

## PERSONALISED JOURNEY PLANNING IN AUCKLAND

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### ABSTRACT

Auckland Transport's Personalised Journey Planning programme promotes smarter travel choices by encouraging morning peak sole-occupancy vehicle drivers to consider alternative travel choices by using more sustainable modes such as public transport, walking, cycling and carpooling. The purpose of this programme is to optimise existing networks and infrastructure to effect behaviour change and reduce congestion in the morning peak.

Only so much can be achieved by engineering, winning the hearts and minds of commuters is the next step to reducing congestion. The programme has a high level of engagement and personalisation. The programme works on an individual basis to better understand user behaviour and motivations for travel choices. Participants are provided with tailored journey options, support, guidance and incentives to overcome barriers and change behaviour.

A working case study of the programme in Auckland is in the suburb of Birkenhead. The programme recruited 438 vehicle drivers and provided alternative options for their commute to work. Of all 110 participants that completed the entire programme, 61% tried a different mode during the trial period. The project achieved a 49% reduction in morning peak sole-occupancy vehicle trips and a 42% reduction in vehicle kilometres travelled. Active travel also increased with an additional 282km walked and 42km cycled during the morning peak hours each week.

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## 1. Introduction

Auckland Transport (AT) provides a variety of packages and services to encourage commuters and communities to make safe and sustainable travel choices.

One such package that AT currently administers is a free Personal Journey Planning (PJP) scheme, which has been developed to target large audiences in the suburb where they reside. The aim of this scheme is to achieve a reduction in **morning peak hour car trips** (7am-9am), through increased uptake of public transport, carpooling, walking and cycling. Personalised Journey Planning involves direct contact with individuals or households. The programme is highly personalised and the campaigns are tailored to each survey location. It works by collecting data on commuters existing travel patterns, and using this data to develop tailored travel plans to encourage the use of alternative modes of transport to the private car.

Several PJP projects have previously taken place in Auckland, including the suburbs of Manukau, Panmure, Newmarket, Beach Haven, Devonport and New Lynn. The PJP programme has been used to promote and integrate new transport infrastructure and public transport operations. The target audience for the PJP schemes are people who currently drive alone in the morning peak, and in particular those who have reasonable access to public transport, walking and cycling routes.

## 2. Background

This case study details a PJP project that was undertaken in Birkenhead, Auckland. Situated on Auckland's North Shore, and only 8km from the CBD, Birkenhead is well served by good transport infrastructure and alternative travel options however the majority of residents still use their cars as their main means of transport.

The area has a T3 transit lane which is operational on Onewa Road to provide faster travel times for morning carpool commuters heading towards the motorways. The T3 transit lane can be used by vehicles transporting three or more passengers. The lane operates from 6.30am to 9am, Monday to Friday and there is potential for many more occupants to travel in the lane by using the bus or carpooling. There is capacity for up to 200 additional carpooling vehicles using the T3 lane in the peak hour (approximately 600 additional people).

In March 2013 a survey conducted between Birkenhead Avenue and Lake Road in the morning peak period found that:

- The speed on the transit lane is four times faster than on the general lane (20km/hr vs. 5km/hr)
- Approximately 30 buses travel along Onewa Road every hour, which is equivalent of one bus every 2 mins
- The buses carry more than 1500 passengers along Onewa Road during peak hour, more than double the number of people carried on the general lane
- The transit lane is carrying 25% of the traffic, and 76% of people are moved through this transit lane

There is also a nearby ferry terminal in Birkenhead with services departing half hourly each morning Monday to Friday. The terminal has 20 priority carpooling spaces and a secure bike parking facility which stores 30 bikes with a choice of standing racks and hanging bike parking. People are encouraged to leave their car at home and instead use their bike to connect with the ferry.

The survey findings and local infrastructure strongly supported our campaign to target peak hour car users in the area and encouraging them to try public transport, carpooling or other active modes, thereby maximising the use of this infrastructure.

### 3. The process

Households located within walking distance (maximum 2km) of the Onewa Road T3 transit lane and Birkenhead ferry terminal were offered a free PJP service (see figure 1).

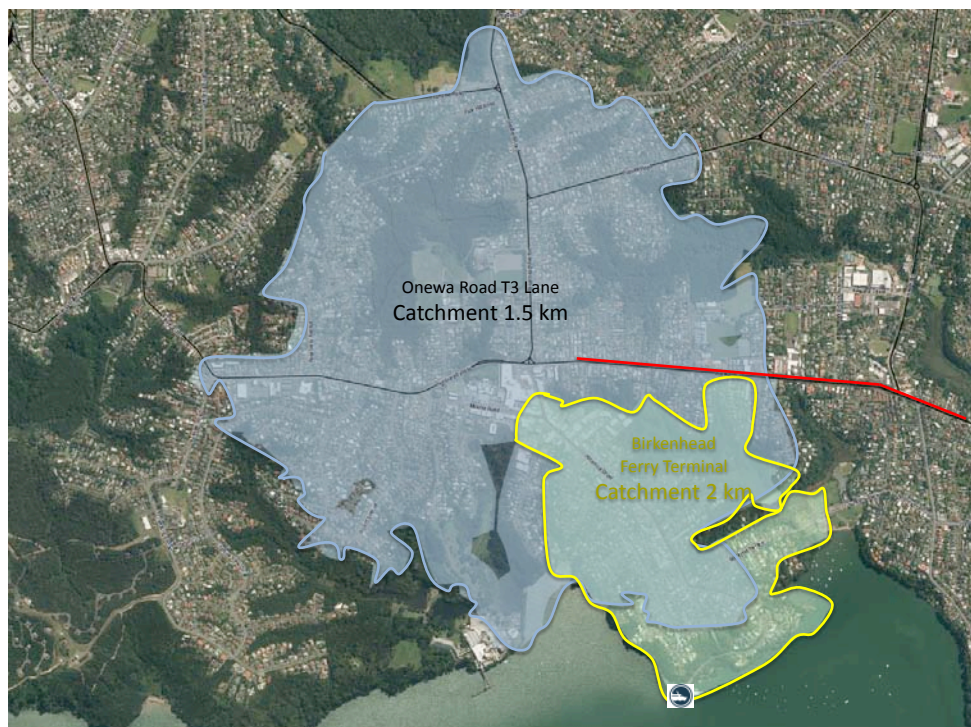


Figure 1: Birkenhead PJP catchment area

A targeted mail drop was undertaken in the area to promote the project and ask residents to either register online or by telephone at the AT call centre if they were interested in participating. To boost the response rate, AT representative's door knocked to raise awareness of the project and invite residents to participate in the programme.

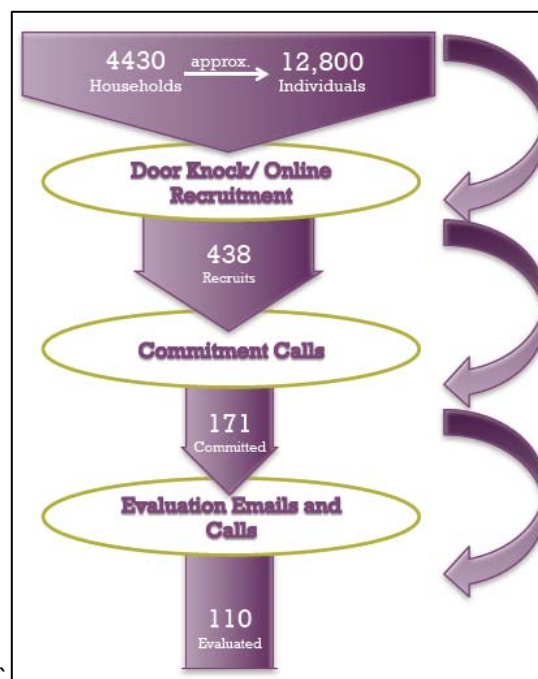
Interested participants were provided with travel information at the respondent's door if their journey was straight forward and on a direct public transport route to popular destinations such as the City, Takapuna or Albany. For more complex journeys which required two or more modes, the participant also received a personalised letter in the mail providing suitable alternative options such as public transport, carpooling, cycling or walking.

Following the recruitment and/or personalised letter, participants were contacted by telephone to obtain a commitment to trial an alternative mode to their car. Once commitment was gained, participants were offered an incentive to encourage the use of alternative modes including a two week travel pass which could be used on the bus, train and inner harbour ferries, pedometers and umbrella's for participants interested in walking, and cycle packs for cyclists.

Five weeks after the incentives were mailed to participants, all participants were invited to undertake a short evaluation survey either online or by telephone to determine uptake of alternative modes and behaviour change.

#### 4. Findings

The programme successfully recruited 438 individuals to participate in the Birkenhead PJP programme. Of these 171 individuals made a commitment to trial a different mode and 110 participants completed the entire programme (see figure 2).



\*Presumes average household size of 2.9 people per dwelling (12,800 individuals/4,430 households)

Figure 2: Number of members of the public involved at each stage of the project

Of the 171 participants who committed to trying a different mode, 61% tried a different mode with the strongest component being commuters who were city-bound and inner-suburb travellers where they could enjoy a relatively short and direct journey to work.

Respondents were provided with information on all transport options in their local area and whilst there was interest across all modes of transport, the most popular mode amongst this group was trying public transport (90%) for their morning commute to work or study. Figure 3 shows the public transport modes trialled by participants.

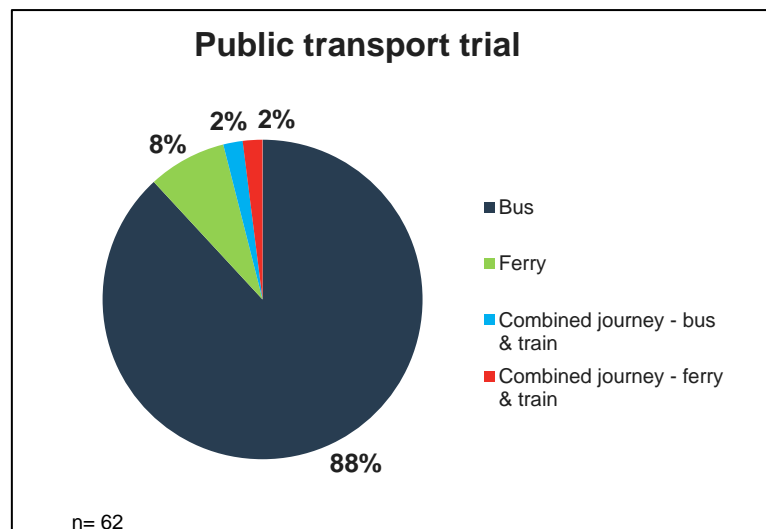


Figure 3: Public transport modes trialed

Active travel has also increased as a result of the programme with those participants that walked completing an additional combined total of 282km each week with the most significant contribution from people travelling to and from public transport stops. Cycling trips increased amongst the participants that cycled by 42kms per week (see figure 4).

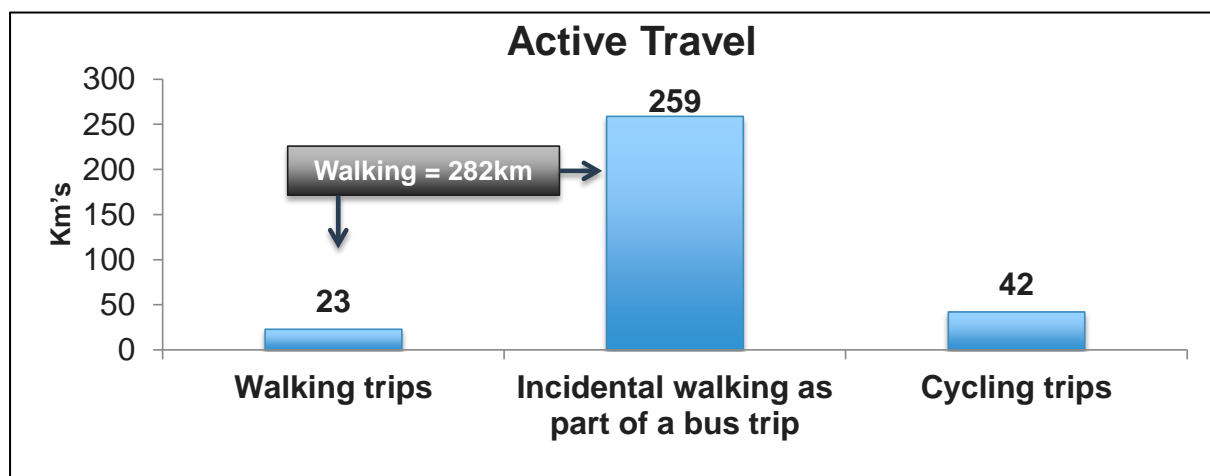


Figure 4: Additional walking and cycling trips resulting from PJP

The programme has successfully changed the behaviours of peak hour car users to more sustainable modes. Of the 110 respondents evaluated, prior to commencing the programme 409 trips per week were sole-occupancy vehicle trips and during the programme this number reduced by 49% (197 trips). Post programme intent shows an even further reduction in single driver trips to 60% (245 trips), with improvements in weather stated as the main reason for using an alternative mode.

The programme has effectively raised awareness of travel options with 60% stating that the programme had helped them to think about their travel options and a further 37% stating that the programme had influenced their actual travel behaviour (see figure 5).



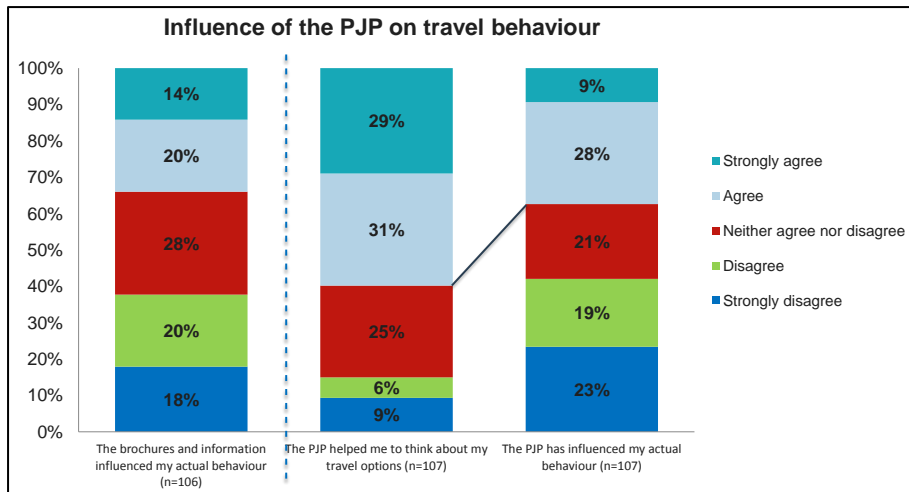


Figure 5: Influence of the PJP on travel behaviour

The programme has received a high level of customer satisfaction with 84% of participants rating they were satisfied or very satisfied with the programme. Participants were highly supportive and positive feedback included:

- “The bus lane is so efficient. It takes far less time to the city, it's brilliant.”
- “I enjoy being able to read/check emails instead of driving.”
- “I do like the HOP cards - they are very convenient and much easier and quicker than cash.”
- “Love cycling, clean, green and great incidental exercise.”
- “Great that AT are being proactive about walking.”

## 5. Economic benefit

An economic evaluation was undertaken for the Birkenhead PJP using The New Zealand Transport Agency's Economic Evaluation Manual (EEM) procedures. The present value cost of the Birkenhead PJP is \$238 per head of target population participating in the programme. The benefit derived from the programme equates to \$1030 per head of target population. This results in a Benefit Cost Ratio of **4.32**.

## 6. Summary

Single vehicle drivers were invited to consider and trial alternative modes such as public transport, walking, cycling and carpooling. Participants were guided and supported through the process with the provision of information packs, tailored journey planning information, incentives to try a new mode and most importantly time to take action and instil these new behaviours.<sup>1</sup>

The programme has been highly effective in changing behaviour particularly with a total of 61% of participants trying a different mode during the five week trial. Morning peak sole-occupancy vehicle trips reduced by 49% and kilometres travelled reduced by 42%. Levels of active travel increased with an additional 282kms walked and 42kms cycled during the morning peak hours each week.

<sup>1</sup> Footnote to appendix 1: Lessons Learned

## APPENDIX 1

### Lessons Learned

The following recommendations are made for future PJPs:

- Hand selection of Ambassadors who work with potential participants door to door, should take place
- Undertake door knocking on weekends only to achieve higher response rates
- Consider a 1.5km catchment area around key bus for future projects
- Ensure email addresses are collected at Recruitment Stage (a mandatory question on the online questionnaire at door knocking)
- Rather than have recruits nominate what mode they would be interested in trying, offer a more guided approach in line with the following:
  - Offer public transport information and incentives only for recruits that have a City destination or a destination which doesn't require interchange;
  - Offer carpooling information to recruits with destinations requiring interchange (more distant destinations); and
  - Offer walking and cycling information and incentives for local trips
- Consider providing PJP Ambassadors with tablet technology so they can show potential recruits online Journey Planner
- Provide training for PJP Ambassadors on concession cards
- Streamline processes to shorten time between recruitment, commitment and distributing incentives.