# FINAL REPORT

# CITY EAST

# TRAFFIC STUDY

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# 1.0 INTRODUCTION

## 1.1 Background

Transport and Urban Planning has been commissioned by the City of Sydney to carry out a traffic study of the City East areas.

Council resolved on 27 June 2005 to undertake a traffic study for the area around Whitlam Square in East Sydney and to identify traffic intrusions into the City of Sydney Local Government area arising from the construction of the Cross City Tunnel.

Residents have sought action by the City to reduce the volume of unnecessary "through" traffic using the streets within the City East areas and to improve local amenity.

## 1.2 Study Area and Study Objectives

The study area is shown on **Figure 1** and includes the villages of East Sydney, Woolloomooloo, Potts Point, Elizabeth Bay, Rushcutters Bay and Darlinghurst (north of Oxford Street).

The study's primary focus is local (Council) roads within the study area and traffic, pedestrian and cyclist issues on these roads.

Both William Street and Oxford Street have had changes implemented in recent years, which has reduced the number of traffic lanes and increased footpath space along these streets.

The William Street changes were implemented as part of the Cross City Tunnel works and were completed in 2006 / 07. Other traffic changes were also implemented as part of the Cross City Tunnel.

The primary objective of the study is to undertake analysis of the transport network to enhance and maintain local accessibility to residents, businesses and visitors to the study area.

A Council resolution was passed on 27 June 2005 to develop a revised traffic plan for East Sydney in consultation with the Roads and Traffic Authority and to investigate the impacts of the Cross City Tunnel on the study area.

The requirements of the Council resolution will be achieved through examining the effectiveness of the previously determined LATM schemes for East Sydney City Woolloomooloo, Darlinghurst, through:

- Identifying viable and effective treatments and solutions to:

    - maintain and improve public transport accessibility, access and efficiency;
    - maintain and enhance safety, connectivity, accessibility and permeability for cyclists and pedestrians;
    - prevent use of local roads by "through" traffic and re-direct "through" traffic to State and Regional roads.

  - maintain local area liveability while maintaining traffic access for residents to local activity generators through traffic management means.

- Identifying the traffic impacts of the Cross City Tunnel on the local traffic network.

- Examining the options for and impacts of reverting Darlinghurst Road, Victoria Street, Neild Avenue and McLachlan Avenue to two way traffic for their entire lengths.

- Examining the impact of closing Liverpool Street at College Street and associated redirected traffic and road changes such as the need or otherwise to close Francis Street together with a median in Yurong Street at Stanley Street.

- Traffic access issues and accidents at the intersection of Bourke and Liverpool Streets.

- Traffic access issues at the intersection of Liverpool and Forbes Streets.

- Traffic and amenity issues along Darlinghurst Road and Macleay Street late at night.

- Traffic problems in Surrey Street and possible changes at the intersection of Craigend and Surrey Streets.

This report details the findings of the local traffic study. The remaining sections of the report address the following:

- Section 2 outlines issues raised by residents as part of the public consultation.
- Section 3 examines the existing traffic conditions in the study area.
- Section 4 analyses current and future proposals in the study area.
- Section 5 outlines the major findings of the study.
- Section 6 describes the draft scheme of the proposed improvement works, the community comments on the draft scheme and consideration of the issues raised by the community.
- Section 7 presents the recommended scheme, together with the costings and priorities, as well as other matters that require follow up.

# 2.0 PUBLIC CONSULTATION

## 2.1 Overview

Public consultation undertaken as part of the study included:

- A public meeting and community workshop held on 20 June 2007 to identify issues of concern to residents and businesses in the study area.

- Consideration of issues raised in the written submissions.

- Consultation with identified stakeholders including Roads and Traffic Authority, State Transit Authority, Woollahra Council, 2011 Residents Association Management Committee, City Edge Residents Association (CERA), Darlinghurst Residents Action Group (DRAG), East Sydney Neighbourhood Association (ESNA), Paddington-Darlinghurst Community Working Group, The Paddington Society, City East Precinct Committee Inc., Darlinghurst Business Partnership, Kings Cross Partnership, Paddington Chamber of Commerce and Surry Hills Business Alliance. A letter was written to all the community groups seeking their written comments on issues.

- Second community workshop held on 13 December 2007 where findings of the study and the proposed improvement works were identified and community feedback sought.

## 2.2 Public Meeting and Community Workshop of 20 June 2007

The first Community Meeting and Workshop was held on 20 June 2007 to identify issues of concern to residents and businesses in the study area. The meeting was attended by more people than who signed the attendance sheets. Some 61 people of the total number signed the attendance sheet. These people gave addresses that included 32 streets in the City East area (Table A2 **Appendix 1** refers).

There were some 183 issues raised, details of which are outlined in the next section.

## 2.3 Issues Raised in Public Consultation Process

**Appendix 1** provides a full list of all the issues raised in the first community workshop and in written submissions from residents, business or stakeholders.

As noted above, there were 183 issues raised at the first Community Workshop. In addition, there were 23 written submissions, a number of which also raised multiple issues.

Many of the issues raised at the Community Workshop related to:

- Previous and recent traffic management changes, such as the Cross City Tunnel and surface works in William Street and other locations;
- Traffic signal operation, which is an RTA matter;
- Enforcement issues and parking;

- Maintenance issues; and
- Other authority issues (Sydney Buses, CityRail, Sydney Ferries).

There were some 85 matters that fell into the above categories, with RTA matters, including the Cross City Tunnel, changes accounting for 47 of these.

Some 102 traffic issues were raised including a number of general statements rather than specific issues. Some participants nominated a specific device at a location, rather than the problem.

Of the 23 written submissions, some of these brought forward matters already identified in the community consultation.

There were some 11 issues relating to other authorities, such as the RTA as well as some 9 matters not directly related to the study.

As most submissions raised multiple issues, there were 43 matters raised including those which were identified at the Community Workshop.

In general, pedestrian issues tended to be the single issue most raised. Other issues such as inappropriate speed, rat running or requests for a specific device were also noted.

Opinions on traffic restrictions including road closures, road narrowings, etc. varied with strong opinions for and against. This is in part borne out in the approval/ disapproval relating to road closures (opinions on traffic control devices), which showed around 29% support for road closures, with 50% non support and 21% undecided. (**Table A3 Appendix 1**). This was the lowest approval rating for any traffic control device.

A full list of the issues raised in the Community Workshop and the written submissions is summarised in **Appendix 1**, as well as a summary of Transport and Urban Planning's investigation of the issues and response.

# 3.0 EXISTING CONDITIONS

## 3.1 Existing Road Network and Land Uses

The existing road network in the study area includes RTA (State Roads) and the City controlled roads.

RTA roads include Kings Cross Tunnel and William Street to Palmer Street, Bourke Street (between William Street and the Eastern Distributor southbound on ramp), sections of Palmer Street, sections of Sir John Young Crescent and Lincoln Crescent and Oxford Street (east of Crown Street).

The study area includes a number of major City roads including William Street, College Street, Crown Street, Darlinghurst Road / Macleay Street / Wylde Street, Victoria Street south of Craigend Street, Greenknowe Avenue / Elizabeth Bay Road, Ward Avenue, Craigend Street, Kings Cross Road, Bayswater Road, Boundary Street, McLachlan Avenue and Neild Avenue. These roads generally perform a higher order collector road function and in some cases a sub arterial or arterial road function carrying traffic within and external to the study area.

Burton Street and Liverpool Street (east of Crown Street) perform a collector road function in the East Sydney and Darlinghurst areas, south of Oxford Street.

The study area is located on the fringe to Sydney CBD and the land uses includes commercial (retail, business and office) and entertainment areas and precincts, mixed with residential uses. The residential areas include high density areas around Potts Point, Elizabeth Bay and Kings Cross and medium density residential areas in parts of Darlinghurst and Woolloomooloo.

King Cross precinct is a famous major entertainment area within Sydney. Darlinghurst / East Sydney and the Macleay Street strip also contains entertainment uses. Other major land uses within or adjacent the study area include Garden Island Naval facility and associated naval uses, St Vincent's Hospital and its associated facilities, St Lukes Hospital, schools including SCEGGS, St Vincent's College, Plunket Street Primary and Sydney District Education High, Darlinghurst Primary, Sydney Grammar School and Darlinghurst Court House and TAFE's NSW Sydney Institute.

## 3.2 Existing Traffic Management

### 3.2.1 Traffic Controls

**Figure 2** shows the existing traffic management in the study area. The area is characterised by a high level of traffic management including turn restrictions, one way streets, intersection controls, pedestrian facilities and LATM type measures in a number of streets.

Traffic signals are provided at most major intersections within the study area. Pedestrian facilities are provided at these intersections, as part of the traffic signals.

There are some 43 intersections or pedestrian locations controlled by traffic signals in the study area, including in those sections of Oxford Street, College Street and William Street that adjoin or fall within the study area. Excluding the traffic signals on these roads, there are 22 sets of traffic signals located on other streets within the study area.

Roundabout control is provided at several intersections including:
- Sir John Young Crescent / Crown Street;
- Greenknowe Avenue / Elizabeth Bay Road / Onslow Avenue;
- Roslyn Gardens / Waratah Street; and
- Palmer Street / Liverpool Street.

A significant amount of the existing traffic management in the study area was introduced following the opening of the Eastern Distributor in 2000 and the Cross City Tunnel in 2005.

The objective of these measures was to reduce traffic in a number of the City streets in the East Sydney, Darlinghurst and Woolloomooloo areas, through measures such as the conversion of several one way streets to two way, road closures, turn bans and LATM measures.

There are also a significant number of one way streets in the study area. Some of these are due to the narrow width of the streets / lanes. In these circumstances, the one way control allows some parking to be retained in the street. Other one way streets are for traffic management purposes including discouraging unnecessary traffic and for simplified traffic management and capacity reasons at intersections.

Major one way streets include:
- Victoria Street, between Oxford Street and Craigend Street;
- Darlinghurst Road, between Burton Street and Craigend Street; and
- Neild Avenue, Boundary Street and McLachlan Avenue loop.

### 3.2.2 Pedestrian Facilities

As noted above, pedestrian crossing facilities are provided at the traffic signal controlled intersections. In addition, marked foot crossings are provided in a number of locations as follows:

- Sir John Young Crescent / Crown Street – across 2 legs of the intersection;
- In Bourke Street at Nicholson Street (raised facility);
- In Wylde Street at Grantham Street;
- In Macleay Street at Rockwall Crescent;
- In Elizabeth Bay Road at Onslow Street / Greenknowe Street – across 2 legs of the intersection.
- In Darlinghurst Road at Roslyn Street (raised facility);
- In Ward Avenue:
  - near Baroda Street
  - at Roslyn Street;
- In Roslyn Street:
  - at Ward Avenue (raised facility)
  - at Roslyn Gardens;

- In Bayswater Road near Roslyn Street;
- In Victoria Street at Darlinghurst Road;
- In Stanley Street at Yurong Street;
- In Forbes Street at Clapton Place;
- Liverpool Street / Bourke Street – across 3 legs of the intersection;
- Bourke Street / Burton Street – across 2 legs of the intersection;
- In Burton Street at Forbes Street; and
- In Barcom Avenue at Liverpool Street.

In addition, pedestrian refuge islands are provided at several intersections as part of the channelisation of the intersections, as well as kerb extensions at a number of intersections which assist pedestrian crossing movements.

**Figure 2** shows the location of the signalised crossings as well as the marked foot crossings in the study area.

## 3.3 Bus Routes

Sydney Buses operates the bus services in the study area, including:

- 311 bus route between Railway Square and Circular Quay, which operates along William Street, Crown Street (north of William Street), Cathedral Street, Bourke Street, Cowper Wharf Road, Wylde Street, Macleay Street, Greenknowe Avenue, Elizabeth Bay Road, Ithaca Road, Billyard Avenue, Onslow Avenue, Darlinghurst Road, Victoria Street and a section of Burton Street and Oxford Street.

- 389 bus route between Circular Quay and Bondi Junction, which operates along McDonald Street, Burton Street, Bourke Street, Stanley Street and Yurong Street to William Street.

- The William Street bus services, which include the 200, 323, 324, 325, 326 and 327 bus routes. These bus routes pass through Bayswater Road, Ward Avenue, Darlinghurst Road, Craigend Street and Kings Cross Road as part of their routes.

- The Oxford Street bus services, which include the 333, 352, 371, 373, 377, 378 and 380.

**Figure 3** shows the bus routes that operate in the study area.

## 3.4 Bicycle Facilities

**Figure 4** shows the City's cycle network within the City East area.

Bicycle routes include:
- Bourke Street;
- Crown Street;
- Riley Street (Burton Street to Stanley Street);
- Stanley Street (Bourke Street to Yurong Street) / Yurong Street (north of Stanley Street);
- Darlinghurst Road (Oxford Street to Bayswater Road);

- Victoria Street (Oxford Street to Challis Avenue);
- Cowper Wharf Road / Wylde Street / Macleay Street (to Greenknowe Avenue);
- Greenknowe Avenue / Elizabeth Bay Road / Roslyn Gardens / Roslyn Street (south of Roslyn Gardens);
- Waratah Street;
- William Street / Kings Cross Road / Craigend Street;
- Burton Street / McDonald Street;
- Womerah Avenue and Barcom Avenue (to Oswald Lane);
- Oxford Street

Most of these bike routes will be an on-road facility of some type either with a dedicated lane / facility or as part of mixed traffic.

## 3.5 Traffic Conditions

### 3.5.1 Road Hierarchy Considerations

The Roads and Traffic Authority's Road Design Guide provides information on road hierarchy considerations including desirable traffic volume thresholds for the various road classifications. For the Sydney Conurbation (Metropolitan Area), the Road Design Guide recommends the following volume thresholds.

- Arterial Road - no volume limit
- Sub Arterial Road - 20,000 vpd in residential and other areas
- Collector Road - 5,000 vpd in residential areas and 10,000 vpd in other areas
- Local Roads - 2,000 vpd in residential areas and 4,000 vpd in other areas

These traffic volume levels (thresholds) are not absolute limits, however provide guidance on the desirable traffic levels for the various road categories as defined in a road hierarchy. However, some care needs to be exercised when comparing existing traffic volumes in existing urban areas to these desirable thresholds, as traffic volumes on any road are determined by a range of factors including the pattern of the road network that the street relates to, the traffic management in the street as well as on the road network and the type and intensity of the land uses served by the street and the road network.

### 3.5.2 Sources for Traffic Volumes

Traffic volumes on the road network have been compiled from a number of sources including some count data from the City and from counts undertaken as part of this study. Traffic volume data collected as part of this study included traffic volume classification and speed counts at 30 mid block locations on the City's roads, as well as intersection traffic volume counts including pedestrian and cyclist counts at some 61 locations in the study area. The traffic counts were collected between 13 and 31 August 2007. Additional intersection and pedestrian counts were undertaken between 16 and 24 October 2007 and in November 2007 to investigate issues raised in late submissions. The counts at the 61 locations were undertaken on a Tuesday or Wednesday, generally between 7am to 9am and 4pm to 6pm. Some pedestrian counts at specific locations were also undertaken on a Saturday between 11am-2pm.

### 3.5.3 Daily Traffic Volumes

Table 3.1 shows weekday (5 day average) and daily (7 day average) traffic volumes on the road network, collected as part of this study during August 2007.

The principal roads that carried above 10,000 vpd on a daily basis (7 day average) include:

- Cowper Wharf Road - 16,779 vpd
- Wylde Street - 16,526 vpd
- Darlinghurst Road (north of Bayswater Road) - 14,551 vpd
- Macleay Street (near Orwell Street) - 12,623 vpd
- Victoria Street (near Surrey Street) - 12,101 vpd
- Ward Avenue - 11,507 vpd
- Greenknowe Avenue - 10,701 vpd
- Craigend Street - 10,188 vpd

The principal roads that carried daily volumes between 5,000 vpd – 10,000 vpd (7 day average) include:

- Darlinghurst Road (south of Craigend Street) - 9,723 vpd
- Crown Street (south of Stanley Street) - 9,218 vpd
- Liverpool Street (east of Forbes Street) - 7,737 vpd
- McLachlan Avenue - 7,448 vpd
- Neild Avenue - 6,787 vpd
- Crown Street (north of Cathedral Street) - 6,495 vpd
- Kings Cross Road (east of Darlinghurst Road) - 5,798 vpd
- Bayswater Road (near Kellett Street) - 5,817 vpd
- Burton Street (east of Forbes Street) - 5,637 vpd
- Bourke Street (near Harmer Street) - 5,514 vpd
- Liverpool Street (east of Womerah Street) - 5,277 vpd

Roads that carried daily volumes between 2,000 vpd – 5,000 vpd (7 day average) include:

- Burton Street (at McDonald Street) - 4,677 vpd
- Liverpool Street (east of Yurong Street) - 3,644 vpd
- Orwell Street - 2,208 vpd
- Nicholson Street - 2,166 vpd

Roads that carried daily volumes of less than 2,000 vpd (7 day average) include:

- Hughes Street - 1,116 vpd
- Brougham Street (north of William Street) - 921 vpd
- Surrey Street - 538 vpd
- McEhlone Street - 530 vpd
- Brougham Lane (east of McElhone Street) - 430 vpd
- Corfu Street - 91 vpd

**Figure 5** summarises the daily volumes (7 day average) on the road network in the study area.

## Heavy Vehicles

**Figure 5** and Table 3.1 show the proportion of heavy vehicles using the road network as recorded in the automatic counts undertaken in August 2007.

Heavy vehicles are defined as Austroad Class 3 and above and include small to large trucks and buses. Heavy vehicles accounted for between 2-6% of total vehicles on most roads. A number of roads had a higher proportion of heavy vehicles.

It was noted that there was construction activity in a number of streets with associated heavy vehicle movements, which may have increased the proportion of heavy vehicles in these streets.

## TABLE 3.1

## WEEKDAY (AVERAGE 5 DAY) & DAILY (AVERAGE 7 DAY) TRAFFIC VOLUMES

| Location | Weekday (5 Day Average) | | | Daily (7 Day Average) | | | % of Heavy Vehicles [1] | |
|---|---|---|---|---|---|---|---|---|
| | North or East | South or West | Total (Two Way) | North or East | South or West | Total (Two Way) | North or East | South or West |
| Ward Ave, north of Bayswater Rd | 5292 | 6100 | 11392 | 5322 | 6185 | 11507 | 2 | 4 |
| Cowper Wharf Rd, east of Brougham St | 7979 | 9603 | 17582 | 7516 | 9263 | 16779 | 4 | 5 |
| Wylde St, south of St Neot Ave | 9173 | 7604 | 16777 | 9141 | 7385 | 16526 | 5 | 4 |
| Macleay St, near Orwell St | 6120 | 6619 | 12739 | 6130 | 6493 | 12623 | 6 | 6 |
| Victoria St, north of Earl St | 3298 | 2074 | 5373 | 3339 | 2139 | 5479 | 5 | 9 |
| Brougham St, north of William St | - | 1023 | 1023 | - | 921 | 921 | - | 4 |
| McElhone St, north of Brougham Lane | 279 | 278 | 557 | 265 | 265 | 530 | 2 | 2 |
| Nicholson St | 1028 | 1278 | 2306 | 979 | 1187 | 2166 | 8 | 7 |
| Bourke St, near Harmer St | 2265 | 3838 | 6103 | 2036 | 3477 | 5514 | 5 | 4 |
| Crown St, north of Cathedral St | 4165 | 2750 | 6915 | 3957 | 2537 | 6495 | 2 | 2 |
| Crown St, south of Stanley St | 5886 | 3379 | 9266 | 5858 | 3360 | 9218 | 3 | 2 |
| Liverpool St, east of Yurong St | 2946 | 817 | 3804 | 2896 | 748 | 3644 | 2 | 3 |
| Liverpool St, east of Forbes St | 4247 | 3836 | 8083 | 4028 | 3709 | 7737 | 2 | 2 |
| Liverpool St, east of Womerah Ave | 2440 | 3272 | 5713 | 2243 | 3033 | 5277 | 2 | 2 |
| Burton St, at McDonald St | 2500 | 2555 | 5056 | 2335 | 2341 | 4677 | 4 | 5 |
| Burton St, east of Forbes St | 3058 | 2847 | 5906 | 2929 | 2708 | 5637 | 4 | 5 |
| McLachlan Ave, north of Boundary St | 7758 | - | 7758 | 7448 | - | 7448 | 5 | - |
| Neild Ave, north of Boundary St | - | 7252 | 7252 | - | 6787 | 6787 | - | 2 |
| Darlinghurst Rd, between Bayswater Rd & Roslyn St | 7535 | 6888 | 14423 | 7656 | 6895 | 14551 | 7 | 8 |
| Bayswater Rd, near Kellett St | 2353 | 3313 | 5666 | 2370 | 3446 | 5817 | 8 | 5 |
| Brougham Lane, between Brougham St & McElhone St | - | 457 | 457 | - | 430 | 430 | - | 3 |
| Corfu St | 100 | - | 100 | 91 | - | 91 | 15 | - |
| Hughes St | - | 1038 | 1038 | - | 1116 | 1116 | - | 4 |
| Orwell St | 2172 | - | 2172 | 2208 | - | 2208 | 6 | - |
| Greenknowe Ave, between Elizabeth Bay Rd & Macleay St | 4961 | 5659 | 10621 | 4898 | 5803 | 10701 | 3 | 3 |
| Victoria St, near Surrey St | - | 11937 | 11937 | - | 12101 | 12101 | - | 4 |
| Darlinghurst Rd, near Tewkesbury St | 10360 | - | 10360 | 9723 | - | 9723 | 4 | - |
| Kings Cross Rd, east of Darlinghurst Rd | 5802 | - | 5802 | 5798 | - | 5798 | 3 | - |
| Craigend St, east of Victoria St | - | 9783 | 9783 | - | 10188 | 10188 | - | 3 |
| Surrey St | 519 | - | 519 | 538 | - | 538 | 3 | - |

*Source: Volume & Classification Counts, August 2007*

### 3.5.4 Peak Hour Traffic Volumes

Table 3.2 summarises mid block traffic volumes during the average weekday AM (8.00am-9.00am) and PM (5.00pm-6.00pm) peak hours as recorded in the August 2007 automatic counts.

Two way AM and PM peak hour volumes on an average weekday (5 day average) using the principal road network are as follows:

- Cowper Wharf Road, east of Brougham Street – 1252 vph to 1266 vph;
- Wylde Avenue – 1170 vph to 1203 vph;
- Greenknowe Avenue – 626 vph to 823 vph;
- Ward Avenue – 695 vph to 719 vph;
- Macleay Street, near Orwell Street – 599 vph to 672 vph
- Bayswater Road, near Kellett Street – 230 vph to 256 vph;
- Darlinghurst Road, near Roslyn Street – 652 vph to 716 vph;
- Victoria Street, near Surrey Street – 695 vph to 761 vph
- Darlinghurst Road, south of Craigend Street – 624 vph to 628 vph;
- Craigend Street – 546 vph to 662 vph;
- Burton Street – 413 vph to 562 vph;
- Liverpool Street, east of Yurong Street – 246 vph to 296 vph; and
- Liverpool Street, east of Forbes Street – 580 vph to 636 vph.

**Figures 6A & 6B and 7A & 7B** show the AM (8.00am-9.00am) and PM (5.00pm-6.00pm) peak hour intersection traffic volumes as recorded in the August and October 2007 traffic counts. These volume counts include total vehicles (i.e. light and heavy vehicles), heavy vehicles and cyclists.

## TABLE 3.2

## AVERAGE WEEKDAY AM & PM TRAFFIC VOLUMES

| Location | 8-9 AM Peak Hour | | | 5-6 PM Peak Hour | | |
|---|---|---|---|---|---|---|
| | North or East | South or West | Total | North or East | South or West | Total |
| Ward Ave, north of Bayswater Rd | 302 | 393 | 695 | 370 | 349 | 719 |
| Cowper Wharf Rd, east of Brougham St | 498 | 754 | 1252 | 668 | 598 | 1266 |
| Wylde St, south of St Neot Ave | 738 | 432 | 1170 | 480 | 723 | 1203 |
| Macleay St, near Orwell St | 280 | 319 | 599 | 311 | 361 | 672 |
| Victoria St, north of Earl St | 197 | 132 | 329 | 189 | 119 | 308 |
| Brougham St, north of William St | - | 63 | 63 | - | 131 | 131 |
| McElhone St, north of Brougham Lane | 24 | 28 | 52 | 25 | 23 | 48 |
| Nicholson St | 86 | 105 | 193 | 73 | 86 | 159 |
| Bourke St, near Harmer St | 162 | 282 | 444 | 149 | 281 | 430 |
| Crown St, north of Cathedral St | 216 | 211 | 427 | 285 | 223 | 508 |
| Crown St, south of Stanley St | 322 | 168 | 490 | 336 | 220 | 576 |
| Liverpool St, east of Yurong St | 160 | 86 | 246 | 245 | 51 | 296 |
| Liverpool St, east of Forbes St | 273 | 363 | 636 | 356 | 224 | 580 |
| Liverpool St, east of Womerah Ave | 175 | 326 | 501 | 225 | 216 | 441 |
| Burton St, at McDonald St | 196 | 366 | 562 | 246 | 168 | 414 |
| Burton St, east of Forbes St | 179 | 320 | 499 | 255 | 158 | 413 |
| McLachlan Ave, north of Boundary St | 577 | - | 577 | 600 | - | 600 |
| Neild Ave, north of Boundary St | - | 616 | 616 | - | 563 | 563 |
| Darlinghurst Rd, between Bayswater Rd & Roslyn St | 403 | 313 | 716 | 324 | 328 | 652 |
| Bayswater Rd, near Kellett St | 106 | 124 | 230 | 117 | 139 | 256 |
| Brougham Lane, between Brougham St & McElhone St | - | 39 | 39 | - | 51 | 51 |
| Corfu St | 7 | - | 7 | 7 | - | 7 |
| Hughes St | - | 38 | 38 | - | 47 | 47 |
| Orwell St | 117 | - | 117 | 113 | - | 113 |
| Greenknowe Ave, between Elizabeth Bay Rd & Macleay St | 245 | 381 | 626 | 493 | 330 | 823 |
| Victoria St, near Surrey St | - | 761 | 761 | - | 695 | 695 |
| Darlinghurst Rd, near Tewkesbury St | 628 | - | 628 | 624 | - | 624 |
| Kings Cross Rd, east of Darlinghurst Rd | 267 | - | 267 | 343 | - | 343 |
| Craigend St, east of Victoria St | - | 662 | 662 | - | 546 | 546 |
| Surrey St | 29 | - | 29 | 24 | - | 24 |

*Source: Volume & Classification Counts, August 2007*

### 3.5.5 Cyclists using the Road Network During Peak Hours

**Figures 6A & 6B and 7A & 7B** show cyclist volumes using the road network in the AM and PM peak hours. The highest number of cyclists using the road network were concentrated on College Street and William Street with low numbers using the other sections of the principal local road network. Cyclist volumes (two way) during the AM peak (8.00am-9.00am) and PM peak (5.00pm-6.00pm) using the road network are as follows:

- College Street - 86-95 cyclists per hour
- William Street - 18-40 cyclists per hour
- Craigend Street - 4-8 cyclists per hour
- Kings Cross Road - 2 cyclists per hour
- Cowper Wharf Road - 8-12 cyclists per hour
- Macleay Street / Wylde Street - 7-28 cyclists per hour
- Crown Street - 3 cyclists per hour
- Bourke Street - 6-9 cyclists per hour
- Darlinghurst Road, south of Craigend Street - 5-9 cyclists per hour
- Victoria Street, south of Craigend Street - 7-10 cyclists per hour
- Burton Street - 4-14 cyclists per hour
- Greenknowe Avenue - 6 cyclists per hour

### 3.5.6 Vehicle Speeds on Local Road Network

The speed limit on streets within the study area is a mixture of 40km/h and 50km/h. Those streets with a 40km/h speed limit are located within parts of Darlinghurst and Woolloomooloo.

The Kings Cross, Potts Point, Elizabeth Bay and Rushcutters Bay areas and some streets in Darlinghurst have a 50km/h speed limit.

William Street, College Street, Sir John Young Crescent, Cowper Wharf Road, as well as Boundary Street, McLachlan Avenue and Neild Avenue have a 50km/h speed limit.

Table 3.3 shows 50$^{th}$ and 85$^{th}$ percentile vehicle speeds on the local road network as recorded in the automatic counts.

The 85$^{th}$ percentile vehicle speeds are 50km/h or less on all of the local roads, with the exception of Cowper Wharf Road east of Brougham Street, which has 85$^{th}$ percentile speeds of 59-60km/h and Neild Avenue and McLachlan Avenue, which have 85$^{th}$ percentile speeds of 55km/h and 53km/h respectively.

The 85$^{th}$ percentile speeds on the remainder of the streets ranged between 25km/h-50km/h. While a number of the streets with 40km/h speed limits have 85$^{th}$ percentile speeds higher than 40km/h (between 40km/h and 49km/h), this could be in part due to a combination of driver confusion about the actual speed limit in these streets, terrain issues (i.e. hills and downgrades), as well as a degree of non observance.

**Figure 5** summarises the 85$^{th}$ percentile speeds on the road network.

## TABLE 3.3

## VEHICLE SPEEDS ON LOCAL ROAD NETWORK

| Location | Weekly 50th Percentile Vehicle Speed (km/h) | | | Weekly 85th Percentile Vehicle Speed (km/h) | | |
|---|---|---|---|---|---|---|
| | North or East | South or West | Total | North or East | South or West | Total |
| Ward Ave, north of Bayswater Rd | 37 | 35 | 36 | 46 | 44 | 46 |
| Cowper Wharf Rd, east of Brougham St | 52 | 54 | 53 | 59 | 60 | 59 |
| Wylde St, south of St Neot Ave | 37 | 36 | 37 | 46 | 45 | 45 |
| Macleay St, near Orwell St | 27 | 27 | 27 | 36 | 37 | 36 |
| Victoria St, north of Earl St | 35 | 33 | 34 | 46 | 45 | 46 |
| Brougham St, north of William St | - | 27 | - | - | 36 | - |
| McElhone St, north of Brougham Lane | 23 | 27 | 25 | 29 | 36 | 34 |
| Nicholson St | 32 | 34 | 33 | 44 | 46 | 45 |
| Bourke St, near Harmer St | 36 | 37 | 37 | 45 | 46 | 46 |
| Crown St, north of Cathedral St | 35 | 39 | 36 | 41 | 48 | 45 |
| Crown St, south of Stanley St | 42 | 38 | 41 | 51 | 49 | 50 |
| Liverpool St, east of Yurong St | 39 | 33 | 37 | 48 | 42 | 48 |
| Liverpool St, east of Forbes St | 35 | 36 | 35 | 43 | 45 | 44 |
| Liverpool St, east of Womerah Ave | 33 | 27 | 29 | 38 | 36 | 37 |
| Burton St, at McDonald St | 44 | 42 | 43 | 51 | 49 | 50 |
| Burton St, east of Forbes St | 38 | 36 | 37 | 47 | 46 | 47 |
| McLachlan Ave, north of Boundary St | 43 | - | - | 53 | - | - |
| Neild Ave, north of Boundary St | - | 45 | - | 55 | - | - |
| Darlinghurst Rd, between Bayswater Rd & Roslyn St | 24 | 22 | 23 | 33 | 33 | 33 |
| Bayswater Rd, near Kellett St | 30 | 27 | 28 | 39 | 37 | 38 |
| Brougham Lane, between Brougham St & McElhone St | - | 17 | - | - | 25 | - |
| Corfu St | 15 | - | - | 25 | - | - |
| Hughes St | - | 24 | - | - | 33 | - |
| Orwell St | 27 | - | - | 38 | - | - |
| Greenknowe Ave, between Elizabeth Bay Rd & Macleay St | 39 | 37 | 38 | 48 | 46 | 47 |
| Victoria St, near Surrey St | - | 35 | - | - | 45 | - |
| Darlinghurst Rd, near Tewkesbury St | 37 | - | - | 48 | - | - |
| Kings Cross Rd, east of Darlinghurst Rd | 34 | - | - | 41 | - | - |
| Craigend St, east of Victoria St | - | 41 | - | - | 49 | - |
| Surrey St | 25 | - | - | 35 | - | - |

*Source: Volume & Classification Counts, August 2007*

## 3.6 Pedestrian Conditions

### 3.6.1 AM and PM Hours

**Figure 8A & 8B** show pedestrian and cyclist crossing volumes at various intersections and other locations during the AM (8.00am-9.00am) and PM (5.00pm-6.00pm) peak hours. Pedestrian activity within the study area is relatively high during these periods.

High volume pedestrian corridors occur:

- Along William Street between College Street and Darlinghurst Road;
- In Darlinghurst Road and on the western side of Macleay Street and Wylde Street;
- In Darlinghurst Road and Victoria Street over the Kings Cross Tunnel.

The number of cyclists recorded crossing at the locations in the study area is small.

Pedestrian crossing movements are relatively well catered for with the existing signalised and other crossing facilities provided on the road network. Locations where additional pedestrian crossing facilities are warranted, based on pedestrian crossing volumes, include:

- Cowper Wharf Road between Bourke Street and Brougham Street – pedestrian crossing volumes at various points between 30-307 pedestrians per hour.

- Forbes Street, Dowling Street, McElhone Street and Brougham Street at William Street – pedestrian crossing volumes in the order of 622-757 pedestrians per hour.

- Across those streets that intersect Macleay Street on its western side between Orwell Street and Challis Avenue – pedestrian crossing volumes between 256-586 pedestrians per hour.

- Victoria Street near Kings Cross Station – pedestrian crossing volumes in the order of 204-278 pedestrians per hour.

- Brougham Lane, which has no footpaths, between McElhone Street and Victoria Street – pedestrian volumes using Brougham Lane between 273-303 pedestrians per hour.

- Macleay Street at Orwell Street – pedestrian crossing volumes between 114-163 pedestrians per hour.

- Elizabeth Bay Road / Roslyn Gardens – pedestrian crossing volumes across Elizabeth Bay Road between 110-122 pedestrians per hour and across Roslyn Gardens between 158-161 pedestrians per hour.

- Across Liverpool Street at Forbes Street – pedestrian crossing volumes between 106-122 pedestrians per hour.

### 3.6.2 Saturday Midday Period

**Figure 9** shows pedestrian and cyclist crossing volumes along Cowper Wharf Road between Bourke Street and Brougham Street during the Saturday midday period.

Hourly pedestrian crossing volumes of Cowper Wharf Road (11am to 2pm) are in the order of:

- 88-104 pedestrians per hour at / near Bourke Street;
- 62-78 pedestrians per hour on the western side of Forbes Street;
- 113-131 pedestrians per hour between Forbes Street and Dowling Street;
- 66-73 pedestrians per hour at McElhone Street; and
- 78-132 pedestrians per hour at Brougham Street.

This confirms the need for additional pedestrian crossing facilities in this section of Cowper Wharf Road.

Cyclist crossing volumes were quite small during the Saturday midday period.

Two way traffic volumes using Cowper Wharf Road between 11am to 2pm on Saturdays is in the order of 823 vph – 959 vph.

## 3.7 Accident Rates

The City provided accident details for the 5½ year period (January 2001 to June 2006) for the study area.

Excluding Oxford Street, there were a total of 856 accidents during the 5½ period including 114 pedestrian accidents and 55 cyclist accidents.

**Figure 10A** shows those intersections which had 5 or more accidents during the 5½ period. There were 26 intersections in total. Notable locations include:

- Crown Street / William Street (traffic signals) – 60 accidents, including 34 injury accidents;
- William Street / Bourke Street (traffic signals) – 46 accidents, including 29 injury accidents;
- Craigend Street / McLachlan Avenue (traffic signals) – 27 accidents, including 14 injury accidents; and
- Bourke Street / Liverpool Street (sign control) – 25 accidents, including 12 injury accidents.

The traffic signal controlled intersections above are the responsibility of the RTA. The William Street / Crown Street intersection should be referred to the RTA for a review of the accidents and the need for remedial measures.

The Bourke Street / Liverpool Street intersection is a sign controlled intersection with moderate pedestrian volumes crossing all legs of the intersection. The majority of the accidents (22 accidents) are right angled accidents and the remaining 3 accidents involved pedestrians. A change of traffic control to traffic signals is considered warranted at this intersection.

Sign or priority controlled intersections with more than 5 accidents included:

- Cowper Wharf Road / Bourke Street – 9 accidents, including 4 injury accidents;
- Cowper Wharf Road / Dowling Street – 6 accidents, including 4 injury accidents;
- Wylde Street at/near St Neots Avenue – 6 accidents, including 1 injury accident;
- Craigend Street / Ward Avenue – 6 accidents, including 3 injury accidents;
- Bourke Street / Burton Street – 10 accidents, including 5 injury accidents; and
- Burton Street / Palmer Street – 12 accidents, including 4 injury accidents.

The other intersections / locations with 5 or more accidents were either on RTA roads or at traffic signals which are the responsibility of the RTA.

**Figure 10B** shows the locations of the pedestrian accidents that occurred in the study area during the 5½ year period. As noted above, there were a total of 113 accidents during the period, which is an average of 20-21 pedestrian accidents per year.

The pedestrian accidents have tended to occur in clusters in parts of Darlinghurst and along William Street.

In the Kings Cross / Potts Point / Elizabeth Bay area and Woolloomooloo the pedestrian accidents are scattered typically as single accidents, although there are locations with 2 or more accidents in close proximity.

William Street accounts for 28 pedestrian accidents, with the areas north and south of William Street accounting for 26 and 60 pedestrian accidents respectively.

Fifty Two (52) of the pedestrian accidents occurred at night (between 6.00pm and 6.00am), which is approximately 46% of the total pedestrian accidents.

There were a total of 55 accidents involving cyclists during the 5½ year period. Most cyclist accidents were scattered throughout the study area with no real pattern to these accidents. Roads where three (3) or more cyclist accidents occurred along their length included:

- William Street / New South Head Road – 9 accidents;
- Crown Street – 8 accidents;
- Bourke Street – 8 accidents;
- Cowper Wharf Road – 4 accidents;
- Craigend Street – 4 accidents; and
- Liverpool Street – 3 accidents.

# 4.0 CURRENT AND FUTURE PROPOSALS

## 4.1 Roads and Traffic Authority

Discussions with RTA officers from Sydney Operations Directorate indicated that the RTA were not considering any changes to the traffic management on the State road system in the study area, other than the proposal previously agreed with Council concerning Bourke Street between the Eastern Distributor southbound on ramp and Stanley Street.

Traffic management changes in the wider area include the introduction of a 50km/h speed limit in Oxford Street through Paddington to link to the existing 50km/h speed limit in the City area.

## 4.2 Sydney Buses

Discussions with Sydney Buses indicated that they were preparing an Integrated Transport Plan for their Eastern Region with the Ministry of Transport. This involves a review of the bus services in the study area, as well as in the wider Eastern Region.

The Draft Integrated Transport Plan should be available for public consultation in early 2008.

## 4.3 Woollahra Council

Discussions with Woollahra Council indicate that Council has no proposals that would alter traffic patterns or traffic volumes using the road network in the City East area. Woollahra Council implemented 40km/h speed limit restrictions in Paddington residential streets some 12 months ago. The Boundary Street route, which borders the City's area, remains at 50km/h.

Monitoring of the 40km/h speed limit is still being undertaken by the RTA.

# 5.0 ASSESSMENT OF ISSUES IDENTIFIED IN STUDY BRIEF

## 5.1 Introduction

The study brief identified a number of issues to investigate as part of the study. The assessment of those issues is documented in this section.

## 5.2 Identify the Traffic Impacts of the Cross City Tunnel

The Cross City Tunnel opened on 28 August 2005. Most of the remaining surface works were substantially completed by May 2006. Additional changes to the surface road system were announced in June 2006 and these works were completed by August 2006. These modifications included:

- Reopening of Druitt Street;
- Changes to proposed bus lanes in Elizabeth Street and retaining a 2 lane right turn from Elizabeth Street northbound into Park Street;
- An additional traffic lane eastbound in William Street between east of Palmer Street to McElhone Street, which resulted in the loss of the bicycle lanes in William Street in this section;
- Changes in and around Sir John Young Crescent including:
  - Direct access to the Harbour Crossing from Palmer Street / Sir John Young Crescent;
  - Traffic signals at Palmer Street / Sir John Young Crescent and providing 2 lanes northbound in Palmer Street, north of Cathedral Street (instead of 1 lane northbound and 1 lane southbound);
  - Reinstating the second right turn lane on the Cahill Expressway Off Ramp to Cowper Wharf Road;
- Changes at Queens Square to provide a dedicated right turn lane from Darlinghurst Road (northbound) into Kings Cross Road (eastbound).

The Cross City Tunnel went into receivership in December 2006 and was sold to a new owner in September 2007.

Official traffic volumes are not available for the Cross City Tunnel. Traffic volume estimates when it opened with a full toll were 20,000 – 25,000 vpd. Current traffic volume estimates based on the media statement released on the recent sale indicate that traffic volumes may be in the order of 32,000 – 33,000 vpd as at September 2007, although this figure cannot be confirmed.

Most of the traffic using the Cross City Tunnel has come from traffic that previously used William Street.

Roads and Traffic Authority AADT traffic volumes from 2003 indicated a daily two way volume in William Street at the Kings Cross Tunnel of 51,863 vpd. Independent counts undertaken in September 2005 in a similar location, after the Cross City Tunnel opened, indicated daily volumes in the order of 26,934 vpd.

Other independent counts undertaken in William Street west of Palmer Street undertaken in March 2007 indicated daily volumes in the order of 34,911. This location would

include traffic joining William Street from Craigend Street and some of the Eastern Distributor traffic.

The City undertook before and after traffic counts on a number of streets in the City East area to determine the impacts on City streets. East-west streets included Cowper Wharf Road, Greenknowe Avenue and Liverpool Street. North-south streets included Crown Street, Bourke Street, Darlinghurst Road, Victoria Street, McLachlan Avenue and Neild Avenue.

Overall, the east-west street daily volumes reduced by 2% from the before situation, although there was some variations by direction.

Liverpool Street had the highest reduction of around 7% as measured east of Forbes Street. Greenknowe Avenue and Cowper Wharf Road traffic volumes remain at similar levels, although there were changes by direction.

The increases in Bourke Street and McLachlan Avenue could be due to vehicle trips generated in the City East and Paddington areas adjusting their trip patterns.

The largest traffic reductions occurred in Crown Street, south of William Street and Darlinghurst Road, south of William Street. Darlinghurst Road pre-opening traffic volumes may have been affected by the construction works associated with the Cross City Tunnel, with more traffic using Darlinghurst Road during construction, which has since reduced.

The traffic reduction in Crown Street, south of William Street appears to be more structural with the current volumes being less than the RTA's AADT volumes for 2005 which was 12,288 vpd. Two-way traffic volumes in Crown Street in August 2006 (after situation) were 9,697 vpd and in September 2007 were 9,218 vpd.

Victoria Street, south of Oxford Street also recorded a small reduction in traffic volumes between the before and after situation.

## 5.3 Options for and Impacts of Converting Darlinghurst Road and Victoria Streets to Two Way Traffic for their Entire Lengths

Darlinghurst Road is one way north between Queens Square (Craigend Street) and Burton Street. The section between Burton Street and Oxford Street is two way.

Victoria Street is one way south between Queens Square (Craigend Street) and Oxford Street.

Traffic volumes in Darlinghurst Road south of Craigend Street are 9,723 vpd (7 day average) and 624 vph - 628 vph in weekday peak hours.

Traffic volumes in Victoria Street south of Craigend Street are 12,101 vpd (7 day average) and 695 vph -761 vph in weekday peak hours.

Both Victoria Street and Darlinghurst Road are bus routes between Craigend Street and Burton Street as well as bicycle routes in the City's Bicycle Network.

Tables 5.1 and 5.2 set out the existing road characteristics of Victoria Street and Darlinghurst Road.

In Victoria Street the eastern footpath has been widened generally between Craigend Street to Burton Street to provide a 10.8 metre wide road carriageway.

The section between Burton Street and Oxford Street has undergone significant narrowing to calm the traffic and provide angle parking for St Vincent's Hospital, which was funded by the Hospital.

Darlinghurst Road has a narrow road carriageway of 8.0 metres (between Craigend Street and Tewkesbury Avenue) and 9.2 metres to Liverpool Street. The section between Liverpool Street and Burton Street is wider at 12.8 metres and contains 21 angled parking spaces on the western side.

Darlinghurst Road is too narrow in the section between Craigend Street and Liverpool Street to convert to two way traffic. It would require the removal of all the on street parking. In addition, the narrow traffic lanes would be problematical for bicycles and buses.

Similarly, the current road width in Victoria Street would provide 5.4 metre lanes in each direction, which would be very tight to cater for a travel lane to carry cars, buses, bicycles as well as parking.

There are capacity and geometric issues at the Queens Square intersection that would prevent two way traffic being introduced in either Victoria Street or Darlinghurst Road, south of Craigend Street.

Both Darlinghurst Road and Victoria Street have been identified for investigation for a separated cycleway as part of the *Cycle Strategy and Action Plan 2007-2017*. The above analysis shows that Darlinghurst Road is not feasible for a separated cycleway, while Victoria Street is feasible, though there may be some loss of parking.

Based on the above, the introduction of two way traffic in either Victoria Street or Darlinghurst Road would be difficult to achieve in the section between Craigend Street and Liverpool Street.

Similarly, it would be difficult to implement two way traffic in the section of Victoria Street between Burton Street and Oxford Street, due to:

- capacity constraints at the Oxford Street / South Dowling Street / Barcom Avenue intersection; and
- the changes required along the frontage of St Vincent's Hospital.

Conversion of Darlinghurst Road to two way in the section between Liverpool Street and Burton Street is considered feasible, but would require the removal of the angle parking in Darlinghurst Road, with some loss of parking. Weekday peak hour volumes in this section are in the order of 589 vph - 669 vph.

Victoria Street between Liverpool Street and Burton Street has a 10.8 metre wide road carriageway. This width is considered too narrow to cater for 2 parking lanes, 2 travel

lanes and buses and bicycles. To cater for two way traffic in this section, road widening would be required. Notwithstanding this, there would be some loss of parking to provide sufficient capacity at the traffic signal controlled intersection of Liverpool Street and Burton Street to cater for two way traffic. Weekday peak hour volumes in this section of Victoria Street are in the order of 697 vph - 705 vph. However, there would be little benefit in two way traffic in this section of Victoria Street as the sections north and south of this block would still be one way south.

Therefore, in terms of options for two way traffic, only the section of Darlinghurst Road between Liverpool Street and Burton Street is considered to be feasible. Implementation of two way traffic in this section would result in the removal (loss) of some parking and changes to the traffic signals at the intersection of Darlinghurst Road with Liverpool Street and Burton Street.

Implementation of two way traffic in Victoria Street between Liverpool Street and Burton Street is technically feasible, but has very limited benefits. Two way traffic would require road widening to cater for buses, cyclists and traffic lanes and changes to the traffic signals in Victoria Street at Liverpool Street and Burton Street. In addition, there would be some loss of parking.

**TABLE 5.1**

**VICTORIA STREET**
**ROAD AND PARKING DETAILS**

| Section | Road Width | Comment |
|---|---|---|
| At Craigend Street | - | Forms complex intersection with Darlinghurst Road, Craigend Street, Kings Cross Road and William Street Ramps. |
| Craigend Street to Surrey Street | 10.8 metres | Footpath widening on eastern side. Parallel parking on both sides. |
| Surrey Street to Liverpool Street | 10.8 metres & 12.8 metres | Footpath widening on eastern side at Surrey Street. Parallel parking on both sides. |
| Liverpool Street to Burton Street | 10.8 metres | Footpath widening on eastern side. Parallel parking on both sides. |
| Burton Street to Oxford Street | 3.6 metres plus parking | Extensive frontage works along St Vincent's Hospital with narrow road and angle parking. |
| At Oxford Street | - | Forms complex offset intersection with Oxford Street / South Dowling Street / Barcom Avenue. |

**TABLE 5.2**

**DARLINGHURST ROAD**
**ROAD AND PARKING DETAILS**

| Section | Road Width | Comment |
|---|---|---|
| At Craigend Street | - | Forms complex intersection with Victoria Street, Craigend Street, Kings Cross Road and William Street Ramps. |
| Craigend Street to Tewesbury Avenue | 8.0 metres | Parking on one side. Extensive No Stopping at Queens Square |
| Tewesbury Avenue to Liverpool Street | 9.2-9.5 metres | Parking on one side. Small section near Liverpool Street where parking on both sides. |
| Liverpool Street to Burton Street | 12.8 metres | 21 angle parking spaces on eastern side. |
| Burton Street to Oxford Street | 12.8 metres | This section is two way. |

## 5.4 Options for and Impacts of Converting Boundary Street, McLachlan Avenue and Neild Avenue to Two Way Traffic

This one way road network involves:

- One way northbound in McLachlan Avenue between Boundary Street and Craigend Road / Bayswater Road;

- One way southbound in Neild Avenue between Bayswater Road and Boundary Street; and

- Boundary Street one way westbound between Neild Avenue and McLachlan Avenue.

Weekday peak hour traffic volumes using these roads are as follows:

- Neild Avenue - 670 vph
- Boundary Street - 409 vph – 679 vph
- McLachlan Avenue - 743 vph – 799 vph

Of the total traffic using McLachlan Avenue in the weekday AM and PM peak hours:

- Some 44% (AM) and 30% (PM) respectively have been generated from Neild Avenue, south of Boundary Street; and

- Some 64% (AM) and 56% (PM) of traffic (in McLachlan Avenue) turns left into Bayswater Road to travel west.

**Figure 11A** shows a conceptual option for the introduction of two way traffic in these streets. Generally, the option would permit:

- Two way local traffic in Neild Avenue with a roundabout suitable for vehicles under 6 metres to U turn in Neild Avenue 60 metres south of Bayswater Road;

- Full two way traffic in McLachlan Avenue and in Boundary Street between Neild Avenue and McLachlan Avenue with roundabout control at the intersections of Boundary Street / Neild Avenue and Boundary Street / McLachlan Avenue. The design of these roundabouts would need to be able to accommodate car trailers (i.e. semi-trailers).

The main changes to traffic patterns would be:

- A transfer of some traffic currently using Neild Avenue to McLachlan Avenue, estimated at 220 – 240 vph in the weekday peak hours, which would turn left into McLachlan Avenue from Bayswater Road;

- Improved local access to the southern section of Neild Avenue, although traffic volumes in Neild Avenue are likely to decrease;

- Improved local access to the eastern section of Boundary Street and Neild Avenue and adjacent streets in Paddington, south of Boundary Street, resulting in a change in traffic patterns in this section of Paddington. Although the change is difficult to quantify, it would be likely to involve only local trips (i.e. Paddington generated).

The software package SCATES has been used to examine the change in traffic conditions and capacity issues at the traffic signal controlled intersections in Bayswater Road, McLachlan Avenue and Neild Avenue.

SCATES is the Roads & Traffic Authority's traffic model used to assess the operational performance of intersections, which are part of traffic signal co-ordinated systems in terms of system performance and intersection performance.

The best criteria for assessing system and intersection performance is Level of Service (LS), Degree of Saturation (DS) and Average Vehicle Delay (AVD). For intersections controlled by traffic signals in the Sydney Metropolitan area, Level of Service D or better (i.e. A, B, C or D) is considered satisfactory.

A SCATES model was developed for the existing situation base case using the current geometry and traffic management at each intersection together with the peak hour traffic and pedestrian volumes, shown in Figures 6B, 7B and 8B.

The traffic management for the two way traffic option is based on **Figure 11A.**

The AM peak hour is the critical peak hour due to the volume of westbound traffic in Bayswater Road / New South Head Road. Table 5.3 shows the results of SCATES modelling for the AM peak hour. Reference to this table shows that the intersection of Bayswater Road / McLachlan Avenue would be oversaturated in the AM peak hour with the conceptual changes shown on **Figure 11A**. The intersection would deteriorate from a Level of Service B operation with Average Vehicle Delays of 25 seconds to a Level of Service F operation with Average Vehicle Delays of 637 seconds per vehicle.

The oversaturated conditions are a result of the reduction in lane capacity in McLachlan Avenue at Bayswater Road and the expected increase in the left turn into McLachlan Avenue of 220 vph during the AM peak hour. The model (which is based on equalising the delay for all traffic using the intersection) indicates that queue lengths would be in the order of 1.66km (i.e. 1,662 metres) in Bayswater Road / New South Head Road and 618 metres in McLachlan Avenue.

Additional traffic modelling of alternative two way traffic options indicates that it would be feasible to introduce two way traffic for local traffic in McLachlan Avenue, provided there were no changes to the Bayswater Road / McLachlan Avenue intersection (i.e. no left turn into McLachlan Avenue from Bayswater Road) and sufficient approach capacity was maintained in McLachlan Avenue.

**Figure 11B** shows such an arrangement which is based on the following changes in McLachlan Avenue:

- Increased No Stopping for the kerbside left lane in the AM peak period;
- Centre left through lane (unlimited length) together with a centre right through lane 50 metres long;

- No Stopping restrictions for 60 metres in the eastern kerbside lane to develop the southbound lanes in McLachlan Avenue.

Traffic modelling of this two way option for local traffic would result in a satisfactory operation in the AM peak hour with a Level of Service B operation and Average Vehicle Delays of 20 seconds per vehicle at the Bayswater Road / McLachlan Avenue intersection.

The modelling does show that the intersection's operation and capacity is sensitive to the length of the No Stopping restrictions in the western kerbside lane in McLachlan Avenue. The left turn volume out of McLachlan Avenue is 513 vph in the AM peak hour and should this increase in the future, there would be a need to increase the No Stopping to avoid the queue from the left lane blocking the through lanes in this approach.

The required traffic management for the introduction of two way traffic for local traffic in McLachlan Avenue would result in the loss of some full time parking in the street (up to 8 spaces). It would be feasible to move the start of the two way traffic further south in McLachlan Avenue (say 90-100 metres) to reduce the impact on parking.

Should it be determined that McLachlan Avenue remain one way, it would still be feasible to introduce two way traffic in Neild Avenue and Boundary Street. For this option, a new roundabout would be retained at the intersection of Neild Avenue / Boundary Street together with changes to the channelisation implemented at the McLachlan Avenue / Boundary Street intersection.

**TABLE 5.3**

**SCATES MODELLING**
**BAYSWATER ROAD IN AM PEAK HOUR**

| Location | Criteria | Scenario | | |
|---|---|---|---|---|
| | | **Existing** | **2 Way Traffic From Bayswater Rd** | **Local 2 Way Traffic** |
| Bayswater Rd / Neild Ave | LS | A | B | A |
| | DS | 0.89 | 0.92 | 0.89 |
| | AVD (secs) | 8 | 17 | 8 |
| Bayswater Rd / McLachlan Ave | LS | B | F | B |
| | DS | 0.98 | 1.66 | 1.00 |
| | AVD (secs) | 25 | 637 | 20 |
| System | LS | B | F | B |
| | AVD (secs) | 16 | 336 | 13 |

Where:

LS Level of Service
DS Degree of Saturation
AVD Average Vehicle Delay

## 5.5 Impacts of Closing Liverpool Street at Oxford Street and Associated Other Traffic Changes

Consultants Arup Transportation Planning examined 4 options for Liverpool Street at Oxford Street, including closure options in 2001.

The 4 options were:

**Option 1** Do nothing
**Option 2** Liverpool Street closure at Hargrave Street
**Option 3** Liverpool Street one way westbound at Oxford Street
**Option 4** Liverpool Street closed at Oxford Street

While Option 4 was the preferred option based on community feedback at the time, no road closure was implemented. Changes were made to Oxford Street / Liverpool Street intersection to reduce vehicle entry speeds from Oxford Street as part of the Oxford Street upgrade works which were undertaken in 2005. **Figure 12A** shows the existing traffic management in the area.

A description of Options 2, 3 and 4 is given below.

For Option 2 (**Figure 12B)**, the traffic changes included:

- Closure of Liverpool Street east of Hargrave Street allowing local access to / from Oxford Street east of Hargrave Street;
- Convert Charlotte and Hargrave Lanes to one way west between Yurong Street and Hargrave Street;
- Convert Francis Street to one way west between Hargrave Street and College Lane;
- Convert Hargrave Street to one way north;
- Close the median at Stanley Street and Yurong Street forcing all traffic from Stanley Street to turn left into Yurong Street to travel towards William Street.

The benefits of Option 2 identified by Arup included:

- Liverpool Street through traffic route for eastbound traffic removed;
- Improved streetscape with potential for greater public / business use; and
- Access into local precinct available for residents.

The dis-benefits of Option 2 identified by Arup included:

- Through traffic could still travel eastbound via Hargrave Street, Francis Street and Yurong Street);
- A new westbound route is possible from Liverpool Street to Francis Street via Charlotte or Hargrave Lanes. It may be difficult to install closures in these lanes;
- Pedestrian crossing still required across Liverpool Street at Whitlam Square.

Arup concluded that traffic flows would change as follows with Option 2:

- Local traffic would enter Liverpool Street to access the rear of the College Street and Hargrave Street properties, which would total 30-40vph, although there was still a potential circuitous eastbound route via Hargrave Street, Francis Street and Yurong Street;
- The remaining Liverpool Street traffic would divert to Oxford Street;
- Traffic volumes in Francis Street would remain at similar levels;
- Stanley Street would experience a slight reduction with traffic diverted to William Street.

For Option 3 (**Figure 12C**), the traffic changes included:

- Liverpool Street converted to one way west between Yurong Street and Oxford Street;
- Introduce two way traffic in Hargrave Street between Liverpool Street and Charlotte Lane and one way north between Charlotte Lane and Francis Street;
- Convert Francis Street to one way west between Hargrave Street and College Lane;
- Close the median at Stanley Street and Yurong Street forcing all traffic from Stanley Street to turn left into Yurong Street to travel towards William Street.

The benefits of Option 3 identified by Arup included:

- Liverpool Street through traffic route for eastbound traffic removed;
- Improved streetscape with potential for greater public / business use;
- Exit from local precinct available for residents.

The dis-benefits for Option 3 identified by Arup included:

- A new westbound route is possible from Liverpool Street to Francis Street via Hargrave Street;
- Pedestrian crossing still required across Liverpool Street at Whitlam Square;
- Two parking spaces removed in Hargrave Street.

Arup concluded that traffic flows would change as follows with Option 3:

- Eastbound Liverpool Street traffic would be diverted to Oxford Street with local traffic turning left into Crown Street;
- Traffic volumes in Francis Street would remain at the current level, although there is the potential for a new through traffic route westbound;
- Stanley Street would experience a slight reduction with traffic diverted to William Street.

For Option 4 (**Figure 12D**), the traffic changes included:

- Close Liverpool Street between Oxford Street and Hargrave Street with provision for emergency and some delivery vehicles;
- Close Francis Street east of College Lane maintaining access to the existing car parks from College Street (It is assumed that Francis Street between the closure and Yurong Street would become two way to provide access to Francis Street);

- Introduce two way traffic in Hargrave Street between Liverpool Street and Charlotte Lane and one way north between Charlotte Lane and Francis Street;
- Close the median at Stanley Street and Yurong Street forcing all traffic from Stanley Street to turn left into Yurong Street to travel towards William Street.

The benefits of Option 4 as identified by Arup included:

- Liverpool Street through traffic route for eastbound traffic removed;
- Francis Street closed to through traffic;
- Improved streetscape with potential for greater public / business use;
- Hargrave Street included in local precinct;
- Pedestrian crossing in Liverpool Street not required.

The dis-benefits of Option 4 identified by Arup included:

- Local access to precinct would be via Crown Street to Liverpool Street or Burton Street which increases travel distance from the west;
- Two car parking spaces are removed in Hargrave Street;
- Loss of car parking in plaza section.

Arup concluded that traffic flows would change as follows with Option 4:

- Eastbound Liverpool Street traffic would be diverted to Oxford Street with local traffic turning left into Crown Street;
- Traffic volumes in Francis Street would remain at the current level;
- Stanley Street would experience a slight reduction with traffic diverted to William Street.

The objective of Options 2, 3 and 4 was to remove the eastbound traffic entering Liverpool Street from Oxford Street and to alter the traffic management in the immediate area so that this traffic would not transfer to Francis Street and / or Stanley Street.

In terms of impacts, the Arup Study only considered the impacts on the local precinct area west of Yurong Street.

While there would be some variations to traffic using the local streets bound by College Street, Liverpool Street, Yurong Street and Stanley Street, as noted above Options 2, 3 and 4 would have similar impacts to the area east of Hargrave Street. The Arup Study found that there was very little through traffic using Stanley Street and Francis Street. They concluded that the higher volumes of traffic entering Stanley Street in the morning was associated with school drop offs to Sydney Grammar. They made no findings on the destinations of the eastbound traffic entering Liverpool Street from Oxford Street.

Table 5.4 shows a comparison of the eastbound traffic volumes entering Stanley Street, Francis Street and Liverpool Street (from College Street and Oxford Street) for the years 2000 (Arup Study) and 2007 (this study).

Reference to these traffic volumes shows that the traffic volumes using Stanley Street and Francis Street are of the same order in 2007 as they were in 2000 with some variations between turning movements. Overall, the eastbound traffic volumes have decreased in the AM and PM peak hours. Eastbound traffic entering Liverpool Street

has decreased by 55 vph in the AM peak hour and 86 vph in the PM peak hour from the 2000 traffic volumes. The existing eastbound entering volumes (into Liverpool Street) are 173 vph – 186 vph in the peak hours. The reduction is likely to be due to changes made to the intersection in the upgrade works for Oxford Street which narrowed the opening and making the movement a more defined left turn into Liverpool Street from Oxford Street.

Current pedestrian volumes using the pedestrian crossing across Liverpool Street are of the same order as they were in 2000 with some 1004 – 1103 pedestrians per hour in the peak hours. The left turn into Liverpool Street needs to give way to these pedestrians.

**TABLE 5.4**

**COMPARISON OF EASTBOUND TRAFFIC VOLUMES**
**LIVERPOOL STREET, FRANCIS STREET & STANLEY STREET**

| Traffic Movement | Traffic Volumes | | | |
|---|---|---|---|---|
| | 2000 (Arup Study) | | 2007 (This Study) | |
| | AM Peak (vph) | PM Peak (vph) | AM Peak (vph) | PM Peak (vph) |
| College St | | | | |
| Left turn into Stanley St | 130 | 34 | 108 | 70 |
| Right turn into Stanley St | 115 | 66 | 156 | 27 |
| Subtotal for Stanley St | 245 | 100 | 264 | 97 |
| | | | | |
| Left turn into Francis St | 46 | 18 | 48 | 34 |
| Right turn into Francis St | 89 | 32 | 45 | 40 |
| Subtotal for Francis St | 135 | 50 | 93 | 74 |
| | | | | |
| Oxford St | | | | |
| Left turn into Liverpool St | 228 | 272 | 173 | 186 |
| | | | | |
| **Total Eastbound Volumes** | **608** | **422** | **530** | **357** |

An Origin and Destination survey conducted between 7-9am and 4-6pm on Wednesday 14 November 2007 found that of the total eastbound traffic that entered Liverpool Street at Oxford Street:

- Between 64% - 67% of this traffic was no longer using Liverpool Street east of Forbes Street; and
- 92% of this traffic was no longer using Liverpool Street east of Victoria Street.

This indicates that a significant proportion of the eastbound traffic that enters Liverpool Street (approximately 65%) has a destination in the area between College Street and Forbes Street during the AM and PM peak hours and another 27% in Darlinghurst Road or Victoria Street.

Some 8% of the eastbound traffic that enters Liverpool Street at Oxford Street travels through to east of Victoria Street in the AM and PM peak hours.

This is borne out by the amount of eastbound traffic that turns from Liverpool Street between Oxford Street and Forbes Street.

Peak hour traffic volumes for Liverpool Street intersections are shown on Figures 6B and 7B. In the AM peak hour some 312 vph turned from Liverpool Street into one of the intersecting streets between Hargrave Street and Forbes Street while some 362 vph joined Liverpool Street to travel east.

In the PM peak hour some 421 vph turned from Liverpool Street into one of the intersecting streets between Hargrave Street and Forbes Street while some 372 vph joined Liverpool Street to travel east.

If Options 2, 3 or 4 were to be implemented, traffic displaced from Liverpool Street, Francis Street and Stanley Street would access the area via a left turn from Oxford Street at Crown Street or Palmer Street, or via a right turn from William Street into Yurong Street.

Traffic arriving from the north along College Street wishing to access the area would divert into William Street and turn right into Yurong Street. Traffic arriving from the south and west in Wentworth Avenue and Liverpool Street east of Whitlam Square would divert along Oxford Street to Crown and / or Palmer Street.

It could be expected that between 50% - 65% of the eastbound traffic displaced from Liverpool Street and the adjacent streets would re-enter the area. Adopting the lower figure of 50% of the existing eastbound traffic re-entering the local area at the above locations, there would be an estimated:

- Increase in the right turn from William Street into Yurong Street of between 64 vph (PM) and 81 vph (AM). Current right turn volumes are 42 vph (PM) and 62 vph (AM); and

- Increase in the left turn from Oxford Street into Crown Street of between 98 vph (AM) and 101 vph (PM). Current left turn volumes are 82 vph (AM) and 103 vph (PM). The left turn into Crown Street needs to turn through 590-611 pedestrians per hour using the northern crossing across Crown Street.

In Liverpool Street, the estimated reduction in traffic volumes from Options 2, 3 or 4 would be in the order of:

- 173 – 186 vph in the peak hours at Yurong Street for Options 3 and 4 and 133 – 143 vph for Option 2

- 87 – 93 vph in the peak hours east of Crown Street based on 50% rejoining Liverpool Street via Crown Street.

Liverpool Street, east of Crown Street, is estimated to carry two way traffic volumes in the order of 327 – 331 vph in the AM and PM peak hours, if Options 2, 3 or 4 are implemented. This would represent a reduction of 21% in traffic volumes using Liverpool Street, east of Crown Street.

### Conclusion

In summary:

- Eastbound traffic entering Liverpool Street from Oxford Street has decreased since 2000. Current peak hour volumes are 173 vph – 186 vph, which is a reduction of 55– 86 vph during these periods
- Some 65% of the eastbound traffic that enters Liverpool Street and Stanley Street in the peak hours is estimated to have a destination in the area between College Street and Forbes Street.
- Options to remove the eastbound traffic entering Liverpool Street at Oxford Street will also require changes to Francis Street and Stanley Street.
- The options examined in 2001 involved closure options in Liverpool Street (Options 2 and 4) and a one way west option in Liverpool Street between Yurong Street and Oxford Street (Option 3).
- Option 2 has the least impact on access from the eastbound direction in the immediate area defined as Stanley Street / College Street / Liverpool Street / Yurong Street. Options 2 and 3 have similar impacts for the immediate area, but displace more of this traffic via William Street / Yurong Street and Oxford Street / Crown Street.
- All the options affect access to the wider area contained between William Street, Oxford Street, west of Darlinghurst Road and Yurong Street (including Yurong Street).
- If any of Options 2, 3 or 4 are implemented, access into the wider area (and for part of the immediate area) for eastbound vehicles will occur:
  - via a right turn for William Street into Yurong Street;
  - via a left turn into Crown Street or Palmer Street from Oxford Street.
- The options are estimated to reduce traffic volumes using Liverpool Street by 133 – 186 vph during peak hours at Yurong Street and 87 – 92 vph east of Crown Street.
- Liverpool Street, east of Crown Street, is estimated to carry two way volumes in the order of 327 – 331 vph, if any of Options 2, 3 or 4 are implemented. This would represent a reduction of 21% in traffic volumes as compared to current traffic levels.

### Recommendation

It is recommended that the current traffic arrangements at the intersection of Oxford Street and Liverpool Street are maintained and Liverpool Street is kept open at this time.

## 5.6 Traffic Access Issues and Accidents at the Intersection of Bourke and Liverpool Streets

This intersection is currently under Stop sign control for Liverpool Street with priority for Bourke Street. Marked foot crossings are provided across 3 legs of the intersection. Bourke Street is a bus route.

The intersection was previously signalised. However, the traffic signals were removed from service in August 2000 as part of the local area works associated with the Eastern Distributor.

Traffic and pedestrian volumes using the intersection during the AM and PM peak hours are shown on Figures 6B, 7B and 8B. Traffic volumes using the intersection at these times are in the order of 843 vph – 978 vph. Pedestrian crossing volumes are 250-282 pedestrians per hour during the same periods.

Observations confirm that there are delays from time to time occurring at the intersection for the traffic using Liverpool Street, as well as a degree of confusion and risk taking in relation to the selection of appropriate gaps in the Bourke Street traffic flow. The turning volumes at the intersection plus the constant pedestrian crossing volumes in part contribute to this outcome.

Accident statistics for the 5½ year period from January 2001 to June 2006 indicated that there has been a total of 25 accidents, 12 of which were injury accidents. The majority of these accidents (22) were cross traffic or right angle accidents with the remaining 3 accidents involving pedestrians. The majority of cross traffic accidents involved eastbound vehicles in Liverpool Street. These type of accidents (i.e. cross traffic and pedestrian accidents) are typically reduced by the provision of traffic signals. A review of the last 18 months of the accident period from January 2005 to June 2006 revealed that there were 8 accidents at the intersection which indicates that there has been no reduction in the number of accidents occurring at the intersection towards the end of the accident period.

The City is proposing to provide a separated cycleway in Bourke Street and the management of pedestrian and cyclists and vehicle movements will require upgraded traffic control at the intersection.

Based on the above accident history and cycleway proposal, a change of traffic control to traffic signals is considered warranted at the intersection.

## 5.7 Traffic Access Issues at the Intersection of Liverpool and Forbes Streets

This intersection is under Stop sign control for Forbes Street. Traffic management includes road narrowing in the Forbes Street legs together with a raised platform section in Liverpool Street at the intersection and pedestrian refuges in Liverpool Street.

Reference to the weekday peak hour traffic and pedestrian volumes using the intersection, Figures 6B, 7B and 8B, shows relatively high turning volumes into the northern leg of Forbes Street from Liverpool Street. Traffic volumes in Liverpool Street are in the order of 712 vph - 768 vph with 71 vph - 111 vph egressing Forbes Street. Pedestrian volumes crossing at the intersection are in the order of 250-282 pedestrians per hour. Some delays occur for traffic egressing the northern approach of Forbes Street at peak times. Sight lines for Forbes Street traffic are restricted due to the grades in Liverpool Street. There is no identified accident history at the intersection.

Conditions for the Forbes Street traffic could be improved by the provision of a roundabout at the intersection which would share the priority at the intersection between all the approaches. Traffic modelling using SIDRA software package shows that the intersection under roundabout control would operate at a Level of Service A operation, with average vehicle delays in the order of 7-8 seconds per vehicle.

If the roundabout is adopted by the City, consideration should be given to providing a marked foot crossing across Liverpool Street on the eastern side of the intersection. The existing pedestrian crossing volumes at this location, together with the traffic volumes using Liverpool Street meet the warrant for a marked foot crossing.

## 5.8 Traffic and Amenity Issues along Darlinghurst Road and Macleay Street Late at Night

Table 5.5 shows two way traffic volumes using Darlinghurst Road and Macleay Street and the adjacent road network during the midnight to 1.00am period for every night of the week. **Figure 13** shows two way traffic volumes using the road network during the same one hour period for a Monday evening / Tuesday morning which has the lowest traffic volumes and a Saturday evening / Sunday morning, which has the highest.

This one hour period tends to be one of the busiest hours on weekend evenings for traffic volumes (peak evening time is typically between 10.00pm – 1.00am) in the Kings Cross entertainment area. Reference to Table 5.5 and **Figure 13** shows:

- Friday and Saturday evenings are the busiest evenings for overall road network and Monday evening the quietest;

- Darlinghurst Road and the southern section of Macleay Street are relatively busy most nights of the week during the 12 midnight to 1.00am period whereas the surrounding roads carry less traffic from Sunday evening through to Thursday evening.

Observations confirm that Saturday evenings between 9.00pm – 1.00am are very busy in the Kings Cross area with large numbers of people visiting the entertainment facilities at this time.

Traffic conditions are characterised by:

- Congestion and slow moving traffic in Darlinghurst Road, Bayswater Road and sections of Macleay Street and Ward Avenue;

- Queuing in William Street for the eastbound direction with vehicles trying to access Darlinghurst Road and the Kings Cross entertainment area, with slow moving traffic and varying levels of congestion at the Queens Square intersection during this period;

- Vehicles circulating the strip via Greenknowe Avenue / Elizabeth Bay Road / Ward Avenue and Bayswater Road between Ward Avenue and Darlinghurst Road;

- Higher volumes of traffic arriving via Cowper Wharf Road and Wylde Street, some of which are ‘doing a drive through’.

While the level of traffic volumes would affect noise levels in some streets, other factors such as noisy exhaust systems on cars and motorbikes and behavioural issues such as use of horns, shouting out etc. also contribute to overall noise levels.

Transport and Urban Planning are not noise experts, so are not in a position to determine the likely impact on the amenity of the residents who live in or close to Macleay Street and Darlinghurst Road from the additional traffic and the behaviour of the drivers and the other patrons in the area.

Addressing the impacts of higher noise levels late at night in the Kings Cross area would require a multi-facet approach, involving other authorities such as the Police (law and order) and the Roads and Traffic Authority (noisy vehicles) as well as the City and public transport authorities.

**TABLE 5.5**

**TRAFFIC VOLUMES**
**USING DARLINGHURST RD, MACLEAY ST & ADJACENT ROADS**
**BETWEEN MIDNIGHT AND 1.00AM**

| Location | Mon/Tue | Tue/Wed | Wed/Thu | Thu/Fri | Fri/Sat | Sat/Sun | Sun/Mon |
|---|---|---|---|---|---|---|---|
| Cowper Wharf Rd | 124 | 162 | 219 | 288 | 536 | 889 | 158 |
| Wylde St south of St Neots Ave | 131 | 159 | 218 | 310 | 310 | 875 | - |
| Macleay St near Orwell St | 365 | 357 | 361 | 484 | 482 | 380* | 402 |
| Darlinghurst Rd between Bayswater Rd & Roslyn St | 357 | 445 | 435 | 520 | 671 | 404* | 496 |
| Greenknowe Ave | 84 | 128 | 137 | 230 | 353 | 562 | 141 |
| Ward Ave north of Bayswater Rd | 112 | 174 | 242 | 297 | 446 | 313* | 90 |
| Bayswater Rd near Kellett St | 147 | 187 | 250 | 306 | 367 | 309* | 254 |

** Traffic counts likely to be affected by slow moving and / or stationary traffic at these times.*

## 5.9 Traffic Problems in Surrey Street and Possible Changes at the Intersection of Craigend Street and Surrey Street

Surrey Street is one way between Victoria Street and Craigend Street. The section between Victoria Street and Caldwell Street is 10 metres wide which narrows to 5.0-6.0 metres north of this location.

Currently, traffic volumes near Victoria Street are relatively low at 538 vehicles per day (vpd) and between 24 vph – 29 vph during the weekday peak hours.

Surrey Street is subject to all traffic left restrictions at Craigend Street although the sign in recent times has been vandalised and/or removed.

The City has a proposal for a raised pedestrian crossing in Victoria Street at Surrey Street. As part of this work, kerb extensions are proposed at the intersection of Victoria Street / Surrey Street.

The existing traffic controls at the intersection of Craigend Street / Ward Avenue / Surrey Street include Stop sign control on Ward Avenue and ‘All Traffic Left’ from Surrey Street into Craigend Street. The City has developed a proposal for this

intersection to reduce delays in Ward Avenue and improve the channelisation of the intersection including 'All Traffic Left' restrictions in Surrey Street.

Peak hour traffic and pedestrian volumes at this intersection are shown on Figures 6B, 7B and 8B. Currently, there are 24 vph – 28 vph exiting Surrey Street at Craigend Street with some 12-15 vehicles crossing illegally into Ward Avenue.

The City proposal is shown on **Figure 14** and includes:

- Seagull channelisation in Craigend Street with Stop sign control for the right turn into Ward Avenue;

- Chanelisation in Craigend Street with a median to reinforce the 'All Traffic Left' restrictions from Surrey Street and provide a refuge for pedestrians crossing Craigend Street.

The proposed changes will require the right turn traffic into Ward Avenue from Craigend Street including Sydney Buses to give way to traffic exiting Ward Avenue. Traffic modelling of the proposal using the SIDRA traffic model indicates that delays to the right turn traffic under Stop sign control will be satisfactory with the approach and intersection operating at a Level of Service A operation. Average Vehicle Delays for this movement will be in the order of 7 seconds per vehicle during the AM and PM peak hours.

Vehicles turning right out of Ward Avenue will be required to merge with the through traffic movement in Craigend Street. Lane changing will occur in the section of Craigend Street between Ward Avenue and Victoria Street, associated with drivers positioning their vehicles for the right and left movements at Victoria Street.

This treatment also addresses the traffic accidents which currently involve vehicles turning right from Ward Avenue to Craigend Street.

# 6.0 DRAFT SCHEME AND COMMUNITY COMMENTS

## 6.1 Approved City Works / Proposals

The City has a number of approved works or proposals in the study area. These are detailed below:

### N1. Cowper Wharf Road between Bourke Street and Brougham Street

The City has a channelisation proposal for this section of Cowper Wharf Road which includes bike lanes, a roundabout at Dowling Street, footpath widening on the northern side of Cowper Wharf Road (west of Forbes Street to Brougham Street) and additional parking on the northern side outside Harry's Café de Wheels (increase from 4 spaces to 6 spaces. Parking would also be provided on the southern side of Cowper Wharf Road between Dowling Street and Brougham Street. An additional 6 spaces could be provided in this area.

As part of this scheme, Transport and Urban Planning recommends additional pedestrian facilities be provided across Cowper Wharf Road at the following locations:

- west wide of Brougham Street – raised pedestrian crossing with kerb extensions;
- west side of Finger Wharf Access Road – signalised crossing; and
- east side of Bourke Street – raised pedestrian crossing with kerb extensions.

The changes would reduce the eastbound direction to one through traffic lane from east of Forbes Street. Eastbound traffic is restricted to one lane at Forbes Street under the existing arrangements. Two lanes would be retained in the westbound direction from Dowling Street to Bourke Street. The proposal is shown on **Figure 15**.

Peak hour traffic volumes in Cowper Wharf Road are:

- eastbound – 576-751 vph; and
- westbound – 652-708 vph.

Traffic modelling (SIDRA and SCATES) shows that the Cowper Wharf Road intersections of Bourke Street, Finger Wharf Access Road and Dowling Street will continue to operate at a satisfactory to good level of service in the AM and PM peak hours (Level of Service A operation for all intersections) with the proposed changes.

The proposed roundabout at Dowling Street would need to be designed to accommodate semi-trailer and bus access to the Garden Island Naval facility which has its access opposite Dowling Street.

Pedestrian counts undertaken as part of this study show that there are large numbers of pedestrians that cross Cowper Wharf Road between Brougham Street (McElhone Stairs) and west of Bourke Street. Crossing volumes are in the order of 483-620 pedestrians per hour on the Saturday midday period. During weekday peak periods, pedestrian volumes are lower but consistent with warrants for crossing facilities at the above locations.

There is no median in Cowper Wharf Road between McElhone Street and Bourke Street and the lane reduction and the additional pedestrian facilities will assist in catering for the pedestrian movements. The lane reduction also allows the introduction of the on road bicycle lanes.

## N2. Roslyn Gardens – Proposed Angle Parking Scheme or Proposed Bicycle Route

This is an either / or proposal.

The City has developed an angle parking scheme in Roslyn Gardens which is shown on **Figure 16**.

Roslyn Gardens is 12.8 metres wide between kerbs. Footpaths are generally 3.6 metres wide except for a section on the eastern side south of Waratah Street which is narrower.

Development in the street is predominantly a mix of medium to high rise residential buildings which includes Lawrence Hardgrave terraces. Other development includes St Lukes Hospital and St Canice Church.

Grades in Roslyn Gardens fall from Elizabeth Bay Road and Roslyn Street towards the middle section of the street. The intersection of Roslyn Gardens and Waratah Street is controlled by a roundabout and Waratah Street is one way west.

City counts undertaken in July 2006 between Roslyn Street and Waratah Street indicate daily volumes in the order of 4,494 vpd and 85$^{th}$ percentile speeds of 50 km/h.

Two way traffic volumes using Roslyn Gardens at Elizabeth Bay Road are 433 vph in the AM peak hour and 392 vph in the PM peak hour. Northbound traffic volumes are 245 vph and 116 vph in the AM and PM peak hours and southbound volumes are 188 vph and 277 vph during the same periods.

Apart from local traffic in the area, generally the northbound traffic at Elizabeth Bay Road is generated by Waratah Street (which links to Bayswater Road) and Roslyn Street. The southbound direction in Roslyn Gardens links to Roslyn Street / Kings Cross Road and Bayswater Road.

The previously proposed scheme alternates the angle parking between the eastern and western sides of Roslyn Gardens with parallel parking on the opposite side. While the scheme is predominantly a parking scheme, the road narrowing associated with angle parking would assist in reducing vehicle speeds in Roslyn Gardens. Where the parking is provided, two way road widths are 6.3 metres wide. The angle parking requires 4.6 metres of road space and the parallel parking 2.1 metres. The angle parking is rear to kerb and there would be some vehicle overhang on the footpath. For the most of the street, existing trees are located within 1 metre of the edge of the kerb, which limits use of the footpath, so the impact of the vehicle overhang on the walking space would be reduced by this.

The proposed scheme would increase the number of parking spaces from 91 (parallel spaces) to 111 spaces with 53 angle spaces and 58 parallel spaces, which is an increase of 20 spaces.

The angle parking scheme proposal has a history dating back to 2000 and has been advertised to the community several times. Based on information provided by the City, the most recent history of the proposal is as follows. The City developed the parking and traffic arrangements in October 2005 and undertook a letter box drop seeking resident's comments. The City received 33 responses with 24 in support and 9 opposing

the scheme. Based on the majority of responses supporting the proposal, a detailed plan was prepared by City staff and was submitted to the Sydney Traffic Committee for consideration.

In May 2007, the City undertook another letterbox drop which had a final design of the angle parking as shown on **Figure 16** and requested comments from residents. The City received 10 submissions. Five (5) of these supported the proposal but requested design changes. There were three (3) who opposed the scheme outright. Another submission sought significant design changes which would involve a redesign and another submission neither supported nor opposed the scheme but suggested other changes in the City's parking policy were required.

Issues raised in those who wanted design changes included sight line issues at Evans Road and adjacent driveways, speed of southbound traffic, U turns near / at Roslyn Street, head light glare and visual heritage issues associated with the Lawrence Hardgrave Terraces.

Those who opposed the scheme considered there was no public (resident) support for the scheme, that it was not required as there was sufficient parking in the street for residents, there were other means to introduce traffic calming in the street, narrowing the effective travel lanes was unsafe, parking manoeuvres would introduce more vehicle delay and that vehicle overhang to the footpaths reduces the available space for pedestrians to use.

Spot street parking surveys undertaken as part of this study indicated parking demand in Roslyn Gardens was consistently high with few vacant spaces. However, this would be no different for the rest of the area in that parking demand in all adjoining streets would be high for most of the time.

Vehicle delays in Roslyn Gardens due to parking manoeuvres for the angle spaces would not be significant to the overall delay that would occur on the road network in the area, although the 30 seconds or so required to reverse into a vehicle space could be a source of annoyance to some drivers using the street. On average, approximately 6-8 cars a minute use Roslyn Gardens during the AM and PM peak hours.

Based on an initial review of the current design, it is considered that if the scheme is to proceed, some design changes may be required, particularly around Evans Road and it is suggested that a design audit should be undertaken, particularly in relation to sight distances. The audit may recommend the removal of one or two spaces to improve sight lines to the north.

Should the scheme not proceed, it would be feasible to introduce other speed control measures in Roslyn Gardens.

The alternative scheme to the proposed angle parking scheme is for bicycle lanes to be introduced in Roslyn Gardens. The City's current cycle strategy nominates Roslyn Gardens as part of the cycle route but includes Greenknowe Avenue, Elizabeth Bay Road, Roslyn Gardens, Roslyn Street, Kings Cross Road. Although the exact form of the bicycle lanes in Roslyn Gardens has not been determined, the bike lanes will be on the road carriageway and would preclude the introduction of angle parking in the street.

This cycleway would provide access for residents of Darlinghurst and Paddington to the Harbour Foreshore. It would also enable cyclists from the east of the City to connect to the bicycle lanes on William Street. This proposal would also provide the desired traffic calming in the Roslyn Gardens area.

Separated cycleways maintain local parking and driveway access while narrowing the traffic lanes to provide a bi-directional bicycle road on one side of roadway.

**Recommendation**

As access to the Sydney Harbour foreshore for residents, workers and visitors is a key aim of the City of Sydney Cycle Strategy and Action Plan, the cycleway option should be adopted.

### N3. Roslyn Street at Roslyn Gardens and near Pedestrian Overbridge at Kings Cross Road.

The City is constructing kerb extensions at these locations as pedestrian improvements.

### N4. Earl Street / Earl Place / Springfield Street – Shared Zone

This is an approved pedestrian improvement scheme and includes footpath widening at the intersection of Earl Street and Earl Place as well as shared zone treatment in the streets.

### S1. Stanley Street between Yurong Street and Bourke Street Footpath Improvements

This is an approved footpath improvement scheme being undertaken by City Projects and is currently being designed. Works may extend into Crown Street and Riley Street between Stanley Street and William Street.

### S2. (a) Bourke Street between Stanley Street and Corfu Street

This is an RTA approved scheme for this section of Bourke Street. It includes bike lane facilities, a raised pedestrian crossing at Stanley Street, reversing the one way movements in William Street (to become one way east) and Corfu Street (to become one way west) and landscaping works.

### S2. (b) Bourke Street between Cowper Wharf Road and Oxford Street – Provide separated cycle way

This is a City proposal to provide a separated cycleway in Bourke Street for its full length.

### S3. Craigend Street and Ward Avenue – Channelisation of Intersection

This channelisation proposal provides seagull channelisation at the intersection with Stop sign control on the right turn from Craigend Street to Ward Avenue. The proposal will make it easier for the right turn movement out of Ward Avenue and provide an island for pedestrians to stage their crossing across Craigend Street (Section 5.9 refers).

**S4. Victoria Street at Surrey Street – Kerb Extensions and pedestrian crossing across Victoria Street**

This is an approved pedestrian improvement proposal at this location.

It involves a raised pedestrian crossing across Victoria Street on the south side of Surrey Street together with kerb extensions in Surrey Street (which is one way east) to facilitate crossing movements across Surrey Street.

**S5. Darlinghurst Road at Oxford Street – Intersection Narrowing in Darlinghurst Road**

This is an approved pedestrian improvement project being undertaken by City Projects. It involves removal of the left turn slip lane in Darlinghurst Road which will be replaced with a conventional kerb treatment to reduce the vehicle speeds of the left turn into Darlinghurst Street from Oxford Street.

**S6. Burton Street Entire Length – Provide a Separated Cycleway**

This is a City proposal to provide a separated cycleway in Burton Street for its full length.

## 6.2 Draft Scheme

The Draft Scheme incorporates a range of improvement works and measures to address identified road safety problems, improve pedestrian and cyclist safety, lower vehicle speeds across the local road network and address, where practical, community concerns identified in the first workshop.

The Draft Scheme is shown on **Figures 17A, 17B, 17C and 17D** and divided into the area north of William Street (**Figures 17A and 17B**) and the area south of William Street (**Figures 17C and 17D**).

The City works / proposals are also shown on Figures 17A, and 17C which are listed as works N1 to N4 and S1 to S6.

### 6.2.1 North of William Street

Proposed improvement works north of William Street include the following measures:

**N5. Request the RTA to authorise the introduction of 40km/h speed limit in city streets excluding RTA roads, William Street, Oxford Street and College Street.**

Reason

Woolloomooloo and parts of East Sydney and Darlinghurst already have a 40km/h speed limit. The introduction of the 40km/h speed limit to the remaining sections of City East area will improve road safety for all road users especially pedestrians and cyclists and provide consistency of the speed limit in the area for local city streets.

**N6. Wilde Street near Grantham Street – provide raised platform at existing pedestrian crossing and consider kerb extensions subject to final design of bike lane.**

Reason

The raised platform will reduce vehicle speeds at the crossing and improve pedestrian safety. The kerb extensions, if implemented, would improve sight lines to the crossing and shorten the walk distance. The raised platform will also assist in maintaining vehicle speeds in Wilde Street to the proposed 40km/h speed limit.

**N7. Macleay Street at Rockwall Crescent:**

**(a) Provide kerb extensions and pedestrian crossing in Rockwall Crescent and raised pedestrian crossing in Macleay Street; or**

**(b) Provide traffic signals with pedestrian crossing across all legs of intersection.**

Reason

This location has a large number of pedestrians crossing Rockwall Crescent (380-550 pedestrians per hour in peak times) and Macleay Street (150-170 pedestrians per hour). Option A would provide improved facilities for pedestrians and reduce vehicle speeds in Macleay Street. Option B is the provision of traffic signals to provide safe crossing facilities at the intersection and to control vehicle movements at the intersection with less delay to the minor traffic movements, particularly turning traffic out of Rockwall Crescent.

**N8. Provide pedestrian crossings and kerb extensions where appropriate in Manning Street and Hughes Street at Macleay Street.**

Reason

The pedestrian crossings across Manning Street and Hughes Street will assist the large pedestrian movements (up to 550 pedestrians per hour in peak hours) that use the western footpath in Macleay Street. Kerb extensions in Manning Street will improve sight lines of the pedestrian crossing and reduce the length of the crossing.

**N9. Macleay Street at Orwell Street – provide raised pedestrian crossing across Macleay Street on the southern side (consider kerb extensions) and pedestrian crossing across Orwell Street.**

Reason

The pedestrian crossings at this intersection are to cater for the significant pedestrian movements that occur at this intersection. Up to 163 pedestrians per hour cross Macleay Street during the peak hours and up to 580 pedestrians per hour cross Orwell Street. The raised pedestrian crossing will reduce vehicle speeds in Macleay Street and the kerb extensions, if adopted, would improve driver sight lines.

**N10 (a) Consider kerb extension in Macleay Street at intersecting streets between McDonald Street and Orwell Street subject to final design of bike lanes in Macleay Street**

**(b) Consider additional footpath widening as appropriate in Macleay Street subject to final design of bike lane requirements.**

Reason

Macleay Street is 12.8 metres wide between kerbs and generally caters for 1 lane of traffic in each direction plus parking lanes. Kerb extensions at appropriate intersections would assist in reducing vehicle speeds in Macleay Street as part of the proposed 40km/h speed limit. The signalised intersections would not have kerb extensions in Macleay Street. Adoption of kerb extensions and footpath widening in Macleay Street north of Greenknowe Avenue would be subject to the final design requirements of the bike lanes in Macleay Street.

**N11. Provide additional pedestrian crossings at the following traffic signal controlled intersections:**

**(a) Macleay Street and Challis Avenue (south side of Macleay Street);**

**(b) Macleay Street and Greenknowe Avenue (western side of Greenknowe Avenue).**

Reason

The additional pedestrian crossing facilities at these intersections would provide more safe crossing locations along Macleay Street. (**NB.** There may be public utility issues at the Macleay Street / Greenknowe Avenue site).

The provision of these facilities would require approval of the RTA.

**N12. Improve signage and check lighting for existing pedestrian crossings in Elizabeth Bay Road at Greenknowe Street (2 crossings).**

Reason

Improved signage and upgraded lighting would improve the conspicuity of the crossings and thereby the potential safety of both the crossings.

**N13. Bayswater Road near Roslyn Street – improve signage of the existing pedestrian crossing near pedestrian overbridge.**

Reason

Improved signage would improve the conspicuity of the pedestrian crossing for the southbound direction and the potential safety of the crossing.

**N14. Elizabeth Bay Road / Roslyn Gardens / Ithaca Street – provide pedestrian crossing across Roslyn Gardens and Elizabeth Bay Road (west side) with appropriate safety measures.**

Reason

Up to 100 and 161 pedestrians per hour cross Elizabeth Bay Road and Roslyn Gardens during the peak hours. The proposed pedestrian crossings would cater for these crossings' movements. Additional safety measures should be considered in the detail design.

**N15. Provide additional facilities including raised platform at existing pedestrian crossing in Ward Avenue near Baroda Street.**

Reason

This is a well used pedestrian crossing. The raised platform will reduce vehicle speeds at the crossing and improve pedestrian safety. The raised platform will also assist in maintaining vehicle speeds in Ward Avenue to the proposed 40km/h speed limit.

**N16. Provide additional facilities including raised platform and consider kerb extensions at existing pedestrian crossing in Ward Avenue at Roslyn Street.**

Reason

This pedestrian crossing is also well used by pedestrians. The raised platform will reduce vehicle speeds at the crossing and improve pedestrian safety. The kerb extensions, if adopted, would improve driver sight lines to the crossing. The raised platform will also assist in maintaining vehicle speeds in Ward Avenue to the proposed 40km/h speed limit.

**N17. Forbes Street at William Street – provide pedestrian crossing across Forbes Street.**

Reason

There are up to 760 pedestrians per hour crossing Forbes Street during the peak hours at William Street. The pedestrian crossing will provide for these crossing movements.

**N18. Dowling Street, McElhone Street, Brougham Street at William Street – provide pedestrian crossing across streets at William Street.**

Reason

There are up to 730 pedestrians per hour using the northern footway of William Street in the peak hours and crossing these streets. The pedestrian crossings across these streets will cater for these pedestrian crossing movements.

**N19. Brougham Lane, between McElhone Street and Victoria Street – provide shared zone treatment.**

Reason

Brougham Lane is a narrow lane with no footpaths. It provides the most direct walking route to Kings Cross Station from the Woolloomooloo area. There is up to 308 pedestrians using Brougham Lane per hour in the peak hours. Traffic volumes are 39-51 vph in the section between McElhone Street and Brougham Street and 84-90 vph between Brougham Street and Victoria Street.

While the volumes are higher than current guidelines, the volume of pedestrians confirm that the shared zone treatment should be introduced in Brougham Lane to provide appropriate pedestrian facilities.

**N20. Victoria Street near Kings Cross Station entrance – provide raised pedestrian crossing and kerb extensions at Earl Street.**

Reason

There are significant numbers of pedestrians crossing Victoria Street in the vicinity of the Station entrances. The proposed raised pedestrian crossing with kerb extensions located on the south side of Earl Street will cater for pedestrian crossing movements adjacent the southern station entrance and reduce vehicle speeds in Victoria Street adjacent the station precinct.

**N21. Nicholson Street – provide kerb extensions at Dowling Street and Bourke Street and two mid block raised platform east and west of Forbes Street. Provide Stop sign on Nicholson Street at Dowling Street.**

Reason

Nicholson Street is used as a short-cut between Dowling Street and Bourke Street. The 85$^{th}$ percentile vehicle speed is 45km/h which is higher than the 40km/h limit. Pedestrians cross along the full length of Nicholson Street. The proposed measures will reduce the attractiveness of Nicholson Street as a short-cut and reduce vehicle speeds, while assisting pedestrians who cross Nicholson Street at the intersections and near Forbes Street.

**N22. Sydney Place between Dowling Street and McElhone Street – consider re-opening street to traffic with shared zone traffic management.**

Reason

Sydney Place was opened to provide vehicle access following the rock slide that closed McElhone Street. Its reopening to traffic introduces traffic circulation to 2 dead-end sections of road in Dowling Street and McElhone Street. The shared zone treatment would ensure that the impacts of the re-opening would be minimised.

**N23. Cathedral Street at Palmer Street – request RTA to remove No Right Turn from Cathedral Street into Palmer Street for the eastbound to southbound turn and No Left Turn for vehicles over 6 metres for the eastbound to northbound turn.**

Reason

The "No Left Turn for Vehicles Over 6 metres' should have been removed when the intersection of Palmer Street north of Cathedral Street was made one way north (i.e. no longer required).

The removal of the No Right Turn sign would allow vehicles to turn right from Cathedral Street to Palmer Street to travel towards William Street. This will improve local access and reduce reliance on Bourke Street. These measures would require the approval of the RTA and may be affected by the Cross City Tunnel Deed Agreement.

**N24. Bourke Street between William Lane and William Street – request RTA to provide for 2 lanes left turn out of Bourke Street at William Street.**

Reason

There is sufficient room for a 2 lane left turn from the northern approach of Bourke Street without affecting the current approved RTA scheme. The proposed measure would assist local access without impacting on parking (No Stopping restrictions already exist in this section of Bourke Street).

This measure would require the approval of the RTA and may be affected by the Cross City Tunnel Deed Agreement.

**N25. Victoria Street, north of Hughes Street – provide line marking to improve delineation of parking and vehicle travel paths.**

Reason

The line marking will provide delineation of the parking and the travel paths and reduce potential vehicle conflict where the travel paths change for two way traffic.

**N26. City to investigate all lanes in Woolloomooloo, Kings Cross and Elizabeth Bay area for shared zone treatment.**

Reason

This is a current policy of the City to convert suitable narrow lanes to shared zones (providing that they meet the relevant guidelines) to reduce vehicle speeds in the lanes and to improve conditions for other road users.

### 6.2.2 South of William Street

Proposed improvement works south of William Street include the following measures:

**S7. Bourke Street / Liverpool Street – provide traffic signals with pedestrian crossings across all legs of the intersection.**

Reason

The provision of traffic signals would be the best facility to cater for the existing traffic and pedestrian volumes at the intersection and future bicycle facilities, as well as the current accident problem (25 accidents including 12 injury accidents, 22 right angle accidents and 3 pedestrian accidents).

**S8. Liverpool Street / Forbes Street:**

**(a) Provide roundabout control at intersection;**

**(b) Provide pedestrian crossing with appropriate safety facilities across eastern leg of Liverpool Street.**

Reason

There are restricted sight lines for traffic exiting Forbes Street and some delays during the peak hours. The provision of a roundabout would share vehicle priority at the intersection and assist Forbes Street traffic as well as reduce vehicle speeds in Liverpool Street.

There are sufficient pedestrian crossing movements on the eastern side of Liverpool Street to justify the provision of a pedestrian crossing.

**S9. Provide pedestrian crossings on western side of Burton Street at Victoria Street (traffic signals).**

Reason

The additional pedestrian crossing at this intersection provides another safe crossing in Burton Street and caters for the pedestrians who cross at this point. The provision of this facility would require approval by the RTA.

**S10. Burton Street at Forbes Street – provide additional facilities including a raised platform at the existing pedestrian crossing across Burton Street.**

Reason

The raised platform will reduce vehicle speeds in Burton Street at the crossing and improve pedestrian safety at the crossing. The raised platform will also assist in maintaining vehicle speeds to the proposed 40km/h speed limit. **NB**. The design is to accommodate the future separated cycleway.

**S11. Burton Street at Bourke Street – provide pedestrian crossing across western side of Burton Street, together with kerb extensions in Burton Street.**

Reason

The proposed pedestrian crossing will cater for the existing pedestrian crossing movements (up to 60 pedestrians per hour in the peak hours). The kerb extensions will improve the sight lines of the pedestrian crossing. **NB.** The design is to accommodate the future separated cycleway.

**S12. Burton Street at Palmer Street**

**(a) Provide kerb extensions in Burton Street and Palmer Street at intersections and extend improvement works to Langley Street (NB. existing islands in Palmer Street to be replaced.).**

**(b) Replace existing raised threshold in Palmer Street, north of Burton Street as part of the improvement works.**

Reason

The kerb blisters will assist pedestrian crossing movements at the intersection and improve driver sight lines of pedestrians.

Incorporating and replacing the existing raised threshold in Palmer Street will integrate the treatment. **NB.** The design is to accommodate the future separated cycleway in Burton Street.

**S13. Liverpool Street at Yurong Street – relocate existing No Entry sign on south side (blocked by tree).**

Reason

Driver visibility of the sign is obscured by this tree, which will increase as the tree grows.

**S14. College Street at Stanley Street – Provide Keep Clear line marking in College Street.**

Reason

The markings are to keep the intersection clear and maintain sight lines of approaching traffic for northbound vehicles wishing to turn right into Stanley Street from College Street. The markings are proposed to reduce the potential of accidents occurring at the intersection.

**S15. Introduction of a 40km/h speed limit in all city streets excluding RTA roads, William Street, Oxford Street and College Street.**

Reason

Parts of East Sydney and Darlinghurst already have a 40km/h speed limit. The introduction of the 40km/h speed limit to the remaining sections of the City East area

will improve road safety for all road users especially pedestrians and cyclists and provide consistency of the speed limits in the area for local city streets.

**S16. Little Burton Street between Burton Street and Kings Lane – provide shared zone treatment.**

Reason

Little Burton Street is a narrow lane with no footpaths. Traffic volumes are low at less than 5 vph in peak hours and it is suitable for the introduction of shared zone facilities.

**S17. City to investigate all lanes in East Sydney and Darlinghurst for shared zone treatment.**

Reason

This is a current policy of the City to convert suitable narrow lanes to shared zones (providing that they meet relevant guidelines) to reduce vehicle speeds in the lanes and improve conditions for other road users.

**S18. Yurong Lane at Yurong Street – City to finalise existing road closure in permanent materials.**

Reason

Existing road closure uses Type F (new jersey) kerb which is temporary and works need to be finalised.

**S19. Burton Street, between Crown and Palmer Streets – City to investigate shared zone adjacent to the Tabernacle.**

Reason

Requires future investigation by the City in conjunction with separated cycleway.

**S20. Neild Avenue and Boundary Street – City to convert two way traffic treatment with Woollahra Council.**

Reason

Two way traffic is feasible and would reduce vehicle speeds in Neild Avenue and improve local access.

**S21. Palmer Street – Provide road closure at Stanley Street (southern side of intersection).**

Reason

This section of Palmer Street provides local access and alternative routes are available. Subject to majority agreement by residents / other uses in street, it could be closed to through traffic.

**S22. Liverpool Street at Oxford Street**

Consider Options as follows:

- Option 1 – Do nothing.
- Option 2 – Liverpool Street closed at Hargrave Street and other changes.
- Option 3 – Liverpool Street one way west at Oxford Street and other changes.
- Option 4 – Liverpool Street closed at Oxford Street and other changes.

Reason

Requires consideration by the City as to which option should be adopted.

## 6.3 Community Comments on Draft Improvement Scheme

The draft improvement scheme was presented at the 2nd Community meeting on Thursday 13 December 2008. There were 22 people in attendance.

Following the presentation, the participants workshopped the draft scheme in smaller groups. Due to the number of recommendations the groups were divided into areas north and south of William Street with participants free to choose which area they wished to comment on. To ensure that accurate views were recorded for each particular proposed measure, participants could choose:

- Support;
- Not Support; or
- No View.

Table 6.1 summarises the participants' response to the proposed measures. The majority of people who attended the meeting were interested in the area north of William Street, which is reflected in the participants' responses.

Following the public display of the draft scheme, there were 12 submissions received. These submissions included:

- Eight (8) submissions, which commented on the scheme or elements of it. Five (5) of these submissions supported the draft scheme or elements of it, some with qualifications and some raising other matters;

- Two (2) submissions that raised issues, which have been addressed in the draft scheme (i.e. improvement measures are proposed which will address the issue);

- One (1) submission that wanted a matter re-investigated; and

- One (1) submission that raised a new issue.

Two of the submissions were critical that the measures proposed in Easy Sydney did not adopt / incorporate a number of the elements of the Community Group's Strategic Plan, although qualified support was given to a number of the measures proposed in East Sydney in one of these submissions.
Where a submission either supported or objected to a proposed measure in the Draft Improvement Scheme, this has been incorporated into Table 6.1.

Those proposed measures where the majority community view did not support a particular measure are shown in Table 6.1 and includes:

- N2(a) the angle parking scheme in Roslyn Garden. In this case the community preferred the proposed bicycle route N2(b).

- N10 (a) and (b) which is kerb extensions in future footpath widening in Macleay Street between McDonald Street and Orwell Street, as part of the bicycle route. There was a mixed response on this proposal.

- N7(b) which is the traffic signals in Macleay Street at Rockwall Crescent. In this case the community preferred N7(a) which is the raised crossing and kerb extensions in Rockwall Crescent and the raised marked foot crossing in Macleay Street in lieu of the traffic signals.

- S21 – proposed road closure in Palmer Street at Stanley Street where the majority view did not support the road closure.

- S22 – Liverpool options at Oxford Street where the majority view was do nothing, although there was support for Option 4 in the written submissions.

All of the matters raised in written submissions have been detailed, investigated and commented upon in **Appendix 2**.

## TABLE 6.1

## RESPONSE TO DRAFT SCHEME AT 2ND COMMUNITY WORKSHOP AND IN WRITTEN SUBMISSIONS

### North of William Street

| Proposal | Workshop | | | Written Submissions | | Total | |
|---|---|---|---|---|---|---|---|
| | Support | Not Support | No View | Support | Not Support | Support | Not Support |
| N1 | 8 | 5 | 2 | 1 | 1 | 9 | 6 |
| N2(a) either | 2 | 10 | 3 | - | 1 | 2 | 11 |
| N2(b) or | 10 | 3 | 2 | 1 | - | 11 | 3 |
| N3 * | 4 | - | 10 | 1 | - | 5 | - |
| N4 * | 4 | - | 10 | 1 | - | 5 | - |
| S2(c) | 12 | 1 | 1 | 1 | - | 13 | - |
| N5 | 11 | 2 | - | 4 | - | 15 | 1 |
| N6 | 12 | 1 | - | 1 | - | 13 | 1 |
| N7(a) either | 9 | 4 | - | 1 | - | 10 | 4 |
| N7(b) or | 3 | 10 | - | 1 | - | 4 | 10 |
| N8 | 11 | 1 | 1 | 1 | - | 12 | 1 |
| N9 | 9 | 4 | - | - | - | 9 | 4 |
| N10(a) | 3 | 8 | 2 | 1 | - | 4 | 8 |
| N10(b) | 5 | 7 | 1 | 1 | - | 6 | 7 |
| N11(a) | 10 | 2 | 1 | 1 | - | 13 | 2 |
| N11(b) | 9 | 2 | 2 | 1 | - | 10 | 2 |
| N12 | 13 | - | - | 1 | - | 14 | - |
| N13 | 13 | - | - | 1 | - | 14 | - |
| N14 | 12 | - | 1 | 1 | - | 13 | - |
| N15 | 11 | 1 | 1 | 1 | - | 12 | 1 |
| N16 | 11 | 2 | - | 1 | - | 12 | 2 |
| N17 | 12 | - | 1 | 1 | - | 13 | - |
| N18 | 13 | - | - | 1 | - | 14 | - |
| N19 | 12 | 1 | - | 1 | - | 13 | 1 |
| N20 | 12 | - | 1 | 1 | - | 13 | - |
| N21 | 8 | 2 | 3 | 1 | - | 9 | 2 |
| N22 | 8 | 4 | 1 | 1 | - | 9 | 4 |
| N23 | 10 | - | 3 | 1 | - | 11 | - |
| N24 | 13 | - | - | 1 | - | 14 | - |
| N25 | 12 | - | 1 | 1 | - | 13 | - |
| N26 | 12 | - | 1 | 1 | - | 13 | - |

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**TABLE 6.1 (con't)**

**RESPONSE TO DRAFT SCHEME AT 2ND COMMUNITY WORKSHOP AND IN WRITTEN SUBMISSIONS**

**South Of William Street**

| | Workshop | | | Written Submissions | | Total | |
|---|---|---|---|---|---|---|---|
| **Proposal** | **Support** | **Not Support** | **No View** | **Support** | **Not Support** | **Support** | **Not Support** |
| S1 * | 5 | - | 1 | 1 | - | 6 | - |
| S2(a) * | **5** | - | 1 | 1 | - | 6 | - |
| S2(b) | 5 | - | 1 | 1 | - | 6 | - |
| S3 | 5 | - | 1 | 1 | - | 6 | - |
| S4 * | 4 | - | 1 | 1 | - | 5 | - |
| S5 * | 4 | - | 1 | 1 | - | 5 | - |
| S6 | 4 | - | 1 | 2 | - | 6 | - |
| S7 | 3 | 1 | 1 | 1 | 2 | 4 | 3 |
| S8(a) | 5 | - | 1 | 2 | - | 7 | - |
| S8(b) | 5 | - | 1 | 2 | - | 7 | - |
| S9 | 5 | - | 1 | 1 | - | 6 | - |
| S10 | 5 | - | 1 | 2 | - | 7 | - |
| S11 | 4 | 1 | 1 | 1 | - | 5 | 1 |
| S12(a) | 5 | - | 1 | 2 | - | 7 | - |
| S12(b) | 5 | - | 1 | 2 | - | 7 | - |
| S13 | 5 | - | 1 | 2 | - | 7 | - |
| S14 | 5 | - | 1 | 2 | - | 7 | - |
| S15 | 5 | - | 1 | 4 | - | 9 | - |
| S16 | 5 | - | 1 | 2 | - | 7 | - |
| S17 | 5 | - | 1 | 2 | - | 7 | |
| S18 | 5 | - | 1 | 2 | - | 7 | - |
| S19 | 5 | - | 1 | 2 | - | 7 | - |
| S20 | 5 | - | 1 | 2 | - | 7 | - |
| S21 | 1 | 5 | 1 | 2 | - | 3 | 5 |
| S22 Liverpool St Options | | | | | | | |
| 1 (Do nothing) | 6 | | | - | - | 6 | - |
| 2 (Closure at Hargrave St | | 6 | | - | - | - | 6 |
| 3 (One way west) | | 6 | | - | - | - | 6 |
| 4 (Closure at Oxford St | | 6 | | 4 | - | 4 | 6 |

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# 7.0 RECOMMENDED SCHEME

## 7.1 Additional City Initiatives

The City has identified the following changes or initiatives that are to be included in the recommended scheme. These are:

- Traffic signals at the intersection of Bourke Street / Cowper Wharf Road, Woolloomooloo, which are required as part of the cycleway strategy and to improve pedestrian amenity (access and safety).

- Nicholson Street at Forbes Street – provide a raised threshold or kerb extensions to improve pedestrian access and amenity. This would need to be incorporated with improvement proposal N21.

- Foley Street Darlinghurst – investigate and provide a shared zone in Foley Street along its full length.

- In addition, the City is examining options for a separated cycleway in Cowper Wharf Road at Woolloomooloo, which may vary the concept plan which is shown on **Figure 15** (N1).

- Provide two way bicycle access in Brougham Lane and Brougham Street south of Brougham Lane between Victoria Street and William Street as part of City Cycle Strategy.

- Investigate a separated cycleway in Victoria Street between Oxford Street and William Street.

- Provide kerb extensions in Orwell Street on north side 29.5 metres from Macleay Street boundary to provide sufficient room for accessibility and footway dining.

- Provide kerb extensions in Hughes Street on north side for 29.5 metres from Macleay Street boundary to provide sufficient room for accessibility and footway dining.

- Provide kerb extensions in Challis Avenue on south side for 30 metres from Macleay Street boundary to provide sufficient room for accessibility and footway dining.

- Provide kerb extensions in Victoria Street on west side outside No. 165-167 for a distance of 12 metres to provide sufficient room for accessibility and footway dining.

In addition, the City has undertaken Safer Routes to School Audits for schools in the area. The findings of these audits are contained in **Appendix 3** and should be implemented.

## 7.2 Changes due to Community Consultation

Based on the second round of community consultation, the following amendments are recommended to the draft scheme.

- Adopt the proposed bicycle route option for Roslyn Gardens in lieu of the angle parking scheme (N2).

- Adopt the kerb extensions and pedestrian crossing in Rockwall Crescent and the raised pedestrian crossing in Macleay Street (N7a). However, it would be prudent to ensure the design changes are compatible to future signalisation of the intersection to ensure that if traffic signal control is required at a future date, that civil changes are minimised.

- Review the need for kerb extensions and footpath widening in Macleay Street between McDonald Street and Orwell Street when the bicycle lanes are investigated and undertake further community consultation at this time (N10a and b). The reason for this is that kerb extensions will assist in improving overall pedestrian safety in Macleay Street and assist in keeping vehicle speeds to the proposed lower 40 km/h speed limit.

It is considered that the City should investigate the closure of Palmer Street at Stanley Street (S21) and seek further community input at that time. This closure would have relatively limited impacts and additional community consultation would assist in determining if it should proceed.

The closure options for Liverpool Street (S22) have not been retained in the scheme, as there is no option that has any clear benefits over the existing situation. All the closure options have impacts within the area between Oxford Street, College Street, William Street and Victoria Street (see Section 5.5). There was no clear community support for any change from the existing situation. It is recommended that the current arrangements be maintained and that Liverpool Street at Oxford Street remain open at this time.

## 7.3 Recommended Scheme of Improvements, Costings and Priorities

The recommended improvement scheme is shown on **Figures 18A, 18B, 18C and 18D**.

Those measures that incorporate raised platforms on bus routes would need to be designed with a (low) profile to suit bus operations.

Table 7.1 details the elements of the scheme and indicative cost estimates for the construction / implementation of the recommended elements. No cost estimates have been provided for those measures that are already approved, not defined in terms of design, or that will be investigated and constructed by City Projects. Cost estimates are indicative construction costs and assume standard treatments with minimal changes to drainage and public utilities and no allowance for design and construction overheads and or contingencies. Cost estimates for traffic signal works have included allowances for RTA fees and design and project management.

Table 7.1 also shows the priorities for implementation based on a 2 level timeframe:

- Priority 1 - within 2 years
- Priority 2 - within 2-5 years

Priority 2 represents those projects that would require a longer timeframe to design and implement.

## TABLE 7.1

## COST ESTIMATES AND PRIORITIES FOR THE RECOMMENDED WORKS

### North of William Street

| Item | Proposed Works | Estimated Construction Cost | Priority |
|---|---|---|---|
| N1 | Cowper Wharf Road between Bourke Street and Brougham Street. | N/A City Projects | 2 |
| N2 | Roslyn Gardens – Proposed Bicycle Route with traffic calming devices. | N/A to be determined | 2 |
| N3 | Roslyn Street at Roslyn Gardens and near Pedestrian Overbridge at Kings Cross Road – pedestrian improvements. | N/A completed | - |
| N4 | Earl Street / Earl Place / Springfield Street – Shared Zone (full length). | N/A existing proposal | 1 |
| S2c Also see S2b | Bourke Street – provide a separated cycleway. | N/A City Projects | 1 |
| N5 | Request the RTA to authorise the introduction of 40km/h speed limit in city streets excluding RTA roads, William Street, Oxford Street and College Street. | $25,000 | 2 |
| N6 | Wilde Street near Grantham Street – provide raised platform at existing pedestrian crossing and consider kerb extensions subject to final design of bike lane. | $35,000 | 2 |
| N7 | Macleay Street at Rockwall Crescent – provide kerb extensions and pedestrian crossing in Rockwall Crescent and raised pedestrian crossing in Macleay Street . | $40,000 | 2 |
| N8 | Provide pedestrian crossings and kerb extensions where appropriate in Manning Street and Hughes Street at Macleay Street. | $40,000 | 2 |
| N9 | Macleay Street at Orwell Street – provide raised pedestrian crossing across Macleay Street on the southern side (consider kerb extensions) and pedestrian crossing across Orwell Street. | $50,000 | 2 |
| N10 (a+b) | Review the need for kerb extension in Macleay Street at intersecting streets between McDonald Street and Orwell Street subject to final design of bike lanes in Macleay Street. Consider additional footpath widening as appropriate in Macleay Street subject to final design of bike lane requirements and additional community consultation. | N/A City Projects | 2 |
| N11<br><br>(a)<br><br>(b) | Provide additional pedestrian crossings at the following traffic signal controlled intersections:<br>Macleay Street and Challis Avenue (south side of Macleay Street).<br>Macleay Street and Greenknowe Avenue (western side of Greenknowe Avenue). | <br><br>$50,000<br>$50,000 | <br><br>2 |
| N12 | Improve signage and check lighting for existing pedestrian crossings in Elizabeth Bay Road at Greenknowe Street (2 crossings). | $20,000 | 1 |
| N13 | Bayswater Road near Roslyn Street – improve signage of the existing pedestrian crossing near pedestrian overbridge. | $2,000 | 1 |
| N14 | Elizabeth Bay Road / Roslyn Gardens / Ithaca Street – provide pedestrian crossing across Roslyn Gardens and Elizabeth Bay Road (west side) with appropriate safety measures. | $20,000 | 1 |

## TABLE 7.1 (Con't)

| Item | Proposed Works | Estimated Construction Cost | Priority |
|---|---|---|---|
| N15 | Provide additional facilities including raised platform at existing pedestrian crossing in Ward Avenue near Baroda Street. | $17,000 | 1 |
| N16 | Provide additional facilities including raised platform and consider kerb extensions at existing pedestrian crossing in Ward Avenue at Roslyn Street. | $35,000 | 1 |
| N17 | Forbes Street at William Street – provide pedestrian crossing across Forbes Street and improve NRT signage to and from Forbes Street. | $15,000 | 1 |
| N18 | Dowling Street, McElhone Street, Brougham Street at William Street – provide pedestrian crossing across streets at William Street. | $12,000 | 1 |
| N19 | Brougham Lane, between McElhone Street and Victoria Street – provide shared zone treatment. | $20,000 | 2 |
| N20 | Victoria Street near Kings Cross Station entrance – provide raised pedestrian crossing and kerb extensions at Earl Street. | $35,000 | 2 |
| N21 | Nicholson Street – provide kerb extensions at Dowling Street and Bourke Street and two mid-block raised platform east and west of Forbes Street. Provide Stop Sign on Nicholson Street at Dowling Street. Provide kerb extensions and / or other pedestrian improvements for pedestrians at Forbes Street. | $75,000 | 2 |
| N22 | Sydney Place between Dowling Street and McElhone Street – consider re-opening street to traffic with shared zone traffic management. | $20,000 - $50,000 | 2 |
| N23 | Cathedral Street at Palmer Street – request RTA to remove No Right Turn from Cathedral Street into Palmer Street for eastbound to southbound turn and No Left Turn for vehicles over 6 metres for eastbound to northbound turn. | $10,000 | 1 |
| N24 | Bourke Street between William Lane and William Street – request RTA to provide for 2 lane left turn out of Bourke Street at William Street. | $35,000 | 2 |
| N25 | Victoria Street, north of Hughes Street – provide line marking to improve delineation of parking and vehicle travel paths. | $12,000 | 1 |
| N26 | City to investigate all lanes in Woolloomooloo, Kings Cross and Elizabeth Bay area for shared zone treatment. | N/A | 2 |
| N27 | Brougham Lane (Victoria Street to Brougham Street) and Brougham Street (William Street to Brougham Lane) – provide two way bicycle access. | $10,000 | 2 |
| N28 | Cowper Wharf Road / Bourke Street – provide traffic signals with crossings on all legs of the intersection. | $300,000 | 2 |
| N29 | Provide kerb extensions at:<br>a) north side of Orwell Street at Macleay Street for 29.5 metres.<br>b) north side of Hughes Street at Macleay Street for 29.5 metres.<br>c) south side of Challis Avenue at Macleay Street for 30 metres.<br>d) west side of Victoria Street outside No. 165-167 for 12 metres. | N/A City Projects | 2 |
| N30 | Implement findings of School Safety Audits. | N/A | 1 |

## TABLE 7.1 (Con't)

### South of William Street

| Item | Proposed Works | Estimated Construction Cost | Priority |
|---|---|---|---|
| S1 | Stanley Street between Yurong Street and Bourke Street - Footpath Improvements. | N/A City Projects | - |
| S2a | Bourke Street between Stanley Street and Corfu Street – Channelisation, separated cycleway, raised pedestrian crossing at Stanley Street. | N/A existing proposal | - |
| S2b Also see S2c | Bourke Street between Cowper Wharf Road and Oxford Street – Provide separated cycle way. | N/A City Projects | 1 |
| S3 | Craigend Street and Ward Avenue – Channelisation of Intersection. | $100,000 | 2 |
| S4 | Victoria Street at Surrey Street – Kerb Extensions and pedestrian crossing across Victoria Street. | N/A existing proposal | - |
| S5 | Darlinghurst Road and Oxford Street – Intersection Narrowing in Darlinghurst Road. | N/A City Projects | - |
| S6 | Burton Street Entire Length – provide a Separated Cycleway. | N/A City Projects | 2 |
| S7 | Bourke Street / Liverpool Street – provide traffic signals with pedestrian crossings across all legs of the intersection. | $300,000 | 2 |
| S8 | Liverpool Street / Forbes Street – provide roundabout control at intersection and provide pedestrian crossing with appropriate safety facilities across eastern leg of Liverpool Street. | $200,000 | 2 |
| S9 | Provide pedestrian crossing on western side of Burton Street at Victoria Street (traffic signals). | $50,000 | 2 |
| S10 | Burton Street at Forbes Street – provide additional facilities including a raised platform at the existing pedestrian crossing across Burton Street. | $15,000 | 2 |
| S11 | Burton Street at Bourke Street – provide pedestrian crossing across western side of Burton Street, together with kerb extensions in Burton Street. | $25,000 | 2 |
| S12a | Burton Street at Palmer Street – provide kerb extensions in Burton Street and Palmer Street at intersections and extend improvement works to Langley Street (NB: existing islands in Palmer Street to be replaced). | $60,000 | 2 |
| S12b | Burton Street at Palmer Street – replace existing raised threshold in Palmer Street, north of Burton Street as part of the improvement works. | $15,000 | 2 |
| S13 | Liverpool Street at Yurong Street – relocate existing No Entry sign on south side (blocked by tree). | $1,000 | 1 |
| S14 | College Street at Stanley Street – provide Keep Clear line marking in College Street. | $5,000 | 1 |
| S15 | Introduction of a 40km/h speed limit in all city streets excluding RTA roads, William Street, Oxford Street and College Street. | $25,000 | 2 |
| S16 | Little Burton Street between Burton Street and Kings Lane – provide shared zone treatment. | $15,000 | 1 |
| S17 | City to investigate all lanes in East Sydney and Darlinghurst for shared zone treatment. | N/A | 2 |
| S18 | Yurong Lane at Yurong Street – City to finalise existing road closure in permanent materials. | N/A City Projects | 1 |

**TABLE 7.1 (Con't)**

| Item | Proposed Works | Estimated Construction Cost | Priority |
|---|---|---|---|
| S19 | Burton Street, between Crown and Palmer Streets – City to investigate shared zone adjacent to the Tabernacle | N/A | 1 |
| S20 | Neild Avenue and Boundary Street – City to convert to two way traffic treatment with Woollahra Council. | N/A | 1 |
| S21 | City to investigate road closure of Palmer Street (southern side) at Stanley Street and undertake further community consultation. | N/A | 2 |
| S22 | City to investigate a separated cycleway in Victoria Street | N/A | 1 |
| S23 | Foley Street – full length. City to investigate and provide shared zone. | N/A | 1 |
| S24 | Implement findings of School Safety Audits. | N/A | 1 |

## 7.4 Locations for Monitoring and / or Further Investigation

Those locations that are recommended for future monitoring and / or further investigation of traffic matters by the City are as follows:

(i) The location of and length of the taxi rank in Bayswater Road near Darlinghurst Road which restricts and blocks the second lane of traffic.

(ii) Monitoring the vehicle speeds in Crown Street between Oxford Street and William Street and consideration of future measures if required.

(iii) Review the need to relax No Right Turn from Burton Street into Forbes Street in detail design of separated cycleway in Burton Street and following reduction of speed limit to 40km/h.

(iv) Monitor vehicle speeds in Dowling Street near Stephen Street following the re-opening of Sydney Place.

(v) Review need for a raised pedestrian crossing in Greenknowe Avenue between Macleay Street and Onslow Avenue near CWA (NB: Investigated as part of this study but warrant for pedestrian crossing not met).

(vi) Review traffic conditions in Oxford Street between South Dowling Street and Darlinghurst Road following City's Projects changes at the Darlinghurst Road / Oxford Street intersection. Review to be conducted with RTA.

(vii) City's Road Safety Office to visit Rockwall Crescent at St. Vincent's College and check if dead-end section (No Stopping) is used for school set downs and pick ups with appropriate follow up action.

(viii) Monitor pedestrian conditions in Victoria Street south of Hughes Street to determine if future footpath widening is required due to pedestrian crowding.

(ix) Monitor vehicle speeds in Reid Avenue and McElhone Street following re-opening of street.

(x) Consider provision of median in Cowper Wharf Road adjacent the Blue Hotel to prevent illegal U turns as part of the City's Improvement Proposal for Cowper Wharf Road (N1).

(xi) Monitor Francis Street / Yurong Street for vehicles travelling wrong way towards College Street against one way movement (also enforcement matter).

(xii) Investigate shared zone treatment in Baroda Lane to calm traffic.

(xiii) Investigate need for a load limit on Burton Street and other streets in East Sydney.

(xiv) Investigate need for speed controls in Dowling Street between Cowper Wharf Road and Nicholson Street.

(xv) Monitor future conditions of pedestrian crossing across Victoria Street at Darlinghurst Road.

(xvi) Darlinghurst Road (main strip) – monitor need for behavioural campaign to reduce incidence of impaired pedestrians walking onto road (needs to be undertaken with RTA and other NSW Government departments).

## 7.5 Other City of Sydney Matters Raised in Community Consultation Outside the Scope of the Study

These matters included a range of issues including parking maintenance and other issues. These issues will be examined and addressed by the relevant units of the City. These issues are listed below.

### 7.5.1 Parking

Parking matters include:

(i) Bourke Street /Nicholson Street – rental cars parking in area.

(ii) Brougham Street (near Butlers Stairs) – 24 hour resident parking requested as backpackers are parking in street and possibly living in cars (also enforcement matter).

(iii) Darlinghurst Road between Kings Cross Road and Macleay Street – reduce parking and provide more No Stopping areas.

(iv) Macleay Street – parking improvements for Area 26.

(v) Macleay Street near Challis Avenue – objection to the recently installed No Stopping restrictions.

(vi) The Esplanade (dead end section) off Ithaca Road – Visitor car parking required in narrow Esplanade once new development is completed.

(vii) Victoria Street and side streets – need for time restrictions to midnight and restriction on parking to 7am.

(viii) Victoria Street south of Craigend Street – need for a loading zone to reduce double parking in front of cafes.

(ix) East Sydney Area – investigate parking in East Sydney (Parking Study).

(x) Parking restrictions in Barncleuth Square and Amos Lane are ignored which restricts access (enforcement matter).

### 7.5.2 Maintenance

Maintenance matters include:

(i) Kings Cross Road / Bayswater Road – flooding issue.

(ii) Cowper Wharf Road at Brougham Street – bus stop does not have shelter.

(iii) Darlinghurst Road near Tewkesbury Avenue – pit lid too low.

(iv) Llankelly Place – reactivate (reinstall lanterns).

(v) Macleay Street at McDonald Street – bus stop furniture obstructs passengers exit from bus (lamp post and signage).

(vi) Macleay Street between Challis Street and McDonald Street – bus shelter removed during building construction.

(vii) Palmer Street – lack of gutter cleaning.

(viii) Victoria Street at Burton Street – redundant bus stop.

(ix) Macleay Street footpaths – request that footpaths be upgraded.

(x) College / William Street intersection and College / Oxford Street – request for bollards to be provided on corners to protect pedestrians from turning traffic.

(xi) Provide footpath on one side of Brougham Street. Details not specified.

(xii) West side of Ithaca Street approaching Elizabeth Bay Road – provide railing for frail pedestrians.

## 7.6 Matters Raised in Community Consultation that are the Responsibility of Another Agency

There were a number of matters raised that are the responsibility of other government agencies such as the Roads & Traffic Authority, Sydney Buses, Railcorp and CityRail, NSW Police Force and Sydney Ferries. In addition, the traffic study identified a technical matter that should be forwarded to the RTA for investigation and follow up. The matters are listed below.

The City should determine which of these issues should be forwarded to the Authorities.

### 7.6.1 Roads & Traffic Authority (RTA)

The traffic study identified a number of matters on State Roads that require investigation by the RTA. These include:

Technical Matters

(i) Crown Street / William Street intersection.

Review traffic signal operation for remedial measures to reduce the number of accidents that occur at the intersection. Also see Item (xii) in Other Community Issues.

Community Issues that Align with Council Policies

(i) Request for additional pedestrian crossings at Bayswater Road / Neild Avenue to access Rushcutters Bay Park.

(ii) Complaint regarding pedestrian times (too short) and delays to pedestrians at the following traffic signal controlled intersections:

- William Street / Forbes Street;
- William Street / Riley Street;
- William Street / Palmer Street – also short timing for left turn from Palmer Street to William Street;
- Darlinghurst Road / Bayswater Road;
- Oxford Street / Palmer Street.

(iii) Traffic signal timing and delays at the intersection of Sir John Young Crescent and Palmer Street.

(iv) Intersection of Cowper Wharf Road / Sir John Young Crescent / Cahill Expressway On and Off Ramps:

- Delays and timing for right turn to travel north on Cahill On Ramp; and
- Lane discipline / confusion in Cowper Wharf Road and need for improved / additional directional signage and / or road markings.

(v) Traffic signal timings and delays at the intersection of Craigend Street / Victoria Street / Darlinghurst Road.

(vi) Intersection of Cowper Wharf Road / Wylde Street:

- Traffic signal timings and delays;
- Need for improved advance warning of traffic signals ahead in Wylde Street, due to restricted sight distance on Wylde Street approach.

Other Community Issues

(i) Possible relocation of bus stop location in Bayswater Road, east of Waratah Street - perception of congestion and safety (**NB**. Initial review indicates that there are limited opportunities to relocate bus stop).

(ii) Consider left turn on red (LTOR) in Cathedral Street at Bourke Street.

(iii) Consider removal of NRT from Crown Street to Oxford Street (**NB**. City does not support this suggestion).

(iv) Consider removal of NRT at intersection of Darlinghurst Road and Burton Street (NB: City notes that current traffic signal phasing sequence requires No Right Turn for safety reasons).

(v) Eastern Distributor at Bourke Street Ramp – Congestion in Eastern Distributor due to Bourke Street ramp merge.

(vi) Traffic signal controlled intersection of Macleay Street / Greenknowe Avenue / Hughes Street – potential safety and congestion issues associated with movements from Greenknowe Avenue into Hughes Street (i.e. left and right turn) and suggestion of reversing one way traffic flow in Hughes Street (**NB**. City does not support the reversing of the one way movement in Hughes Street).

(vii) Craigend Street / McLachlan Avenue – consider reinstatement of slip lane into Craigend Street (**NB**. City does not support this suggestion).

(viii) Craigend Street south side between Neild Avenue and McLachlan Avenue – consider the reinstatement of the bus bay.

(ix) Craigend Street / New South Head Road – consider noise reduction measures as a result of traffic increases due to Cross City Tunnel.

(x) New South Head Road / Neild Avenue – consider improvements for right turn into Neild Avenue

(xi) Oxford Street north side near St. Vincent's Hospital – consider relocating bus stop closer to St. Vincent's Hospital.

(xii) Traffic signal timing and delays for Crown Street traffic including right turn traffic in Crown Street at William Street.

(xiii) Victoria Street / Burton Street intersection – complaint that the existing line marking in Victoria Street is confusing.

(xiv) Traffic signals generally:

- Suggestion of longer all red times;
- Comment that pedestrian lanterns at signalised sites are often blocked by high trucks / vehicles (i.e. height of lantern).

(xv) Consider need to extend concrete median in William Street at McElhone Street to prevent vehicles turning left from McElhone Street over painted median to access Kings Cross Tunnel.

### 7.6.2 Sydney Buses

Community issues raised for Sydney Buses include:

(i) Suggestion to provide direct bus access up Craigend Street to City and reverse movement from City via Kings Cross Road.

(ii) Suggestion that the 311 route relocate from Crown Street due to congestion.

(iii) Servicing frequency of 311 route and concern that frequency will be reduced.

(iv) Suggestion that buses drive across the roundabout at Greenknowe Avenue / Elizabeth Bay Road, which causes passengers discomfort.

### 7.6.3 Railcorp / City Rail

Community issues raised include:

(i) Suggestion of a bicycle path in the corridor of Eastern Suburbs Railway (**NB**. this would be difficult to achieve in viaduct sections and would need to be part of City's Cycle Strategy).

(ii) Suggestion of noise measures for Eastern Suburbs Railway near McLachlan Avenue.

(iii) Suggestion of better signage and information required for night ride bus service.

### 7.6.4 Enforcement (NSW Police Force)

Enforcement matters raised by the community include:

(i) One way in Brougham Street is ignored.

(ii) One way in Clapton Place is ignored by some residents.

(iii) Roslyn Gardens / Waratah Street – vehicles travelling the wrong way up Waratah Street and at the roundabout.

### 7.6.5 Sydney Ferries

Community issues raised include:

(i) The suggestion of a ferry service to operate from Woolloomooloo Finger Wharf.

# APPENDIX 1

# Issues Raised in Community Workshop and Written Submissions

# APPENDIX 1 CITY EAST – LATM
# MATTERS RAISED AT 1ST PUBLIC MEETING AND AT COMMUNITY FORUM

| | Location | Dislike / Comment | Transport & Urban Planning's Comments |
|---|---|---|---|
| 1 | Barncleuth Square & Amos Lane | Parking both sides restricts access. Sign is ignored | Enforcement Issue. |
| 2 | Bayswater Road (Kings Cross Road) / Waratah Street | - Dangerous intersection (lane divider and traffic speed, narrow kerbside lane for buses). Remove divider and add safety barrier<br>- Merging traffic creates dangerous situation | Difficult to change merge or remove median. Generally merge is an RTA matter. |
| 3 | Bayswater Road – taxi rank near Darlinghurst Road | Restricts queues<br>Blocks 2nd lane | Noted. City to investigate relocation or adjustment to taxi rank location. |
| 4 | Bayswater Road & Kings Cross Road | Illegal two way movement – make two way (preferable) or barrier to stop) | ? |
| 5 | Bayswater Road / Kings Cross Road | Flooding | Maintenance issue. |
| 6 | Bayswater Road east of Darlinghurst Road | Problems with traffic flow at night due to night clubs, etc. in area. Need better control at these times | Congestion does occur on Friday and Saturday evenings. |
| 7 | Bayswater Road, east of Waratah Street | Dangerous location of bus stop – causes congestion | STA and RTA matter. To be reviewed with these authorities, however difficult to find another location. |
| 8 | Best or Stephen Street, Woolloomooloo | Re-open one of these streets | Difficult to re-open Best Street as it connects to the dead end section of Dowling Street. Full opening of Stephen Street would require substantial re-design of streetscape in the street and possibly Forbes Street. |
| 9 | Bourke Street at Cowper Wharf Road | - Congestion and queuing<br>- New pedestrian crossing required | Delays considered satisfactory.<br>Pedestrian improvement proposed. |
| 10 | Area near Bourke Street ramp onto Eastern Distributor and William Street lane access | - Traffic problem<br>- Remove parking that blocks vehicle movement between 4pm and 7pm<br>- Congestion and queuing<br>- Opening number of lanes at a "choke point" | Eastern Distributor ramp is congested during peak times, which affects Bourke Street. Changes proposed in Bourke Street south of William Lane. |
| 11 | Bourke Street & Forbes Street | Opportunity to make one way and angle parking and landscaping | ? |

| | Location | Dislike / Comment | Transport & Urban Planning's Comments |
|---|---|---|---|
| 12 | Bourke Street & Liverpool Street | - Difficult intersection<br>- Sight distance problem. Difficult to cross<br>- Roundabout is requested. Difficult intersection.<br>- Needs treatment to reduce vehicle speeds and provide pedestrian access<br>- Traffic calming device needed<br>- Poor sight line / speed / no control | Traffic signal control recommended. |
| 13 | Bourke Street & Nicholson Street | Rental car parking | Parking issue to be investigated by City |
| 14 | Bourke Street & Oxford Street | Bourke Street closed at Taylor Square | Noted. Closure occurred several years ago |
| 15 | Bourke Street & William Street | Right turn from Bourke Street into William Street required | RTA matter. However, State Government has stated no change to William Street / Bourke Street |
| 16 | Bourke Street (northbound) from Cowper Wharf Road | Need for traffic calming | Speed control devices already provided in Bourke Street |
| 17 | Bourke Street and Burton Street | - Needs treatment to reduce vehicle speeds and provide pedestrian access<br>- Low visibility at intersection | - Pedestrian crossing provided across eastern and southern legs. pedestrian crossing to be considered across western leg of Burton Street<br>- Sight distance is considered satisfactory |
| 18 | Bourke Street and Crown Street | Revert to one way roads | Outside Study Brief |
| 19 | Bourke Street at SCEGGS College | Traffic congestion on Bourke Street headed south, adjacent to SCEGGS College | This is the school drop off and pick up locations. Problem does not appear to be significant |
| 20 | Bourke Street at William Street | - No bicycle facilities<br>- Re-open through access and remove all bollards (Eastern Distributor on ramp) to allow all two way access | - RTA scheme approved. No changes to allow northbound access, north of Eastern Distributor ramp<br>- RTA scheme will provide for bicycles. |
| 21 | Bourke Street, southern side at William Street | Support street closure of Bourke Street entering William Street | Approved RTA scheme is for left in/left out at Bourke Street |
| 22 | Bourke Street between Eastern Distributor & Cathedral Street | - Remove parking on east kerb<br>- Provide LHT lane into William Street | See Item 10. Changes proposed to improve left turn from Bourke Street |
| 23 | Brougham Lane | - Reduce speed limit & widen footpath<br>- Should be shared zone (10km/h)<br>- Lack of traffic calming | Shared zone proposed between McElhone Street and Victoria Street |

| | Location | Dislike / Comment | Transport & Urban Planning's Comments |
|---|---|---|---|
| 24 | Brougham Lane & McElhone Street | Poor visibility. Parking close to corner and child care facility | Brougham Lane proposed to be shared zone. McElhone Street has speed control devices |
| 25 | Brougham Street | Enforcement of one way traffic | Enforcement matter |
| 26 | Brougham Street (near Butlers stairs) | Resident parking needed 24/7<br>Backpacker parking / camping<br>Enforcement issue | Parking and enforcement issue |
| 27 | Burton Street & Sherbrooke Street | Poor visibility | Sight distance is considered satisfactory. |
| 28 | Burton Street / Forbes Street | Why is there no right turn from Burton Street into Forbes Street? | Sight distance in Burton Street is restricted due to uphill grade and crest. City could consider the option of removal of No Right Turn (full or part time) for trial period at a future time. |
| 29 | Burton Street at Victoria Street | Extra pedestrian crossing east side of Burton Street | Additional crossing at traffic signals to be considered by RTA. |
| 30 | Cathedral & Palmer Streets | - Pedestrian safety<br>- Too many lanes to cross | Traffic signal controlled intersection and therefore RTA matter. Crossing provided on all legs. It would be difficult to change current geometry at this intersection due to Eastern Distributor which is located beneath Palmer St |
| 31 | Cathedral Street & Bourke Street | Allow left hand turn sign on red light. Cathedral Street into Bourke Street. | Left Turn On Red is a matter for RTA. |
| 32 | Clapton Place | Residents go down wrong way | Enforcement matter, although difficult to prevent. |
| 33 | Bayswater Rd & Kellett Street | Taxi rank is in a bad spot – should leave in Darlinghurst Road | See comments for Item 3. |
| 34 | Craigend Street & Ward Avenue | - Need pedestrian crossing<br>- Diagonal desire line north west to south east<br>- Turning right from Ward Ave into Craigend Street<br>- Traffic and pedestrian improvements<br>- Difficulty turning from Ward Avenue to Craigend Street | - Channelisation proposed, which will assist pedestrians. Warrant for pedestrian crossing not met.<br>- Proposed channelisation will improve right turn from Ward Avenue |
| 35a | Crown St & William Street | Difficult to turn left from Crown St into William St because parking on William Street (to travel west) | Parking manoeuvres may temporarily block kerbside lane |
| 35b | Palmer & Williams Street | - Dangerous for pedestrians<br>- Traffic lights – Turning left from Eastern Distributor into William Street too quick | Traffic signals are matter for RTA |

| | Location | Dislike / Comment | Transport & Urban Planning's Comments |
|---|---|---|---|
| 36 | College Street at William Street and at Whitlam Square | Removal of slip lanes at intersections | This work was done as part of William Street upgrade works |
| 37 | Corfu Street | - Night time speeding<br>- Vehicles going wrong way and speeding | Shared zone proposed in Corfu Street and adjoining streets |
| 38 | Cowper Wharf Road | - Woolloomooloo Bay Hotel patron seating on footpath reduces pedestrian safety and traffic<br>- Speeding<br>- Increase speed limit from 50km/h to 60km/h<br>- 50km/hr (non-observance?) | - Comment is noted but not agreed with.<br>- Improvement scheme recommended for Cowper Wharf Road which will reduce speed<br>- Increase in speed limit not supported.<br>- Speed controls are proposed as part of scheme |
| 39 | Cowper Wharf Road – Harry's Café | Traffic pull in is dangerous | Improvement scheme will increase parking at Harry's Café. |
| 40 | Cowper Wharf Road & Dowling Street | ? | Roundabout proposed at this intersection. |
| 41 | Cowper Wharf Road (at Cahill Expressway) | No access to City North | Access to the City North was changed as part of Cross City Tunnel works and is an RTA matter |
| 42 | Cowper Wharf Road at Brougham Street | Bus stop doesn't have a shelter | Maintenance issue. |
| 43 | Cowper Wharf Road at Finger Wharf | - Remove pedestrian lights at Finger Wharf and provide roundabout.<br>- Re-instate pedestrian (pedestrian crossing?) crossing | - Traffic signals provide facilities for pedestrians. Change to roundabout not supported.<br>- Additional crossing facilities to be provided |
| 44 | Cowper Wharf Road at Lincoln Crescent | - Access to Macquarie Street in City via Cowper Wharf Road<br>- Extension to under ramps for Eastern Distributor. Traffic signal timing needs to be examined to improve access to travel north to Domain tunnel | - Access to City North changed as part of Cross City Tunnel works<br>- Traffic signals are an RTA matter. |
| 45 | Cowper Wharf Road near Bourke Street & Lincoln Crescent | Incorrect left lane usage and access problems to Harbour Bridge | RTA matter. Directional signage needs to be improved. |
| 46 | Craigend Road into Darlinghurst Road north | Right turn very tight | Traffic signal operation is a matter for RTA. |
| 47 | Craigend Street at McLachlan Avenue | Pedestrian crossing needs to be re-examined with possible removal | RTA matter. However unlikely that the City would support the removal of the pedestrian crossing |

| | Location | Dislike / Comment | Transport & Urban Planning's Comments |
|---|---|---|---|
| 48 | Craigend Street | Provide direct bus access up Craigend Street to City. Similarly direct bus access from City across through Kings Cross Road. Not through Bayswater Road | Matter for Sydney Buses |
| 49 | Craigend Street & Victoria Street | New footpath works have eliminated parking spaces | Noted |
| 50 | Craigend Street / Darlinghurst Road / Victoria Street | Traffic lights – timing too fast | Traffic signal operation is a matter for RTA. |
| 51 | Cross City Tunnel | No left turn from tunnel into Waratah Street | RTA matter, but geometry prevents this left turn |
| 52 | Crown Street at Oxford Street | Wants right turn ban removed from Crown Street to Oxford Street (south to west) | Turn bans at traffic signals are a matter for RTA. |
| 53 | Crown Street at William Street | Turning right time too short. Needs more time at traffic signals | Matter for RTA |
| 54 | Crown Street at William Street and Cathedral Street | Congestion in Crown Street – suggest buses relocate to Bourke Street | Bus route is a matter for Sydney Buses |
| 55 | Crown Street between Oxford Street & William Street | Too much traffic travelling too fast | Crown Street is main north south route within study area. 85$^{th}$% vehicle speeds are 50km/h which is higher than posted 40km/h limit. Suggest that vehicle speeds be kept under review |
| 56 | Darlinghurst Rd / Kings Cross Road / Craigend Street | Island too big<br>Problem with turning movements | Matter for RTA |
| 57 | Darlinghurst Road | Crossing near railway station (Kings Cross Station) (not close enough) | Crossing provided at Bayswater Road and Roslyn Street. Difficult to provide a crossing at another location due to spread out nature of pedestrian crossing movements adjacent the station and along Darlinghurst Road |
| 58 | Darlinghurst Road | Pit lid too low near St Johns Road (near Tewkesbury Avenue) | Maintenance issue |
| 59 | Darlinghurst Road | - Badly configured<br>- Not enough drop off spots at the station<br>- Having only 1 lane each way causes congestion<br>- Less parking and more stopping zones | Footpaths were widened by City to cater for large pedestrian numbers using street and to reduce vehicle speeds. Parking issues to be addressed separately |
| 60 | Darlinghurst Road & Burton Street | Remove 'No Right Turn" | Matter for RTA. No Right Turn required due to current traffic signal phasing |

| | Location | Dislike / Comment | Transport & Urban Planning's Comments |
|---|---|---|---|
| 61 | Darlinghurst Road & Victoria Street (near Bayswater Road) | Dangerous pedestrian crossing | Existing pedestrian crossing across Victoria Street at Darlinghurst Road has large numbers of pedestrians using it. No recorded safety problem at crossing. Suggest matter be kept under review |
| 62 | Darlinghurst Road (main strip) | Impaired pedestrians walking onto road – pedestrian safety | This is a widespread problem and needs to be addressed by a behavioural campaign with NSW Government |
| 63 | Darlinghurst Road / Bayswater Road | - Discourage traffic from using this street and to use Kings Cross Road / Ward Avenue to access precinct.<br>- Pedestrians<br>- Discourage traffic<br>- Connectivity of other methods of transport required | Comments noted.<br>Kings Cross Road and Ward Avenue provides alternative access but difficult to force vehicles to use it |
| 64 | Darlinghurst Road / Bayswater Road | - Reinstate pedestrian refuge at this location<br>- Pedestrian delay at traffic signals | - Traffic signals replaced pedestrian refuge<br>- Traffic signal timings are a matter for RTA |
| 65 | Darlinghurst Road and Victoria Street | Bus corridors | Both these streets are bus routes |
| 66 | Dowling Street | Speeding up to Stephen Street. | Dowling Street is a No Through Road at Stephen Street. Recommend that vehicle speeds be reviewed after Sydney Place is re-opened |
| 67 | Dowling Street (road closures) | Woolloomooloo generally too difficult to get into and out of – driver legibility issue | Comments noted |
| 68 | Eastern Distributor exit on Bourke Street south | Bottleneck – caused by merging Bourke Street north entrance and Randwick exit | Matter for RTA |
| 69 | Eastern Suburbs Rail line in Woolloomooloo | Should have pedestrian / cycle track | This is a matter for Railcorp. City to investigate as part of bicycle strategy |
| 70 | Elizabeth Bay Road near Greenknowe Ave | Poorly lit pedestrian crossings | Recommendation to check and improve lighting at crossings |
| 71 | Finger Wharf | Ferry service required from Finger Wharf. | Matter for Sydney Ferries |
| 72 | Bourke Street and St Peters Street | Remove median | RTA scheme for Bourke Street removes median at St Peters Street |
| 73 | Forbes Street Mall | Anti social behaviour in Forbes Street Mall at night. | Matter for Police |

| | Location | Dislike / Comment | Transport & Urban Planning's Comments |
|---|---|---|---|
| 74 | Greenknowe Avenue at Elizabeth Bay Road | Buses drive across roundabout (causes discomfort) | Matter to be referred to Sydney Buses to see if a solution can be found |
| 75 | Greenknowe Avenue & Hughes Street at Macleay Street | - Vehicle conflicts<br>- o/way pair – reverse traffic flow? | Reversing one way traffic flow in Hughes Street would require signalisation of Hughes Street. Matter for RTA as it would change the traffic signals at this intersection |
| 76 | Greenknowe Avenue between McLeay Street & Onslow Avenue | Needs mid block pedestrian crossing.<br>Reduce vehicle speed near CWA. | Difficult to site location for pedestrian crossing in this section of Greenknowe Street. Also warrant for pedestrian crossing not met. The City to continue to monitor |
| 77 | Harry's Café (Cowper Wharf Road) | - Double parking (need to have No Parking)<br>- Lack of pedestrian facilities<br>- Extended trading hours result in hooning behaviour in the early hours.<br>- Vehicles pulling in and out at Harry's and the Hotel on Cowper Wharf Road<br>- Cars / taxis double parking in this area | - Parking to be increased with proposed scheme for Cowper Wharf Road.<br>- Additional pedestrian facilities to be provided in area<br>- Extended trading hours not a matter for traffic study |
| 78 | Hughes Street | Mild traffic calming required | Conditions are considered satisfactory. Daily volumes are 1116vpd and 85$^{th}$% speed is 33km/h |
| 79 | Kings Cross Road & Roslyn Street | Need for pedestrian crossing | City has proposal for pedestrian improvements at this location |
| 80 | Kings Cross Road merge with New South Head Road (to turn right at Neild Avenue) | Heading east onto New South Head Road crossing multiple lanes of traffic to turn right | RTA matter, however current traffic management does not encourage this movement. Alternative route to Bayswater Road and Neild Avenue available from Ward Avenue |
| 81 | Kings Cross Tunnel | Multi / too many pedestrian crossing points on Darlinghurst Road heading north to Kings Cross (over land bridge) | Comment noted |
| 82 | Lincoln Cres / Cowper Wharf Road | Redesign intersection – ACE recommendation report | ? |
| 83 | Lincoln Crescent north of Palmer Street | Barriers to stop traffic turning right | RTA? |
| 84 | Little Burton Street | Traffic treatments to slow traffic and prevent through traffic | Shared zone recommended for Little Burton Street |

| | Location | Dislike / Comment | Transport & Urban Planning's Comments |
|---|---|---|---|
| 85 | Liverpool Street / Oxford Street | - No further road narrowings<br>- Close Liverpool Street at Oxford Street<br>- Close access off from Oxford Street<br>- Pedestrian crossing across Liverpool Street needs improvement to prevent conflict with cars | Liverpool Street at Oxford Street investigated in Section 5.5 |
| 86 | Liverpool Street & Yurong Street | - Cars drive through the wrong way<br>- One way sign too small. Drivers going down one way wrong way | Sign is obscured by a tree. Sign to be relocated |
| 87 | Liverpool Street & Forbes Street | - Need roundabout<br>- Traffic congestion, especially at peak hour<br>- School related traffic (pick up and drop off of kids) | Roundabout and other improvements recommended |
| 88 | Llankelly Place | Re-activate (re-install lanterns) | Maintenance issue |
| 89 | Macleay Street | Footpath width. High pedestrian volume between Orwell & Rockwall Streets for most of week | Improvements proposed |
| 90 | Macleay Street | Vehicles block pedestrians crossing at Manning, Hughes and Orwell Streets | Improvements proposed |
| 91 | Macleay Street | Area 26 parking improvements | Parking issue |
| 92 | Macleay Street & Bayswater Road | Traffic signals / pedestrian safety. Timing issue | Traffic signal operation is a matter for RTA |
| 93 | Macleay Street & Hughes Street | 11pm between Greenknowe Avenue and Darlinghurst Road, vehicle queuing and noise. Hoons Thursday to Sunday. Solution is from 11pm it should be public transport only to stop the hoons cruising | Comments noted. See Section 5.8 |
| 94 | Macleay Street (near Rex Hotel) at Orwell Street | Crossing needed near Post Office | pedestrian crossing recommended at this location |
| 95 | Macleay Street / Challis Avenue | Need for roundabout facility | Traffic signals provide best traffic control in view of numbers of pedestrians using this intersection. |
| 96 | Macleay Street / Rockwall Cres | - Dangerous pedestrian crossing – needs traffic signals<br>- Redundant bus stop<br>- Safety of pedestrian crossing | Provision of traffic signals is one of two improvement options at this location under consideration |
| 97 | Macleay Street at MacDonald Street | Bus stop furniture obstructs passenger exit from bus (lamp post and signage) | The City to follow up with Sydney Buses (maintenance issue) |
| 98 | Macleay Street between Challis Avenue & McDonald Street | Bus shelter removed during building construction | Maintenance issue |
| 99 | Macleay Street near Challis Avenue | 'No Stopping' recently installed | Parking matter |

| | Location | Dislike / Comment | Transport & Urban Planning's Comments |
|---|---|---|---|
| 100 | McElhone Stairs at Cowper Wharf Road | Need pedestrian crossing across Cowper Wharf Road | Pedestrian crossing proposed as part of improvement works |
| 101 | McElhone Street | Left turn traffic McElhone Street to Kings Cross Tunnel – queuing problem | McElhone Street volumes are small. It is illegal to turn left into Tunnel roadway as painted median is provide |
| 102 | McElhone Street near Brougham Lane | Speed and volume of traffic<br>Too narrow footpath | Shared zone proposed for Brougham Lane. McElhone Street has speed control devices |
| 103 | McLachlan Ave | Noise from trains – sound reduction | Matter for CityRail / RailCorp |
| 104 | McLachlan Avenue / Craigend Street | Left turn into Craigend Street needs slip lane re-instated | Traffic signals are an RTA matter |
| 105 | Neild Avenue | Speeding traffic requires traffic control devices | Current speed limit is 60km/h. See comments for Item 106. |
| 106 | Neild Ave / Boundary Street / McLachlan Avenue | - Make two way traffic<br>- No pedestrian access - needs improved crossing access | Two way traffic options have been examined |
| 107 | New South Head Road | Re-instate bus bay on south side of New South Head Road between Neild Avenue and McLachlan Ave | RTA matter |
| 108 | New South Head Road (near McLachlan Avenue) | Needs noise reduction as a result of increased traffic from CCT | RTA matter |
| 109 | New South Head Road / Neild Avenue | Right turn into Neild Avenue needs improvement | RTA matter |
| 110 | Nicholson Street & Dowling Street | Vehicles speeding near Children's Centre. | 85$^{th}$ speed is 46km/h in Nicholson Street. Measures proposed. See comment for Item 111 |
| 111 | Nicholson Street & Forbes Street | Rat running and speeding. | Daily volumes are 2166vpd. Traffic travels between Bourke Street and Dowling Street. 85$^{th}$ percentile vehicle speed is 45km/h. Speed control measures to be recommended |
| 112 | Night Rider Bus Service | Need signage and information | Matter for CityRail. |
| 113 | Onslow Avenue | - Infrequency of 311 bus service (to Central Station).<br>- Inconsistency of 311 bus times. Often early, making up time to cope with later delays in City. Residents need buses to run on time and keep to their designated routes | Matter for Sydney Buses. |
| 114 | Onslow Avenue (one way south) | Provides difficult vehicle access. Have to go via Ithaca Road and Billyard Avenue | One way required to maintain parking and bus route in street. |
| 115 | Onslow Avenue between Billyard Avenue & Greenknowe Avenue | Need to reinstate bus stop. There is no stop in middle of Onslow Avenue. | This is a matter for Sydney Buses |

| | Location | Dislike / Comment | Transport & Urban Planning's Comments |
|---|---|---|---|
| 116 | Orwell Street | Mild traffic calming required | Daily volumes are 2,208 vpd. 85$^{th}$% speed is 38km/h which is considered satisfactory |
| 117 | Oxford Street (north side) | Bus stop to be moved closer to St Vincent's Hospital | This is a matter for RTA and Sydney Buses. |
| 118 | Oxford Street / Darlinghurst Road | Narrow road between South Dowling Street and Darlinghurst Road | City has a proposal to narrow Darlinghurst Road at Oxford Street. Conditions should be reviewed after these works |
| 119 | Oxford Street / Palmer Street | Traffic signals favouring traffic and not pedestrians | Traffic signal timings are a matter for RTA |
| 120 | Palmer Street | Lack of gutter cleaning | Maintenance issue |
| 121 | Palmer Street between Cowper Wharf Road and William Street | Divert southbound traffic in Palmer Street left into Cathedral Street right into Bourke Street left William Street | There is no benefit in adopting this traffic change |
| 122 | Park Street | Bus lane between College Street and Elizabeth Street – 1 block in length (outside study area) | This is outside the study area |
| 123 | Reid Avenue between McElhone St & Dowling Street | Re-open Reid Avenue | This is a temporary closure due to rock slide in McElhone Street |
| 124 | Riley Street & William Street | Too busy for crossing. Too many lanes to cross | Traffic signals are a matter for RTA |
| 125 | Rockwall Crescent at St Vincent's College | Dead end used as a drop off zone by parents in "No Stopping" area | Enforcement issue. To be followed up by City's Road Safety Officer |
| 126 | Roslyn Gardens | - Proposed angle parking will ruin amenity. Safety issue. Proposed angle parking dangerous<br>- Problems with proposed location of angle parking – support idea but bad location<br>- Opposed to proposed angle parking<br>- Proposed angle parking not supported | See comments in Section 6 |
| 127 | Roslyn Gardens Road / Waratah Street | Badly positioned roundabout – rat run for boy racers including traffic travelling wrong way up Waratah Street | Geometry of roundabout appears to be satisfactory. Vehicles travelling in wrong direction is an enforcement issue |
| 128 | Rushcutters Bay end of Cross City Tunnel near Waratah Street | Super merge | RTA matter |
| 129 | Rushcutters Bay Park | Improve pedestrian access from Neild Ave eg. signalised crossing New South Head Road to Park from median | This is a matter for the RTA. Current pedestrian access to park is via crossing at McLachlan Avenue for eastbound carriageway of New South Head Road |

| | Location | Dislike / Comment | Transport & Urban Planning's Comments |
|---|---|---|---|
| 130 | Sir John Young Crescent & Crown Street | - Loss of traffic lights<br>- Dangerous crossing | Roundabout installed by RTA as part of Cross City Tunnel works. Existing pedestrian crossing has been examined and has been installed in accordance with standards. Counts indicate low pedestrian volumes using crossing |
| 131 | Sir John Young Crescent & Palmer Street | Extra vehicular movements with roundabout (double vehicle load) | Traffic signals installed at this intersection |
| 132 | Sir John Young Crescent / Lincoln Crescent at Palmer Street / Crown Street merge area | Traffic lights – inconsistent length of time of lights for through flow | Traffic signals are matter for RTA |
| 133 | South Dowling Street (south of Oxford Street) | Re-instate clearways for improved traffic flows (**NB.** outside study area) | Outside study area |
| 134 | St Mary's Road / Riley Street | - Remove signals and replace with roundabout and full access to Yurong Parkway<br>- Reinstate roundabout<br>- No traffic lights – replace with roundabout | Traffic signals and changes made as part of Cross City Tunnel works |
| 135 | St Peters Street | Remove bollards | St Peters Street is closed between Forbes Street and Bourke Street. It is an approved road closure |
| 136 | Taylor Square | Height of pedestrian signals allows taxis, trucks, 4WD to obscure lights – general comment for all Sydney | Matter for RTA |
| 137 | Taylor Square south of Oxford Street | Re-open – **NB.** outside study area | Outside study area |
| 138 | The Esplanade (dead end section) off Ithaca Road | Visitor car parking required in narrow esplanade once new development is in place | Parking matter |
| 139 | Victoria Street | Vehicle / pedestrian conflicts. U turns – need to improve road safety. Reduce double parking. Widen footpaths south of Hughes Street | Double parking is an enforcement matter. Significant number of commercial entertainment uses in this section of Victoria Road. Area near night club is busy on Friday and Saturday evenings with significant groups of pedestrians. There is enough room to widen the footpaths. This is not necessarily a traffic safety matter but future widening could be considered by City Projects |
| 140 | Victoria Street | Mix of parallel and angle parking is dangerous (particularly at night) | Improved delineation proposed in this area |

| | Location | Dislike / Comment | Transport & Urban Planning's Comments |
|---|---|---|---|
| 141 | Victoria Street & Kings Cross Road | Pedestrian safety a concern | Pedestrian facilities are provided at this location. There is no recorded pedestrian accident problem |
| 142 | Victoria Street and side streets | - Restrict parking – 10pm to 7am<br>- Need time restricted to midnight | Parking issue |
| 143 | Victoria Street north of Hughes Street | Congestion | Angle parking provided in this area. |
| 144 | Victoria Street at Burton Street | - Confusing line markings<br>- Redundant bus stop | - Line markings at traffic signals are an RTA matter<br>- Maintenance issue |
| 145 | Victoria Street at St Vincent's Hospital | Traffic congestion | Victoria Street narrows in front of St Vincent's Hospital |
| 146 | Victoria Street at Surrey Street | Extra pedestrian crossing eg. pedestrian refuge. | City has a proposal for a raised pedestrian crossing at this location |
| 147 | Victoria Street near Surrey Street | Pedestrian crossing required outside church | City has a proposal for a raised pedestrian crossing at this location |
| 148 | Victoria Street south of Craigend Street | Double parking in front of cafes – deliveries – need a loading zone (southbound?) | Parking matter |
| 149 | Waratah Street | Do not close Waratah Street | There is no proposal to close Waratah Street |
| 150 | Ward Avenue & Craigend Street & Surrey Street | Roundabout is requested. Difficulty coming out of Ward Avenue | See comments for Item 34 and Section 5.9 |
| 151 | Ward Avenue / Roslyn Street | - Through pedestrian crossing – speed problem<br>- Site improvement required<br>- General intersection improvement for pedestrians | Raised platform is recommended at pedestrian crossing |
| 152 | Wentworth Avenue at Oxford Street & College Street | Traffic lights turning right into Oxford and Liverpool Street too quick | Matter for RTA |
| 153 | William Street | - Pedestrian safety at Riley Street<br>- Put back the cycle lanes<br>- Traffic on whole of William Street<br>- T2 Transit Lane<br>- No designated bus lane causes backup of traffic when bus stops<br>- No cycleway<br>- Too much traffic<br>- Need indented bays for buses on William Street | Current geometry and traffic management is result of Cross City Tunnel changes. |
| 154 | William Street & Forbes Street | Too much pedestrian wait time at traffic lights | Traffic signals are a matter for RTA |

| | Location | Dislike / Comment | Transport & Urban Planning's Comments |
|---|---|---|---|
| 155 | William Street & Riley Street | Poor pedestrian timing at the crossing. | Traffic signals are a matter for RTA |
| 156 | William Street (between Forbes Street & Bourke Street) | Problems with bus access | Matter for Sydney Buses |
| 157 | William Street (mostly) | Cyclists on footpath are dangerous for pedestrians. | Comment noted |
| 158 | William Street / Bourke Street | Close right turn to Bourke Street and send to Palmer Street. Circulate from Palmer St, Cathedral St, Bourke St back to Eastern Distributor | This is an RTA matter. However, the suggestion would not improve traffic conditions |
| 159 | William Street / Crown Street | Traffic signal timing - cars queuing in AM / PM peak | Traffic signals are a matter for RTA. |
| 160 | William Street / Riley Street | Traffic signals - Right turn lane – Riley Street | Traffic signals are a matter for RTA |
| 161 | William Street approach to Victoria Street / Darlinghurst Road | Queuing in William Street (peak and other times including weekdays midday, etc.) especially Friday and Saturday nights | Queuing does occur due to the demand for vehicles to enter the Kings Cross entertainment area and Darlinghurst |
| 162 | William Street at Forbes Street | Poor pedestrian facilities – provide bridge over William Street | Existing at grade traffic signal crossing at Forbes Street. Pedestrian overbridge increases the walk distance for pedestrians and for this reason not always well used |
| 163 | Wylde Street at Cowper Wharf Road | Traffic lights at bottom of Wylde Street causes traffic to bank up at peak hour | Traffic signals are a matter for RTA |
| 164 | Wylde Street at St Neot Avenue | Dangerous pedestrian crossing – high traffic speed | Raised platform proposed at this pedestrian crossing |
| 165 | Wylde Street, east of Cowper Wharf Road | Poor sight distance on approach to traffic lights – advance warning required | Comments noted. Advance signage suggestion to be forwarded to RTA |
| 166 | Yurong Lane / Stream Street | Poor road closure – needs public domain improvement | This is a matter for the City |
| 167 | Yurong Lane near Yurong Street | Re-open access laneway | This is a matter for the City |
| 168 | Yurong Street between Stanley Street and William Street | Congestion due to rat running from Stanley Street | Yurong Street and Stanley Street is the main access in and out of the East Sydney and parts of Darlinghurst area from William Street. There is some traffic which uses Stanley Street west of Yurong Street from College Street which turns left into Yurong Street to travel to William Street |
| 169 | General Comment | - Possible talk of reducing 311 bus service<br>- Bus Route 311 – good route but reduced service and rarely active | Matter for Sydney Buses |
| 170 | General Comment | Speed of traffic in Sydney limited to 40km/h | Speed limits are set by RTA |

| | Location | Dislike / Comment | Transport & Urban Planning's Comments |
|---|---|---|---|
| 171 | General comment | Red phasing not long enough at signals | RTA matter |
| 172 | General comment | - Need long term public transport connectivity plan (east / west / north / south).<br>- Integrated transport needed | Comment noted |
| 173 | General comment | Too many one ways, banned turns in the area | Comment noted |
| 174 | General comment | No more road narrowings | Comment noted |
| 175 | General comment | No more road closures | Comment noted |
| 176 | General Comment | Improve bus Route 389 along Yurong Street and Stanley Street | Comment noted |
| 177 | General Comment | Blister at entry point to stop cars blocking entry? | Comment noted |
| 178 | General Comment | Regulations not enforced sufficiently well. Restricts a/v of spaces for residents. More rangers please | Enforcement matter for City |
| 179 | General Comment | Parking permits | Parking matter |
| 180 | General Comment | Rat run & through traffic on Burton Street | Burton Street provides a connection to Paddington and is a collector (east-west) route in Darlinghurst and East Sydney. It carries between 4677 vpd-5637 vpd |
| 181 | General Comment | Cycle path along Bourke Street danger along parked cars (doors opening) | Comment noted. City is proposing separated cycleway |
| 182 | General Comment | Support 40km speed limit through residential area | 40km/h speed limit a recommendation for study area |
| 183 | General Comment | In City. Long way from King Street to William Street for 311 bus stops (**NB.** outside study area) | Outside study area |

# CITY EAST
# MATTERS RAISED IN WRITTEN SUBMISSIONS

| No. | Address | Issue | Transport & Urban Planning's Comment |
|---|---|---|---|
| W1 | Resident / Manar Apartments | - Traffic signals requested at Macleay Street / Rockwall Crescent<br>- Cars attempt to overtake on left when turning left into driveway of apartments on Macleay Street. | - This is one of the proposed improvement options for this intersection<br>- No measure available to stop this. |
| W2 | DRAG | - Bourke Street – re-open north and south of William Street<br>- Kings Cross Land Bridge – widened footways has reduced capacity and caused bottlenecks<br>- Taxi rank in Bayswater Road near Darlinghurst Road causes / exacerbates congestion.<br>- Crown Street / William Street and Crown Street / Oxford Street. Dangerous due to geometry and traffic signal phasing.<br>- Congestion at William Street / Crown Street due in part to Bourke Street changes.<br>- Bourke and Liverpool Streets – provide traffic signals<br>- Re-open City crossing at Sir John Young Crescent and Cathedral Street<br>- Consider measures to improve pedestrian safety along Macleay Street, Darlinghurst Road and Victoria Street (Darlinghurst)<br>- No pedestrian crossing on Bourke Street / William Street east.<br>-<br>- Reinstate roundabout at Sir John Young Crescent / St Mary's Road / Yurong Parkway.<br>- Consider roundabout at Cowper Wharf Road and Bourke Street.<br>- Proposed angle parking in Roslyn Gardens may compromise traffic safety.<br>- Woolloomooloo accessibility is most disadvantaged by traffic restrictions<br>- Consider that the objectives of the study are too narrow and cater to the gated community concept. | - NSW Government previously advised that Bourke Street will not be re-opened.<br>- Comment noted.<br>- Noted. City to investigate options for changes to taxi rank.<br>- Traffic signal phasing and timings are a matter for RTA.<br>- Noted. See comments above regarding Bourke Street.<br>- Traffic signals recommended at this intersection.<br>- State Government and RTA have determined there will be no more changes concerning Cross City Tunnel<br>- Additional pedestrian crossing measures considered in these streets as part of study recommendations.<br>- RTA approved scheme does not have a pedestrian crossing on the eastern side of Bourke Street<br>- Traffic signals installed as part of the Cross City Tunnel works and unlikely to be changed.<br>- Current traffic conditions do not warrant roundabout control. However, City has indicated that traffic signals will be provided at the intersection as part of its bicycle strategy for Bourke Street.<br>- See comments in Section 6 regarding this matter.<br>- Comment noted.<br>- Comment noted. Scope and objectives of the study are set by the City. |

| No. | Address | Issue | Transport & Urban Planning's Comment |
|---|---|---|---|
| W3 | Paddington-Darlinghurst Community Working Group | - South Dowling Street between Oxford Street and Flinders Street. Make local road, reduce traffic volumes and reduce speed limit to 40km/h<br>- Flinders Street at Taylor Square. Reintroduce right turn into Crown Street | - This is outside the study area<br>- This is outside study area |
| W4 | 2011 Residents Association Inc. | - Improved pedestrian amenity and traffic thresholds in Brougham Lane.<br>- Traffic calming in upper McElhone Street<br>- Extension of median in William Street at McElhone Street<br>- Proposed angle parking in Roslyn Gardens may compromise road safety in street<br>- Macleay Street / Hughes Street / Greenknowe Avenue right turn into Hughes Street conflicts with pedestrians and other vehicles<br>- Improved pedestrian safety along Macleay Street, Darlinghurst Road and Victoria Street (Darlinghurst) and William Street | - Shared zone recommended for Brougham Lane between McElhone Street and Victoria Street<br>- Speed control devices are provided in upper section of McElhone Street. However, additional speed monitoring is suggested when street is re-opened<br>- A painted median is provided in William Street, which makes it illegal to cross the (painted median). Extending the concrete median is a matter for the RTA, although there may not be sufficient space to provide a concrete barrier.<br>- See comments in Section 6<br>- Existing traffic signal geometry and phasing does not cater for right turn or cross movement into Hughes Street (RTA matter). pedestrian crossing is proposed across Hughes Street<br>- Pedestrian improvement measures considered along these streets |
| W5 | Surry Hills Business Alliance | - General concern with design of some LATM measures<br>- Reposition traffic signals at Randle Street and Elizabeth Street at Central (request since 1996) | - Comment noted<br>- Location is outside study area |
| W6 | Resident / Dowling Street, Woolloomooloo | Request speed humps in Dowling Street between Eastern Suburbs Railway and Sydney Place (speeding and hoons) | This section of Dowling Street is a No Through Road with low traffic volumes. Recommend that matter be examined after Sydney Place is re-opened (recommendation of study) to determine if speed control devices are required |
| W7 | Resident / McElhone Street, Woolloomooloo | - Improve pedestrian facilities in Brougham Lane<br>- Request for speed hump in McElhone Street and Reid Avenue<br>- Request for 2 southbound lanes in Bourke Street just north of William Street | - Shared zone recommended in Brougham Lane, between McElhone Street and Victoria Street<br>- McElhone Street has speed control devices between Reid Avenue and William Street. Reid Avenue needs to be reviewed when McElhone Street is re-opened (rock slide)<br>- Changes recommended, subject to RTA approval |

| No. | Address | Issue | Transport & Urban Planning's Comment |
|---|---|---|---|
| W8 | Resident / Riley Street, East Sydney | - Reverse one way movement in Liverpool Street at Oxford Street to reduce rat running<br>- Request for one way flow in Roslyn Gardens between Roslyn Street and Waratah Street to stop through traffic | - See Section 5.5<br>- City has other proposals for Roslyn Gardens, which would preclude one way traffic |
| W9 | Resident / Admiralty Gardens, Cowper Wharf Road, Woolloomooloo | - Do not introduce more measures that make it difficult for cars to move around in Woolloomooloo<br>- Bourke Street changes restrict access between Darlinghurst and Woolloomooloo with Crown Street only through route<br>- Restore a direct access to City North from Lincoln Crescent.<br>- Narrowings, traffic signals and street closures cause more congestion and create pollution<br>- Reinstate medians in William Street to assist pedestrians.<br>- Restore Queens Square intersection to previous geometry | - Noted<br>- Noted<br>- Matter for RTA as was changed as part of Cross City Tunnel<br>- Noted<br>- Medians removed to discourage midblock crossings at uncontrolled locations<br>- Noted, but City and RTA unlikely to change current configuration (traffic signals are an RTA matter) |
| W10 | Email | College Street and Stanley Street – potential accident problem between right turning vehicles into Stanley Street and southbound vehicles in centre lane (**NB.** median lane is stationery). Suggest close median or install traffic signals | Not considered feasible to ban right turn due to access requirement for existing uses. Consider 'Do Not Queue Across Intersection' or 'Keep Clear' road marking in first instance |
| W11 | Resident / Cowper Wharf Road, Woolloomooloo | - Through traffic and speeding problem – Cowper Wharf Road<br>- Traffic congestion and parking problem at Harry's Café de Wheels | - Cowper Wharf Road is an important road link in area.<br>- Pedestrian improvement scheme proposed to reduce vehicle speeds in Cowper Wharf Road, together with a 40km/h speed limit<br>- Scheme will increase parking at this location |
| W12 | Resident Macleay Street, Potts Point | - Noisy vehicles including loud motorcycles using Macleay Street at night, as a speedway<br>- Requests road closures on weekend nights and speed humps | - Traffic volumes are high on Friday and Saturday evenings, due to number of trips to Kings Cross entertainment area<br>- Speed control measures proposed in Macleay Street at a number of pedestrian crossings<br>- Road closure would affect access into the areas including access for residents. Such measures would require overall transport plan for the area<br>- Noisy vehicles could be addressed by RTA Compliance Officers and Police, but would require a co-ordinated approach |
| W13 | Resident / Tusculum Street, Potts Point | - Large trucks using Macleay Street during day<br>- Emergency vehicles using sirens at night. Request approach be made to services to request limits be placed on use | - Macleay Street is major access road into area and would be used by some trucks<br>- Outside study brief. This is a matter for City to pursue |

| No. | Address | Issue | Transport & Urban Planning's Comment |
|---|---|---|---|
| W13 (cont) | | - Require pedestrian crossings on all side streets along Macleay Street<br>- High pedestrian traffic on both sides of Macleay Street. Request footpath upgrades | - Study recommendations include additional pedestrian crossing facilities along Macleay Street<br>- Noted. Footpath upgrades matter for City |
| W14 | Traffic Sergent / Kings Cross Police Station | - U turns by taxis and others in Cowper Wharf Road adjacent Blue Hotel (near Forbes Street). Requests median be provided | - Proposed scheme will include roundabout at Dowling Street, which provides a facility for U turns<br>- Median in this section of Cowper Wharf Road could be considered in detailed design of proposed scheme |
| W15 | Resident / Springfield Avenue, Kings Cross | Request pedestrian improvements in Earl Place at Earl Street | City has proposal for shared zone and footpath widening in Earl Place and Earl Street |
| W16 | Resident / Liverpool Street, Darlinghurst | Request removal of No Right Turn in Burton Street at Forbes Street | Sight distance in Burton Street for this right turn is restricted by a crest. The City could consider the relaxation of No Right Turn restriction for trial period at a future time if the 40km/h speed limit is implemented |
| W17 | Resident | Forbes Street at William Street – drivers disobeying No Entry to William Street | - Half road closure implemented at intersection.<br>- Pedestrian crossing proposed across Forbes Street at William Street. City to consider if additional measures to prevent illegal left turn out movement can be implemented |
| W18 | Resident / Kings Cross | Difficult to turn right into Hughes Street from Greenknowe Avenue at Macleay Street | Existing traffic signal geometry and phasing does not cater for this right turn (RTA matter) |
| W19 | Resident | Vehicles travel wrong way in Francis Street (to College Street) against one way movement. Suggest low concrete barrier across Francis Street at Yurong Street | Peak hour counts do not reveal extent of this problem. Physical measures would involve intersection narrowing in Francis Street at intersection with Yurong Street. Suggest that the City keep this matter under review |
| W20 | Resident / Ithaca Road, Elizabeth Bay | Requests pedestrian crossing at following locations:<br>(i) across Elizabeth Bay Road at Ithaca Road;<br>(ii) across Ithaca Road at Billyard Avenue;<br>(iii) across Macleay Street (southern side) at Challis Avenue;<br>(iv) across Cowper Wharf Road at Brougham Street, near McElhone stairs | Pedestrian crossing recommended at locations (i) and (iv) and also location (iii) (which is subject to RTA agreement). Location (ii) does not meet warrant for pedestrian crossing |
| W21 | Resident / Francis Street, East Sydney | - Left turn slip lane removed from College Street into William Street and also at Oxford Street / Wentworth Avenue / College Street. Considers that changes are dangerous to pedestrians as vehicles edge forward before pedestrians have completed crossing. Requests that left turn slip lane be retained / reinstated in the City | - Comment noted |

| No. | Address | Issue | Transport & Urban Planning's Comment |
|---|---|---|---|
| W21 (cont) | Resident / Francis Street, East Sydney | - Also requests that some large bollards be provided on both corners above | - Bollards are a matter for City to consider |
| | | - Considers that the pedestrian crossing at Liverpool Street at Oxford Street is dangerous. Cars queue up and block the intersection due to the number of pedestrians using the crossing | - See comments in Section 5.5 |
| W22 | ESNA | - Laneways near Yurong Street which have concrete barriers need to be replaced with more aesthetically pleasing treatments | - This is a matter for the City to follow up on and has been noted in the report and the improvement scheme |
| | | - Street closure, Shared Zone or similar treatment in Burton Street between Palmer Street and Langley Street to connect the proposed Community Arts Centres | - This section of Burton Street is used from Crown Street (to and from the south) to access the land uses in East Sydney and Darlinghurst, east of Crown Street. Existing traffic volumes are too high for a shared zone and would need to be reduced with other measures. The suggested road closure would transfer the traffic to Liverpool Street between Bourke Street and Crown Street and may limit future plans and opportunities for the proposed community centre. Footpath widening and streetscape improvements provide a better alternative to discourage and calm traffic in the first instance. The City is proposing a separated cycleway in Burton Street which will reduce the road width and could investigate a possible shared zone treatment at that time |
| | | - Consider Shared Zones in laneways in East Sydney | - Little Burton Street proposed to be a Shared Zone. City to investigate lanes in East Sydney and Darlinghurst for suitability of shared zone treatment |
| | | - Whitlam Square Study (2001) concerning Liverpool Street | - The options from this study regarding Liverpool Street have been reviewed in this study. Section 5.5 refers |
| | | - Recommendations of ESNA's Community Strategic Plan (2002) concerning traffic which are: | - General Comment<br>Some of the suggested measures in the Strategic Plan have already been implemented and there are other measures either approved or proposed that would meet some of the objectives of the Strategic Plan. |

| No. | Address | Issue | Transport & Urban Planning's Comment |
|---|---|---|---|
| W22 (cont) | | Suggested Road Closures in:<br>• Palmer Street, south of Stanley Street;<br>• Burton Street, west of Bourke Street;<br>• Liverpool Street, east of Bourke Street; | In follow up communications ESNA agreed that shared zones would not be suitable on a number of streets nominated in the Strategic Plan<br>- Specific comments on the suggested measures are as follows:<br>• This section of Palmer Street has traffic calming measures implemented and carries relatively low traffic volumes, consistent with a residential street. However, a street closure could be considered<br>• This section of Burton Street is used from Crown Street (to and from the south) to access the land uses in East Sydney and Darlinghurst, east of Crown Street. A road closure of Burton Street west of Bourke Street would transfer traffic using this section of Burton Street to Liverpool Street. As noted above, other measures are proposed in Burton Street between Bourke Street and Crown Street to provide for pedestrian needs and calm the traffic using this section of Burton Street including road narrowing and kerb extensions at Palmer Street and Bourke Street together with a future separated cycleway in Burton Street. City is also to investigate a possible shared zone adjacent future community centre<br>• Liverpool Street at this location operates as a collector road and would be difficult to close due to the impacts on other streets within the local area. Traffic signals are proposed at this intersection to address the current deficiencies. The closure of Liverpool Street at this point would transfer the Liverpool Street traffic to Burton Street between Bourke Street and Victoria Street. This would amount to 558-656 vph in the AM and PM peak hours, if Liverpool Street at Oxford Street is not restricted and a468-566 vph in the peak hours if Liverpool Street is restricted at Oxford Street. The section of Forbes Street, between Liverpool Street and Burton |

| No. | Address | Issue | Transport & Urban Planning's Comment |
|---|---|---|---|
| W22 (cont) | | | Street would be used as a bypass unless it was also closed. The closure would make vehicle access into and out of the local area, east of Bourke Street, more circuitous and may require additional parking restrictions at the traffic signal controlled intersections of Bourke Street with Darlinghurst Road and Victoria Street to maintain sufficient intersection capacity at these intersections. As Burton Street between Victoria Street and Bourke Street is also a bus route, there would be impacts on bus servicing times. |
| | | • St Peters Street, east of Bourke Street; | • This is currently closed with gates but allows some school access |
| | | • Bollards on Forbes Street near St Peters Lane; | • Forbes Street is closed at St Peters Lane |
| | | • Bourke Street (south side) at William Street | • Bourke Street is left in / left out at William Street. There is an approved RTA scheme for Bourke Street between Stanley Street and Corfu Street |
| | | Create shared zone in Palmer Street between Liverpool Street and Burton Street | - RTA Guidelines indicate shared zones are generally only suitable on roads that carry 300 vehicles per day or less (i.e. 30 vph)<br>- Alternative improvement works are proposed in this section of Palmer Street in lieu of a shared zone |
| | | Create shared zone in Stanley Street between Crown Street and Riley Street | - The City has an approved footpath scheme for Stanley Street between Yurong Street and Bourke Street. Stanley Street is also a bus route so a shared zone is not appropriate |
| | | Create shared zone in Crown Street between Chapel Street and William Street | - Crown street carries daily volumes of 9,218 vpd and is therefore not suitable as a shared zone. ESNA agrees with this |
| | | Impose a 40km/h speed limit throughout area | - A 40km/h speed limit exists in most of the streets in the East Sydney Area<br>- A 40km/h speed limit on all city streets in the study area except RTA roads. Oxford Street / William Street / College Street is a recommendation of the study |

| No. | Address | Issue | Transport & Urban Planning's Comment |
|---|---|---|---|
| W22 (cont) | | Suggested One-Way Streets:<br>• Forbes Street south of Burton Street, one-way south and Bourke Street between Forbes Street and Bourke Street one-way north | • One-way streets, particularly on wider streets, tend to increase vehicle speeds and increase round the block trips for local access. Both these roads carry only local type traffic and there is no advantage in making either street one-way |
| | | • Reverse one-way flow in St Peters Lane to one-way eastbound with bollards at Forbes Street | • St Peters Lane is one-way east (this may have been implemented since 2002) |
| | | • Relocate Stop Sign at Bourke Street and Burton Street | • Stop Sign control is on Burton Street at this intersection. Reversing the Stop signs may have an adverse affect on road safety at the intersection, due to the down grade in the eastern approach of Burton Street. An additional pedestrian crossing is proposed across Burton Street (western approach) at Bourke Street, with kerb extensions. The City may consider changing the priority at the intersection at a future time and or the provision of 4 way stop sign control |
| | | • Narrow Bourke Street at Liverpool Street and provide crossings on both sides of Liverpool Street | • Traffic signals are proposed at this intersection with signalised pedestrian crossings on all legs of the intersection. Bourke Street is also a bicycle route. The City is proposing a separated cycleway which will narrow the traffic lanes in Bourke Street. |
| | | • Narrow both sides of Crown Street:<br>- at Liverpool Street;<br>- at Stanley Street | • Crown Street is a bicycle route. Any road narrowing may affect the bicycle lane. Both intersections also cater for right turning movements from Crown Street. If the road was narrowed, these turns may have to be banned, otherwise traffic congestion would increase at the intersections. Notwithstanding the above, City Projects will be examining possible footpath improvement in Crown Street between Stanley Street and William Street as part of the Stanley Street upgrade works |

| No. | Address | Issue | Transport & Urban Planning's Comment |
|---|---|---|---|
| W23 | Resident / Roslyn Gardens<br>Email | - Opposes the City's proposal for introduction of angle parking in Roslyn Gardens for the following reasons:<br><br>- Roslyn Gardens is main alternate route to William Street (due to congestion in William Street at other locations during the peak hours) and introduction of angle parking will cause congestion in Roslyn Gardens due to the parking manoeuvres and narrower road carriageway<br><br>- Considers that there are other measures available to calm the traffic such as speed humps for the introduction of the 40km/h speed limit<br><br>- Considers that there is no need for additional parking in Roslyn Gardens and that there is sufficient parking for residents now<br><br>- Considers that the additional parking created by the angle parking will be taken up by commercial interests | See comments in Section 6 |

## TABLE A2

## COMMUNITY CONSULTATION

## COMMUNITY WORKSHOP

61 people signed the attendance sheets.

Those people who signed in lived in the following streets:

| Street | Attendees |
|---|---|
| Barncleuth Square | 1 |
| Boundary Street | 1 |
| Brougham Street | 4 |
| Cathedral Street | 2 |
| Charles Street | 1 |
| Clement Street / Pl | 3 |
| Corfu Street | 1 |
| Cowper Wharf Road | 1 |
| Crown Street | 1 |
| Foley Street | 1 |
| Forbes Street | 1 |
| Hardie Street | 2 |
| Harmer Street | 1 |
| Kings Cross Road | 4 |
| Little Burton Street | 1 |
| Liverpool Street | 1 |
| Macleay Street | 8 |
| Manning Street | 1 |
| McElhone Street | 1 |
| Nicholson Street | 1 |
| Oak Lane | 1 |
| Onslow Avenue | 3 |
| Oxford Street | 3 |
| Palmer Street | 1 |
| PO Box 460 Double Bay | 1 |
| Roslyn Gardens | 5 |
| Sherbrooke Street | 1 |
| Shirley Road | 1 |
| Sir John Young Cres | 2 |
| The Esplanade | 1 |
| Victoria Street | 3 |
| Waratah Street | 1 |
| Wylde Street | 1 |
| **Total:** | **61** |

# TABLE A3

## CITY EAST LATM

## COMMUNITY WORKSHOP

## OPINIONS ON TRAFFIC CONTROL DEVICES

| Device | Yes | No | Depends | Reasons | No Comment | Total Response |
|---|---|---|---|---|---|---|
| | | | | | | |
| Give Way | 34 (62%) | 6 (11%) | 2 (4%) | | 13 (23%) | 55 |
| Stop | 30 (54%) | 8 (15%) | 2 (4%) | | 15 (27%) | 55 |
| TCS | 36 (65%) | 9 (17%) | 4 (7%) | | 6 (11%) | 55 |
| Roundabout | 38 (68%) | 9 (17%) | 1 (2%) | | 7 (13%) | 55 |
| Kerb Blisters | 22 (40%) | 20 (36%) | 4 (7%) | | 9 (17%) | 55 |
| No Right Turn | 32 (58%) | 7 (13%) | 4 (7%) | | 12 (22%) | 55 |
| No Left Turn | 31 (56%) | 6 (11%) | 3 (6%) | | 15 (27%) | 55 |
| Closure / Half Closure | 16 (29%) | 28 (50%) | 2 (4%) | | 9 (17%) | 55 |
| One Way | 33 (59%) | 9 (17%) | 2 (4%) | | 11 (20%) | 55 |
| Raised Threshold | 26 (47%) | 18 (32%) | 3 (6%) | | 8 (15%) | 55 |
| Speed Limits (support 40km/h zone) | 36 (65%) | 7 (13%) | 2 (4%) | | 10 (18%) | 55 |
| Shared Zones | 26 (47%) | 17 (31%) | 4 (7%) | | 8 (15%) | 55 |
| Pedestrian Refuge | 34 61%) | 12 (22%) | 2 (4%) | | 7 (13%) | 55 |
| Kerb Blisters | 29 (52%) | 17 (31%) | 1 (2%) | | 8 (15%) | 55 |
| Marked Foot Crossing | 39 (70%) | 4 (7%) | 3 (6%) | | 9 (17%) | 55 |
| Raised Marked Foot Crossing | 35 (64%) | 10 (18%) | | | 10 (18%) | 55 |
| Pedestrian TCS | 34 (62%) | 7 (13%) | 4 (7%) | | 10 (18%) | 55 |

# APPENDIX 2A PUBLIC COMMENT DRAFT SCHEME COMMENTS

| Draft Improvement Measure | Comments on Scheme | Other Matters / Comments | Transport & Urban Planning's Comments |
|---|---|---|---|
| N1 | (i) Taxis double park and block traffic.<br><br>(ii) Consider roundabout at Bourke Street / Cowper Wharf Road. Ease turn for buses and keep intersection clear. | | (i) Comment noted. Parking to be increased.<br><br>(ii) City now proposes to provide traffic signal control of intersection as part of Cycleway Strategy and improve pedestrian amenity (i.e. crossing opportunities and safety). |
| N2 | Provide raised platforms in Roslyn Gardens in interim to slow traffic (i.e. prior to cycleway). | | Matter for City to determine. |
| N6 | Northbound buses impact (reduce) sight lines for pedestrians at crossing. | | Comments noted. Kerb extensions would improve sight lines of crossing. Bus stop may need to be moved to also improve sight lines. This would be considered in the detail design. |
| N7a | Raised crossing a good idea. Needs to be further south, outside Woolworths to cater for pedestrians crossing at this location. | | Existing location has a strong pedestrian desire line. |
| N11 | Low volume pedestrian traffic signals should be changed to operate as pelicans. | | These traffic signals, at this location, are intersection traffic signals and not suitable for pelican operation (i.e. flashing yellow during pedestrian clearance). |
| N15 | Issue with unauthorised right turns from Baroda Street into Ward Avenue. Consider possible roundabout. | | Baroda Street is one way to Ward Avenue, so roundabout would not be an effective form of traffic control. |
| N17 | Sign for No Right Turn from William Street to Forbes Street. | | No Right Turn signage to be checked and upgraded if required. |

| Draft Improvement Measure | Comments on Scheme | Other Matters / Comments | Transport & Urban Planning's Comments |
|---|---|---|---|
| N23 | Investigate further prior to implementation. | | The existing No Left Turn restriction sign for vehicles over 6 metres is an oversight by the RTA.<br><br>The removal of the No Right Turn restriction from Cathedral Street to Palmer Street would take some pressure off Bourke Street between Cathedral Street and William Street. |
| General | | 1. Baroda Lane – provide shared zone to calm traffic.<br><br>2. Pedestrian crossing in Greenknowe Avenue outside CWA to reduce traffic speed. Remove crossing down the hill.<br><br>3. Suggestion of a footpath on one side of Brougham Street.<br><br>4. Suggestion to remove the No Right Turn in Palmer Street at Cathedral Street to avoid problem of vehicles turning left into Cathedral Street and then doing a U turn in Bourke Street.<br><br>5. Crown Street is blocked every afternoon from Liverpool Street. What can be done about it?<br><br>6. Visitor parking for Brougham Street. | This is a new matter and would need to be investigated by the City.<br><br>Transport and Urban Planning investigated this location for the provision of a pedestrian crossing but the warrant was not met. Recommend that City monitor and review need for pedestrian crossing at this location as part of bicycle route.<br><br>This is a matter for the City.<br><br>Removal of this right turn is a matter for the RTA. However, the removal of the right turn would create additional congestion on the Palmer Street ramp and would encourage traffic outside the local area to use Cathedral Street as a bypass. For this reason, the City and the RTA would not support the suggested change at this stage.<br><br>This is a capacity problem at the intersection of William Street / Crown Street which is controlled by traffic signals. Traffic signals and their timing is a matter for the RTA.<br><br>Parking matters are not included in this study but will be passed on for follow up by the City. |

| Draft Improvement Measure | Comments on Scheme | Other Matters / Comments | Transport & Urban Planning's Comments |
|---|---|---|---|
| General (cont) | | 7. Difficult to turn from Greenknowe Street into Hughes Street at Greenknowe Street / Macleay Street / Hughes Street intersection. | This is a matter for the RTA (traffic signals). |
| | | 8. Provide pedestrian rail for pedestrians on west side of Ithaca Street approaching Elizabeth Bay Road. | This is not a matter for this study, but will be passed on to the relevant section in the City. |
| | | 9. Concern at short pedestrian crossing times for traffic signal crossings in William Street. | This is a matter for the RTA. |
| S1 | Provide a load limit on Burton Street. | | This is a new matter and should be investigated by the City. |
| S4 | Can the kerb extensions be landscaped? | | This is a matter for the detail design. |
| S6 | Investigate to improve sight distance at driveway locations in the design | | This is a matter for the detail design. |
| S7 | Roundabouts are not pedestrian friendly. Traffic signals are the better option and are pedestrian friendly. | | Traffic signals are proposed at this intersection and Transport and Urban Planning agrees that traffic signals provide appropriate and safe facilities for pedestrians. |
| S11 | Parked cars restrict visibility in Burton Street, which creates confusion. Traffic control should provide clear message to Burton Street that Bourke Street has priority. | | Proposed kerb extensions will improve driver sight lines of approaching traffic and of Stop sign for Burton Street traffic. |

| Draft Improvement Measure | Comments on Scheme | Other Matters / Comments | Transport & Urban Planning's Comments |
|---|---|---|---|
| S12 | Visibility bad at intersection with risk of hitting cyclists. Consider extension of kerb to Bourke Street with some treatment to slow down cyclists. | | This is a matter for the detail design. |
| S15 | Need to approach RTA concerning 40km/h speed limit. | | Noted. |
| S21 | Do not agree with proposed road closure. | | Noted. |
| S22 | Leave Liverpool Street open. What other treatments / options are available if Liverpool Street is not closed such as kerb extensions, landscaping (i.e. serious traffic treatment). | | Alternative traffic management treatments for Liverpool Street is a matter for the City to consider. |

# APPENDIX 2B PUBLIC COMMENT DRAFT SCHEME COMMENTS – WRITTEN SUBMISSIONS

| | | Comments on Scheme | Other Matters / Comments | Transport & Urban Planning's Comments |
|---|---|---|---|---|
| W1 | Resident Surrey St, Darlinghurst | | - Accident problems at Craigend St/Ward Ave / Surry St<br>- Safety of pedestrians crossing Craigend St near intersection of Ward Av | City has proposal in LATM Scheme to rechannelise the intersection, which will assist traffic exiting Ward Ave and should reduce potential conflicts with traffic exiting Surrey Street. The proposal includes traffic islands which will allow pedestrians to stage their crossing of Craigend St. Pedestrian counts undertaken as part of LATM study do not meet warrant for pedestrian crossing facility |
| W2 | Resident Forbes St (north of Liverpool St), Darlinghurst | | Difficulty and delays turning right out of Forbes St at Liverpool St in AM peak on school days | LATM Scheme recommends a roundabout at this intersection together with pedestrian crossing facilities across the eastern leg of Liverpool St. These measures will assist traffic exiting Forbes Street at Liverpool St |
| W3 | Secretary – Strata Plan SP 52111 Roslyn Gardens | - Objects to the angle parking proposal in Roslyn Gardens and considers the proposal is unsafe adjacent St Luke's Hospital and without any established need<br>- Other concerns include increased noise and congestion from the angle parking as well as the need for footpath upgrades<br>- Considers that there are other LATM measures available to reduce traffic speeds in the street | | There are 2 options for Roslyn Gardens which are the angle parking scheme or the proposed bicycle route. Based on the community views expressed at 2nd Community forum and public submissions, the proposed bicycle route is the preferred option of the community and has been recommended. Notwithstanding this, it is also recommended that if the angle parking proposal is to proceed that a design audit should be undertaken to ensure any potential safety issues are identified and addressed before implementation |
| W4 | Macleay Street Residents | Suggested the following measures be considered:<br>(i) Reduce speed limit to 40km/h.<br>(ii) Increase speed signage including consideration of illuminated signs.<br>(iii) Roundabouts on Macleay St at Manning St, Rockwall Cr and Orwell St. | | (i) 40km/h speed limit recommendation of study.<br>(ii) Speed zoning signage is normally installed in accordance with RTA standards in NSW.<br>(iii) Roundabouts at intersections are not compatible with pedestrian safety and amenity or with future bicycle lanes, which are to be provided in Macleay St. Alternative traffic and pedestrian management controls are recommended at Orwell St, Rockwall Cr and Manning St as part of the LATM Scheme. |

| | | Comments on Scheme | Other Matters / Comments | Transport & Urban Planning's Comments |
|---|---|---|---|---|
| W4 (cont) | | (iv) Soft humps in Macleay St between Challis Ave and McDonald St and between Challis Ave and Rockwall Cr.<br><br>(v) Move pedestrian crossing in Macleay St from east side of Rockwall Cr to Ikon (building) area on soft hump.<br><br>(vi) consider speed ripple strips. | (vii) Consider footpath patrols north of Greenknowe Ave.<br>(viii) Consider acoustic cameras (fixed or portable)<br>(ix) Better and increased co-operation with Kings Cross Police, venue managers and local residents.<br>(x) Quiet. Zone signage.<br>(xi) Add Police targeting noisy vehicles to sign down at the Wharf.<br>(xii) Overall improve street scaping of the neighbourhood<br>(xiii) Increase public transport to and from Kings Cross | (iv) Additional soft humps may affect parking, and for this reason are not favoured.<br><br>(v) The existing pedestrian crossing at Rockwall Cr is used by 152-169 pedestrians per hour in the peak hours. There is no benefit in relocating this crossing as suggested. In addition, improvements are proposed in the LATM Scheme by way of either a raised crossing facility or traffic signal control at the intersection.<br>(vi) Speed ripple strips are normally used on high speed roads where the speed limit is reduced, due to a change in traffic conditions ahead that requires lower vehicle speeds. Their application in urban areas is unlikely to be effective, and other devices are normally used. Ripple strips also produce high noise volumes when driven across and would defeat the desired noise reduction sought by the residents.<br><br>Items (vii) to (xiii) are not matters for this study. |
| W5 | Resident McElhone St, Woolloomooloo | States that traffic counts undertaken for McElhone St were undertaken when McElhone St was blocked due to a rockslide | | It is agreed that McElhone St was blocked when the traffic counts were undertaken. This is acknowledged in Appendix 1 (W7). It is recommended that the City undertake new traffic and vehicle speed counts in McElhone St to determine if any additional LATM measures are required in McElhone St between William St and Reid Ave. |
| W6 | Ratepayer / Resident PO Box, Darlinghurst | | Requests that a speed hump be provided in Dowling Street between Cowper Wharf Rd and Nicholson St to reduce opportunities for street racing | This is a new request (i.e. not raised in first round of submissions) and would require investigation by the City including traffic and speed counts in Dowling St. |
| W7 | Ratepayer / Resident No address (email) | Congratulated Council staff on the draft scheme | | Comments noted. |

| | | Comments on Scheme | Other Matters / Comments | Transport & Urban Planning's Comments |
|---|---|---|---|---|
| W8 | Resident Cowper Wharf Rd | Concerned that the proposed scheme Cowper Wharf Rd which reduces eastbound traffic to one lane plus a parking lane will be insufficient to accommodate the parking demands at Harry's Café De Wheels and Blue Hotel where cars / vehicles often double park blocking one of the eastbound lanes. | | Comments noted. Parking will be increased as part of proposal. Double parking is an enforcement matter. City may need to increase parking enforcement in Cowper Wharf Road. |
| W9 | Paddington Society | (i) Generally support the proposed LATM measures.<br><br>(ii) Strongly supports the introduction of the 40km/h speed limits but suggests that careful attention be paid to the design of the LATM measures so that vehicle speeds are lowered in line with the posted 40km/h limit.<br><br>(iii) Supports the total closure of Liverpool St at Oxford St (Option 4).<br><br>(iv) Supports the best option for the introduction of two way traffic in Boundary Street, McLachlan Ave and Neild Ave recognising that the RTA would not accept any closure or change that significantly reduces the traffic efficiency in New South Head Road or the Cross City Tunnel. | (v) Notes that design for two way traffic should incorporate provision for bicycles and footpath improvements. Also notes that future pedestrian and cyclist crossing opportunities of New South Head Road at Neild Ave should be investigated by the City, Woollahra Council and the RTA | Comments for Items (i) to (iii) noted.<br><br>Item (iv) is a matter for the City to follow up with Woollahra Council. An additional signalised pedestrian crossing across New South Head Road is a matter for the RTA. |

| | | Comments on Scheme | Other Matters / Comments | Transport & Urban Planning's Comments |
|---|---|---|---|---|
| W10 | Resident<br>Liverpool St<br>Sydney | (i) This submission critiques the draft study report and disagrees with the size of the study area, the community consultation process including the views and matters raised during the process. | | (i) The study area, community consultation process for the study and study brief were set by City Council. |
| | | (ii) Disagrees with a number of statements made in the draft study report, particularly in relation to road classifications and dismisses the study as 'pro vehicle traffic' and not meeting the objectives of a LATM study. | | (ii) The draft study report and recommendations balance the access needs of residents with the management of through traffic.. The study recommends lower speed limits, a range of LATM, pedestrian and cyclist measures that will lower vehicle speeds and improve pedestrian and cyclist safety on the City's road network throughout the whole study area as well as generally calming traffic using the local streets in the area.<br>The East Sydney area has already had a number of LATM treatments implemented on the road network following the Eastern Distributor. These measures together with the Eastern Distributor have greatly reduced the amount of traffic that historically used a number of streets in the East Sydney area including Crown St, Bourke St and Liverpool St.<br>Other LATM improvement measures are recommended in East Sydney as part of the recommended scheme, or are options for further consideration. The LATM measures in the recommended Improvement Scheme meet the study objectives and suggested measures put forward that would either affect public transport or transfer traffic from one street to another parallel street (i.e. not to State or Regional roads) have not been adopted due to their impacts. |
| | | (iii) The submission maintains that Liverpool St, Burton St and Crown St are local residential streets and as such should not carry more traffic than 2000 vpd. | | (iii) For roads such as Crown St, Liverpool St and Burton St currently play in the City area, it is acknowledged that the roads serve a range of land uses including educational, commercial, entertainment and residential in the Darlinghurst and East Sydney areas and therefore the application of desirable traffic volume threshold of 2,000 vpd for a local residential street is not appropriate. These roads have a wider role in the City's road hierarchy rather than to just serve the land uses in East |

| | | Comments on Scheme | Other Matters / Comments | Transport & Urban Planning's Comments |
|---|---|---|---|---|
| W10 (cont) | | | | Sydney. Section 3.5.1 of the study report states that desirable volume thresholds for local roads in other areas including mixed areas is 4,000 vpd and for a collector road is 5,000 vpd in a residential area and 10,000 vpd in other areas. These roads typically carry one lane of traffic in each direction and parking. |
| | | (iv) Disagrees with the recommended traffic signals at the intersection of Liverpool St / Bourke St based on:<br>(a) lack of analysis of when the 25 accidents occurred and in particular if there has been a reduction in recent times; | | (iv) (a) The provision of traffic signals is the best option for the intersection of Bourke St / Liverpool St. The total number of accidents at Bourke St and Liverpool St was 25 accidents, with 12 injury accidents for the 5½ year period. There was no reduction in the number of accidents that occurred in the final 18 month period between January 2005 and June 2006 with a total of 8 reported accidents. Twenty Two (22) of the accidents were cross traffic and 3 were pedestrian accidents, all of which are considered correctable by traffic signals. |
| | | (b) considers that there is no guarantee that there will be a reduction in accidents, given that other traffic signal sites have a relatively higher number of accidents; | | (b) Any comparison of accidents number to other traffic signal controlled intersection is not valid, unless the number of vehicles using the intersection is also included. In this regard, the Liverpool St / Bourke St intersection has a higher accident rate based on the number of vehicles using the intersection than the William St / Crown St intersection, which had the highest number of intersection accidents in the study area over the study period. |
| | | (c) considers that traffic signals are pedestrian unfriendly, expensive and raise the status of local roads. | | (c) Bourke Street will be a future cyclist route with a separated cycleway. Currently total pedestrian volumes crossing at the intersection in peak hours are 250-282 pedestrians per hour and traffic volumes are in the order of 843-978 vpd and traffic signals are the best option to address the accident problem and provide for all users at the intersection including the future separated cycleway. |

| | | Comments on Scheme | Other Matters / Comments | Transport & Urban Planning's Comments |
|---|---|---|---|---|
| W10 (cont) | | (v) Disagrees with the analysis undertaken for the Liverpool St options at Whitlam Square and considers that Option 4 should be recommended. | | (v) The draft study report documented the 4 options that are available for Liverpool St at Oxford St and documents the changes required and the impacts of each option and did not recommend a course of action.<br>As no option provides a distinct community benefit, it is recommended that the existing arrangements are maintained until a need is shown. |
| | | (vi) Considers that the study does not provide any recommendations that support the 389 bus route, through East Sydney, whereas ESNA's Community Strategic Plan (February 2002) made a number of recommendations that assisted the bus route. | | (vi) Transport and Urban Planning's discussions with the STA did not indicate that STA had any concerns with 389 bus route in the East Sydney area (i.e. Burton St, Bourke St, Stanley St, Yurong St), although they confirmed they were preparing an Integrated Transport Plan for the Eastern area which includes the study area. In addition, a review of the bus route and travel conditions in East Sydney did not reveal any delays for buses.<br><br>ESNA's 2002 Strategic Plan included a shared zone in Stanley St and a road closure in Liverpool St on the eastern side of Bourke St. Both of these measures would impact on the bus servicing times through East Sydney. The provision of a shared zone on a bus route would raise right of way and potential safety issues, given that pedestrians in the shared zone have right of way. It is acknowledged that in a meeting with ESNA representatives during the study, the ESNA representatives agreed that the shared zone may not be appropriate and withdrew this proposed measure.<br><br>The closure of Liverpool St on the eastern side of Bourke St would transfer traffic to Burton St between Bourke St and Darlinghurst Road / Victoria St, which is the bus route. This additional traffic would increase bus servicing times. |

| | | Comments on Scheme | Other Matters / Comments | Transport & Urban Planning's Comments |
|---|---|---|---|---|
| W10 (cont) | | (vii) Considers that ESNA's proposed road closure of Liverpool St on the eastern side of Bourke St would have clearly stated advantages and that the draft study analysis on this matter and the nature of the traffic using Forbes St associated with SCEGGS lacks local knowledge. In this regard, traffic turning right into Forbes St under the proposed roundabout will cause queuing in the steep western approach of Liverpool St for eastbound traffic. | | (vii) Analysis indicated that a closure of Liverpool St on the eastern side of Bourke St could not be supported as most of the displaced traffic would simply transfer to Burton St between Bourke St and Darlinghurst Rd/Victoria St with increased use of Forbes St between Liverpool St and Burton St to access Forbes St north of Liverpool St. Traffic volumes in Liverpool St east of Bourke St in the peak hours are 340-419 vph eastbound and 186-218 vph westbound. If Liverpool St at Oxford St is restricted the eastbound volumes would be reduced by approximately 90vph. As noted above, the increased traffic using Burton Street between Bourke Street and Victoria Street would affect the bus route.<br><br>The proposed roundabout at Liverpool St / Forbes St, the peak hour traffic counts show that the left turn into Forbes St is 99-107 vph during these periods while the right turn is 111-212 vph. The roundabout will cater for all traffic using the intersection and will particularly assist vehicles turning right out of Forbes St into Liverpool St. The roundabout will change priority at the intersection with Liverpool St no longer having priority over Forbes St. The traffic modelling indicates that delays at the intersection will be satisfactory. |
| | | (viii) Burton St, west of Bourke Street shared zone and other measures | | (viii) A number of LATM measures have been recommended in Burton Street between Bourke St and east of Crown St including consideration of a future shared zone between Palmer St and Crown St. |
| | | (ix) Study has not specifically examined the traffic movements associated with the SCEGGS and Sydney Grammar. Considers that right turn traffic into Forbes St at Liverpool St associated with SCEGGS will cause traffic queuing in Liverpool St and disrupt residents. | | (ix) The study has collected traffic and pedestrian data on the road network and addresses identified problems, issues raised in the community consultation process and included in the study brief. With regard to SCEGGS School the proposed roundabout and other pedestrian measures will address the identified issues at the Forbes Street / Liverpool St intersection. Transport and Urban Planning disagrees with the comment that the roundabout will disrupt residents. The section of Bourke St adjacent SCEGGS was examined at school times and no significant |

| | | Comments on Scheme | Other Matters / Comments | Transport & Urban Planning's Comments |
|---|---|---|---|---|
| W10 (cont) | | | | problems were observed. No traffic issues were raised in the community consultation process or in a subsequent meeting with ESNA representatives about Sydney Grammar. No issues with the school were picked up in the traffic and pedestrian surveys.<br><br>(x) The study is an integrated approach to community needs and good transport analysis. The study recommends uniform lower speed limits on city streets and has identified a range of uniform measures on the road network to address identified issues and concerns in accordance with best practice and Guidelines / Standards for Traffic Engineering. |
| | | (x) The report is deficient in an Integrated Precinct based traffic vision and tends to treat each issue on an ad hoc basis. | | |
| W11 | ESNA East Sydney | (i) ESNA states that the study and draft scheme has failed to protect or put in place measures to reduce the traffic volumes in the East Sydney streets located between College St, Oxford St, William St and Forbes St and in particular Crown St, Liverpool St and Burton St. ESNA considers all of these streets are local residential streets and as such measures and a strategy should be implemented to reach the desirable delay threshold volume of 2,000 vpd (for a residential street) in all these streets. | | (i) The role in the City's overall road hierarchy that streets such as Crown St, Liverpool St and Burton St is not restricted to servicing the land uses in East Sydney. Crown Street for example has a much wider role in the City road network servicing land uses in Redfern, Surry Hills, Darlinghurst and Woolloomooloo as well as East Sydney. Similarly, Liverpool St and Burton St service land uses in Darlinghurst as well as East Sydney and therefore the streets have a role than that is wider than the East Sydney precinct.<br><br>In these circumstances, the application of a desirable threshold for a residential street of 2,000 vpd is not considered appropriate, due to the role performed by all of these roads. The area between William St, Oxford St, College St and Victoria St contains a mix use of uses including educational, entertainment, commercial as well as residential. |

| | | Comments on Scheme | Other Matters / Comments | Transport & Urban Planning's Comments |
|---|---|---|---|---|
| W11 (cont) | | (ii) ESNA considers that participant views on various traffic control devices including road closures collected at the first Community meeting are meaningless in the context of reflecting community attitudes and should be discarded. | | (ii) ESNA's comments are noted regarding the views expressed at the first community consultation meeting. |
| | | (iii) ESNA maintains that Liverpool St should be closed in two locations, namely:<br>(a) at Whitlam Square;<br>(b) on the eastern side of Bourke St so that traffic volumes can be reduced to less than 2,000 vpd in Liverpool St. With regard to the Whitlam Square options, ESNA supports Option 4. | | (iii) (a) See Item (v) in W10.<br>(b) Analysis does not support the second closure of Liverpool St on the eastern side of Bourke St. This would disadvantage residents and businesses in Forbes St, north of Liverpool St and increase traffic volumes in Burton St east of Bourke St as well as in Forbes St between Burton St and Liverpool St unless this street is also closed. Currently there are 97-107 vph which turn left into Forbes St from Liverpool St in the peak hours. This traffic and the other traffic in using Liverpool St, east of Bourke St will simply transfer to Burton St and not to either William St and or Oxford St as suggested by ESNA. Those eastbound vehicles wishing to access Forbes St north of Liverpool St will use Forbes St between Burton St and Liverpool St increasing traffic in that section of Forbes St. Also see Transport and Urban Planning's comments for W10 (iii). |
| | | (iv) Liverpool St at Bourke Street. | | (iv) This is the same issue raised in W10 (iv). See Transport and Urban Planning's response for W10 (iv). |
| | | (v) Burton St between Bourke St and Crown St future shared zone. | | (v) This is the same issue raised in W10 (viii). See Transport and Urban Planning's response for W10 (viii). |
| | | (vi) (a) ESNA supports the proposed 40km/h speed limit but suggests it will require monitoring and enforcement. | | (vi) (a) Enforcement and monitoring of speed limits is a matter for the City following implementation. |

| | | Comments on Scheme | Other Matters / Comments | Transport & Urban Planning's Comments |
|---|---|---|---|---|
| W11 (cont) | | (b) Suggests that heavy vehicles be banned from entry to the narrow streets of East Sydney with an exception for the 389 bus.<br><br>(vii) ESNA has raised a number of issues concerning parking in the East Sydney area.<br><br>(viii) SCEGGS and Sydney Grammar Schools.<br><br>(ix) (a) ESNA supports the following measures in the draft scheme.<br><br>N5, N24 (if the local residents really want it), S6, S8 (but considers it unnecessary if Liverpool St is closed east of Bourke St), S10, S11 (but prefers a road closure), S12, S13, S14, S15, S16, S17, S18, S19, S21 and Option 4 for S22 (i.e. Liverpool St at Whitlam Square).<br><br>(b) ESNA does not support S7, i.e. traffic signals at Liverpool St / Bourke St. | | (b) This is a new matter and would need to be investigated by the City.<br><br>(vii) Parking is not a matter for this study and ESNA's concerns would need to be investigated by the City as a separate matter.<br><br>(viii) This is the same issue raised in W10 (ix). See Transport and Urban Planning's response for W10 (ix).<br><br>(ix) (a) N24 was requested by a resident in McElhone Street and involves a section of Bourke Street controlled by the RTA. |

| | | Comments on Scheme | Other Matters / Comments | Transport & Urban Planning's Comments |
|---|---|---|---|---|
| W12 | Bike East | (i) Bike East supported nearly all the elements of the draft scheme subject to certain qualifications, mostly relating to the detail design issues and cyclist access (a summary is attached). | | (i) Comments noted. |
| | | (ii) Bike East does not support N24, which is the additional left turn lane from Bourke St to William St unless the design allows for separate bicycle road along Bourke St at William St. | | (ii) The additional lane would not affect bicycle path in Bourke St at William St. |
| | | (iii) Bike East has raised a number of qualification issues (called threshold issues), which include connectivity of cycle routes to open space and schools, William Street, two way traffic in Boundary Rd, McLachlan Ave and Neild Ave, Craigend St, Cowper Wharf Rd proposal and Roslyn Gardens. | | (iii) Most of the threshold issues relate to the City's Cycle Strategy or are detail design matters. |
| | | (iv) Bike East does not support the draft proposal for Cowper Wharf Road shown on Figure 15 and requests changes. | | (iv) The City is examining an alternative design for Cowper Wharf Road. However, Figure 15 is a concept plan and the detail design would include the appropriate standards for bicycles. |
| | | (v) Bike East supports Option D for Liverpool St at Whitlam Square subject to suitable design accommodating bikes | | (v) Comment noted. |

## BIKE EAST SUMMARY

### Table 1 – Comments on Draft Scheme (Parts 5 and 6 of Draft Report: City East Traffic Study)
### East Sydney Traffic Study and Draft LATM – Submission

| *Approved City Works or Proposals* **(6.1 & 6.2)** | *Comments* | *Bicycling recommendation* |
|---|---|---|
| 5.7; N15; N16; N23; S1; S8; S13; S14 | Consider the bicyclist: no lane passage squeeze point between >3.3 and <3.7m be created | Support – subject to ensuring that the passage through for cyclists complies with standards |
| N20; N25; S4; S6; S9; S10; S12; S19 | LATM affects SBR examination and proposals | Supported – subject to co-ordination with SBR1 examination and determination |
| N17 & N18; S3; S20; S22 | See relevant **Threshold issues submission points and Recommendations 1 - 11** | Supported – subject to consideration of detailed comments in the submission |
| N1; N2; N6 – N8; N10; N11a & N11b; N12; N14 | This is part of the Sydney Harbour Foreshore Cycleway under the Cycling Strategy | Supported – subject to consideration of detailed comments in the submission and need for examination of SBR before final designs agreed |
| 5.6 ...Bourke and Liverpool Streets; N1; N21; N24; S2(a), (b) and (c); S7; S11; | Under the Cycling Strategy an SBR is proposed for Bourke Street | Support traffic light controls at Liverpool St; all LATMs subject to incorporation of SBR design |
| N3; N13; | Affects Roslyn Street – pedestrian overbridge and future bicycling facilities along Bayswater Road parallel to Kings Cross Tunnel | Support – subject to ensuring cyclist access to overbridge and after consideration of bicycle facilities east of Kings Cross Road |
| S5 | Extension of Oxford Street bicycle facility between Taylor Sq and Greens Road | Support – subject to consideration/incorporation of the bicycle facility design for Oxford Street |
| N5; S15 | 40km/h speed zoning excluding RTA roads | Strongly supported |
| N4; N19; N22; N26; S16 & S17; S19 | Shared zoning | Strongly supported |
| N24 | Extra lane for left turn | Strongly opposed – unless the design still allows space for SBR along Bourke @ William Street |
| S18; S21 | Road or lane closures | Support – subject to pedestrian and cyclist through access |
| Overall Comment | Kerb blisters are not sound unless fully integrated with the footpath design | Refer such proposals to City Projects for appropriate design solutions |

# APPENDIX 3

## CITY EAST LATM
## SAFE ROUTES TO SCHOOL AUDIT

| Concern / Issue | Location | UBD Reference |
|---|---|---|
| Missing kerb ramps | Intersection of Barcom Avenue and Leichhardt Street, Darlinghurst | Map K, K10 |
| | Boundary Street (Southern side, left of Campbell Avenue), Darlinghurst | Map K, K11 |
| | Intersection of Liverpool Street and Barcom Avenue, Darlinghurst | Map K, M8 |
| | Intersection of Liverpool and Bourke Streets, Darlinghurst | Map K, C6 |
| Extension of School Zone needed (to include the entrance on Challis Ave) | Challis Avenue, Potts Point | Map J, M10 - N10 |
| Uneven Path – Trip hazard | Western side of Macleay Street, between Rockwall Cr and Manning St, Potts Point | Map J, P12 - P13 |
| | At the end of Oswald Lane, meeting Barcom Avenue, Darlinghurst | Map K, Q6 |
| | Western side of Forbes Street, next to St Vincent's Caritas Centre (Between Bourke and Burton Sts) | Map K, C10 - E8 |
| Potential conflict between pedestrians and cars entering/exiting car park | Car park entrance at Cathedral Square, off Cathedral Street, Woolloomooloo | Map F, N16 |
| Pedestrians cross on unmarked side of intersection (short cut) | Intersection of Liverpool and Bourke Streets, Darlinghurst | Map K, C6 |
| No marked pedestrian crossing (a lot of traffic on Stanley Street during peak times) | Intersection of Stanley and Riley Streets, Darlinghurst | Map H, Q3 |
| No Parking Sign needs replacement (obstructed by sticker) | Southern side of Berwick Lane, at Palmer Lane, Darlinghurst | Map K, B5 |
| Drivers disobeying No Parking (Thursdays only) sign – there to allow school buses to take students to sports on Thursdays) | St Mary's Road, Woolloomooloo (next to St Mary's Cathedral School) | Map F, Q15 |

| **Concern / Issue** | **Location** | **UBD Reference** |
|---|---|---|
| Narrow footpath | Wilson Street, Woolloomooloo (along Plunkett Street Primary School) | Map J, H13 |
| | Maclean Street, Woolloomooloo | Map J, H13 |
| | Clapton Place, Darlinghurst | Map K, E4 - H2 |
| | Chaplin Street, Darlinghurst | Map K, J7 - K8 |
| | West Street, Darlinghurst | Map K, L7 - K9 |
| | West Avenue, Darlinghurst | Map K, L9 |
| No footpath | Womerah Lane, Darlinghurst | Map K, N6 - Q5 |
| | Oswald Lane, Darlinghurst | Map K, Q5 |
| | Lindsay Lane, Darlinghurst | Map K, N8 |
| | Cow Lane, Darlinghurst | Map K, L8 |
| | St Peters Lane / Premier Lane, Darlinghurst | Map K, D1 - I2 |
| | Kirketon Road (north of Farrell Ave), Darlinghurst | Map K, I3 |
| | Farrell Avenue (between Kirketon Rd and Darlinghurst Rd), Darlinghurst | Map K, I3 - J3 |
| | Thomson Lane, Darlinghurst | Map K, D4 - D5 |
| | Shorter Lane, Darlinghurst | Map K, D5 |
| | Berwick Lane, Darlinghurst | Map K, B5 |
| | Palmer Lane, Darlinghurst | Map K, C4 - B5 |
| | O'Briens Lane, Darlinghurst | Map K, B4 |
| | Chapel Street, Darlinghurst | Map H, R3 to Map K, B3 |
| | Liverpool Lane, Darlinghurst | Map H, Q5 to Map K, A5 |
| | Woods Lane, Darlinghurst | Map K, A4 |
| | Burnell Place, Darlinghurst | Map H, R4 |
| | Rosella Lane, Darlinghurst | Map K, B1 - B3 |
| | Yurong Lane, Darlinghurst | Map H, Q1 to Map K, A1 |
| | Barnett Lane, Darlinghurst | Map K, A1 - B1 |
| | Wisdom Lane, Darlinghurst | Map K, C1 - C2 |
| | Sutton Lane, Darlinghurst | Map K, C3 |

| **Concern / Issue** | **Location** | **UBD Reference** |
|---|---|---|
| No footpath | West Lane, Darlinghurst | Map K, K9 |
| | McDonald Lane, Potts Point | Map J, L9 - P9 |
| | Tusculum Lane, Potts Point | Map J, M13 - M14 |
| | Pring Street, Woolloomooloo | Map J, J14 |