

## STAFF REPORT

**TO:** Chairman and Members of Engineering Services Committee

**FROM:** Steve Elkington, Road Asset Engineer

**REFERENCE:** RD3499, RD3437 and RD3268

**DATE:** 31 May 2006

**SUBJECT:** **SPEED LIMIT REVIEWS:**

- Lord Rutherford Road South
- Higgins Road
- Bird Road

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### 1 PURPOSE

To report on a recent speed limit review undertaken on Lord Rutherford Road South, Higgins and Bird Roads. The review was prompted by a recent subdivision application.

- 1.1 Lord Rutherford Road South – This road was reviewed between the existing 50/100 kph speed limit sign and Telenius Road;
- 1.2 Higgins Road – This road was reviewed over its full length between Telenius Road and Bird Road;
- 1.3 Bird Road – This road was reviewed over its full length between Higgins Road and Main Road Spring Grove.

It was decided to review the entire route involving these three roads rather than simply reviewing Lord Rutherford Road South alone, leading to inconsistencies if changes to the current speed limit had been proposed.

### 2. BACKGROUND

All three roads reviewed, with the exception of the first section of Lord Rutherford Road South, have a current Rural Speed Limit of 100 kph.

**2.1 Lord Rutherford Road South** extends from north of Robertson Road to Telenius Road a distance of approximately 1.4 kilometres. The length of the road section reviewed from the existing 50/100 kph speed limit sign is approximately 860 metres and classified under Council's roading hierarchy as a Collector Road. The road is straight and quite wide at 8.2 metres, this width is slightly wider than that recommended of 7.2 metres in Council's engineering standard. The road has an average traffic count of between 900 vehicles per day at the SH6 end and approximately 500 vehicles per day at Telenius Road end.

**2.2 Higgins Road** extends from Telenius Road to Bird Road and is 2.75 kilometres long with an average width of between 5.2 and 5.5 metres. The road alignment

is relatively straight and flat however, a creek runs along the eastern side of the road for part of the way. There is a low stop bank between the creek and road to increase I presume the capacity of the creek thereby preventing surface flooding occurring sooner. The road is classified as an Access Road under Council's roading hierarchy and carries approximately 330 vehicles per day.

**2.3 Bird Road** extends from Higgins Road to Main Road Spring Grove (SH6), with its intersection at SH6 being within Transit's proposed 70 kph speed limit section. Bird Road alignment is relatively straight and flat with a length of approximately 565 metres and a width of 5.2 metres. The road is classified as an Access Road under Council's roading hierarchy and carries approximately 200 vehicles per day.

### Crash History

From Land Transport NZ Crash Analysis Database (CAS), there appears to be little crash history on these roads with only three reported minor injury crashes on Higgins Road occurring in 1996 and two in 2003. One crash involved alcohol another involved hitting Telenius Bridge due to sun strike causing misjudgement and another whereby the driver travelling on Bridge Valley Road and approaching Higgins Road intersection failed to see the intersection and hit a fence.

### Speed Survey

These surveys were undertaken over a seven day period and completed on Sunday 16<sup>th</sup> April 2006. The 85 percentile i.e. 85% of traffic travelling at or below this speed was approximately 90kph for both surveys. Therefore should the speed limit be lowered to 80 kph then, there will need to be enforcement to encourage acceptance of a lower speed limit. It should be noted the survey shows a majority of drivers already drive at a lower speed than the current speed limit therefore speeding can not be an issue.

## 3 COMMENT

Under the *Land Transport Rule Setting of Speed Limits 2003*, a Warrant survey is required to be undertaken to ascertain the average rating for the road under consideration. The average rating is then used to assess what the appropriate speed limit should be. The Warrant process is primarily based on road frontage development with the roadway factors such as facilities for pedestrians, cyclists, and parking, as well as road geometry, traffic control and roadway use, being secondary. In other words the total rating achieved for the roadway factors can not exceed the road frontage development rating. Therefore if there is little roadside development then the other factors have minimal affect.

Rating Required for specific speed limit	Speed Limit kph
Equal to 11 or greater	50
Greater or equal to 6 but less than 11	70
Greater or equal to 3 but less than 6	80
Less than 3	100

### **Speed Limit Warrant Results**

**3.1 Lord Rutherford Road South (Between existing 50/100kph speed limit and Telenius Road)**

Average rating for this road section is **2.6**



**Lord Rutherford Rd South – Opposite Barton Lane looking South**

**3.2 Higgins Road (Between Telenius Road and Bird Road)**

Average rating for this road is **2.0**



**Higgins Road - looking South**

### 3.3 Bird Road (Between SH6 and Higgins Road)

Average rating for this road is **0.8**



**Bird Road – Looking towards Higgins Rd**

## 4 SUMMARY

The low ratings achieved for each of the Warrants was due to the lack of roadside development. Based on the low ratings achieved for all three roads it would be inappropriate to lower the current open road speed limit.

Due to the roads being reasonably straight and providing good visibility then putting in place a lower speed limit is unlikely to achieve respect and therefore compliance. Further to this Lord Rutherford Road is a wide road and therefore a lowering of the current speed limit is unlikely to see a reduction in speed.

The low crash history of the roads, where it would appear speed was not the main factor also supports the speed limit remaining unchanged.

Finally, the current operating speed determined from the recent speed surveys indicates that the 85<sup>th</sup> percentile of traffic is travelling at or below 90kph. Therefore to put in place a speed limit of 80kph, and expect full compliance of all drivers based on the speed surveys, will require between 30 and 40% of drivers to reduce their speed which is considered too high.

Transit New Zealand has considered an 80kph speed limit on the State Highway between Brightwater and Wakefield when reviewing current speed limits along the state highway and which I understand was not supported by the various groups that were consulted.



**Telenius Bridge on Higgins Road** – The single lane bridge close to Telenius Road makes for an awful layout however, based on LTNZ Crash Analysis Database there fortunately has only been two minor injury crashes in the last 10years involving the bridge. In the most recent crash in 2003, alcohol was the main factor where as in a previous crash of 1996, the vehicle involved was travelling north bound and it would appear the driver was dazzled by the sun and misjudged the bridge. Since this first reported crash in 1996, signage improvements have been undertaken and the priority changed.

Ideally investigation needs to be undertaken into either widening the bridge or replacing the structure. As a minimum option, the side walls require replacing with Guard Railing however this cost needs to be considered against widening or replacing the structure.



**Telenius Bridge on Higgins Road – Looking North**

## **5 RECOMMENDATION**

**That the current speed limits of Lord Rutherford Road South, Higgins Road and Bird Road remain unchanged.**

Steve Elkington  
**Road Asset Engineer**