Absolutely Positively Wellington
Me Heke Ki Pōneke Wellington City Council

CITY INFRASTRUCTURE COMMITTEE
6 AUGUST 2003

REPORT 3
(1215/48/IM)

BUS PRIORITY LANES MONITORING

1. Purpose of Report

To report to Committee the monitoring results for the first year of operation of the bus lanes introduced in 2002, and to outline a forward programme for the expansion of bus lanes.

2. Executive Summary

Three bus lane schemes were introduced in June 2002. These were in Kaiwharawhara Rd, Adelaide Rd and Chaytor St. They were designed to reduce bus travel times without unduly impacting on general traffic. Bus lanes also show support for a mode of transport which uses less road space, is more environmentally friendly and moves larger numbers of people than the equivalent number of private cars. This is in keeping with the broader objective of increasing patronage by improving the performance of buses through reduced traffic delay and reliability. This in turn is expected to make the service more attractive to users.

Monitoring of the bus lanes was carried out by Traffic Design Group and has shown that, in the first year, the performance of the bus lanes has exceeded expectations. There have been time savings for buses on all routes and an indication in two locations that car travel times have also reduced.

There are a number of concerns starting to come through over the lack of enforcement, and it is proposed that the Council actively pursue acquiring powers to enforce bus lanes as is done in Auckland.

It is proposed that a programme of bus lane expansion be pursued and that individual schemes be reported back to Committee as they are developed.

3. Recommendations

It is recommended that the Committee:

1. *Receive the information.*

2. *Agree that the bus lanes in Adelaide Road, Kaiwharawhara Road and Chaytor Street continue to operate.*

3. *Note the forward programme for bus lane extensions and improvements.*

*4. Agree the **officers** develop a business case for Council to carrying out its own enforcement, develop procedures and processes modelled on Auckland's experience, and formulate an application to the Commissioner of Police for authority to carry out bus lane enforcement.*

4. Background

4.1 Previous Committee Decisions

In April 2002, The City Infrastructure Committee approved the introduction of three bus lanes as a one year trial. These were in:

- Kaiwharawhara Road
- Adelaide Road
- Chaytor Street

These schemes were to be monitored and the results reported to Committee six monthly. The first six months results were reported in February this year.

4.2 Expected Benefits of Bus Lanes

The schemes implemented in June 2002 are all kerbside with-flow lanes and operate 7am to 9am weekdays, except Chaytor Street which operates at all times. More than 4,000 bus commuters travelling into Wellington each day were expected to save around a minute of travelling time each morning. There was also an expectation that the bus lanes would have a positive impact on bus reliability.

Other benefits in introducing bus lanes were seen to be:

- Give priority to buses on arterial routes where buses are routinely caught in traffic queues during the morning peak times (7am to 9am)
- Reduce bus travel times
- Benefit passengers
- Make public transport more attractive to users
- Demonstrate Council's commitment to public passenger transport
- Help the environment
- Provide more efficient travel into the city
- Reduce dependence on private car use
- Use the existing road network more efficiently.

4.3 First Six Month Results

Results from the first six months monitoring showed that the bus lanes performed better than expected. Travel time savings were achieved for both buses and cars in Adelaide Road and Chaytor Street. Bus travel time savings were also achieved in Kiawharawhara Road but there was no change for motorists.

5. Discussion

5.1 Performance and Monitoring

The key performance targets set for measuring the success of the bus lanes were:

- That they should have little or no adverse effects on travel times for other traffic;
- That they should achieve at least half the forecast travel time savings for bus passengers.

Travel times surveys were carried out prior to the introduction of the schemes and these surveys were repeated after six weeks, six months and one year of operation. This was to ascertain the performance of the schemes and to check whether the expected results were achieved. Part of the monitoring was also to look at passenger ridership levels. Ridership surveys are conducted by the Regional Council yearly in February/ March and these results are given below. It should be remembered that passenger ridership figures are influenced by a number of factors but it is expected that they will give Council an indication over time, whether this initiative and others it is taking, are positive in terms of increasing patronage.

5.2 Results

Results from the latest survey confirm travel time savings for buses on all three bus lanes. The latest survey does not show the same impressive savings shown in November because in both the case of Adelaide Road and Chaytor Street there were major road works that impacted on the operation of the lane. In Adelaide Road a crane from a construction site caused buses to merge with general traffic before re-entering the bus lane. In Chaytor Street the construction of retaining walls reduced traffic speeds below 30km/h.

Results of all surveys are shown in the tables below and on graphs in the appendix.

Travel Time Savings
Travel time profiles through the morning peak are shown for cars and buses respectively by Figures 1 and 2 in the attached appendix.

The peak delay, or extra travel time above the free flow travel time, for each of the locations is shown below in tables 1 to 4:

CARS

Table 1

ROAD	PEAK CAR DELAY (min:sec)			
	May 2002	July 2002	November 2002	April 2003
Adelaide Road	5:12	5:17	2:36	5:34
Chaytor Street	2:56	2:19	1:30	3:30
Kaiwharawhara Road	2:20	2:17	2:58	3:29

Table 2

ROAD	AVERAGE CAR DELAY (min:sec)			
	May 2002	July 2002	November 2002	April 2003
Adelaide Road	3:14	2:01	1:01	1.54
Chaytor Street	1:22	1:13	0:36	1:44
Kaiwharawhara Road	1:24	1:01	1:21	1:23

BUSES

Table 3

ROAD	PEAK BUS DELAY (min:sec)			
	May 2002	July 2002	November 2002	April 2003
Adelaide Road	4:11	0:31	0:26	2:30
Chaytor Street	2:39	1:10	1:08	1:46
Kaiwharawhara Road	3:02	1:23	1:29	2:45

Table 4

ROAD	AVERAGE BUS DELAY (min:sec)			
	May 2002	July 2002	November 2002	April 2003
Adelaide Road	2:21	0:21	0:15	0:45
Chaytor Street	1:29	0:43	0:32	1:00
Kaiwharawhara Road	1:05	0:30	0:44	0:46

Despite disruption during the survey period the results clearly show a significant saving in bus travel times. These improved from the start of the scheme and have been sustained over the trial period.

Car travel times can also be considered to have improved for Adelaide Road and Chaytor Street taking into account the disruption on each of these routes during the survey. These types of disruption would normally be expected to cause significant delay but as can be seen from the results, car travel times are only marginally higher than pre-bus lane conditions.

Traffic Counts

Traffic counts, shown in table 5, undertaken as part of the monitoring program show that traffic flows have remained at similar levels over the trial period, although there was a slight drop off in July. This would be expected following publicity of a new scheme, where regular motorists go out of their way to avoid any associated frustrations brought about by change.

Table 5

STREET	PEAK HOUR TRAFFIC FLOWS (vph)			
	May 2002	July 2002	November 2002	April 2003
Chaytor Street (7:45 - 8:45)	911	705	829	840
Birdwood Street (7:45 - 8:45)	379	383	389	336
Adelaide Road (8:00 - 9:00)	1,366	1,178	1,254	1,230
Kaiwharawhara Road (7:30 - 8:30)	1,269	1,174	1,219	1,310

A comparison of traffic flow patterns during each of the survey periods is shown in Figure 3 of the appendix.

Pedestrian Counts

The separate counts of pedestrians alongside the bus lanes are shown in table 6 below. These are the peak hour pedestrian flows during the survey period. The bus lanes appear to have very little effect on pedestrian activity. The variance can be explained by the influence weather conditions have on pedestrian activity.

Table 6

ROAD	CROSSING ROAD (peds per hour)				WALKING ALONGSIDE LANE (peds per hour)			
	May 2002	July 2002	November 2002	April 2003	May 2002	July 2002	November 2002	April 2003
Adelaide Road	553	389	465	558	226	151	358	296
Chaytor Street	186	156	210	189	21	43	26	23
Kaiwharawhara Rd	0	0	2	15	28	21	33	55

The land-use along side each of the lanes was recorded before they were introduced, to monitor any effect. No businesses alongside the bus lanes have closed during their operation. Three of the five vacant buildings on Adelaide Road have been leased and three additional businesses have opened in Kiawharawhara Road. These changes represent a boyant economy but also demonstrate that the bus lanes appear to have had no adverse effect on adjacent business activity.

Ridership

Bus ridership during the period of the trial has generally risen 3% across the city. While it is difficult to get actual figures for each of the streets with bus lane schemes bus passenger figures produced by Stagecoach from route information show ridership increases on routes through the bus lanes has risen between 5% and 9%. This shows an encouraging increase ahead of the City wide rise. Bus passenger numbers carried on bus lane routes during the morning peak from 7am to 9am per week are as follows:

BUS PASSENGER CARRIED BETWEEN 7am and 9am PER WEEK			
ROAD	FEB 2002	FEB 2003	PERCENTAGE INCREASE
Adelaide Road	5954	6509	9.3%
Chaytor Street	6241	6600	5.4%
Kaiwharawhara Road	2063	2223	7.8%

5.3 Cyclists, Taxis and Other Road Users

At the conclusion of the year's trial, Council undertook to review the use of the new bus lanes by cyclists, taxis and other road users.

Cyclists
Cyclists have safely used the bus lanes throughout the trial and there is no apparent reason why their permitted use should change. There have been calls from cycle lobby groups for cycle signage to be erected in addition to the bus lane signage. To date cycle signage has not been erected because the lanes are narrower than the normally accepted width for inclusion of cycles without either the bus or the cyclist having to move out of the lane to pass. There is no evidence that this is a problem and education material provided to both bus drivers and cyclists clearly sets out best practice for these two users to safely coexist. It is proposed that to comply with accepted practice the signage should remain as it is but cyclists are not prevented from using the lanes if they wish to do so.

Other Users
Discussions with the LTSA indicate that new legislation being considered as part of the new "Traffic Devices Rule" supports the Councils current bus lane signage. It is most likely that the new legislation for bus lanes will allow emergency and enforcement vehicles, cyclists and motorcyclists. Therefore *Bus Lane* signage will imply use by these modes without additional signage. Cycle signage will be reserved for facilities dedicated to cyclists. If these modes are to be excluded so that a bus has exclusive use then signage will show *Buses Only*. Similarly if a traffic lane is to be dedicated to high occupancy vehicles then this will be identified *as* a *Transit Lane*. Transit lanes will be further classified by the minimum number of passengers to be carried before being allowed to use the lane. It should be noted that, for all the bus lanes now in place, through the city this categorisation of bus lanes would only require the north bound lane on Lambton Quay to be re-marked from *Buses Only* to *Bus Lane* to be consistent with the proposed LTSA approach.

Taxis
The use of bus lanes by taxis would also fit well into this regime. If taxis are to be permitted to use a bus lane then the lane would need to be designated a *Transit Lane*. This would also require the taxis to carry the stated minimum number of passengers. It is not proposed at this time to make the city bus lanes, transit lanes, as it would dilute the benefit currently being gained by a large number of bus passengers. The survey results show that there is no detrimental effect on car travel time as a result of the implementation of the bus lane, and the time savings by buses is not so great as to give a significant advantage to taxis or shared cars compared with single occupant vehicles. Taxis are also free to exercise alternative route choice and have greater flexibility in where they can pick up or set down passengers. The bus lanes do not deny taxis access

to any areas of the City and as such there is no compelling reason why they should be permitted to use bus lanes any more than other commercial vehicle operators. It is therefore proposed that the status quo remain.

5.4 Enforcement

While most motorists comply with the new bus lanes there are a growing number of callers frustrated at the blatant abuse by some drivers using the bus lanes, particularly Adelaide Rd. While any information on offending vehicles is passed on to the Police, the Council is powerless to do any more. Police tell us they do not have sufficient resources to put more time into the enforcement of bus lanes. They were happy to provide a presence when the bus lanes were first introduced and they will continue to deal with blatant offenders. However, now the scheme is up and running, general enforcement of the lanes takes a low Police priority. The Police believe the future enforcement for these schemes should be the responsibility of local authorities. Where bus lanes have been introduced elsewhere in New Zealand such as on the North Shore, and in Auckland City, the local authorities sought and obtained powers to carry out their own enforcement. Council officers have made preliminary investigations to understand the process and procedure for gaining the same powers. Having the power to enforce bus lanes gives the Council the opportunity to more proactively enforce in the future if it chooses to do so. The use of "state of the art" technology solutions, e.g. enforcement cameras, rather than using existing parking warden type techniques, is the way Auckland is heading, and a similar set up would work for Wellington. If Wellington wishes to maintain the benefits it has gained from bus lanes and continue to enjoy the co-operation of law abiding motorists, then it needs the power to effectively enforce bus lanes. This will require the development of enforcement objectives and procedures, and an authority from the Commissioner of Police to carry out the enforcement. With the agreement of the Committee, further work will be carried out in this area to establish costs and to develop the case for Council to become involved in this activity. The results of this work will be separately reported to Committee.

5.5 Forward Programme

Following on from the success of the trial bus lanes it is proposed to investigate and bring forward to the Committee the following bus lane schemes. These are in no particular order of priority.

i. Extension of Adelaide Road bus lane
ii. Extension of Chaytor Street bus lane
iii. Extension of Kaiwharawhara bus lane
iv. Karori bound bus lane on Glenmore Street
v. Bus lane on Kent Tce in advance of the Basin Reserve
vi. City bound bus lane on Hutt Road
vii. Evening peak hour bus lane on Adelaide Road

Already under study and the subject of a separate report, is a bus priority scheme for Dixon and Manners Streets area.

This list covers the areas of highest demand for bus travel time improvements.

The bus lanes on Lambton Quay, north bound and in Thorndon Quay, while marked as bus only lanes, have not been formalised by Council. These are self- enforcing but it is proposed that they be ratified by Council when the LTSA completes its review of the Traffic Devices Rule. Traffic resolutions will be bought forward to the Committee in the normal way once the outcome of the review is known.

6. Conclusion

The bus lanes introduced in June 2002 have achieved their set performance objectives. To date they have been effective in reducing bus travel times. This has been at no disadvantage to motorists. Earlier surveys indicate that there may even be some savings for motorists particularly in Adelaide Rd. It is therefore proposed that the bus lanes remain in place.

The Council will need to actively involve itself in the future enforcement of bus lanes if it wishes to achieve good compliance to protect the gains made for buses. It is therefore proposed that the Council seeks similar bus lane enforcement powers to those of Auckland City Council.

In line with what might be expected to come from the new LTSA Traffic Devices Rule it is proposed that the current signage of bus lanes remain unchanged. I.e. no separate signing is proposed for cyclists, however motorcyclist should be permitted to use the bus lanes. This is consistent with what currently happens in Auckland. Similarly it is proposed that Lambton Quay and Thorndon Quay be formalised as bus lanes following the out-come of the LTSA review. This will also allow these lanes to be enforced in the future if required.

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Supporting information

a) **Strategic fit**

This project supports the following outcomes in the Strategic Plan:

Outcome 8.1 – Transport Effectiveness
*A well planned/comprehensive transport network supports a compact and highly **liveable** city where people move about easily and safely.*

Outcome 8.2 – Transport Accessibility
*Transport options enable people to easily **fulfil** their work and **lifestyle** requirements.*

Outcome 8.3 – Transport Efficiency
***Efficient** transport contributes to the economic viability and growth of the city.*

Outcome 8.4 – Transport Sustainability
Transport solutions ensure wise use of resources and cater for the long-term needs of the community.

b) Annual Plan reference

Relates to CX135 Public Transport Improvements -passenger transport network upgrades

c) Annual Plan and Long Term Financial Strategy implications

Iniatives are covered by existing budgets

d) Treaty of Waitangi implications

None identified.

e) Consultation

***The** Wellington Regional Council and Stagecoach provided information and feedback on the bus lanes. Taxi operators and cycle groups are aware of Council's current position **on** bus lanes.*

f) Legal implications

N/A

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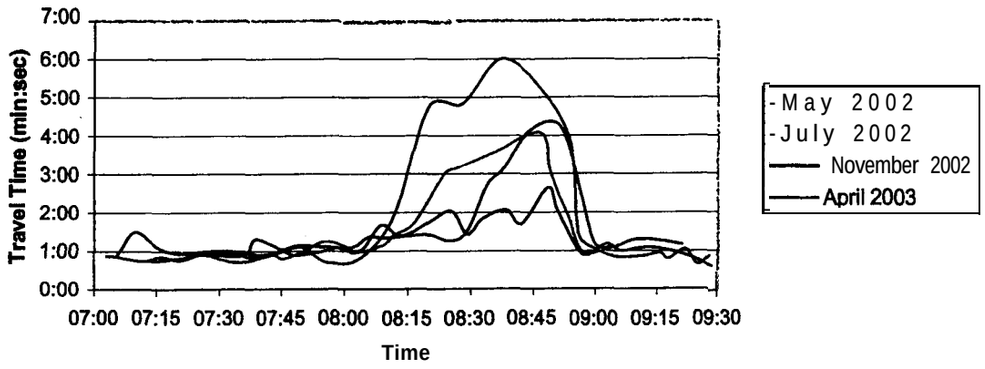
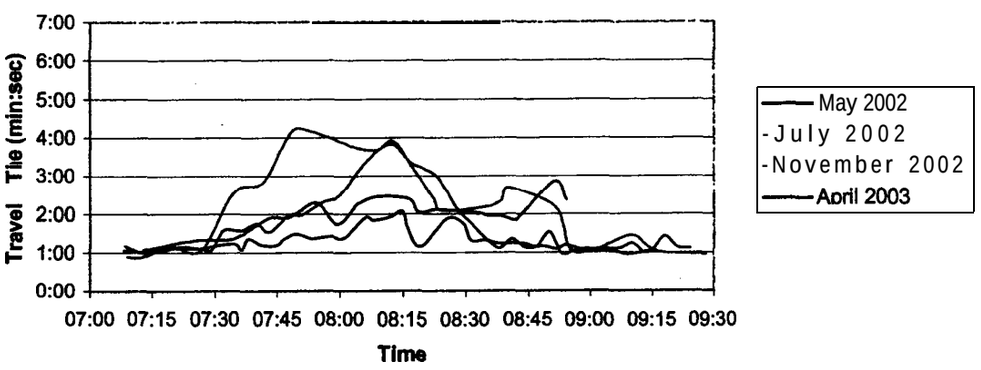
N/A

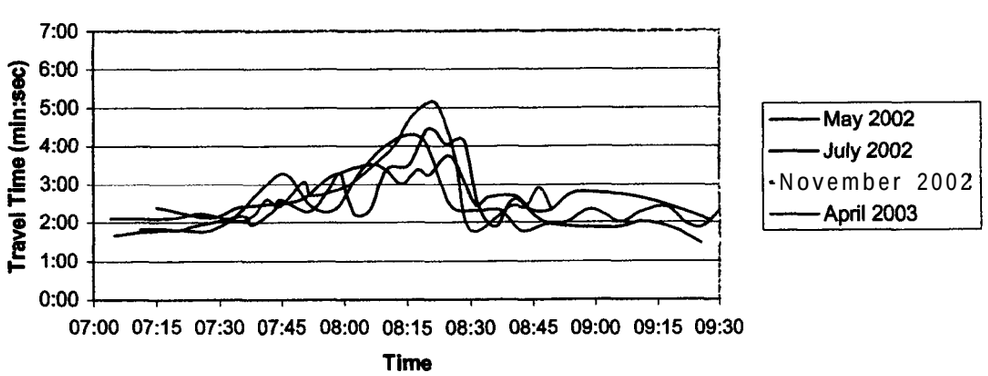
Adelaide Road Travel Time



Chaytor Street Travel Time

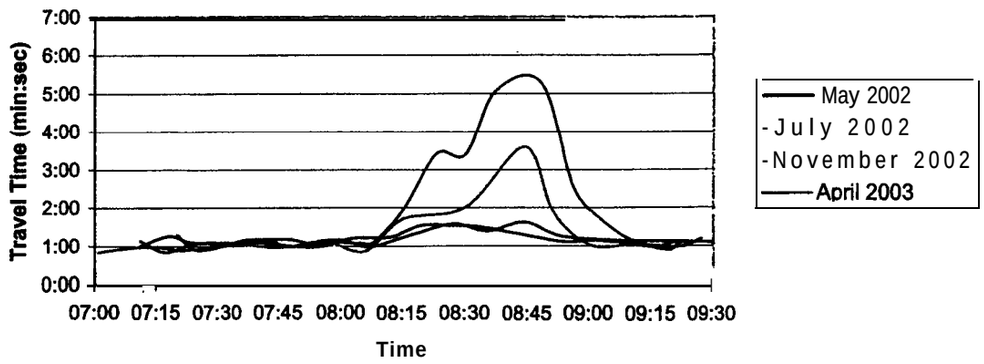


Kaiwharawhara Road Travel Time

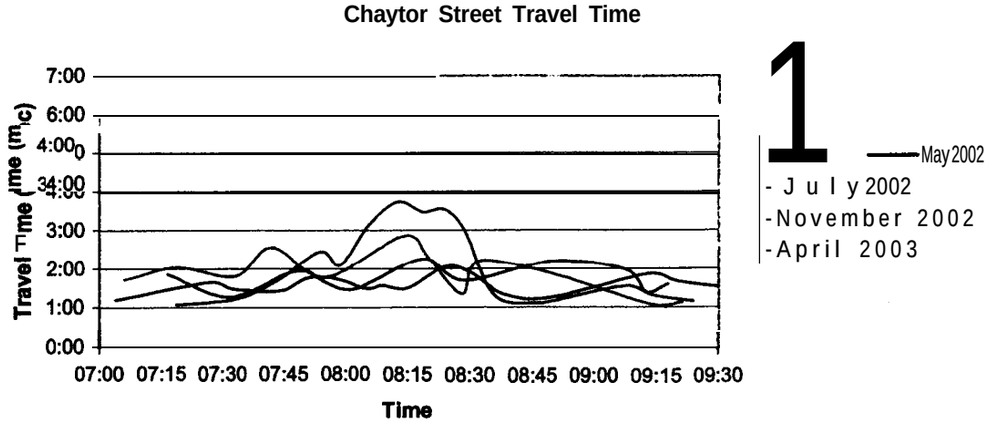


CAR TRAVEL TIMES 1

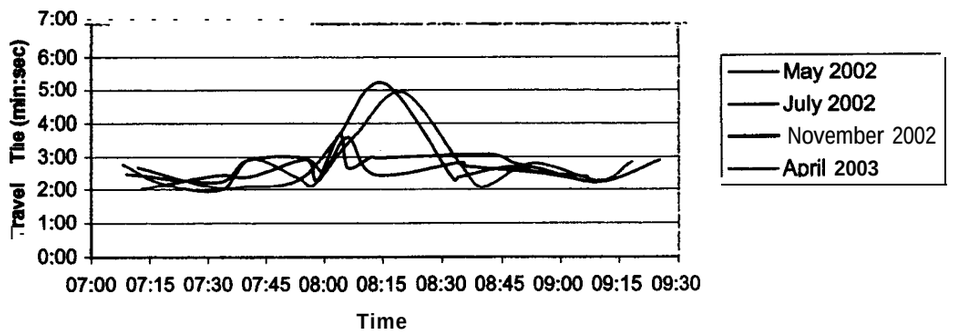
Adelaide Road Travel Time



Chaytor Street Travel Time

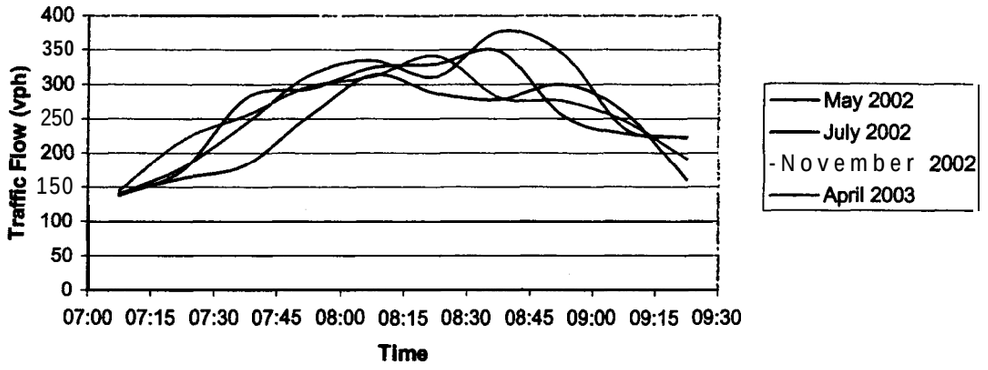


Kaiwharawhara Road Travel Time

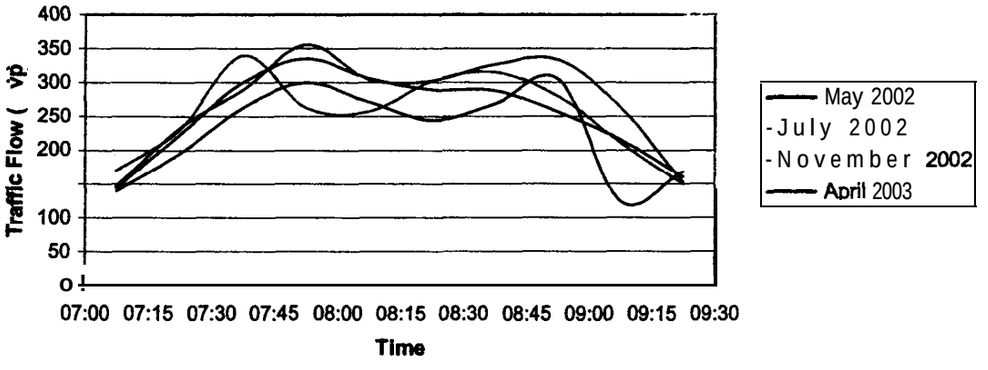


BUS TRAVEL TIMES

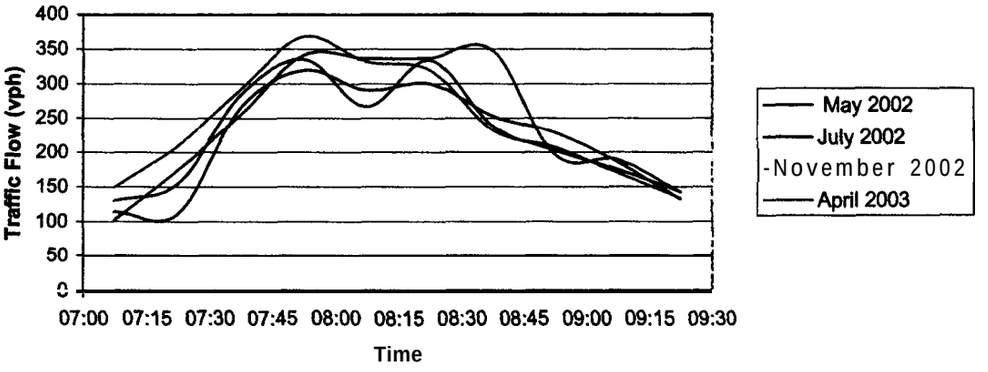
Adelaide Road Traffic Flow Profile



Chayton Street and **Birdwood** Street Traffic Flow Profile



Kaiwharawhara Road Traffic Flow Profile



TRAFFIC FLOW PROFILES 3