Summary

- This paper analyses the average daily traffic counts recorded for key locations on District roads for the years 2009 – 2013, and up-dates the analysis of the counts reported in the Council’s “Progress Towards Community Outcomes 2009”.
- Southbrook Road at the Southbrook Stream remains the most heavily used road in the District, with its 2013 count exceeding 21,400.
- At the same time the count for Flaxton Road south of Fernside Road has climbed from 5,000 in 2009 to over 7,750 in 2013. During the earlier period 2003 - 2008 the counts on this road ranged between 4,000 and 5,000.
- The counts for Tram Road close to the Motorway at Clarkville increased significantly between 2012 and 2013, with a gain of 1,645 (18.5 percent). The increases between 2009 and 2012 were more gradual. Over the period 2009 – 2013 there was no significant change in the counts on Tram Road west of Two Chain Road.
- The relative numbers of vehicles travelling on Oxford Road and Kippenberger Avenue have changed, with the number in 2013 for Kippenberger Avenue exceeding that for Oxford Road west of Rangiora. In earlier years the counts for the Oxford Road were higher than for Kippenberger Avenue.
- The traffic counts for the Cones Road Bridge for each of the years 2011 – 2013 exceeded 8,800, with a recent “out of sequence” count of over 10,000 in April 2014. There has been no change for the Upper Sefton Road at the District boundary.
- The counts to the north and south of the Oxford urban area have increased gradually since 2009, with the reading on Oxford Road for 2013 of 2,013 of 2626 and the reading for Depot Road at the Eyre River Bridge slightly lower at 2,147.
- The major change in the readings for the west of the District is the increase in the counts for the Waimakariri Gorge Bridge, particularly from 2012 to 2013. In 2013 the count for this location was 2,260, an increase of approximately 400 (17.7 percent) from a year earlier, and 675 (42.7 percent) over the five year period 2009 - 2013.
- The changes in the counts for Williams Street in Kaiapoi show the impact of damage from the earthquakes and subsequent engineering works, while the count for the Old Main North Road Bridge across the Waimakariri River was just under 10,000 for 2013, a level exceeded in 2007 and matched in the years 2004 - 2006.
- The highest use roads in the Waimakariri District in 2013 were:

<table>
<thead>
<tr>
<th>Road</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southbrook Road</td>
<td>21,469</td>
</tr>
<tr>
<td>Williams Street</td>
<td>11,496</td>
</tr>
<tr>
<td>Tram Road (Clarkville)</td>
<td>10,536</td>
</tr>
<tr>
<td>Old Waimakariri Bridge</td>
<td>9,825</td>
</tr>
<tr>
<td>Cones Road Bridge</td>
<td>8,806</td>
</tr>
<tr>
<td>Flaxton Road (sth.Fernside Rd)</td>
<td>7,751</td>
</tr>
<tr>
<td>Kippenberger Avenue</td>
<td>5,368</td>
</tr>
<tr>
<td>Oxford Road (west of Rangiora)</td>
<td>5,171</td>
</tr>
</tbody>
</table>
1 Introduction

This occasional paper presents the recent daily traffic counts recorded for the main roads in the Waimakariri District. It provides further information to support the increasing concerns about congestion on the main arterial routes into Christchurch at peak travel times in the morning and afternoon. In addition, this data highlights the importance of the Council remaining conversant with the changes that are occurring in the use of its roads.

The Council's Progress towards Community Outcomes 2009 reported the average daily traffic movements for key roads up until 2008, and this occasional paper reports the results of the Council’s monitoring from 2009.

2 Access to Rangiora from the south

The issue of congestion on the Southbrook Road at peak travel times is an increasing concern, while the Council is planning to improve access to the Flaxton Road for west Rangiora with the construction of a collector road linking West Belt directly to Townsend Road.

Figure 1 sets out the average daily traffic counts for Southbrook Road at the Southbrook Stream and the Flaxton Road at Fernside Road for 2009 – 2013.

![Figure 1: Average Daily Traffic Counts Southbrook Road and Flaxton Road 2009 - 2013](image)

Figure 1 shows that there has been significant increases in the number of traffic movements for both these major routes out of Rangiora since 2009. Over the period 2009 – 2013 there was an increase of 4,264 (24.8 percent) in average daily traffic movement on Southbrook Road. During this period there was also an increase in the number of traffic movements on the Flaxton Road of 2,662 (51.3 percent). In 2009 the average daily traffic count for the Flaxton Road was 5,129 and by 2013 it had increased to 7,751.
3 Tram Road

Figure 2 sets out the average daily traffic counts for 2009 – 2013 for Tram Road at Swannanoa west of Two Chain Road and west of the Motorway at Clarkville.

Figure 2 shows that while there has been very little change in the counts on Tram Road at Swannanoa, there has been an increase of 3230 (44.2 percent) in the traffic movements on Tram Road west of the Motorway. While the difference between these two counts for Tram Road suggest that most of the increased activity is attributable to development in the Mandeville/Clarkville areas, it is necessary to recognise that traffic from further west travelling east on South Eyre Road reaches Tram Road in Clarkville at an intersection opposite Giles Road.

4 East and West of Rangiora

Figure 3 sets out the recent traffic counts for Oxford Road west of Rangiora and Kippenberger Avenue to the east.
Figure 3 shows that there has been a greater increase in the number of traffic movements recorded on Kippenberger Avenue to the east of Rangiora than on Oxford Road immediately to the west of the town. Between 2009 and 2013 the average daily traffic count for Oxford Road west of Rangiora increased from 4,277 to 5,171 or 21.2 percent (905). At the same time the count for Kippenberger Avenue increased from 3,968 to 5,368 or 35.3 percent (1400).

5 North of the Ashley River/Rakahuri

Figure 4 sets out the average daily traffic counts for the Cones Road Bridge across the Ashley River/Rakahuri and the Upper Sefton Road at the border between the Waimakariri and Hurunui Districts.

![Figure 4: Average Daily Traffic Counts Cones Road Bridge and Upper Sefton Road](image)

Figure 4 shows that there has been very little change in the number of vehicles moving between the Waimakariri and Hurunui Districts via the Upper Sefton Road. The average daily traffic count at the Cones Road Bridge peaked in 2012 at 9012, which represented a 16.3 percent increase from the 7549 movements recorded in 2009.

An additional reading from the Cones Road Bridge in April 2014 indicated that during that month over 10,000 vehicles per day were using this bridge.

6 East and West of Oxford

Figure 5 sets out the average daily traffic counts for Oxford Road east of the Oxford urban area and Depot Road at the Eyre River Bridge for 2009 – 2013.
Figure 5 shows that there has been a steady increase in the average number of vehicle movements on the main roads to the east and west of Oxford. The increase on Depot Road has been greater than for the Oxford Road, with the average daily count for this road at the Eyre River 461 (27.4 percent) higher at 2,147 in 2013 than in 2009 when the count was 1,686.

While the increase recorded for Depot Road was higher than for the Oxford Road, the overall average number of movements remains higher for the main road to the east of Oxford. Between 2009 and 2013 the average daily count for this stretch of Oxford Road increased from 2,286 to 2,626 or 14.9 percent (340).

7 The Waimakariri and Ashley Gorges

Figure 6 sets out the average daily traffic counts for the Waimakariri and Ashley Gorge Bridges.
Figure 6 shows that there has been little variation in the traffic counts for the Ashley Gorge Bridge, but that there has been a significant recent increase in the average daily traffic count for the Waimakariri Gorge Bridge. Between 2009 and 2013 there was an increase of 674 (42.6 percent) in the counts and from 2012 to 2013 there was an increase of 403 (21.7 percent) alone. The recent increase may well be attributable to the increased use of the Waimakariri Gorge Bridge and the Old West Coast Road by people living in the Oxford area and working in Christchurch, as this route allows them to avoid the delays on the Tram Road and the northern arterial routes into Christchurch.

8 Old Main North Road and Williams Street

Figure 7 sets out the average daily traffic counts for the Waimakariri River Bridge on the Old Main North Road and Williams Street on the Kaiapoi River Bridge.

Figure 7 shows that the average daily traffic movements across the Waimakariri River Bridge on Old Main North Road had increased in 2013 when compared with 2009, despite a decline in 2011 and 2013 in the post-earthquake environment. When 2013 average daily traffic counts for the Old Waimakariri Bridge are compared with those for 2009, there was an increase of 553 (6.0 percent). It should be noted that the 2013 average daily traffic counts are similar to those for separate months provided to the Council by the Christchurch City Council and used in the general review of the patterns of use of the main arterial routes into the City in Occasional Paper No. 9.

The decline in the average daily traffic counts for Williams Street at the Kaiapoi River is clearly attributable to the disruption caused by the earthquakes, and then the more recent engineering works to restore the Kaiapoi town centre.
9 Longer-term trends

Some of the changes in the average daily traffic counts for the District over the last five years can be seen as a continuation of trends already apparent in the years before 2009, while in other cases there has been little change, if any.

The Southbrook Road continues to have the highest counts for District roads, and in 2011 and 2013 this exceeded 20,000, which is a significant increase on the earlier counts. During the 2003 – 2008 period the highest count was just over 18,000 in 2005, with the remaining counts are in the 16,000 – 17,000 range.

Between 2009 and 2013 the Flaxton Road south of Fernside Road recorded a steady increase in the average daily traffic count, from 5,000 to in excess of 7,000. During the earlier period this road recorded counts in the 4,000 – 5,000 range. While this count will include some vehicles that travel south via Flaxton Road from Southbrook Road, the increase in the Flaxton Road count can also be attributed to the increasing use of the Penticost Road/Townsend/Fernside Road route by vehicles travelling to and from west Rangiora.

In the years prior to 2009, traffic movements on Tram Road at Clarkville only exceeded 8,000 in 2007, while in 2004, 2005 and 2008 were between 7,000 and 8,000. It is therefore only in 2012 and 2013 that the counts for Tram Road have increased significantly. At the same time there has been little change over the period since 2003 in the counts for Tram Road west of Two Chain Road, at approximately 2,000 average daily counts.

The change in the counts for Oxford Road to the west of Rangiora and Kippenberger Avenue to the east between 2009 and 2013 is a reversal of the relative counts for these two roads, established over a longer period. Only in 2003 was there a higher count for Kippenberger Avenue than the Oxford Road, and in 2006 and 2007 the count for the Oxford Road exceeded Kippenberger Avenue by over 500 average daily traffic movements.

The level of activity at the Waimakariri Gorge Bridge has more than doubled in the period since 2003. That year the count was just over 1,000 and by 2008 it had reached a count of about 1,400. This contrasts sharply with the 2013 count of over 2,200, which as indicated earlier may well be attributable to a change in travel pattern for people living in the Oxford area and working in Christchurch.

The average daily traffic counts for Williams Street clearly reflect the impact of the earthquakes, with a pre-earthquake reading of over 15,300 which was second only to the 2008 count in excess of 16,000 and similar to the level recorded in 2007. The relative stability of the counts for the Old Main Road Bridge is of more significance. The most recent reading for this location was just under 10,000, a level similar to that recorded for the years 2004 – 2006, and only exceeded in 2007 with a reading in excess of 11,000, and similar to that recorded in 2003.