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## **Re: crossing the Auckland Harbour Bridge by foot or cycle**

Bevan,

As requested, here are some of my thoughts on the estimates for crossing the harbour bridge by foot or cycle.

I have used two different methods (with separate assumptions) to arrive at two alternative estimates. I have tried to quantify the assumptions and have shown how my calculations were achieved.

It is pleasing to see that both estimates are reasonably consistent with each other.

### **Estimate one**

This estimate uses the Young & Rubicam survey as its base.

The assumptions are:

1. The survey is representative of the population of Auckland (or has been weighted to be representative)
  2. The survey is only of adults (who make up, say, 75% of the population)
  3. The sample was drawn randomly, from at least a million people in the Auckland region
  4. When someone says they would use the bridge for walking, they most likely mean both ways to complete the round-same trip. It is possible that there would be a few people who would use it one-way
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and I have used a factor of 75% to allow for this. (It is probably higher than this.)

5. When people say "once a week or more often" this is an average of three times a week. (It could be more but is unlikely to be less.)
6. People over-estimate changes in their behaviour. I have assumed a factor of three is present. This means if someone says they would "definitely" do something, we say they are only 33 per cent likely to actually do it.
7. Trips are equally spread out over the week. It could be that commuting is higher, or that recreation outside these times mean travel is higher. At this stage, we just don't know.

Looking at walking to start with, three per cent of the survey said they would walk over the bridge once a week or more often. There were also some who said they would use it once a fortnight or so, but I have excluded these as they wouldn't be core users. Using a million people in Auckland as a base (assumption 3), this is 30,000 people. At three trips a week (see assumption 5) this is 90,000 trips a week. Drop it down to 30,000 due to assumption 6 and divide by seven to get days of the week (assumption 7). That's 4300 trips a day – each way. Double to get both ways (8600) and then use assumption 4 to reduce to 6500. If we only include adults (assumption 2), this drops to just under 5000.

The proportion of people who would use the bridge for walking would most likely start fairly high (due to the novelty), then drop off (as some found they didn't like it) and then slowly increase (as word got around, spread by those who found it worthwhile).

5000 is about a two hundred an hour (if spread equally across 24 hours), which is probably more than six a minute during the peak times (whenever they are).

Cycling (as I recall) had the same proportion say "once a week or more often" in the survey, therefore the cycling estimate would be the same.

This leads to a total of just under **10,000 trips per day**, which is about a **half a lane of traffic** (each lane on the bridge moves just under 20,000 vehicles a day).



## **Estimate two**

According to the 2006 census, about one per cent of trips to work in the Auckland region used a bicycle. About six per cent walked or jogged.

This is a total of seven per cent.

(As a matter of interest, the Regional Land Transport Strategy aims for and expects 15 per cent of trips in the region to be made by either walking or cycling by 2016.)

If we apply this seven per cent figure to the current use of the bridge, we get **10,500 trips per day for walking and cycling**. This assumes that the bridge is currently suppressing the same level of demand as is present elsewhere in North Shore and Auckland City (it is probably not suppressing the same amount – it could be more, it could be less.)

It is hard to determine how accurate this estimate is, but it is interesting to note that the proportion of people walking or cycling to work on the North Shore is about half that within Auckland City and it is likely that some of this is due to unfulfilled demand for a way to walk across the harbour.

Bevan, I hope these estimates meet your needs. Please do not hesitate to contact me if you have any further questions.

Regards,

Andrew Stevenson

**Managing Director**

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