

Bus and Transit Lane Review Update

Glossary

Auckland Transport	(AT)
New Zealand Transport Agency	(NZTA)
Transit Two	(T2)
Transit Three	(T3)

Executive Summary

Following the release of The Bus and Transit Lane Review: Planning and Implementation Model for Auckland, July 2011, AT has made significant advances in implementing the associated action plan. This report provides an update on the work streams outlined in the action plan.

The following key milestones have been completed:

- Formation of the bus and transit lane steering group;
- Region wide review of effectiveness of priority bus and transit lanes;
- Change of Remuera Road bus lane to a T3 lane;
- Completion of a productivity analysis for all bus and transit lanes in the region;
- Development of an on-going productivity analysis programme;
- Implementation of trial bus and transit lane signage and marking improvement measures;
- Completion of Grafton Bridge bus lane upgrade measures – signage and road markings
- Audit of Onewa Road T3 lane and implementation of measures to allow enforcement.

The following tasks are still outstanding:

- Audit of all existing bus and transit lanes;
- Roll out of education campaigns in support of new bus and transit lane signage;
- Including bus and transit lane changes in the New Zealand Road Code.

These elements have not progressed yet as they are dependent on the outcome of the trial of the new signage and road markings that is currently underway. The trial is expected to be concluded by June 2013.

In addition to the above, AT has also initiated work to upgrade key bus routes for use by double decker buses. AT is also in the process of developing a proposal to trial taxis in specified bus lanes to determine potential benefits.

Recommendations

It is recommended that the Board:

- i). Receive the report
- ii). Endorse the continuation of the described work streams
- iii). Endorse the enforcement approach outlined in this paper.

Strategic Context

In July 2011 AT produced The Bus and Transit Lane Review: Planning and Implementation Model for Auckland. The objective of the report was to ensure that all bus and transit lanes optimise the productivity of their route and also have a consistent layout across the region that is easily understood by all road users. Having established a proposed policy and standard templates, the document set forward an action plan of key work streams required to advance the report recommendations.

Background

The action plan identified 10 key work streams which are outlined below. Also included is an update on the progress of each work stream.

1. Project management - Steering group formation

The steering group was formed in August 2011 and consists of Manager Road Corridor Operations (Chair), Manager Public Transport Operations, Manager Strategy and Planning, Manager Parking and Enforcement and Manager Investigation and Design.

The steering group meets regularly to review project progress and provide strategic direction on key tasks. The steering group also takes responsibility for approval of investigation methodologies, design principals, and communication plans.

2. Operational or policy review - Review of priority bus and transit lanes

Remuera Road

Following results of an updated productivity analysis AT in conjunction with the Orakei Local Board, made the decision to trial a change from the existing bus lane to a T3 lane. The analysis indicated that a T3 lane would adequately accommodate bus movements with the added ability of accommodating higher occupancy vehicles on the route. Road marking and signage changes for the T3 lane incorporated the new trial design elements.

The T3 lane was introduced in June/July 2012. Early indications confirm that the T3 lane is currently operating efficiently. A productivity, safety and road user review will be undertaken following a full year of operation.

Onewa Road T3 Lane

An investigation into the operation of the Onewa Road T3 lane was undertaken in December 2011/January 2012. The investigation concluded that the partial continuation of the T3 lane into the bus lane would potentially have adverse safety implications. The potential benefits of the change were outweighed by safety concerns and it was recommended that the existing layout be retained.

Khyber Pass Bus Lane

Detailed surveys were undertaken on Khyber Pass in November 2011 to assess the utilisation of the bus lane. Productivity analysis of the bus lane concluded that the lane is justified despite the reduction in bus numbers due to right turning into Park Road. Approximately 30 buses an hour use the bus lane downstream of Park Road. Based on this analysis no change is recommended to the existing bus lane.

3. Region wide productivity analysis

Productivity analysis for the entire Auckland bus and transit lane network was completed and reported on in July 2012. The analysis was based on surveys undertaken in March 2012. The review showed that of the 47 bus and transit lanes on the road network, 41 should be retained in their current format. Six T2 lanes were identified where the existing arrangement did not achieve the optimal productivity when compared to other potential arrangements. These lanes are located on Shakespeare Road, Akoranga Drive, Constellation Drive and Forrest Hill Road. It is recommended that further detailed assessments be undertaken at these locations to better understand the operational performance of these transit lanes and corridors as a whole.

The most productive bus and transit lanes in the region were the Fanshawe Street, Khyber Pass Road, Anzac Avenue and Symonds Street bus lanes.

4. Monitoring programme

AT has developed a methodology and has scheduled data collection for annual productivity assessment of all bus and transit lanes. This will allow AT to regularly assess the operation of these lanes and respond by implementing changes as required. Annual surveys will be undertaken in March each year. In the future data required for the productivity analysis will be collected by making use of the IT enhancement benefits of integrated ticketing systems that capture bus travel times and occupancies for buses on the Auckland network. This will allow year round monitoring and assessment of productivity.

5. Design review – Auckland trial

In June/July 2012 AT implemented trial measures on four key bus routes aimed at improving the signage and markings (refer **Attachment 1**). The measures aim to clarify the use of bus and transit lanes for motorists. Following discussion with the NZTA, the steering group agreed to run the trial of the proposed measures for one year before reviewing and reporting on their effectiveness. Driver infringement surveys were undertaken at a number of locations on each of the trial sites before implementation of the trial measures. Post implementation infringement surveys will be undertaken in the second half of 2013. Driver feedback surveys of general motorists and bus drivers will also be undertaken as part of the review process. Following completion of this review, recommendations will be made about adoption of the designs or any changes required.

Grafton Bridge

AT has made a number of improvements to clearly communicate the bus lane restrictions on Grafton Bridge. The existing Grafton Bridge signage system was significantly rationalised and simplified following a comprehensive public perception survey and the final implementation of the measures was completed in January 2013. The measures have utilised electronic variable message technology linked to new signals (refer **Attachment 2**). This has provided a dynamic synchronised method of communicating the time related restrictions of the bus lane. This technology also provides the ability for improved communication of incidents should this be required. Early observations suggest that the change has significantly reduced infringements on the bridge. Enforcement data will be closely monitored over the next months to assess the full benefits of the improvements.

6. Region wide infrastructure audits

A limited number of audits have been undertaken which have focused on bus and transit lanes with known issues. During 2012 the Onewa Road T3 lane was audited

and improvements were implemented to bring it up to current enforcement standards. Akoranga Drive; Forrest Hill Road; Shakespeare Road; and Constellation Drive are currently being audited. It is expected that the associated physical works will be completed by the end of April 2013. The audits of the remaining bus and transit lanes will be undertaken in conjunction with upgrade works associated with implementation of the approved trial measures once these have been finalised.

7. Upgrading existing bus and transit lanes

This work is pending the conclusion of the trial and will be subject to the provision of funding. It is anticipated that this work would need to be staged over a number of years.

8. Trial measures communication plan

A comprehensive communication plan was initiated as part of implementation of the trial measures. This included information on the AT web site, an interactive online game testing appropriate use of bus lanes, local radio notifications and newspaper advertisements in the Herald and a number of local papers. **(Attachment 3)**

9. Education campaigns

AT will seek to advance this work stream following completion of the trial and final recommendations on the trial design elements.

10. New Zealand road code

AT will seek to advance this work stream following completion of the trial and final recommendations on the trial design elements.

In addition to these actions the following items have been progressed to date:

Double decker bus route review

New Zealand Buses and Ritchies have indicated their intention to run double decker buses in Auckland to improve operational efficiencies on high patronage routes. AT engineers have reviewed key bus routes and identified a number of issues relating to vertical clearance including: overhanging tree branches, overhanging verandas, low power lines, power poles leaning onto the carriageway, low rail bridges.

In discussion with operators, AT has identified the northern bus way and Mt Eden Road as the priority routes for the introduction of double decker bus use. A programme of tree trimming has been completed to remove overhanging branches on Fanshawe Street as part of the northern bus way route into the city. AT has also initiated a project to identify the full extent of the required veranda modifications and to progress remedial works. The investigation is expected to be completed by the end of June 2013 with physical works starting in the 2013/14 financial year (subject to final costing and funding availability).

Taxis in bus lanes

AT has recognised that there could be potential benefits arising from a trial of taxis in bus lanes. In other countries taxis are allowed to use bus lanes and AT believes it would be useful to undertake a trial of this in an Auckland location. This would determine if benefits for taxi passengers could be achieved without a negative impact on the level of service achieved for buses or the safety of cyclists and other road users.

AT is currently considering how to best progress the proposed trial. To do this it is envisaged that a proposal will need to be prepared detailing the parameters under which a trial could be implemented. This proposal would broadly include site identification, trial evaluation criteria and required new signs and markings. Following this it is expected that

consultation on the trial methodology would be undertaken with key stakeholders. AT would then make a recommendation to the AT Board and action the subsequent directive.

As taxis are not covered by standard bus lanes a new class of special vehicle lane will be required. This is possible under the current Land Transport Act 1998 and AT Traffic Bylaw 2012.

Enforcement

The original report recommended that a warning be issued to first time offenders instead of immediate infringement notices, while the network was being reviewed, new standards established and overall signage improved. AT's Parking and Enforcement Department has investigated the feasibility of implementing such a scheme. The investigation established that the current management system is incapable of automating a First Time Warning process and that the IT system would require significant modification or replacement. Undertaking this process manually was also investigated and subsequently discounted because of the significant labour and administrative costs, which is unbudgeted. It was also found that first time warning would impact on the effectiveness of special vehicle lanes as there may be the perception that these lanes are not being enforced resulting in a drop in compliance. On reflection, given the system constraints and potential negative impact on the effectiveness of the special vehicle lanes, it was decided that it is not feasible to progress this proposal and it was considered better to focus effort and investment into improving the network.

Next Steps

- Continuing annual assessment of bus and transit lane productivity;
- Assessment of the effectiveness of the Remuera Road T3 change (July 2013);
- Development of a programme for implementing changes identified as part of the annual productivity analysis;
- Assessment of the effectiveness of trial measures and finalisation of implementation templates (October 2013);
- Development of a programme for regional implementation of recommended bus and transit lane markings and signage;
- The roll out of an education campaign supporting new signage and road markings;
- Seeking the inclusion of new bus lane elements in the official New Zealand road code;
- Continuing the programme of works to upgrade bus routes for double decker access, subject to funding availability;
- Development of the proposal to trial taxis in specified bus lanes following which a recommendation can be brought back to the Board for consideration.

ATTACHMENTS

- Attachment 1** – Photos of trial measures
- Attachment 2** – Photos of Grafton Bridge upgrade
- Attachment 3** – Sample of Herald article for trial

<p>Written by</p>	<p>Tim Segedin Team Leader Traffic Operations South</p> <p>Miguel Menezes Principal Network Performance Engineer</p>	 
<p>Reviewed by</p>	<p>Randhir Karma Traffic Operations Manager</p> <p>Andrew Allen Manager Road Corridor Operations</p> <p>Trevor Starr Manager Parking and Enforcement</p>	  
<p>Recommended by</p>	<p>Greg Edmonds Chief Operations Officer</p>	
<p>Approved for Submission</p>	<p>David Warburton Chief Executive</p>	

Photos of Trial measures



Figure 1: New trial T3 lane marking on Remuera Road

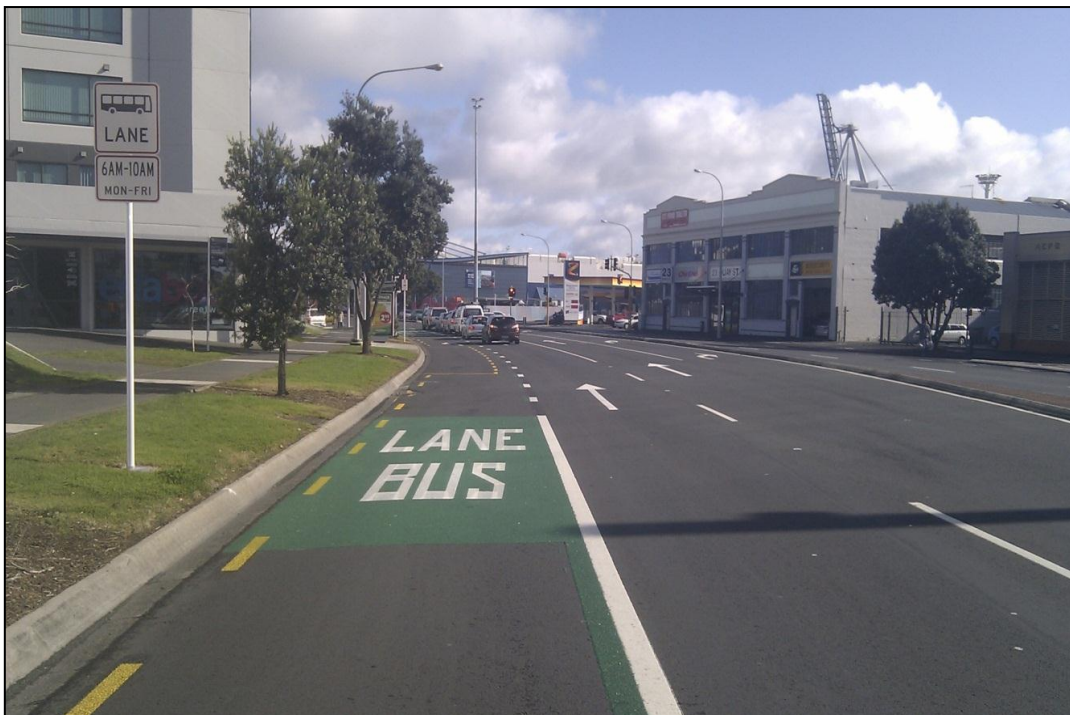


Figure 2: New trial marking on Quay Street



Figure 3: New trial marking and light emitting diodes on Vincent Street

Photos of Grafton Bridge upgrade



Figure 4: Karangahape Road approach to Grafton Bridge



Figure 5: Karangahape Road Advance Direction Sign



Figure 6: Symonds Street northern approach to Grafton Bridge



Figure 7: Symonds Street Advance Direction Sign



Figure 8: Park Road approach to Grafton Bridge



Figure 9: Grafton Road southern approach to Grafton Bridge

Attachment 3: Sample of Herald Article for Trial

We're trialling new bus lane markings and signage around Auckland

In working towards the most efficient use of Auckland's roads, we're trialling new ways to help identify the 50 metre maximum entry point for vehicles moving into a bus/transit lane to turn left at an intersection. In Vincent St, we will also be trialling the use of LED line markers in conjunction with painted road markings.

THESE TRIALS WILL TAKE PLACE ON: Quay St – Fanshawe St – Great South Rd – Vincent St – Remuera Rd

WHAT TO LOOK FOR:

- 1 Signs like this indicate the type of lane and the hours of operation (if not 24 hours).
- 2 We're changing the solid green/white line marking a bus or transit lane, to a broken green/white line, 50 metres in advance of an intersection. This shows the maximum point where motorists can legally enter a bus/transit lane to make a left turn at an intersection.
- 3 The use of a solid green line adjacent to the solid white line identifying a bus or transit lane.

Test your skill online at:
www.aucklandtransport.govt.nz
or phone (09) 355 3553 for more information

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Failure to comply with rules around T3/Transit Lanes may result in a fine.

An infographic illustrating the proposed changes to bus lane markings and signage. It features a perspective view of a road with a bus lane. On the left, there are three signs: a 'LANE' sign with a bus icon, a 'TRANSIT LANE T2' sign, and a 'TRANSIT LANE T3' sign. A yellow arrow points to a '50m' marking on the road. A callout box explains that these signs indicate lane type and hours. Another callout points to a broken green/white line, stating it marks the 50m entry point for left turns. A third callout points to a solid green line next to a white line, identifying the bus lane. The background shows a city skyline under a blue sky. The Auckland Transport logo and website information are at the bottom.