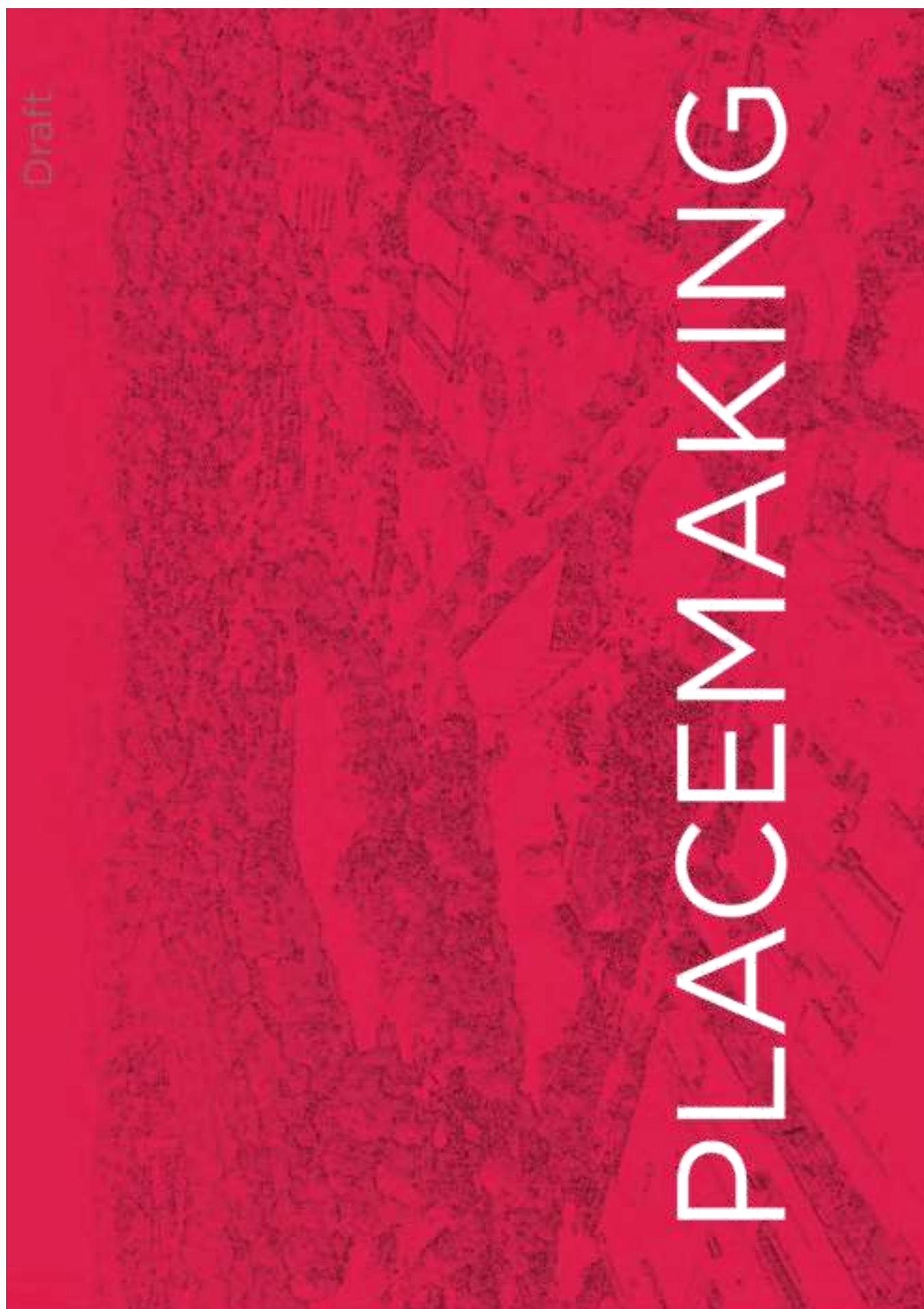
- 11 **Light Industrial zoned areas:** beginning with the block bounded by Harwell, and Darley Streets, for **'Affordable Housing for the Next Generation'** (AHND). Maintain the role of the light industrial zone at street level and explore opportunities for affordable and key worker housing above street level. Possible future opportunities for AHND elsewhere, such as the Bus Depot site, to be investigated having regard to detailed analysis of land use compatibility, residential amenity, protection of industrial-related functions and employment, and the performance and impact of the Harwell/Darley Street block.



Town Centre Elements

IMAGINE MONA VALE: MONA VALE PLACE PLAN





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## 4.0 PEOPLE, STREETS AND PLACES

### 4.1 SUSTAINABLE TRAVEL: FUTURE ACTIVE TRAVEL STRATEGY

Active Travel is an approach to travel and transport that focuses on physical activity (walking and cycling) as opposed to motorised and carbon-dependent means. As the population grows there will be continued impact on the congestion of roads and competition for car parking at destinations. High levels of private car use is prevalent across Pittwater, and particularly concentrated in the Town Centre of Mona Vale. By increasing access to Active Travel linkages in concentrated locations, the economic efficiencies also increase, as the need for expenditure on roads and car parks is reduced.

Pittwater has for many years had a strong focus on Active Travel through the 'Walk & Ride' strategy. Building on this, a local Active Travel Strategy has been developed and will be incorporated into the Northern Beaches wider area Active Travel Strategy to achieve greater efficiency and the capacity to plan active travel, travel, a walking and cycling friendly environment will create a more socially inclusive community.

The Active Travel vision is "to enable a culture which supports people to choose active travel choices that benefit their health,

enhance community lifestyle and create a village atmosphere in a well-connected sustainable transport network".

Council is currently reviewing their Active Travel Strategy for the Northern Beaches.

### 4.1.1 PEDESTRIAN AND CYCLE PLAN

The concept on this page shows potential infrastructure investments and upgrades to increase amenity and connectivity for pedestrians and cyclists. A mixture of 'On Road' and 'On Road' cycle links are intended to provide choices for the recreational and commuter cyclist. Pedestrian amenity will be improved by allocated traffic calming measures and lower speed limits on key streets.

### 4.1.2 B-LINE (NEW BUS LINE)

The Northern Beaches (NB) B-Line route is proposed to extend 30km along the primary north-south spine from the Sydney CBD to Mona Vale. Facilitating rapid bus movements along this corridor will reduce bus travel times, reduce car reliance, and connect higher density areas with other modes of transport. Mona Vale's B-Line Terminus will be centrally located and accessible from most part of the Centre. The Centre will benefit from this improved public transport service.



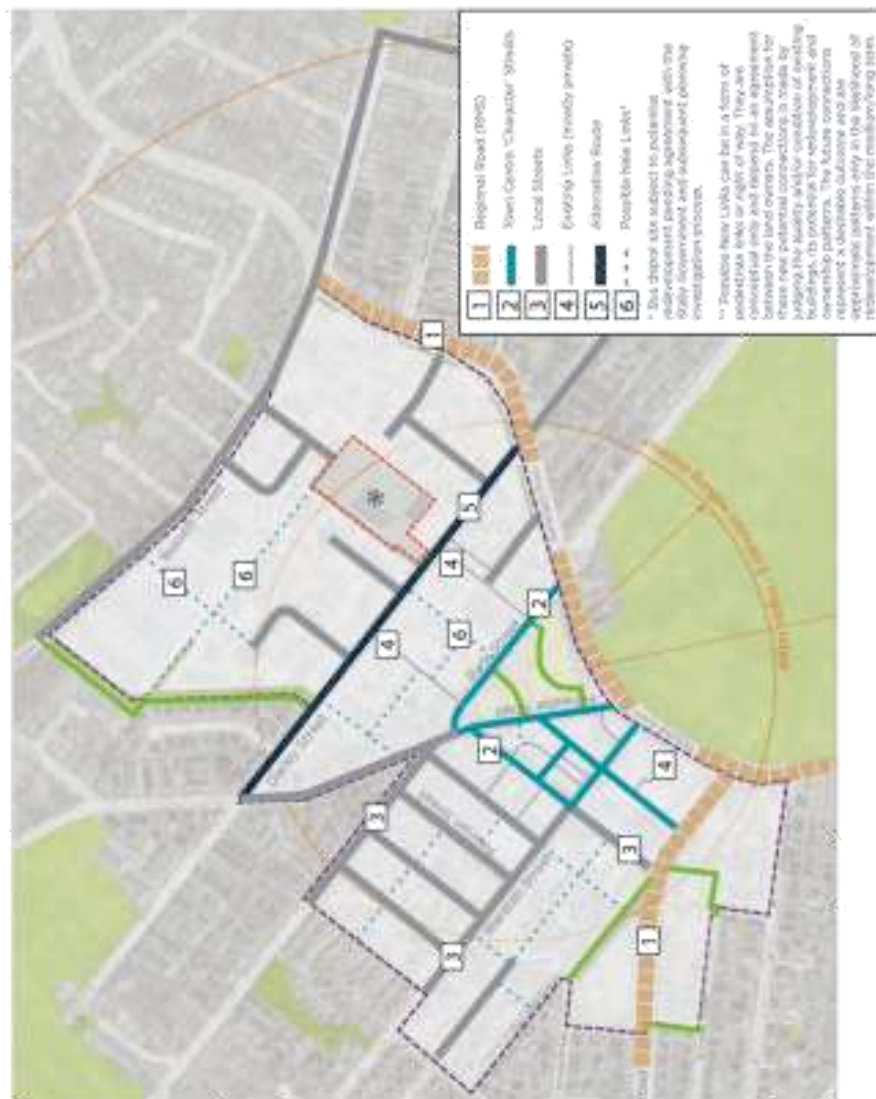
Pittwater and Crows Nestwood Concept (Open part: Not Approved)

IMAGINE MONA VALE: MONA VALE PLACE PLAN



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## 4.0 PEOPLE, STREETS AND PLACES



Connectivity from the adjoining residential area is maintained with **Local Streets (3)** and **Local Links (3)** and improved with **New Links (6)**. Most of the Local Links are within private lands, however they should be retained as a feature in the future redevelopment of these sites. Proposed New Links are conceptual only and subject to future discussion with the land owners. The future connections represent a desirable outcome and are approximate patterns only in the likelihood of redevelopment within the medium/long term.

An analysis and traffic modelling by Parking and Traffic Consultants recommends a relocation of the main traffic route from Pittwater Road to Darley Street - as an **Alternative Route (4)** on the northern side of the Centre, subject to incorporation of further traffic treatments and RMS agreement. This will control the vehicle movement through the Town Centre streets and smaller local streets. Reduction of speed may be proposed for Pittwater Road, Park and Bungari Streets. Signs to advise of changes to traffic conditions also are proposed for Pittwater Road and Park Street reinforcing Darley Street as the main traffic route.

### 4.2 FUTURE NETWORK DESIGN AIMS

Accessibility is a very important aspect to support the life and activities of a town centre. Currently, most of the Mona Vale Town Centre is accessed via a connective street network. However, the current analysis by Parking and Traffic Consultants (TTC) identifies an impact on the amenity and the atmosphere of the Centre.

During the community engagement process, there was a common perception that the pedestrian experience and overall connectivity can be improved.

The Place Plan aims to achieve a more permeable street network with improved connectivity to the surrounding areas. New connections will create high levels of choice and mobility for pedestrians, cyclists and vehicles, with an emphasis on creating a highly walkable community that will provide a seamless access to all parts of the Centre.

**Town Centre Character Streets (1)** will be **People Streets**. They will facilitate activation of the ground floor uses and place a significant focus on pedestrian and cyclist movement.

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## 4.0 PEOPLE, STREETS AND PLACES

### 4.3 STREET DESIGN EXPLORATION

#### 4.3.1 BUNGAN STREET

##### Existing Conditions

Bungan Street North is currently lined by specialty retail and outdoor dining facilities. There are two lanes of traffic with on-street parallel parking on the western side and 90 degree parking on the eastern side.

Bungan Street South is less active than Bungan Street North. There are two lanes of traffic with on-street parking on both sides. Ground floor activities are visible on the retail frontage eastern side. However, the elevated footpath on the corner of Warringah and Bungan Streets creates some congestion in movement.

For the purpose of this Place Plan, Bungan Street North is considered one of the character streets while the southern part will continue as a local street.

##### Design Ideas

During the community consultation process, one of the common ideas was to reduce traffic and create a pedestrian and cycle friendly Bungan Street. As one of the 'Town Centre Streets', Bungan Street North's design will focus on the amenity and ease of pedestrian and cyclist movement.

The key design ideas for Bungan Street North are below:

1. Sense of enclosure and a perception of a narrower street to improve the setting.
2. Landscape treatments, paving patterns, placements

of street furniture and plantings to be used to delineate spaces.

3. Facilitating an informal pedestrian and cyclist movement to activate the street.
4. Integrating safer, bike friendly traffic lanes. A shared space will encourage pedestrian and cycle movements.
5. Using on-street parking as a tool to separate the traffic. 90 degree parking will be allocated as parallel parking to increase community spaces and improve pedestrian safety.
6. Encourage a fresco dining to enable a condition of 'Euf Street'.



Recent condition of Bungan Street into a shared space, 2017



Existing Bungan Street North



Existing Bungan Street South



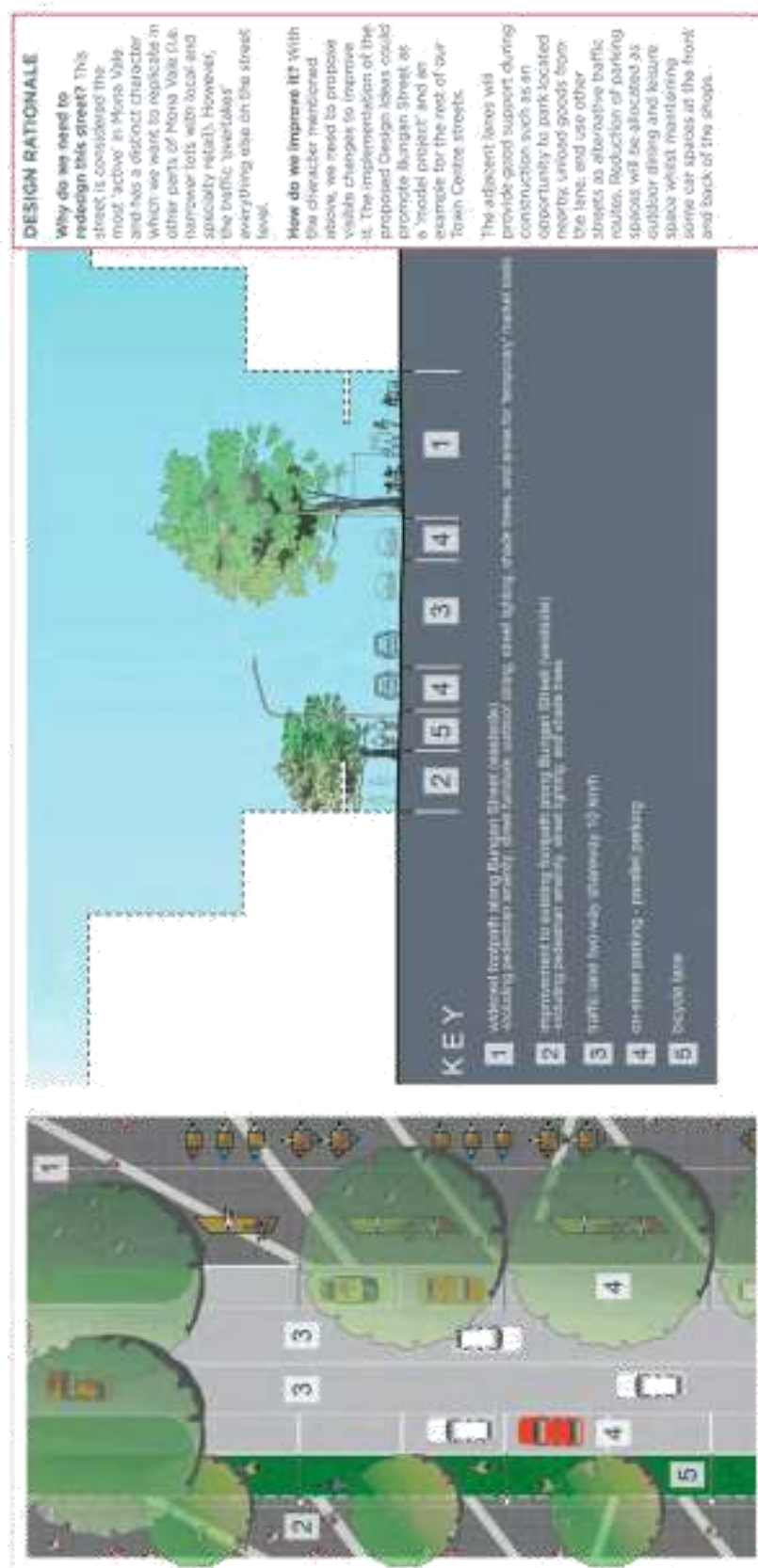
Shared spaces in Australia and Victoria offer a mix of pedestrian and cyclist environments, without parking car along

DRAFTING MONA VALE: MONA VALE PLACE PLAN



Draft

# 4.0 PEOPLE, STREETS AND PLACES



Concrete Driveway / Bicycle Street / Main Street / Plan and Section

Draft

## 4.0 PEOPLE, STREETS AND PLACES

### 4.3.2 PITTWATER ROAD

#### Existing Conditions

Pittwater Road (between Bungen Street and Baynesley Road) is currently lined by retail use on one side and community use on the other. The total reserve width is 30m with four traffic lanes in addition to on-street parking.

The landscape well along the north side of Pittwater Road is elevated to separate the pedestrians from busy traffic but somehow it also conceal the active uses from the street.

This street continues beyond the roundabout with 2 lanes

of traffic and is lined by mostly residential uses. For the purpose of this Place Plan, Pittwater Road East is considered as one of the character streets while the western part will continue as a local street.

#### Design Ideas

The key design ideas for Pittwater Road East are below:

1. Slower vehicular speed to improve the setting. Sense of enclosure and a perception of a narrower street will help to achieve this.
2. Reduction of 4 traffic lanes into 2 traffic lanes to match

the rest of Pittwater Road and the reconfiguration of on-street parking. This will reduce the bitumen width and minimise the separation between both sides of the street.

3. Use of on-street parking as a tool to separate the traffic and the pedestrian zones.
4. Widening the footpath to facilitate outdoor dining on the southern side. Landscaping and Water Sensitive Urban Design features on both sides.
5. Utilise the existing wide reserve to project the grand "Boulevard" character as a gateway to the Town Centre.



Wide footpath to allow for walking and social interaction



Wide footpath to allow for walking and social interaction

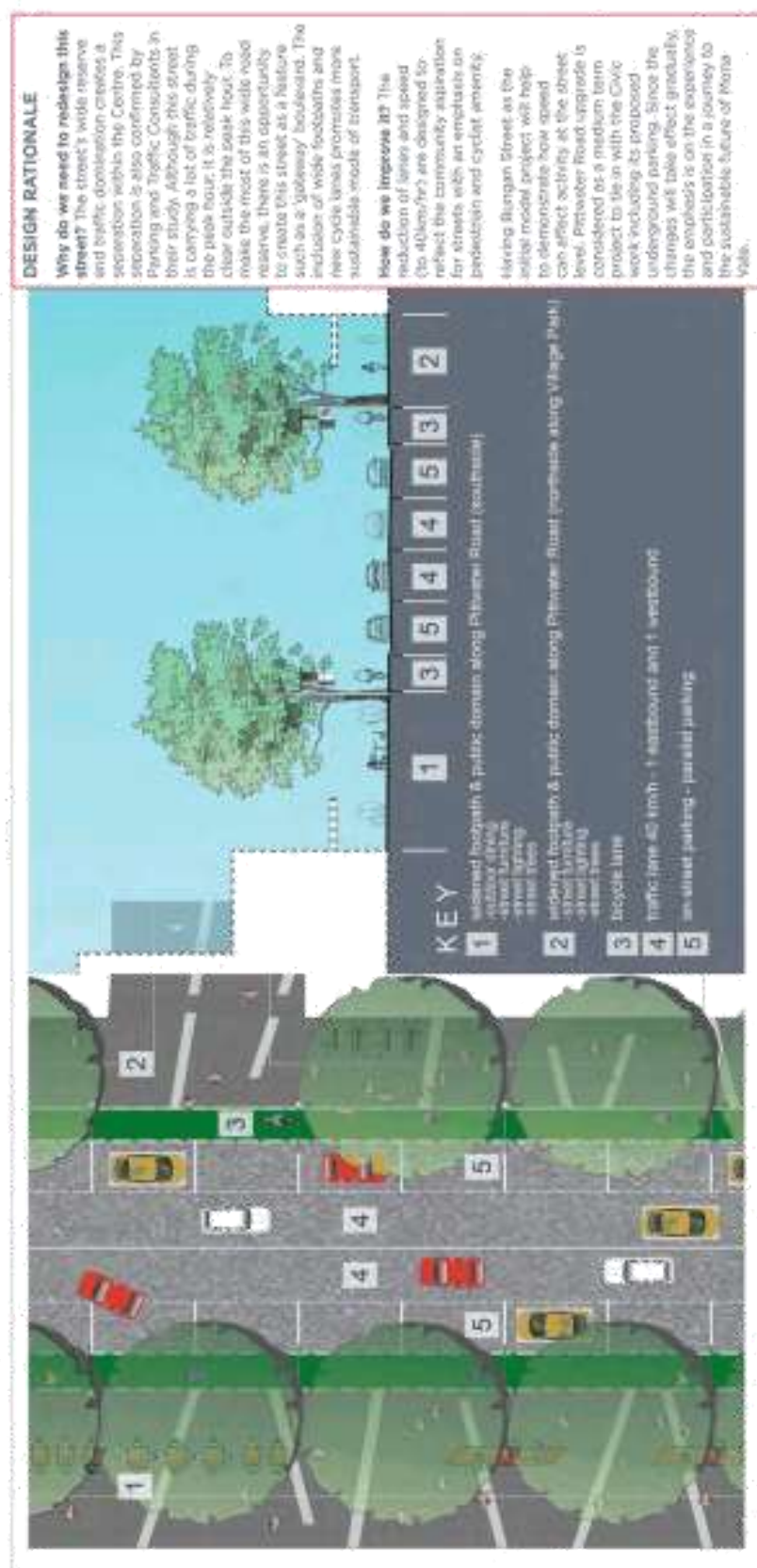


existing Pittwater Road East

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## 4.0 PEOPLE, STREETS AND PLACES



Concept Extension - Pleasure Road - 'The Boulevard' - Public and Private



Draft

## 4.0 PEOPLE, STREETS AND PLACES

### 4.3.3 PARK STREET

#### Existing Conditions

Park Street East (between Bungan Street and Bannockburn Road) is currently used by retail use to the north and community use to the south. Ground floor activities are visible on the retail frontage. However, the changes of footpath levels at Pittwater Place and driveway access create some disruptions in movements.

The width and the centreline of Park Street East varies along the street. It has two lanes of traffic with on-street parking on both sides. The on-street parking is a combination of

angled and 90 degree parking. Two pedestrian crossings connect pedestrian movements from south to north. The existing bus stop is located near one of the crossings and to remain in the same location.

Park Street West (west of pitwater Road) is used by mostly residential uses. For the purpose of this Place Plan, Park Street East is considered as one of the character streets while the western part will continue as a local street.

#### Design Ideas

The key design ideas for Park Street East are below:

1. Creating more consistent street conditions to

improve safety. Landscape treatments and street furniture are required to note the change of conditions.

2. Facilitating informal, free-flowing pedestrian and cyclist movements to activate the street. Active uses on both sides will improve the life at street level.

3. Using on-street parking as a tool to separate the traffic and the pedestrian zone.

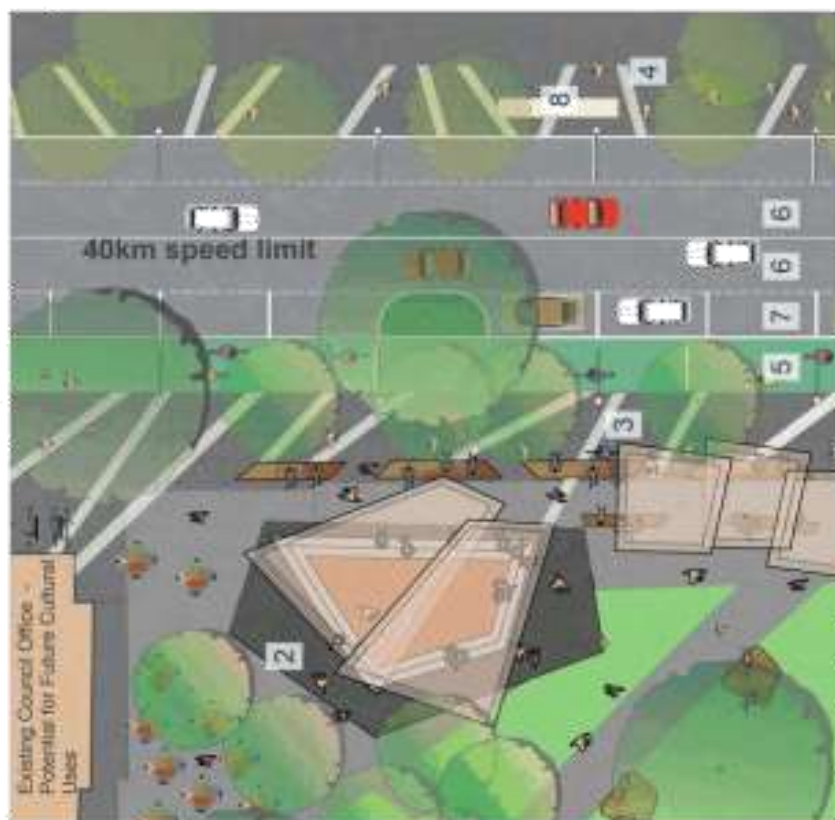
4. Introducing safer, bike friendly traffic lanes. Landscaping, rain-gardens, and paving patterns will be used to help delineate spaces.



Park Street East



Proposed landscaping and paving patterns to improve pedestrian and cyclist movements.



Conceptual Diagram - Park Street East

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## 4.0 PEOPLE, STREETS AND PLACES



Consultation Feedback - Park Street Section

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## 4.0 PEOPLE, STREETS AND PLACES

### 4.3.4 LANEWAYS

#### Existing Conditions

Mona Vale has a network of established laneway systems. Some properties are using these lanes as their front address, therefore some parts are showing more activities on the street level than the others.

However, most of these lanes are used mainly for service related purposes such as delivery, alternative traffic connections and additional parking spaces.

Some of Mona Vale's laneways are owned by private entities. This section shows a potential upgrade of the public laneway system.

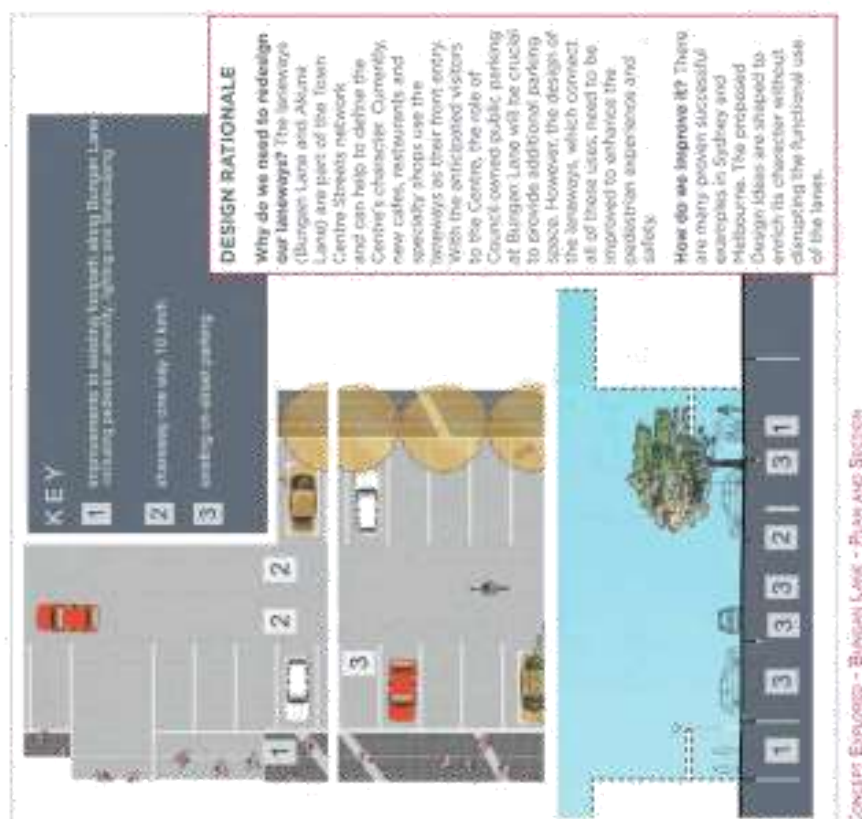
#### Design Ideas

The key design ideas for the laneways are below:

1. Continue to facilitate informal pedestrian, cyclist and vehicular movements.
2. Continue to encourage pedestrian entries off the laneways to promote natural surveillance and ground floor activation.
3. Use of paving patterns to delineate spaces and create areas of activities.
4. Incorporate some landscaping and street furniture for the wide part of the laneway to increase pedestrian amenity and promote activities.
5. Design the laneways to be part of the streetway system.



Examples of laneways to focus on pedestrian activities - City of Sydney



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## 4.0 PEOPLE, STREETS AND PLACES

### 4.4 SIGNAGE AND WAYFINDING

Providing legible wayfinding information and appropriate lighting are critical to ensure movement networks are clearly defined and easily understood so that people are confident of finding their way around the Centre.

A signage, wayfinding and lighting strategy, including a design manual is required to provide a clear and coordinated framework. The strategy and manual will ensure signage is consistent and help people get to their desired destination.

Signage within Mona Vale is currently lacking visual cohesion. This is leading to a decrease in visual clarity and legibility. The Place Plan can be viewed as an opportunity to review the current practice.

During the community engagement period, Florence Lam, Anup Fellow Global Lighting Design Leader, suggested using urban lighting not just as a functional addition, but as a fundamental solution to improving quality of life, reinforcing urban design principles, enhancing the cultural experience and encouraging social interaction.

A consistent and coherent signage and lighting strategy will be integral to the success of these places.

#### 4.4.1 DESIGN IDEAS

The key design ideas are below:

1. Design a system which allows for different addition of wayfinding processing, such as cognitive mapping and point-to-point navigation.

2. Provide consistent Design Language: the sign elements appear as part of a system to strengthen the image of the place.

3. Design a comprehensive system so that it can be recognised, read, understood, and compared in the shortest time possible.

4. Create a framework for specialised lighting in certain locations such as using subtle lighting design at key places, building and streets to reinforce the distinctiveness of an area.



Examples of consistent signage at the design V&C



Source: Wayfinding and Lighting Character Project Plan

- |   |  |
|---|--|
| 1 | Civic heart and the heart: wayfinding and lighting design to enhance the character of civic heart and local place                                  |
| 2 | Village heart: wayfinding and lighting design to enhance urban character and street level activities   |
| 3 | Residential interface: wayfinding and lighting design to reflect transitional character to residential area  |
| 4 | Light industrial: wayfinding and lighting design to facilitate the working environment and reflect transitional character to light industrial zone |
| 5 | Residential: wayfinding and lighting design to reflect residential character and future context  |



Draft

## 4.0 PEOPLE, STREETS AND PLACES

### 4.5 DESIGN CONCEPT FOR PEOPLE'S SPACES

#### 4.5.1 THE HEART

##### Design Ideas

- Create a focus on community spaces and synergy between complementary uses.
- Design public open space to be accessible and intimately scaled to encourage social interaction.
- Maintain the visual connection between the Civic Square and Village Park.
- Allocate built form to frame Ptwater Road and Park Street.
- Facilitate easier pedestrian movement from Bungan Street 'Main Street' to Civic Square. Removal of the existing roundabout is recommended by 'Mona Vale Town Centre, Traffic Flow and Parking Strategy'.
- Design areas of activities and activity programs to encourage the use of space which provides natural surveillance far daylong and night-time.
- Potential future conversion of the existing Council Administration building to a collective artist 'in-residence' facility to include retail, exhibition and workshop space.



urban, civic square



streets and footpaths



nighttime and daytime activities



street, community and retail space



The 'Heart' Concept: Envisioned (Most of the ideas for the Civic Square and Village Park are set out on 10 the following pages)

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# 4.0 PEOPLE, STREETS AND PLACES



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Image: proposed Civic Square



Image: proposed Civic Square



Image: proposed Civic Square



Image: proposed Civic Square

natural surveillance. Entries and openings to the Civic Square, rooftop garden, Village Park and the streets are mandatory.

Avoid extended blank walls visible from the public domain. The auditorium and multi-purpose library building are designed with a transparent facade to show activities within the buildings. The buildings are to front the Civic Square, rooftop garden, Village Park and the streets.

Relocate the existing isolated cafe to a new location for activation of Village Park.

Design a flexible upper floor plan to increase robustness to future commercial adaptation.

Offer business incubator and co-shared offices to provide affordable options in prime locations for local workers.

Design a self-contained village with access to public transport to reduce dependency on private cars.

Consider reduction of on-site parking to promote active travel and to maximise usage of public spaces.

## THE CIVIC SQUARE

Considering the future growth in Mona Vale's population, there is a real need for good civic spaces in the centre.

Brewster Horth Architects (BHA) were originally engaged by the Council in 2003 to design the existing Mona Vale Library and two council buildings and were completed by 2004.

To ensure and maintain the relationship of many good elements in these spaces, BHA were engaged again in 2016 to provide a preliminary design for the future expansion of the civic buildings. Architectural concept and drawings on the following pages are produced by BHA.

### Design Ideas

- The Civic Square must be enclosed by built form with activity generators on the ground floor. Activity programs can be used to maintain daytime and nighttime activity.
- Design the Civic Square as a focal point and meeting spot to allow for social interaction with low key design features as informal seating, shading and water features.
- Allocate multiple entries from public spaces to encourage activity and

## 4.0 PEOPLE, STREETS AND PLACES

Site plan showing building footprints, parking areas, and landscaping. Dimensions are provided for various sections. A north arrow is located in the upper right corner.

Section, through the 'Capitals' that 'standing for religious, economic and the Civil Service' is a separate part of the

MACHINE MCHNA VALE: MOMA VALE PLACE PLAN

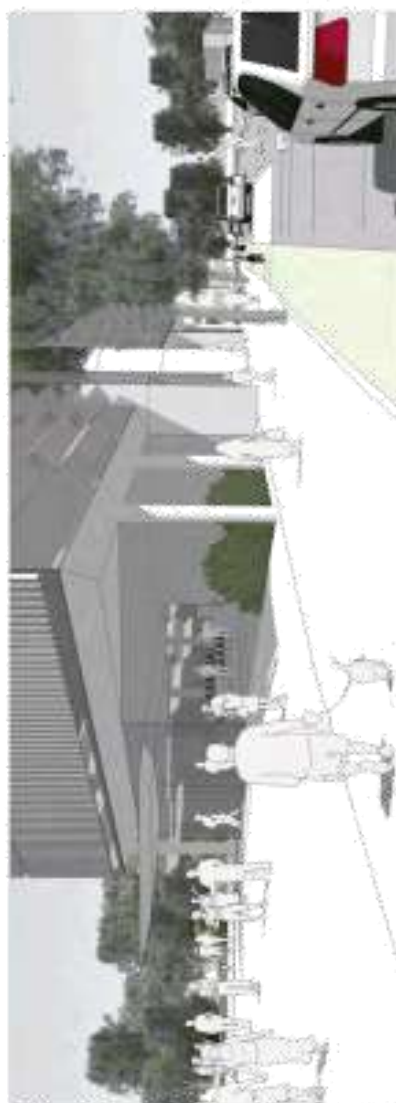


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# 4.0 PEOPLE, STREETS AND PLACES



Building and activities to frame the Civic Square.



Early form, Melbourne House



Cable to connect Village Park



Village Square and Village Street to Civic Square



The heart of the community - The Civic Square, library, cafe and restaurant, auditorium, museum and other public buildings and other space



Section through the 'Community Hub' showing the auditorium, restaurant and cafe. Space is highlighted in yellow to show the building's footprint.

Draft

## 4.0 PEOPLE, STREETS AND PLACES

### VILLAGE PARK

#### Design Ideas

- Create a rooftop garden linked to the Council building, Village Park, streetscape & transport.
- Activate interface between the Council building and Village Park with community activities.
- Provide public amenity including raised podium area for entertainment, artspace, and pop-up stable lawn area for relaxation; and an upgraded playground. All access to be provided by linking activity areas.
- Retain recreational open space and provide areas of shade within the Village Park.
- Create an environment conducive to social interactions and recreational activities to the edges of the open space.
- Create a unique character to the gateway of Village Park on Pittwater Road and Park Street.
- Maintain and enhance the existing War Memorial precinct.
- Improve the interface between Pittwater Road and Village Park with an activity generator.



Image: Family-friendly spaces



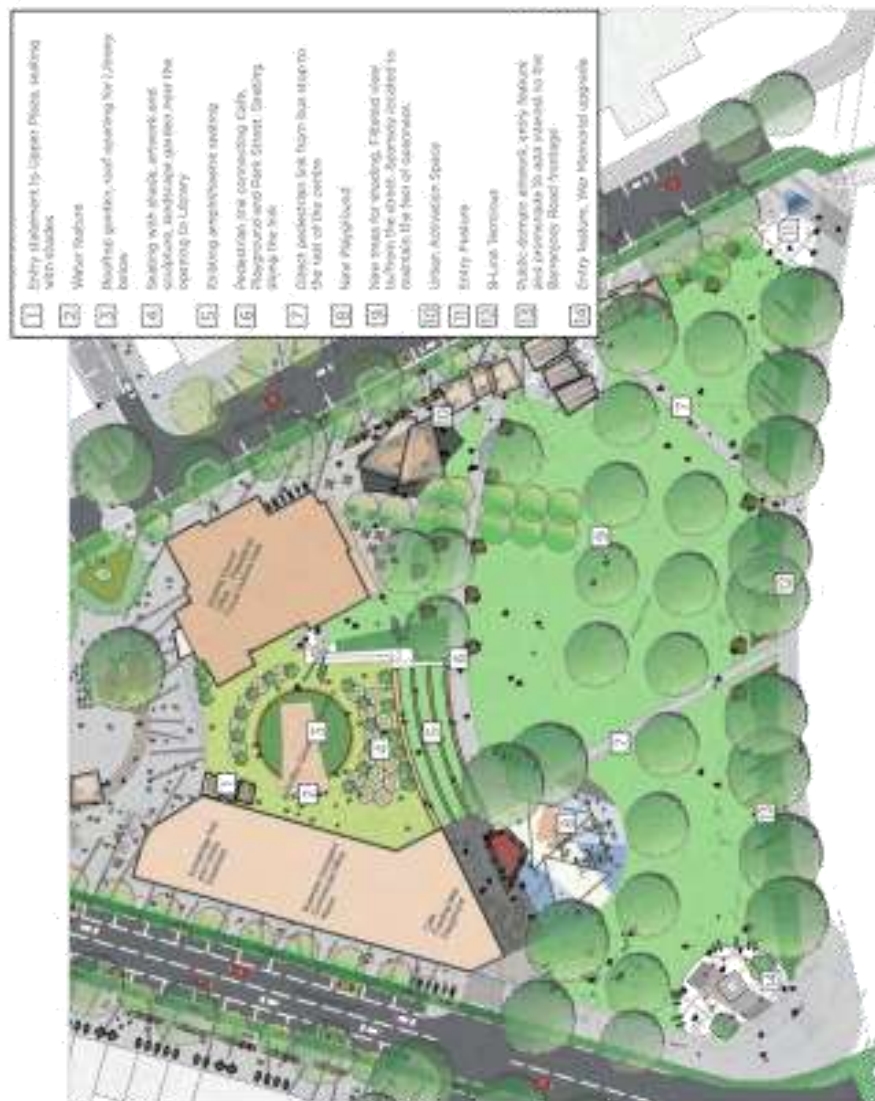
Image: Active recreation



Image: Low-key playground



Image: Active recreation



Visual Park Concept Evolution

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Draft

## 4.0 PEOPLE, STREETS AND PLACES



Usage Activity Zones



Gateway, New Playgrounds and Cafe





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## 5.0 BUILT FORM CHARACTER



35



contemporary, open, articulated by nature



refined surveillance to public spaces



mixed activities, informal character



adequate weather protection and non-slip safety requirements

living, indoor to outdoor integration by the use of balconies and courtyards and large windows creating open facades.

Lower scale buildings are on the perimeter to integrate with the adjoining residential development.

Pockets of increased density built form are located to take advantage of the topography and amenity to public transport and to define the community heart and core area.

### 5.1.1 HEIGHTS

Mixed used apartment buildings will be the dominant built form in the Town Centre core, focussing on housing diversity and affordability for a range of households. Maximum height within the core area will be 6 storeys (3) with an exception of some 4 storeys (2) to allow infiltration of sunlight to the public domain. The interface area will allow up to 3 storeys (3) to provide a transition of scale to the adjacent 3 storey (4) residential and education zone.

An upper level setback is required for any buildings above 3 stories to fit into the existing context and to maintain pedestrian scale on the street level.

### 5.1 DESIRED BUILT FORM CHARACTER

The scale and height of buildings defines the street and public realm. Built form reinforces the structure of the street system by aligning building facades parallel to and overlooking streets and public spaces.

Built form is to reflect Mona Vale's existing fine grain character to emphasise the desired village atmosphere. Fine grain built form needs to be replaced by a larger redevelopment proposal.

Light-weight expressions, and a natural colour palette are appropriate to reflect the relaxed contemporary beach side lifestyle.

Buildings are to be dynamically responsive and incorporate expressions of light and shade with well detailed and articulated facades.

Building elements such as weather protection and sun shading (including eaves and overhangs) are to be incorporated into facades and roof forms to reduce direct solar heat and for rain protection.

The built form has visible and expressive roof forms and includes mid-section-outdoor

Draft

## 5.0 BUILT FORM CHARACTER

### 5.2 DEVELOPING THE CHARACTER

#### 5.2.1 CENTRAL ACTIVATION AREA

##### Design Ideas

- Avoid blank, solid walls in the public domain. Large redevelopment ideas are to be designed to minimise the extent of blank walls to public areas.
- Incorporate active uses on the ground floor to promote activity on the street level. An additional level of commercial/retail on the upper floor is required to fulfil floor space demand for non-residential uses.
- Incorporate vertically proportioned architectural elements to enhance visual experience and reinforce the fine grain subdivision pattern.
- Provide a well defined public domain and sense of main street enclosure. Awnings can be used to define pedestrian space and provide weather protection.
- Include landscaped streets and public domain to provide generous shade for users
- Provide three storey street wall height with upper levels setback to fit into the existing context and to maintain pedestrian scale.
- Locate car parking to the rear of buildings or underground with vehicular access from side street or lanes.



Active ground floor



Well defined public domain



Active ground floor



Street wall position and upper level setback to maintain human scale



IMAGINE MONA VALE, MONA VALE PLACE PLAN



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## 5.0 BUILT FORM CHARACTER



### 5.2.2 RESIDENTIAL INTERFACE

#### Design Ideas

- Allocate a transitional height, scale and typology between denser core areas and the adjacent lower density residential.
- Adopt built form principles of domestic typology with distinct base, middle and top with well defined roof.
- Promote vertical modulation and facade definition for street frontage and corner lots.
- Allocate direct pedestrian entry from the street and minimise impacts of driveway access with appropriate setback and recess. Vehicular access from lane or side streets are preferred, where possible.
- Encourage amalgamation on narrow lots (less than 12m wide).
- Allocate the front setback area as Deep Soil Planting zone to soften the built form.
- For lots fronting Dygal Street, allocate a centrally located courtyard with landscaping for a communal open space. Built form also needs to address Regzone Lane.
- For lots fronting Waratah and Park Streets, allocate the rear setback area for landscaping.



Transitional heights to core area



vertical modulation



Domestic typology with generous landscaping



Draft

## 5.0 BUILT FORM CHARACTER

### 5.2.3 INITIAL INVESTIGATION AREA OF AHNG

#### Design Ideas

- Ensure the ground floor is allocated to non-residential uses (consistent with the IN2 zone) with minimum ceiling heights to accommodate a range of light industrial workshops and associated storage. Display activities and direct pedestrian entries from the street.
- Options are explored for incorporating **Affordable Housing for the Next Generation (AHNG)** which is targeted for young people and workers (in the levels above ground).
- Investigations will include analysis of the area's employment functions, housing affordability and the potential compatibility of light industrial and residential uses. Design solutions will include relative mechanisms for ensuring that potential impacts from existing and future industrial uses on the ground floor and surrounding vicinity do not unduly impact on the health, well-being and amenity of residents.
- Some form of activation is encouraged on the footpath and Darby Streets frontage.
- Ensure that built form achieves appropriate pedestrian scale with three storey podium elements and any levels above the set back accordingly.



Informal spaces provide for quick and easy living



Light industrial use ground floor



Maximising extent to activate street



IMAGINE MONA VALE: MONA VALE PLACE PLAN



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# snapshot

|   |  |   |
|---|--|---|
|   |   |    |
| <b>7700m<sup>2</sup>+</b><br>potential total new outdoor public spaces when the Civic Reserve is fully redeveloped. This includes a new Civic Square with water features, playground, outdoor gym, performance stage and outdoor seating. | <b>2500m<sup>2</sup>+</b><br>potential space for a-levelled driving and parking  | <b>1500m<sup>2</sup>+</b><br>potential additional space for 175 new automobiles, new restaurants and cafe, contemporary meeting space with wifi connection which is even larger than for the plaza. |
| <b>870m<sup>2</sup>+</b><br>potential new cycle area when the Town Centre streets are fully redeveloped. This will form part of a larger bicycle network across the region.   | <b>275+</b><br>proposed additional public off street parking spaces provided when The Way to the Park and Sky (SS) signals and the Civic Square underground parking (25 spaces) are fully developed. | <b>52</b><br>proposed hotel converted parking lot when Monks Vale Town Centre streets are fully redeveloped. Current underground parking provided when office includes 100 spaces.                  |
| <b>44</b><br>proposed future public off street parking lot when Mona Vale Town Centre streets are fully redeveloped. Current public off street parking provided when airport extra is 100 spaces.   |    |    |
|    |  |   |

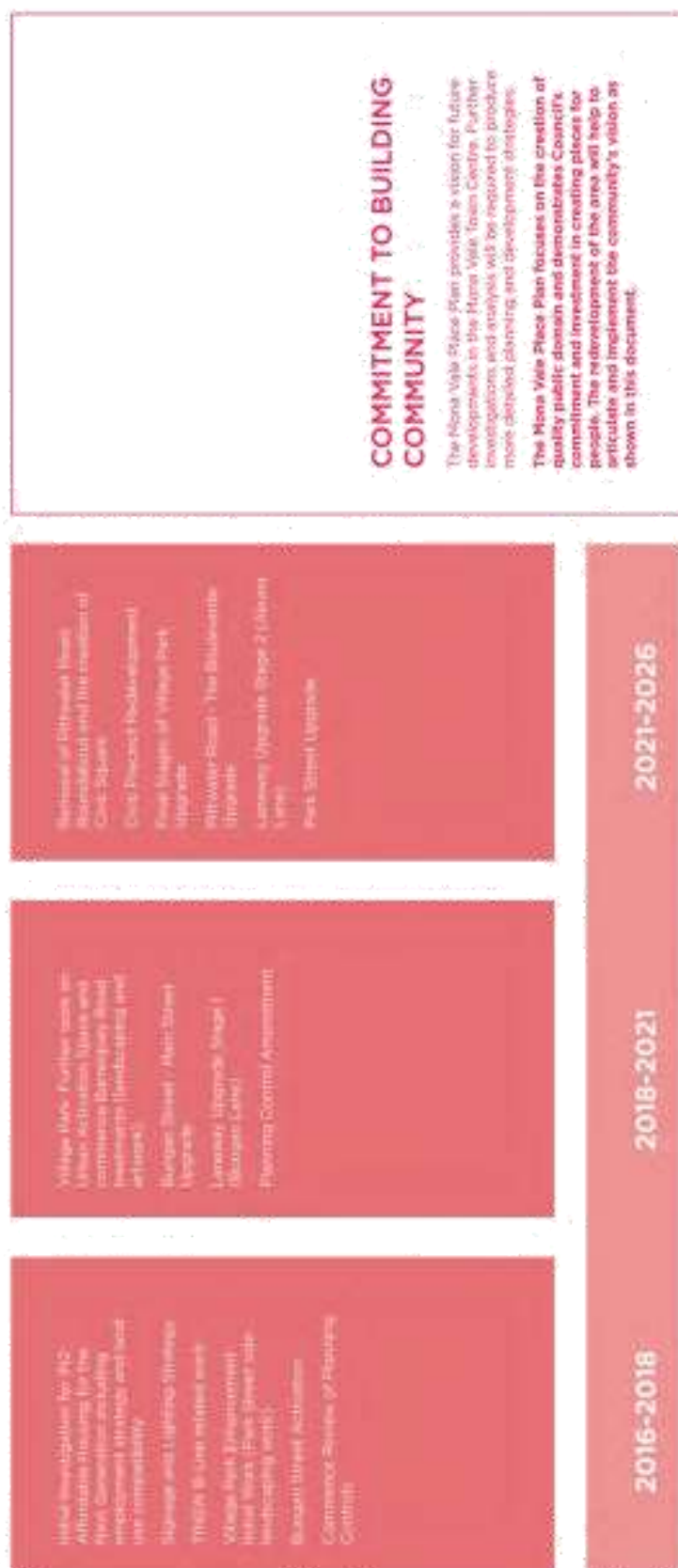
An aerial photograph of the Mona Vale area, including the coastline, roads, and surrounding vegetation. A semi-transparent red rectangular overlay covers the entire image. The word "TIMELINE" is written vertically in large, white, sans-serif capital letters across the right side of the red overlay.

# TIMELINE



Draft

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Draft

## CREDIT

Northern Beaches Council appreciates the contribution made to the project by:

- Community, survey and workshop participants
- Kinesis - Mona Vale Development Feasibility Testing
- Parking and Traffic Consultants - Traffic and Parking Study
- Brewster Hjorth Architects - Architectural Concept of Mona Vale Auditorium and Library
- Council staffs and Place Management team

IMAGINE MONA VALE: MONA VALE PLACE PLAN

# APPENDICES

## A. GLOBAL AND LOCAL TRENDS

| Vehicle Type              | Percentage |
|---------------------------|------------|
| Cars and motorbikes       | 52%        |
| Heavy trucks              | 11%        |
| Medium trucks             | 4%         |
| Light commercial vehicles | 9%         |
| Bicycles and mopeds       | 8%         |
| Scooters and mopeds       | 2%         |
| Domestic aircraft         | 3%         |

**90%** of all  
Ford, Toyota, GM  
Australia has one of the  
world's highest vehicle  
miles per litre ratios

**99.9%** of  
affluent vehicles run on  
premium fuels – and together  
a move towards greater  
vehicle fuel efficiency  
will ensure a brighter  
economic future for  
every citizen

**7** times  
the fuel efficiency  
of the cars

Figure 1 is a stacked area chart illustrating the percentage of different vehicle types in the UK fleet from 1980 to 2000. The Y-axis represents the percentage (0 to 100), and the X-axis represents the year (1980 to 2000). The legend identifies five vehicle types: Articulated (dark blue), Bus (light blue), LCV (yellow), Motorcycle Road (red), and Passenger Cars (pink). The chart shows a significant increase in Passenger Cars and a decrease in Articulated vehicles over the period.

Journal: *Journal of International Business Studies*, 2013, 44(1), 1-15

**10%** will no longer undertake transport functions would reduce OAG's earnings by more than

**400,000** dollars a year every million passengers on an average transport network of cars, trucks

**45,000** (thousands of tons)

Traffic competition between rail and the Australian Government

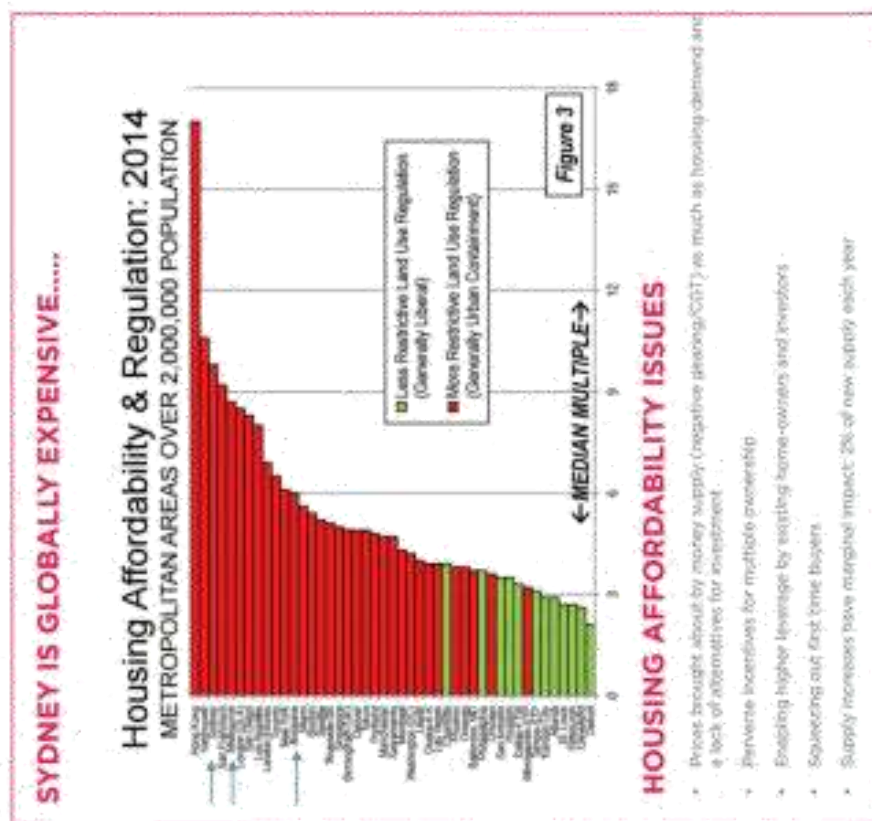
**\$20** billion (total operating by 2002)

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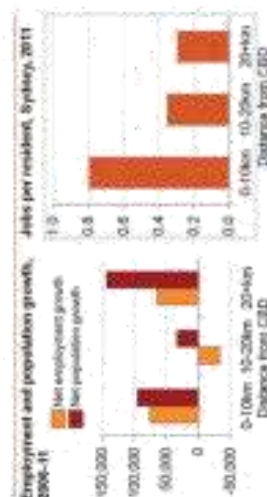


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## A. GLOBAL AND LOCAL TRENDS



### HOMES ARE NOT BEING BUILT WHERE PEOPLE WORK



Source: Grattan Institute

in Australian financial market cities around the world, Australian cities have some of the lowest population densities per person per hectare (Source: Sydney Audit 2004; US Census Bureau 2006; Transport for London 2007)

Draft

## B. KINESIS FEASIBILITY STUDY

### B.1 OVERVIEW

Successful Place Planning understands and responds to the physical opportunities and constraints of the place and the community's aspirations. The analysis in this section is to acknowledge the existing conditions and key elements. The aspirations of the community were gained from an extensive engagement process which was then documented in the Imagine Mona Vale – Engagement Summary for Mona Vale Place Plan. This combined with the analysis of external consultants, will define the vision for Mona Vale.

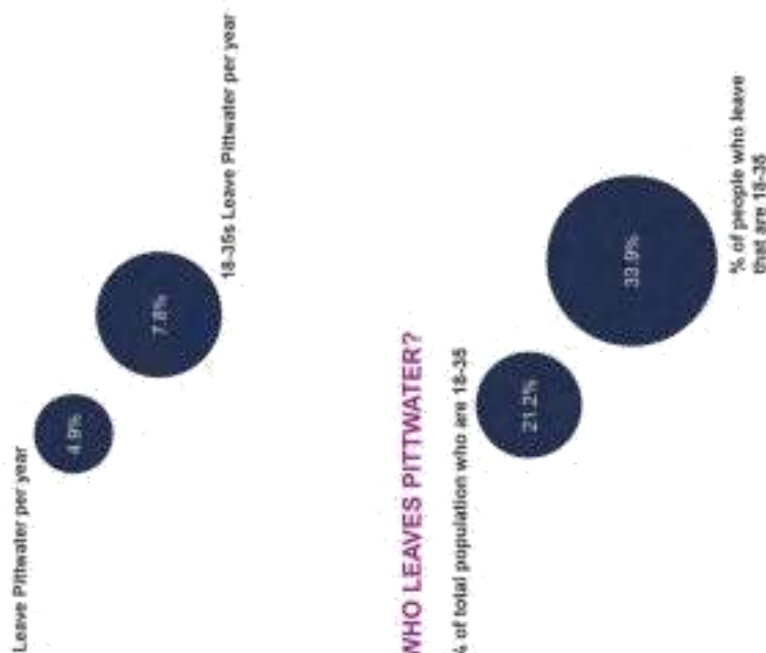
### B.2 MONA VALE TRENDS

During the community engagement process and further analysis by Kinesis, there are four key areas of interest which influence the future growth of the Centre:

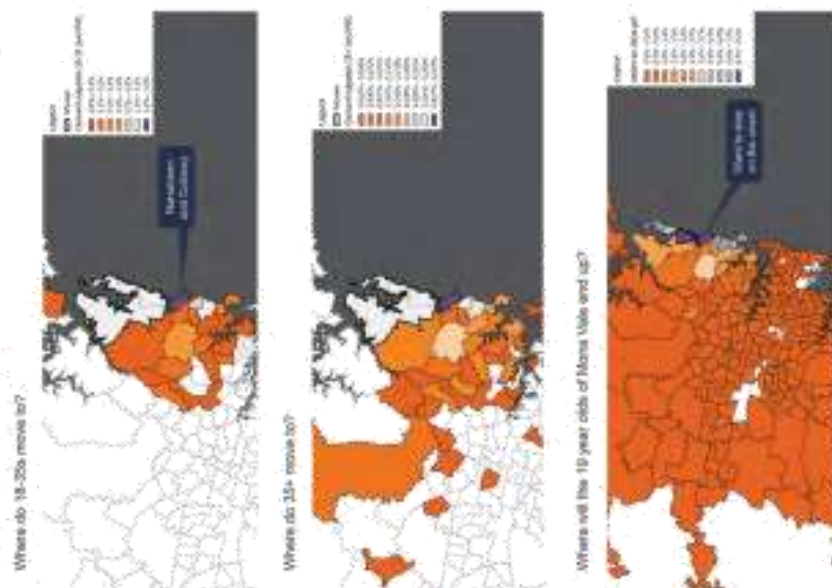
1. Retaining young people
2. Increasing local employment
3. Projecting the social vision
4. Working towards sustainability - shared urban experience

The diagrams on this page explain the current trends to the local area.

### WHO LEAVES PITTWATER?



### MIGRATION PATTERNS



IMAGINE MONA VALE: MONA VALE PLACE PLAN

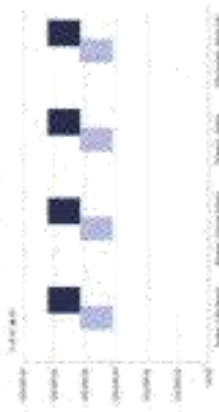
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## B. KINESIS FEASIBILITY STUDY

### IS PITTVATER UNAFFORDABLE?

#### PITTVATER INCOME

Median income range (\$ per working adult)



#### Median income range (\$ per working adult)

Income: Over \$100,000

Income: \$50,000 - \$100,000

Income: \$20,000 - \$50,000

Income: Under \$20,000

Income: Not stated

Income: Not stated

Income: Not stated

Income: Not stated

Income: Not stated

Income: Not stated

Income: Not stated

Income: Not stated

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Income: Not stated

### What is affordable housing?

"As a rule of thumb, housing is usually considered affordable if it costs less than 30 percent of gross household income"

AFSA (Dept of Family and Community Services)

For Pittwater, this equates to:

~\$15,350 year gross - \$3,582,000

~\$35 year gross - \$8,510,000

~\$35 year gross - \$8,510,000

~\$35 year gross - \$8,510,000

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### A PATH TO SUSTAINABLE COMMUNITY?

#### EMPLOYMENT CONTAINMENT

People who work in Pittwater

commute from:

Other areas

Other areas

Other areas

Other areas

Other areas

Other areas

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10+ years but high level of containment

Careless 2+ vehicles per household in Pittwater

Careless 2+ vehicles per household in Pittwater

Careless 2+ vehicles per household in Pittwater

Careless 2+ vehicles per household in Pittwater

Careless 2+ vehicles per household in Pittwater

Careless 2+ vehicles per household in Pittwater

Careless 2+ vehicles per household in Pittwater

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What are the benefits we are planning for?

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## B. KINESIS FEASIBILITY STUDY

### B.3 FEASIBILITY STUDY

Kinesis was engaged by the former Pittwater Council to provide an analysis of the current conditions and the development potential of Mona Vale, with a focus on providing affordable housing.

The analysis shows:

- an evidence base to demonstrate challenges and opportunities, and

- an outline of the approaches required to deliver a substantial amount of affordable housing and housing choice in the Centre.

A decision to pursue these approaches will inform and influence the future vision.

An analysis of the development potential of four sites in the Mona Vale Centre was undertaken. A range of design options were considered:

- retention of existing structures with development of underutilised land,

- demolition & redevelopment of the entire site,

- varying the amount and type of car parking,

- varying building heights from current controls.

The analysis showed these factors as well as the amenity, pattern, existing zoning and specific housing types and choices taken together determined whether a development was viable and feasible.

The findings of this study showed that due to the amenity of the locality to this wide range of factors, and the particular characteristics of each site, each site needed to be considered individually and a generic adjustment to zoning controls would be unlikely to achieve the desired outcome.

The analysis showed that it should be possible to achieve social and environmental objectives, but this will require a more proactive, site based approach by Council.

### B.3.1 KEY FINDINGS

- Affordable housing vs lower cost dwellings**

The analysis of the current condition shows that Mona Vale faces a challenge to retain young people. In addition to this, the demographic analysis shows that the largest group (25%) of the individual workforce is on the lowest income quartile. Considering that housing is the second biggest household expenditure after food, it is essential that the future strategy should include a form of affordable housing. The analysis shows that providing options for lower cost dwellings will not deliver Affordable Housing objectives. An integrated approach which includes some concessions and interventions for eligible intensified/redevelopment sites is recommended to deliver the preferred outcome.

- IN2 zone and its potential for 'SEPP (Affordable Rental Housing) 2009' and/or New Generation Boarding House**

Pittwater has a high level of containment, 42% of

employed local residents work within the former Pittwater area and a further 35% work in neighbouring Warringah area. Mona Vale IN2 zone is geographically located within a 400m radius of the Town Centre, which means that this area can share most of the amenities that the Centre offers. Selected sites on Oakley and Herketh Streets have the potential to contribute the ground floor light industrial employment generating asset with potential opportunities to introduce affordable housing residential uses on the upper floors. This will require a Local Environmental Plan (LEP) amendment and negotiation with the Department of Planning & Environment.

Affordable Housing would be permitted, subject to the consent authority being satisfied that it is provided in accordance with the objective of this zoning and the vision of the Mona Vale Place Plan, its being compatible with existing approved and permissible uses in the vicinity, compliance with the relevant provisions of the Local Government Areas Act 1994, and having not an adverse effect on the environment.

- Potential Redevelopment of B4 Zone**

Sites located within the B4 zones are not without challenges. Some of these sites are quite narrow, the growth and context of fragmented ownership. However, selected sites within the existing B4 zone have opportunities for intensification and/or redevelopment. The test sites show a common result for feasibility analysis. They are feasible and viable for Affordable Housing sites, but less viable as 'market' housing. The redevelopment of these sites is subject to the fulfilment of the zone objectives and protection of the existing retail and commercial space. Ground floor and first floor are generally allocated for non-residential uses.

- Reduction of on-site car parking provision**

Pittwater Development Control Plan (DCP) 20 requires higher on-site car parking provision in comparison to Road and Maritime Services (RMS) and other Local Government Areas (LGAs). Considering the cost of providing parking on-

site, whether it is at grade or basement parking, the analysis shows that all but sites are neither feasible nor viable to comply with the current provision in light of the Council Active Transport Strategy vision, the Centre will benefit from increased public transport services and walking/cycling infrastructure augmentation. Comprehensive car parking strategies that reduce on-site parking requirements in conjunction with the Active Transport Strategy are integral to housing affordability and essential to foster sustainable growth in the long term.

- Existing building height**

The analysis shows that B4 zone height limit (35m or 4 storeys) does not comply with the revised height definitions in the Standard Instrument and the recommended floor to floor dimensions in the Apartment Design Guide. In light of the recent redevelopment pattern and the feasibility of selected test sites, greater heights such as 6 storeys can be suggested where there is no adverse impact to amenity.



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## B. KINESIS FEASIBILITY STUDY

### CONCLUSION

In the course of testing the feasibility of local commercial street fronted and off-street parking systems, the need for changes to planning controls, land use and local services, including parking, has become apparent.

It is important to recognise and anticipate the Affordable Housing State Environmental Report, the strategy for housing choices in Mona Vale. There is a great opportunity to take the policy within the LEP and DCP to the next step, in relation to housing, by planning and other, practical measures.

### POSSIBLE FUTURE WORK REQUIRED

1. Undertake further work to develop a policy which includes legal and planning processes for the delivery of affordable housing, and for Council's potential role and involvement.
2. Undertake more detailed feasibility costing for selected development sites that may engage local landowners via business and equitable processes defined in step (1).
3. Undertake an analysis of potential for value adding between local landowners and Council via SBA or other mechanisms.
4. Undertake more detailed demand and supply analysis of residential, employment and industrial lands in Mona Vale.
5. Undertake work to amend Council's Planning Controls including the discrepancies between existing and standard LEP definitions, and the incorporation of policy and strategic considerations.

#### Block planning and site amalgamation

During the analysis it has become clear that approaching reserves as a site for site back has limitations and that approaching the design of entire street blocks may have significant urban design and financial benefits. There are a number of mechanisms that may be worth investigating further, including tradable development rights and 'land re-alignment' techniques. The incentives/strategies for such an approach would need to be a significant increase in land value, which could be achieved through changes to the permissible uses, floor space ratios, heights or a combination of all three. This concession will be subject to the fulfilment of the vision of the Mona Vale Place Plan, to ensure the existing Mona Vale character, human-scale and village character.

#### Opportunities for increasing housing diversity and density around the Centre

The study shows opportunities for updating Council planning controls to provide for an increase in density around the Centre in providing extensions and/or modifications to accommodate ancillary dwellings in the area within a 1km radius of the Centre. Existing B2 zones within a 400m radius of the Town Centre, such as areas fronting Dyal Street, can also benefit from up-zoning to B2 to allow development of residential apartments.

#### Increased amenities within redevelopment sites

The potential of roof terraces to provide common open space which would provide high amenity and have little impact on adjoining sites, should be considered and allowed for in the DCP.

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## C. PARKING AND TRAFFIC CONSULTANTS STUDY

### C.1 OVERVIEW

Parking and Traffic Consultants were engaged by the former Pittwater Council to conduct a traffic analysis and parking study for Mona Vale in the context of the Place Planning process.

The aims of the study are to assess the road network capacity by way of traffic modelling and the current parking activity across the study area, providing Council with the information required to develop a plan of civic improvements and a parking strategy.

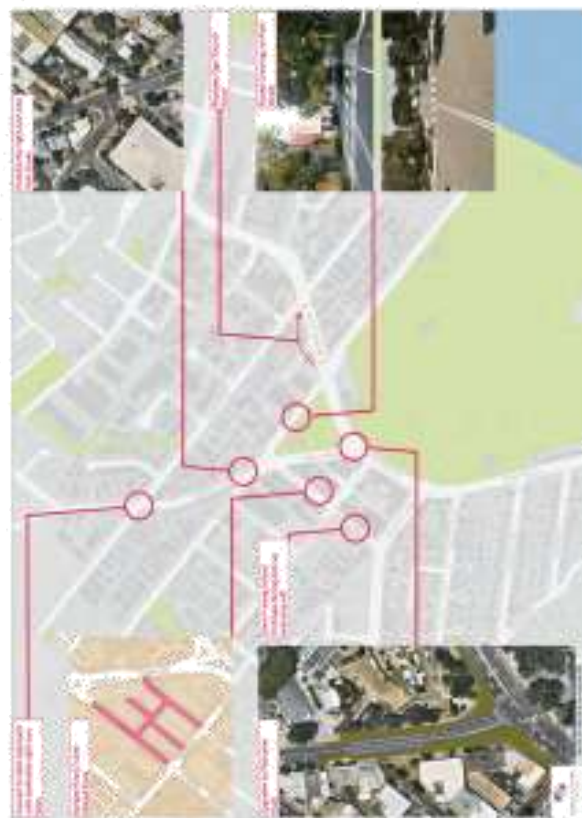
The study has involved the collection of data through extensive surveys of the road network and parking usage as well as a public consultation process. This data has been modelled in relation to the future parking demands and traffic impacts across the Town Centre road network.

### C.2 TRAFFIC STUDY

#### C.2.1 ROAD NETWORK OPERATION

- In 2021 the traffic growth is relatively evenly distributed across the network and causes mainly even impacts at each intersection.
- The primary impact of the Civic Works will be the distribution of increased traffic along Darley Street. This will require the extension of the right turn lane on the southbound Barronney Road approach to Darley Street.
- The increase in traffic along Darley Street increases the delays at each end for vehicles joining Barronney Road and Pittwater Road, although both intersections continue to operate within capacity.

- The Mona Vale Road / Pittwater Road intersection models a Level of Service C during the evening peak, which is consistent with the AECOM findings.
- The Civic works compress Pittwater Road and Darley Street, so while the traffic volumes reduce, the delays remain relatively unchanged.
- The Civic Works result in only minor impacts on the Town Centre Road network.
- It should be noted that a traffic growth rate of 1% per year was adopted, although current records indicate zero growth over the past 5 years.
- The results of the traffic modelling are detailed in Section 5 of the Traffic and Parking Strategy Report.



Proposed adjustments to street network and traffic flow

IMAGINE MONA VALE: MONA VALE PLACE PLAN

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## C. PARKING AND TRAFFIC CONSULTANTS STUDY

### C.2.2 ROAD NETWORK FINDINGS

- The operational capacity of the road network has been assessed through modelling, based on peak hour traffic surveys, traffic signal data and a simulation of the road layout and traffic controls. The model confirms that the existing road network operates within capacity during the daily peak periods and that there is spare capacity to accommodate future growth in traffic activity.

- The model tested a future scenario whereby the growing traffic activity was increased by 7% per annum (cumulatively) to 2021. This scenario confirms that the road network can accommodate this level of growth, although there are indications that certain intersections will require adjustments to the traffic signal timing or some physical works (primarily within the arterials roads).
- The proposed civic works were applied to the road network model to assess the impacts on the road network. The results indicate that the works can be undertaken with some relatively minor mitigated works required. The primary impact results from redirecting traffic along Dalley Street, whereby the right turn movement from Barrington Road generates a queue that extends beyond the existing right turn lane, which then blocks a southbound lane. This will likely require an adjustment to the traffic signal timing and an extension to the right turn lane.

### ROAD NETWORK RECOMMENDATIONS

- Continue to develop the civic works plan on the basis that the traffic modelling confirms that the road network will still operate with a good level of service, subject to some mitigating works being undertaken.
- Develop the proposal for a Shared Zone along Bungan Street and the adjacent lanes to the south.
- Lane with RMS and develop concept plans in relation to changes to the arterial roads, particularly the proposal to reduce the intersection of Pittwater Road and Barrington Road.
- Develop a concept plan of the intersections of Pittwater Road with Bungan Street and Park Street in the context that the modelling has confirmed that the removal of the existing roundabout can be achieved in relation to road capacity.



Arterial and Regional Road Corridor



Proposed Shared Zone

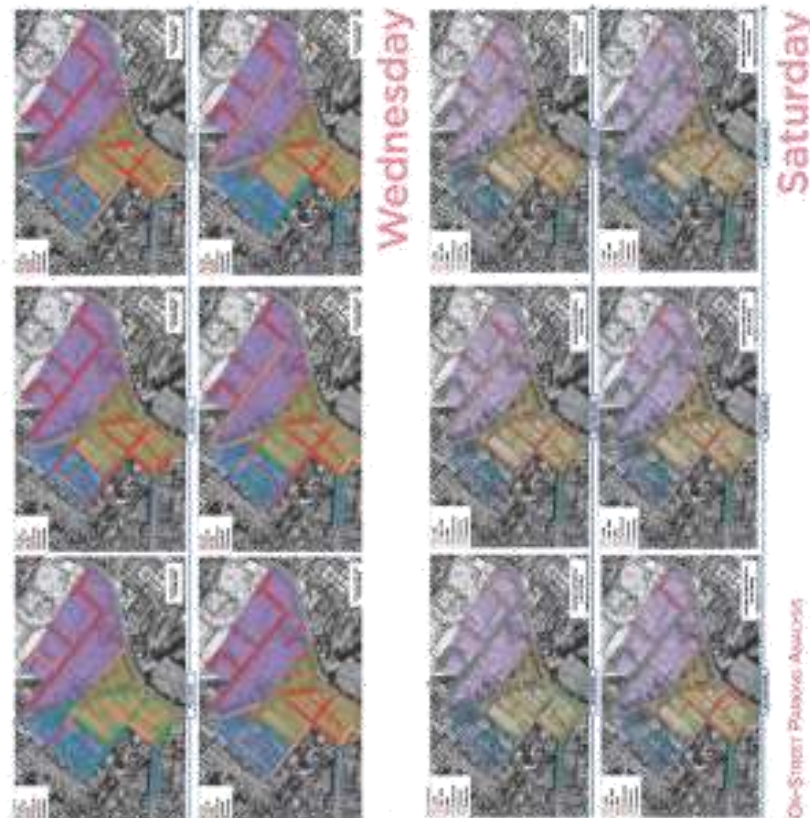


Proposed Intersection Improvements



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# C. PARKING AND TRAFFIC CONSULTANTS STUDY



## C.3 PARKING STRATEGY

### B.3.1 PARKING INVENTORY ANALYSIS

At peak demand there were 980 cars parked in Council managed public car spaces in the study area, 422 (27%+57+92) in restricted spaces (excluding BP) and 558 (400+158+38) in BP plus unrestricted spaces.

Of the 201 available spaces at peak 198 spaces (59%) were located in the commercial zone. Of these spaces, 77 (65%) were located in the Bungan Lane car park, 20 (26%) in the BP parking and 57 (74%) elsewhere in the car park. 32% of available spaces were located in the residential zone, predominantly in the unrestricted on street parking areas.

The survey indicates that at least 440 vehicles (calculated by the sum of all cars with a length of stay less than 5 hours, 303+137), present during the peak demand period relied in short stay parkers, being visitors to the surrounding businesses and/or residences, although they do not necessarily parked in the time restricted spaces.

particularly those staying for greater than 2 hours, it also shows that 82% of these were parked in time restricted parking spaces (excluding BP). The remaining 540 vehicles would be made up of workers in the area, commuters and residents leaving their vehicles on-street throughout the day.

Approximately 90% were parked in restricted spaces which may indicate a need to review enforcement management as time restrictions are only effective if appropriately enforced.

Based on the above analysis, the estimated supply and demand for each of the main user groups that require parking in the area during weekday peak periods is:

- Commuters, workers to the area and residents - Unrestricted + BP spaces: 108 spaces
- Visitors for business and special purposes - Restricted Spaces (incl BP): 25 spaces

## C.3.2 PARKING FINDINGS

These estimates confirm there is available parking in the study area for all user groups at peak

however not necessarily easy to locate (e.g. Bungan Lane car park) or in the most convenient location (unrestricted spaces in the residential zone).

The perception that parking is not available may be due to the following:

- Drivers prefer to park on-street close to their destination rather than off-street and walk.
- Drivers are unaware that there is parking available.
- Drivers wish to find parking for a time period longer than is available; and
- Drivers expect to find parking close to their desired location.

**50%** in driving space  
**18%** in off-street Council Car Park



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## C. PARKING AND TRAFFIC CONSULTANTS STUDY

### C.3.2 PARKING STRATEGY

- The parking surveys confirm that parking turnover within the Town Centre is high with a relatively short average length of stay, which is entirely appropriate within commercial centres.
- The surveys indicate a high degree of all day parking within the light industrial area surrounding Darley Street, which is indicative of commuters and workers. This type of activity provides use by visitors and shoppers and therefore decreases the value of the parking spaces.

- The Town Centre is primarily subject to a 1 hour parking limit, while no restrictions apply to roads in close proximity to the Town Centre, which provides an opportunity for all-day parking, which in turn may encourage car usage.
- A comparison of current planning controls with neighbouring councils indicates that the minimum parking requirements are high in the context of a Town Centre and could be either reduced or converted to maximum limits to discourage car ownership and usage. This must, however, be done in the

- context of the density of the Town Centre, access to employment and services, and public transport.
- There is high demand for drop-off and pick-up parking associated with the Mona Vale Public School, which impacts on the operation of Bungan Street and Vanclose Street. This could be better managed through the provision of 30min parking controls during the School Zone times.
- The Parking Strategy recommendations are detailed in Section 6 of the Traffic and Parking Strategy Report.

43%

minutes spent in parking in the morning. Further 15% spent 2 minutes in the

30.4%

minutes spent in parking in the morning. Further 15% spent 2 minutes in the

57%

minutes spent in parking in the morning. Further 15% spent 2 minutes in the

### PARKING STRATEGY RECOMMENDATIONS

- Adopt a general principle that where occupancy exceeds 80% (practical capacity) on a consistent basis, consideration is given to imposing time restrictions and/or implementing paid parking to manage parking demand.
- Introduce time restrictions into the residential and industrial zones (Darley Street) adjoining the commercial zone (e.g. 2P).
- Consider converting off street car parks in the commercial zone (car parks A and B and Bungan Lane car park Levels 1 and 2) to 3P weekdays.
- The time restrictions will still be greater than on street (1P).
- Similarly 3P parking in the Bungan Lane car park could be converted to 3P parking.
- Consider either a reduction in the current parking requirements for developments, or the conversion of the existing rates to maximum limits, rather than minimum requirements.
- Work with the local schools to investigate alternative drop off /pick up zones (e.g. rear of Mona Vale Primary, etc) and the efficient management of existing drop off /pick up areas.
- Develop a town centre signage plan to direct parkers to available parking to minimise circulating traffic (e.g. the Bungan Lane car park).
- Consider dynamic signage as part of the signage plan.
- Consider encouraging car share schemes through the provision of 'pods' in lieu of on-street parking spaces.
- Incentivise employers to introduce car-pooling and/or public transport for staff.
- Install bike racks within strategic locations and in close proximity to major destinations (e.g. the front door of supermarkets or within the east street areas once established).
- Work with local schools and businesses to promote travel smart initiatives (e.g. car-pooling, walking and cycling to school, etc).
- Develop overflow parking plans for peak periods. Potential sites for overflow parking on weekends include school parking.
- Unbundle parking in new developments.
- Reduce parking requirements for new developments, particularly those adjacent to public transport hubs - assess parking demand before creating parking.

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## D. WALK MONA VALE

### D.1 WHAT IS A PEDESTRIAN ACCESS & MOBILITY PLAN?

A Pedestrian Access and Mobility Plan (PAMP) is a strategic action plan for the development and installation of pedestrian network improvements, such as footpaths, pedestrian crossings and kerb ramps. It also considers initiatives to positively affect the community through programs and promotions to encourage more people to walk.

The former Pittwater Council, in partnership with the Roads and Maritime Services (RMS) has a responsibility to provide a safe, convenient and connected pedestrian network which will provide infrastructure to support increased walking activity.

The PAMP has provided an opportunity for Council to review the existing Mona Vale pedestrian network through the 2015 Urban Talks workshops and the development of Walk Mona Vale.

### D.2 BENEFIT OF PAMP

Walk Mona Vale will provide many benefits to the community through transportation, environmental and social factors, such as:

- Identified pedestrian priority network and network gaps
- Improved access for mobility impaired groups
- Safe and convenient crossing opportunities
- Reduce injuries to pedestrians
- Active travel links to Northern Beaches B-Line Program
- Integration with planning controls
- Improved walking direction throughout Mona Vale and destinations
- Provision of new abseals with Council's Active Strategy and infrastructure works program

### D.3 PEDESTRIAN CRASHES

A Roads and Maritime Services crash data analysis has been completed and outlined crash 'hotspots' from the past five years for the study area.

Key points to note are:

- The majority of pedestrian-vehicle accidents occurred on Burnessway Road. There is also a crash cluster on Burnessway Road near the Mona Vale Town Centre between Park Street and Darling Street. This corresponds to the section of Burnessway Road where the central pedestrian fencing ends.
- There were two recorded accidents in the Town Centre at intersections with Pittwater Road at Park Street intersection (between Karoon Street and Africa Lane) and at Pittwater Road and Burnessway Lane.
- One accident on Garfield Street at By The Sea Road
- One accident on Mona Vale Road at Foley Street.

### Walk Mona Vale Strategies

Based on community consultation and background review and analysis, the following refined strategies have been established:

|             |  |
|-------------|--|
| Strategy 1  | Improve access and linkages to Mona Vale and local destinations through priority pedestrian network  |
| Strategy 2  | Prioritise future pedestrian crossing facilities for improved crossing of roads  |
| Strategy 3  | Improve walking directions through Mona Vale and to local destinations   |
| Strategy 4  | Create obstacles for people through Place Planning   |
| Strategy 5  | Reduce car movements in and around the Mona Vale town centre and local schools   |
| Strategy 6  | Establish a healthy and active Mona Vale community by connecting Mona Vale with their neighbourhood through improved pedestrian networks which support and encourage walking |
| Strategy 7  | Encourage walking to the northern beaches B-Line network   |
| Strategy 8  | Advocate for increased funding for infrastructure improvements   |
| Strategy 9  | Encourage walking through behavioral change campaigns  |
| Strategy 10 | Prioritise active travel throughout the Local Government Area  |

Draft

## D. WALK MONA VALE

### Future Mona Vale pedestrian connections

Creating a walking network between our town centre, public transport and local destinations, will encourage our community to walk more often while helping to reduce congestion on our road network.

We are committed to improving the Mona Vale active travel network with plans for footpaths etc:

- Parklands Road
- Maxwell Street
- Ermine Street
- Mona Vale Road (paved path)
- Narrabeen Park Parade



### Pedestrian improvement priorities

Through community engagement and detailed network studies, it has been identified that the top priorities for the Mona Vale are:

|             |   |
|-------------|---|
| Priority 1  | Improved pedestrian access for Mona Vale Public School students across Oliver Way through construction of a pedestrian refuge |
| Priority 2  | Improved pedestrian access on Darley Street through construction of kerb extensions and pedestrian refuges                    |
| Priority 3  | Speed overalls or raised pedestrian crossings at three locations on Park Street   |
| Priority 4  | Improved pedestrian access at the intersection of Pittwater Road, Burgen Street and Park Street                               |
| Priority 5  | Improved pedestrian footpath connectivity on Werah Street and Burgen Street   |
| Priority 6  | New signalled crossing leg on Mona Vale Road and Pittwater Road intersection  |
| Priority 7  | New signalled crossing leg on Burroughs Road and Golf Avenue intersection   |
| Priority 8  | New signalled crossing leg on Burroughs Road and Darley Street East   |
| Priority 9  | Complete missing pedestrian footpath links on Darley Street and Darley Street West  |
| Priority 10 | Upgrade all kerb ramps identified as non-compliant through pedestrian network audits  |
| Priority 11 | Improved pedestrian access across By The Sea Road at the Darley Street intersection   |
| Priority 12 | Improved pedestrian access at Mona Vale Beach for cafes and restaurants through a pedestrian refuge                           |
| Priority 13 | Improved pedestrian access across Werah Street at the intersection of Pittwater Road  |
| Priority 14 | Implement way finding signs through Mona Vale to key destinations   |
| Priority 15 | Work with the community to encourage walking to the Mona Vale Town Centre and local schools                                   |



