
REPORT 5
(1215/52/IM)

BUS LANE MONITORING AND TRIAL OF TAXI USE OF BUS LANES

1. Purpose of Report

To update the Committee on the performance of current bus lanes and to report back on the trial allowing taxis to use bus lanes.

2. Executive Summary

Monitoring of existing bus priority schemes continues to show sustained benefits for bus travel times. These travel time savings have had no detrimental effect on general traffic travel times and in some instances, reduced general traffic travel times have also been achieved.

A trial allowing taxis to use bus lanes was conducted over the last year on selected bus lanes. The effects were monitored during the course of the trial and no problems were identified. In general the average travel time for taxis was faster than general traffic and slightly slower than buses. This was achieved with no discernable effect on bus operations or their journey times. As a result it is recommended that taxis continue to be allowed to use designated bus lanes and that the situation continue to be monitored so that if the current operating conditions change then appropriate action can be considered.

3. Recommendations

Officers recommend that the Strategy and Policy Committee:

- 1. Receive the information.*
- 2. Agree to “in service” taxis using designated bus lanes with detailed traffic resolutions to be brought back to Committee for approval.*
- 3. Note “in service” taxi use of bus lanes will continue to be monitored as part of the annual bus lane monitoring survey.*
- 4. Note the results of the annual bus lane monitoring survey.*

4. Background

An annual survey is carried out to monitor the performance of bus lanes. This survey has been conducted independently by Traffic Design Group, a local specialist traffic engineering consultancy, since the first bus lanes were introduced in 2002. A summary of the results are discussed below.

In April 2008 SPC agreed to trialling taxi use of bus lanes. This was agreed to after a long period of advocacy by the industry. The trial was approved for the use of Adelaide Road, Kaiwharawhara Road, Glenmore Street, and Chaytor Street. Bus lanes in these streets represented a good cross section of bus operation and general traffic environments. Bus lanes in the central city were excluded because they carry heavy numbers of buses and in many instances operate as contra-flow lanes. It is anticipated that taxi use of these bus lanes would never be permitted because of safety and operation constraints.

5. Discussion

5.1 Monitoring

We have been monitoring the performance of bus lanes since their introduction in 2002. This includes the level of cycle, pedestrian and business activity adjacent to the bus lanes. The first schemes were introduced to reduce bus travel times without unduly impacting on general traffic. This has been achieved and the last surveys carried out by Traffic Design Group in 2009 continue to show sustained travel time savings on all routes. A summary of results for Adelaide Rd, Chaytor St, Kaiwharawhara Rd, Glenmore St, and Victoria St are shown in Appendix 1.

These results show we are still getting travel time savings for buses of around 2 minutes in Adelaide Rd and nearly a minute in Chaytor St. While there is some sustained reduction in general traffic travel times being achieved, which is particularly noticeable in Adelaide Rd, there is a growing trend of these time savings being eroded. This is attributed to a general increase in traffic particularly at intersections where growing volumes of opposing traffic are causing increasing delays. This emphasises the benefit of bus lanes in that, as parallel general traffic travel times are increasing the corresponding bus travel times are either unaffected or increasing at a lower rate.

Monitoring results also show a general trend towards increased cycling and walking in the vicinity of the bus lanes. It is evident from these results that the bus lanes have no detrimental effect on these modes.

Similarly the monitoring of adjacent land use has shown no discernable influence on nearby businesses from the operation of bus lanes.

The illegal use of bus lanes is also monitored. Infringement by unauthorised vehicles ranges from 0% in Glenmore St to 15% in Kaiwharawhara Road. There is however a trend emerging which suggests illegal use of bus lanes is increasing and is now typically at more than 12% as opposed to two years ago where the level of non compliance was more typically at about 3%. The period of greatest infringement is in the last 15 minutes of the peak travel period, which is arguably the busiest time. While these levels of infringement are considered

tolerable they need to be watched closely. We have probably reached the point where we can no longer rely on the goodwill of law abiding drivers and the Council will need to carry out enforcement from time to time to ensure the gains made for buses are not eroded.

5.2 Bus Lane Enforcement

Consistent with previous Council decisions, Council now has the capability of enforcing bus lanes. As concluded above there is no pressure to carry out a rigorous enforcement programme. No enforcement has been carried out to date but it is proposed to carry out a low level of spot enforcement on central city bound routes such as Adelaide Road and Kiawharawhara Road later in the year. This will be preceded by a period of informing motorists of their errant behaviour before tickets are issued.

The main driver in developing an enforcement capability is to reinforce the good level of voluntary compliance we enjoy and to be able to protect future bus priority measures as we introduce these through the city. Having an enforcement capability also gives us confidence, when allowing other vehicles such as taxis to use bus lanes, that we have an effective means of monitoring this and a deterrent to other motorists who maybe tempted to follow suit.

5.3 Taxi Trial

Following the Council's decision to allow trialling taxis using bus lanes, consultation was carried out with the taxi industry representatives to establish parameters for the trial. The industry was keen to see the best results from the trial which led to the development of a protocol for their use of bus lanes. The purpose of the protocol was to ensure all drivers:

- understood the purpose of the trial,
- were aware of the safety issues involved when using bus lanes and
- were provided with some guidelines and common sense rules around the use of the bus lanes and to give consideration to other users such as cyclists.

A copy of the protocol is attached in appendix 2. It was a requirement that every driver who wanted to use bus lanes sign up to the protocol to ensure they were aware of these requirements.

Council's decision to conduct a trial was restricted to "in service" taxis. The protocol was also seen as a mechanism to control this restriction. The idea being that if a driver contravened this condition or any of the conditions in the protocol they could be censured for their behaviour and have their permission to use the bus lane withdrawn.

It was also agreed with the industry that the success or otherwise of the trial would be measured by the following performance measures

- that bus travel times are not affected,
- peak delays for buses remain unchanged, and
- the level of general traffic non compliance does not rise.

These were agreed on the basis that the taxi use of bus lanes should not be at the expense of the small gains already achieved for buses. The bus lanes introduced to date are relatively short and sensitive to other impacts.

In line with the Committee decision the trial was conducted on four different bus lanes in the city. This enabled the effects of taxis in bus lanes to be assessed for different operating conditions. Two of the lanes, in Adelaide Road and Kaiwharawhara Road, operate in the morning peak, one lane, in Glenmore Street, operates in the evening peak and the fourth, in Chaytor Street, operates at all times. All four lanes have different traffic volumes, bus numbers and operating conditions, so provide a good spectrum for the trial.

The trial started in February 2009 and the activity of taxis was monitored throughout. There were no issues of concern identified during the trial. A formal survey by traffic engineering consultants, Traffic Design Group was carried out in August 2009 together with our annual bus lane monitoring survey. The results of this survey are shown in the bottom of the tables in appendix 1.

These results show that the use of bus lanes by taxis has had little or no effect on the operation of buses. Taxis themselves show on average an improvement in journey time over the general traffic but are still slower than buses. This is in part because the survey includes the journey time of taxis using the general traffic lanes.

The other conclusion drawn from the data is that only a small number of taxis use these routes at the time the bus lanes are in operation. So while we can be satisfied that during the trial period, taxis have had no measurable impact on bus lanes, their number and the number of buses is fairly low. Going forward we need to continue monitoring this situation with the view that changes might need to be made to protect bus travel time savings if this changes. This is most likely to happen when either bus numbers and/or taxi numbers grow significantly

6. Conclusion

Bus lane Monitoring

Bus lanes continue to provide significant travel time savings to buses with little or no disbenefit to general traffic.

Taxi Trial.

The use of bus lanes by taxis has had no detrimental effect on bus travel times under current operating conditions. It is recommended that taxis continue to be allowed to use designated bus lanes and their use of bus lanes continues to be monitored.

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Supporting Information

1) Strategic Fit / Strategic Outcome

The report fits with the Council's transport strategy which supports the economic, social, cultural and environmental aspirations of its citizens. In particular it is part of the development of the public transport system being the priority means for the movement of people along the Urban Development Strategy growth spines. The report is not inconsistent with Council's overall vision of Creative Wellington – Innovation Capital.

2) LTCCP/Annual Plan reference and long term financial impact

The project is contained in the Council Plan # CX402. The changes indicated here will lead to a small increase in operational expenditure in the coming year and subsequent years. This will however be offset by enforcement income to effectively be cost neutral.

3) Treaty of Waitangi considerations

N/A

4) Decision-Making

This is not a significant decision. The report sets out clear results supporting its conclusion and reflects the views and preferences of those with an interest in this matter who have been consulted.

5) Consultation

a) General Consultation

All affected parties have been identified. The effects of this work are largely confined to the taxi industry. It is proposed that consultation be targeted through the traffic resolution process which provides an appropriate opportunity for wider community input. The outcome of this process will be reported back to Committee.

b) Consultation with Maori

N/A

6) Legal Implications

There are no legal implications to be considered.

APPENDIX ONE

Adelaide Road

	MAY 2002	JULY 2002	NOV 2002	APRIL 2003*	JULY 2003	JULY 2004	AUGUST 2005	AUGUST 2006	AUGUST 2007	AUGUST 2008	AUGUST 2009
Peak hour flow rate (vph)	1,370	1,180	1,290	1,230	-	1,190	1,170	1,300	1,180	1,090	1,140
Duration of Peak (mins)	44	36	46	47	45	46	46	45	38	42	44
Car free flowing time (secs)	48	48	48	48	48	48	48	48	48	48	48
Average car travel time during peak (secs)	242	169	109	162	104	93	101	117	80	92	124
Maximum car travel time (secs)	360	365	204	382	215	207	176	242	230	254	273
Average car delay (sec)	194	121	61	114	56	45	53	69	32	44	76
Maximum car Delay (sec)	312	317	156	334	167	159	128	194	182	206	225
Bus free flowing time (secs)	66	66	66	66	66	66	66	66	66	66	66
Average bus travel time during peak (secs)	207	87	81	111	87	91	81	114	78	72	92
Maximum bus travel time (secs)	317	97	92	216	181	108	122	216	139	132	139
Average bus delay (secs)	141	21	15	45	21	25	15	48	12	6	26
Maximum bus delay (secs)	251	31	26	150	115	42	56	150	73	66	73
Taxi free flowing time (secs)	-	-	-	-	-	-	-	-	-	-	48
Average taxi travel time during peak (secs)	-	-	-	-	-	-	-	-	-	-	110
Maximum taxi travel time (secs)	-	-	-	-	-	-	-	-	-	-	242
Average taxi delay (secs)	-	-	-	-	-	-	-	-	-	-	62
Maximum taxi delay (secs)	-	-	-	-	-	-	-	-	-	-	194

* Construction equipment obstructed the bus lane and required buses to merge back into the adjoining traffic lane

Chaytor Street

	MAY 2002	JULY 2002	NOV 2002	APRIL 2003*	JULY 2003*	JULY 2004	AUGUST 2005	AUGUST 2006	AUGUST 2007	AUGUST 2008	AUGUST 2009
Peak hour flow rate (vph)	910	730	860	840	-	954	820	750	830	790	800
Duration of peak (mins)	63	76	67	81	65	45	70	70	76	53	54
Car free flowing time (secs)	54	54	54	54	54	54	54	54	54	54	54
Average car travel time during peak (secs)	136	127	90	158	138	125	147	99	104	153	172
Maximum car travel time (secs)	230	193	144	264	269	224	220	137	159	247	270
Average car delay (secs)	82	73	36	104	84	71	93	45	50	99	118
Maximum car delay (secs)	176	139	90	210	215	170	166	83	105	193	216
Bus free flowing time (secs)	65	65	65	65	65	65	65	65	65	65	65
Average bus travel time during peak (secs)	154	108	97	125	142	123	142	70	96	105	105
Maximum bus travel time (secs)	224	135	123	171	162	133	189	118	172	145	144
Average bus delay (secs)	89	43	32	60	77	58	77	5	31	40	40
Maximum bus delay (secs)	159	70	58	106	97	68	124	53	107	80	79
Taxi free flowing time (secs)	-	-	-	-	-	-	-	-	-	-	48
Average taxi travel time during peak (secs)	-	-	-	-	-	-	-	-	-	-	110
Maximum taxi travel time (secs)	-	-	-	-	-	-	-	-	-	-	199
Average taxi delay (secs)	-	-	-	-	-	-	-	-	-	-	56
Maximum taxi delay (secs)	-	-	-	-	-	-	-	-	-	-	145

* Shoulder of the city bound traffic lane was closed between Curtis Street and Old Karori Road

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Kaiwharawhara Road

	MAY 2002	JULY 2002	NOV 2002	APRIL 2003	JULY 2003	JULY 2004	AUGUST 2005	AUGUST 2006	AUGUST 2007	AUGUST 2008	AUGUST 2009
Peak hour flow rate (vph)	1,360	1,170	1,220	1,310	-	1,484	1,470	1,210	1,190	1,230	1,290
Duration of peak (mins)	39	103	49	71	45	45	60	37	58	56	53
Car free flowing time (secs)	126	126	126	126	126	126	126	126	126	126	126
Average car travel time during peak (secs)	194	171	191	193	191	173	220	161	170	185	146
Maximum car travel time (secs)	266	263	304	335	345	240	309	209	240	205	242
Average car delay (secs)	68	45	65	67	119	47	94	35	44	59	20
Maximum car delay (secs)	140	137	178	209	219	114	183	83	114	79	116
Bus free flowing time (secs)	132	132	132	132	132	132	132	132	132	132	132
Average bus travel time during peak (secs)	197	162	176	178	161	155	192	113	168	194	157
Maximum bus travel time (secs)	314	215	221	297	213	217	245	217	233	222	199
Average bus delay (secs)	65	30	44	46	29	23	60	19	36	62	25
Maximum bus delay (secs)	182	83	89	165	81	85	113	85	101	90	67
Taxi free flowing time (secs)	-	-	-	-	-	-	-	-	-	-	126
Average taxi travel time during peak (secs)	-	-	-	-	-	-	-	-	-	-	165
Maximum taxi travel time (secs)	-	-	-	-	-	-	-	-	-	-	191
Average taxi delay (secs)	-	-	-	-	-	-	-	-	-	-	39
Maximum taxi delay (secs)	-	-	-	-	-	-	-	-	-	-	65

Glenmore Street

	JULY 2004	AUGUST 2005*	AUGUST 2006	AUGUST 2007	AUGU ST 2008	AUGUST 2009
Peak hour flow rate (vph)	950	1,160	660	650	620	600
Duration of peak (mins)	62	45	37	56	53	47
Car free flowing time (secs)	50	50	50	50	50	50
Average car travel time during peak (secs)	91	156	214	87	141	238
Maximum car travel time (secs)	146	348	390	236	280	425
Average car delay (secs)	41	106	164	37	91	188
Maximum car delay (secs)	96	298	340	186	230	375
Bus free flowing time (secs)	57	57	57	57	57	57
Average bus travel time during peak (secs)	104	116	130	88	100	132
Maximum bus travel time (secs)	151	128	216	145	162	173
Average bus delay (secs)	47	59	73	31	43	75
Maximum bus delay (secs)	94	71	159	88	105	116
Taxi free flowing time (secs)	-	-	-	-	-	50
Average taxi travel time during peak (secs)	-	-	-	-	-	118
Maximum taxi travel time (secs)	-	-	-	-	-	141
Average taxi delay (secs)	-	-	-	-	-	68
Maximum taxi delay (secs)	-	-	-	-	-	91

* Roadworks present in the area of Upland Road

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Victoria Street

	JULY 2004	AUGUST 2005	AUGUST 2006	AUGUST 2007	AUGU ST 2008	AUGUST 2009
Peak hour flow rate (vph)	426	190	400	380	380	370
Duration of peak (mins)	50	53	52	48	55	59
Bus free flowing time (secs)	45	45	45	45	45	45
Average bus travel time during peak (secs)	265	248	267	192	169	258
Maximum bus travel time (secs)	347	349	361	482	317	453
Average bus delay (secs)	220	203	222	147	124	213
Maximum bus delay (secs)	302	304	316	437	272	408

APPENDIX TWO

Taxi Protocols For Bus Lane Trial

Background

For some time the taxi industry has lobbied the Council to allow Taxis to use bus lanes. Taxis play an important part in moving the public around the city on a daily basis. It is expected that some of the travel time savings gained for buses can also be achieved for taxis without any detriment to the gains made for buses. It will also allow for further efficient use of this dedicated road space.

A trial to allow taxis to use bus lanes is to be conducted to test these objectives. This trial will run throughout 2009 and start early in the year. For the trial to be successful the following guidelines and practises have been developed to ensure it is conducted in a safe and efficient manner for all users. It is in the interest of all parties that the guidelines and practices are adhered to. The trial will be monitored and an independent survey carried out towards the end of the trial to judge its effect. The results of the trial will be reported to Council's SPC Committee towards the end of the year.

The trial covers four current bus lanes, Kaiwharawhara Rd, Adelaide Road, Glenmore St and Chaytor St. These areas represent the various conditions that might be encountered when using bus lanes in Wellington City. They operate at various times of the day and carry different numbers of buses. This range of conditions will be useful when determining the impact of allowing taxis to use bus lanes and how it might effect the efficiency of bus operations and travel times.

Information

Who is permitted to use nominated Bus Lane during the trial period?

Taxis carrying a fare paying passenger/s are permitted to use the nominated bus lanes during the trial. Other authorised uses are buses, bicycles, police and emergency vehicles

What bus lanes can be used

The nominated bus lanes that may be used by taxis during the trial are on Kaiwharawhara Rd, Adelaide Road, Glenmore St and Chaytor St so long as the taxi is carrying a fare paying passenger/s.

Bus lanes that can not be used by Taxis.

All other bus lanes can not be used by taxis. These include Lambton Quay, Hunter St, Customhouse Quay, Willis St, Dixon St and Manners St

When

The trial will run through 2009. The start date is the 1st February 2009.

Common sense approach for using Bus Lanes

Be observant when opting to use the bus lane, perhaps if you see two or more buses in a particular stretch of roadway, especially during busy traffic times, it may prove to be quicker for you and your customers not to use the bus lane because buses will be stopping and starting to pick up their customers at bus stops. Just use your common sense at these times.

Agreement.

All taxi drivers who want to participate in the trial must sign an agreement to take part. This is to ensure you understand the purpose of the trial and are aware of the safety issues and operating protocols for the use of bus lanes. The taxi industry has a vested interest in seeing that the trial is successful and is keen for all drivers to abide by the conditions of the trial to ensure any long term benefits of using bus lanes are not lost.

APPENDIX TWO

Operating Practices when using a Bus Lane

Taxi Driver's Attitude

It is important that drivers perform in a professional manner and are courteous to other road users during the 2009 trial period

When can you use a Bus Lanes

You can only use a nominated bus lane when you have a fare paying passenger on board and the bus lane is in operation.

Speed Limits

You must observe the speed limit applying to the roadway. It is suggested that all vehicles using a bus lane do not exceed 30Km/hr for the safety of all road users.

It is important that you are aware that you may be obscured by buses and that other motorists approaching from side streets or entrances may not see you. Travelling at lower speeds will ensure you have more time to be seen and more time to react to unexpected situations.

Dropping off Passengers

You are not permitted to drop off passengers in a bus lane. In special circumstances such as dropping off a passenger with a disability it is accepted that you may stop in the bus lane. In such an event please use common sense and try and stop in a position that will not impede buses or at least minimise the time of disruption. It is suggested the following practice be followed

Use hazard lights

Always use your hazard lights just prior to stopping and keep these lights on until your passengers are safely out of your vehicle

Safety of passengers being dropped off.

Be vigilant and do not allow your passengers to open doors towards the bus lane. Please assist them out on the footpath side.

Re-entering the General Traffic

When your customers have vacated your vehicle use your indicators to signal your intention to commence travel and re-enter the general traffic lane. You can not continue to use the bus lane, as you no longer have passengers in your vehicle.

Protocols when Overtaking a Bus

Should you need to overtake a bus and move back into the general traffic flow, always

Use your indicators with plenty of warning! Be courteous to other motorists, they have the right of way in this situation. Courtesy and patience will generally be rewarded. Should a motorist allow you to move back into the general traffic, always offer the motorist a courtesy wave to show your appreciation!

Use your indicators when moving back into the bus lane.

Protocol for overtaking a cyclist

Cyclists tend to be slower and should be passed with caution. Give them room when passing. If you need to move out into the general traffic lane do so by indicating and follow the same procedure as above.

Enforcement

Enforcement will be carried out to ensure compliance with these rules. There will be a probationary period to allow everyone to fully understand their obligations during the trial.

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Please keep a signed copy of this agreement in your cab for inspection by enforcement staff as required.

Remember this is only a trial period for taxis, so please work together with the buses for the benefit of theirs and your customers. Courtesy to other road users will go a long way to them accepting your use of the bus lane.

Acceptance

I have read and understood the reasons for the trial. I accept the trial will only operate during 2009 and I will abide by the conditions set for the trial.

Signed:

Cab No.

Date: