Auckland Transport
An Auckland Council Organisation

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Kyle H
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Dear Kyle,

Local Government Official Information and Meetings Act 1987
CAS-409142-Q3N8S2

I refer to your email dated 28 February 2017 requesting information about traffic light phasing at the intersection of Lake Road and Bardia Street.

Investigation into Traffic Light Phasing since 2014

There are a number of issues that affect the operation of the traffic lights and the performance of this corridor. All traffic lights along this corridor are coordinated during heavy traffic and the corridor is set up so that Lake Road is given priority over the side roads.

A formal Optimisation Project on Lake Road was carried out in 2014. The project covered all traffic light intersections on Lake Road. Since then the corridor has been monitored and reviewed, however a formal Optimisation report has not been prepared since 2014. There is a CCTV camera that has good visibility of this section of the Lake Road corridor which is used on a daily basis to view the operation of the Lake Road / Bardia Street intersection. In addition to the Optimisation and regular business as usual monitoring and observations, we carry out high level monthly reviews of the performance of a number of corridors and locations, this includes Lake Road.

The main constraint at the Lake Road / Bardia Street intersection is the available space at the intersection and that there is only one approach lane in both directions to the intersection. The capacity of this corridor is further reduced due to vehicles pulling into and out of car parks by the Belmont shops. These movements delay vehicles northbound on Lake Road, causing large gaps to form between vehicles. With additional traffic joining Lake Road from Bayswater Avenue and Egremont Street, this leads to a further reduction in available capacity for vehicles on Lake Road. Options have been looked at including widening and restricting parking through this section.

Traffic Count Request

Data for all traffic counts that have been conducted can be viewed on the Auckland Transport website. While there are no recent counts in this section of Lake Road, historic counts are in the region of 30-35,000 vehicles per day in this area, and 40,000 vehicles per day closer to Takapuna.

Timing of the Traffic Signals Phasing

As the traffic signal system is an adaptive system, the phasings are not fixed and change depending on the traffic demands and extension requests by the traffic sensors. These sensors are beneath the surface of each lane at the stop line.

On a typical weekday morning peak the intersection would operate at a 130 second cycle time and at 135 seconds during the evening peak. This intersection will operate with a cycle time of up to 140 seconds. The Lake Road phase would receive the bulk of the time, approximately 60-70 percent, with 15-20 percent of the time given to each of Bardia Street and Windscombe Street if vehicles are waiting. The right turn into Bardia Street runs infrequently. The pedestrian crossings also run in parallel with the vehicle movements, which can result in left turning vehicles and vehicles behind them being delayed. The alternative of stopping all vehicles to allow the pedestrians time to cross would result in even longer delays for all users.

In off peak times the intersection will respond to traffic levels and will operate as it does during peak times if traffic levels are high enough, or will stay with a green for Lake Road and quickly respond to vehicles on Bardia Street and Windscombe Street.

We trust this information has addressed the matters raised however you have the right in accordance with section 27(3) of the Local Government Official Information and Meetings Act 1987 (LGOIMA) to make a complaint to the Office of the Ombudsman if you are not satisfied with our response.

Kind regards

Rua Pani
ATOC Smales Manager