

## Chapter 8 Travel Demand Management

### 8.1 INTRODUCTION

It is a challenge to provide a transport system to meet Auckland's rapidly expanding needs. Auckland's population is growing, and Aucklanders' dependence on the car makes it difficult to supply transport infrastructure to cope with increasing demand.

Travel demand management is an essential component of the Auckland Regional Land Transport Strategy. This chapter meets the requirement (LTA 1998 s175(2)(j)) to include a travel demand management strategy in the overall strategy. It aims to reduce car trips and to encourage more people to walk, cycle, catch public transport, share car trips, and to work, shop and play locally.

Although there is no single agreed definition of travel demand management, the definition proposed here is:

"A set of tools to offer people better travel information and opportunities and help people choose to reduce their need to travel especially by car."

Travel demand management is wide ranging and covers tools and techniques ranging from land use planning to educating children on the benefits of walking to school. Its measures and tools are described under the following main subheadings:

Reduce need to travel	<ul style="list-style-type: none"> <li>• Land use – intensification</li> <li>• Mixed use developments</li> <li>• Telecommunications infrastructure – teleworking</li> </ul>
Provide for travel choices	<ul style="list-style-type: none"> <li>• Allocation of road space (to public transport, walking, cycling, high occupancy vehicles)</li> <li>• Improved public transport services</li> <li>• Construction of walking and cycling networks</li> </ul>

Influence travel choices	<ul style="list-style-type: none"> <li>• School Travel Plans</li> <li>• Business Travel Plans</li> <li>• Community Travel Plans</li> <li>• Improved information</li> </ul>
Pricing	<ul style="list-style-type: none"> <li>• Regionally/nationally agreed parking controls<sup>1</sup></li> <li>• Congestion pricing<sup>2</sup></li> <li>• Tolling of existing roads<sup>3</sup></li> </ul>

Travel demand management in this strategy does not include traffic management measures primarily aimed at making more efficient use of the roading system. It is recognised, however that traffic management measures (such as ramp metering) can be implemented in a way that delivers demand management benefits. Policies related to traffic management are discussed in Chapter 7 under policy 2.3

Travel demand management initiatives are important for Auckland for the following reasons:

- A co-ordinated approach to transport - with priority given to walking, cycling and public transport trips - will help to develop a more sustainable land use pattern for the region.
- Travel demand management projects help to make more efficient use of existing and future roading infrastructure. Reducing the number of trips being made by car will free up road capacity for commercial, freight and other priority users.
- Travel demand management projects can increase public transport patronage and therefore increase the benefits from public transport investments.

<sup>1</sup> Chapter 7 policy 3.4

<sup>2</sup> Chapter 7 policy 3.5

<sup>3</sup> Chapter 7 policy 3.5.7



- Increasing the proportion of trips made by walking and cycling will have health, social and environmental benefits.
- Travel demand management projects are cheap for the transport benefit they deliver – especially when compared to other transport infrastructure construction costs.
- A number of trips may be avoided completely by enhancing the use of available telecommunication technology.

This travel demand management strategy significantly expands existing travel demand management programmes and requires much greater regional co-ordination. It will be implemented by a number of organisations, including the Auckland Regional Transport Authority (ARTA), Transit New Zealand and the region's local councils. Its timing and targets will be included in those organisations' Land Transport Programmes.

While travel demand management is relatively new in Auckland, it is an integral part of transport planning and is proving very cost effective overseas. A recent review of travel demand management initiatives in Britain<sup>4</sup> found that significant reductions in traffic were being achieved. In particular:

- 3100 UK schools (15 per cent of all schools) had implemented school travel plans in 2003. An assessment of 80 of these plans<sup>5</sup> found that 76 per cent had achieved reductions in total car use. In 41 per cent of plans, car use had reduced by more than 20 per cent. Ten per cent appeared to have more than halved overall car use.
- More than half of local councils in the UK, about half of all tertiary institutes and hospitals, and 11 per cent of large businesses (with over 100 employees) are expected to have travel plans by

06/07. An assessment of 26 existing plans found that 88 per cent of plans had achieved reductions in car use, and car trips to work had reduced by 18 per cent on average.

Early travel demand management measures introduced in Auckland have also produced promising results:

- More than 2000 Auckland children walk to school each day on a walking school bus supervised by parents and operated along a walking school bus designated route.
- Workplace travel plans are starting in Auckland. At Vodafone, the opportunity to develop a travel plan was welcomed as "a fantastic concept to get us off our bums to help the environment".

Developments not directly related to transport, such as improved telecommunications, are improving and becoming more affordable and may reduce the need to travel. For example the Ministry of Education, with the support of the Ministry of Economic Development, is providing broadband to rural schools. The schools' communities will also benefit from the access to broadband.

### Rural TDM

Travel demand management is not just limited to the urban areas of the region. For the rural communities TDM measures will need to be developed within the context of these environments, which may be distinct and unique compared to those adopted in urban areas. In the rural context travel demand management strategies need to consider increasing travel options and reducing isolation for non-drivers or people without access to affordable car travel all in an environment not supportive for walking and cycling with open road speeds. Appropriate speed reduction, aided by effective signage and 'gateway' design, can help to ensure a pedestrian and cycle friendly rural environment.

<sup>4</sup> Smarter Choices – Changing the way we travel, Department for Transport, July 2004

<sup>5</sup> Making School Travel Plans Work, Department for Transport 2003



## 8.2 TRAVEL DEMAND MANAGEMENT STRATEGY AND POLICIES

This chapter, together with other parts of the Regional Land Transport Strategy, sets out the Travel Demand Management Strategy for Auckland region in detail. It meets the requirement of the Land Transport Management Act to incorporate a travel demand management strategy in all regional land transport strategies. It should be read in conjunction with the whole Regional Land Transport Strategy. Policies set out in Section 3 of Chapter 7 are particularly relevant.

Significant links and reference to travel demand management can also be found in:

- **Chapter 5, The Role of the Modes** relating to the roles of public transport, walking and cycling.
- **Chapter 6, Strategic Options** relating to the funding required to implement this travel demand management strategy and its assumed benefits.
- **Chapter 9, Expected Results** setting out the action, targets and timings for this strategy. These targets and timings are also summarised below.

## 8.3 TRAVEL DEMAND MANAGEMENT ACTIONS, TARGETS AND TIMING

This travel demand management strategy aims to enable the transport network to move people and freight more effectively, by shifting vehicle trips for which there is an attractive alternative or which can be undertaken cost effectively. To identify these trips and develop appropriate strategies, peak and off-peak travel are considered separately.

In the morning peak, the greatest benefits will come from interventions that reduce vehicle trips to congested destinations. Fewer vehicle kilometres travelled and more walking and cycling will deliver benefits towards the strategic objectives of the New Zealand Transport Strategy regardless of the time of day.

The actions, targets and timing for the different components of this travel demand management strategy are set out under the headings:

- Reducing the need to travel
- Providing for travel choices
- Influencing travel choices
- Pricing

Indicative targets and timing are given for priority projects. The operational detail of these projects will be included in the Land Transport Programmes of Auckland Regional Transport Authority, Transit and local councils.

### 8.3.1 Reducing the need to travel

People's travel choices are more attractive when work, education and leisure facilities are close by and the transport network links key destinations in a logical way. This requires transport systems and land use to be planned in an integrated manner.

The Regional Policy Statement and the Regional Growth Strategy, along with local district plans, set out the desired form of urban development in the Auckland region and control where future growth will take place as described in Chapter 3. They require more mixed-use development in a number of high-density centres and corridors. The subsequent increase in all urban activities in the growth centres and corridors - not just in residential activity - will reduce the need to travel. The more compatible the activities are in a single centre and the higher the density of development, the more opportunities people will have to live, work and play locally.

Working from home or other remote locations (teleworking) is an effective low cost mechanism for reducing the need to travel. Improved communications technology is critical for enabling a wide range of activities to be undertaken without the need to leave home. This not only has the benefit



of reducing travel but it also provides a means by which a number of trips can be retimed to occur in the interpeak periods.

It is expected that teleworking will become an even more popular demand management mechanism for business and individuals, as technologies such as video phones/conferencing, wireless technology and faster broadband enable more people and companies to work remotely. This travel demand management strategy seeks to make it easier to work or undertake other activities from home, through supportive planning regulations and effective communications infrastructure and pricing.

Policies which support reducing the need to travel are in Chapter 7.

Action	Responsibility	Target	Timing
Land use	ARC and TAs	13% of the regional population will be living in high-density centres and corridors.	2016

### 8.3.2 Providing for travel choices

Urban transport networks exist to move people and goods. They are most effective when they give priority to more efficient modes such as walking, cycling, bus, rail and high occupancy vehicles. This can be done by allocating existing or future road space more fairly or providing for more and better quality walking, cycling and public transport infrastructure, or all.

#### Improving walking opportunities

Walking is a popular recreational activity. It is also an environmentally friendly and sustainable mode of transport, well suited for short trips.

However, walking as a transport mode has been declining. This is partly a response to growing traffic volumes that make the region’s roads increasingly unpleasant, inconvenient and unsafe for pedestrians. Also, today’s children walk less, mainly because their parents are concerned about traffic dangers.

Making walking a more popular transport choice will require investment in better footpaths, safer crossings and more pleasant shortcuts and walkways. Much of this investment will be at a local level, and needs to be designed to meet the needs of all pedestrians – including children and people who use mobility aids. In some cases providing priority for pedestrians will mean taking road space away from vehicles.

Planning for walking is an important component in the design and implementation of roading improvements and the management of the transport network as a whole. Good urban street design will help by creating more attractive, safer and more sustainable places for pedestrians.

A description of the role of walking is outlined in Chapter 5 Role of the Modes.

Policies which improve the conditions and infrastructure of walking are in Chapter 7 – policy 4.4.

#### Improving cycling opportunities

Cycling also has significant potential benefits as a mode of transport, especially for short to medium distance trips. However, cycling has also declined in Auckland, to the point where it accounts for only 1 per cent of trips to work<sup>6</sup> and 1.6 per cent of total trips<sup>7</sup>.

Road safety concerns are the main reason for this decline. Cyclists are second only to motorcyclists in terms of their risk of being involved in an injury

<sup>6</sup> 2001 Census Journey to Work figures, Statistics NZ

<sup>7</sup> LTSA household travel survey 1997/98



crash, and over half of all Aucklanders say cycling is “mostly unsafe” (18 per cent) or “always unsafe” (34 per cent)<sup>8</sup>. However in cities where cycling is more popular, there’s a “safety in numbers” effect, indicating that drivers are more considerate of cyclists when there are more cyclists on the road.

As with walking, more thought and investment is needed in facilities to integrate cyclists into the transport system. Generally, cyclists are required to share road space with motor vehicles, and small details of road design can make this much easier. In some places, and for some groups of cyclists, off-road facilities are a more practical option.

Because current levels of cycling are so low, these investments may take time to generate a significant number of users. However, building up a comprehensive network of safe, pleasant and direct cycle links is a crucial component of this strategy.

A description of the role of cycling is outlined in Chapter 5 Role of the Modes.

Policies that improve the conditions and infrastructure for cycling are in Chapter 7 – policy 4.5.

### Improved public transport services

The Regional Land Transport Strategy signals significant investment in public transport (Chapter 6) and identifies the outcomes expected. Public transport, in the form of buses, trains and ferries, generally provides travel that is safer and more space and energy efficient than cars.

A description of the role of public transport is outlined in Chapter 5 Role of the Modes.

The following table outlines the investment in infrastructure and services that is required as part of

the travel demand management strategy to ensure enough travel choice options are provided. It also states where policies on walking, cycling and public transport can be found, along with related monitoring indicators for these improvements.

Action	Responsibility	Target	Timing
Walking	ARTA, TAs Transit	Improvements in 18 town centres/ intensifying areas	2016
Cycling	ARTA, TAs Transit	Completion of 50% regional cycle network	2016
Passenger transport	ARC, ARTA, TAs, Transit, NZ Rail Corporation	Services linking regional growth centres on the rapid transit network will be no more than 10 minutes apart in the morning peak	2016

### 8.3.3 Influencing travel choices

Travel planning is the process of finding out why people make the travel choices they do, and what would persuade them to use their cars less. Travel plans rely on other initiatives such as land use changes, public transport investments, and improved information on all transport options to succeed. In turn, travel plans can ensure that improvements to transport networks respond to community wishes and needs.

A major focus of this travel demand management strategy is to work alongside communities to understand and address the barriers to more sustainable travel choices. This will be done through:

- School travel plans
- Centre based workplace travel plans
- Community travel initiatives
- Improved public transport information.

<sup>8</sup> Community Perceptions of Personal Transport, survey for ARC, 2002, reported in 2003 RLTS



Influencing travel choice can also be undertaken via parking controls. The policies relating to planning and managing the region's parking supply are contained in policy 3.4 (Chapter 7).

### School travel plans

School travel plans provide ways to give children the option of an active, social, safe and sustainable trip to school. They are developed with input from children, parents and communities.

A regional programme of school travel plans is underway in Auckland. Based on the success of current initiatives, all schools in the region are expected to voluntarily agree to develop travel plans within the next 10 years.

### Workplace travel plans

Workplace travel plans aim to reduce the proportion of trips by car to work or to tertiary study. Employers and tertiary institutions can influence travel choices in a range of ways, the most significant being the provision – or not – of subsidised parking. Simple actions like trialing free public transport, providing cycle parking, supporting teleworking and encouraging walking can also make a difference.

### Community travel initiatives

The Regional Growth Strategy aims to encourage more people to live, work and play in centres that offer a lifestyle that is not dependent on the car. Community travel plans are a tool to achieve this.

Significant changes in travel behaviour can be achieved, particularly for social and recreational trips between travel peaks, through a combination of direct marketing (usually by phone), information and incentives, and targeted capital investment.

### Improved information

An important element in influencing travel choices is the availability of good information. Residents and visitors can make well-informed decisions about how they will travel only if they are made aware of the choices available to them, and the benefits and costs of those choices. This requires:

- Ensuring that information on transport choices is accessible
- Ensuring that information on public transport services, walking and cycling is available and easily accessible
- Raising awareness of transport choices including the choice of not to travel
- Encouraging more people to walk, cycle and use public transport, for more trips
- Understanding and meeting customer requirements for timely and accessible transport information
- A better understanding of teleworking and its benefits.

The following table outlines the targeted investments and expected benefits required from initiatives which influence travel choice.



	Responsibility	Target	Timing
School travel plans	ARTA, TAs	Achieve a 9% reduction in car trips to school	2014
Centre based travel plans	ARTA, TAs	Achieve a 12% average reduction in car trips to work/study in organisations totalling 90,000 employees/students	2016
Community based travel initiatives	ARTA, TAs	Achieve a 3% average reduction in local car trips made by 60,000 households	2016
Improved information	ARTA	80% customer satisfaction with customer information	2016

The Land Transport Management Act permits tolling of new roads under specific circumstances. The Regional Land Transport Strategy sets out the conditions under which a toll road would generally be expected to proceed in the Auckland region under current legislation.

Policies on road pricing are in Chapter 7 – policy 3.5.

### 8.3.4 Pricing

Road pricing as a term used by the Regional Land Transport Strategy means charging road users directly for their use of particular parts of the road network. Policy 3.5 (Chapter 7) outlines the issues and policies relating to road pricing in Auckland. Previous studies have concluded that road pricing is potentially a powerful demand management and funding tool in the longer term. However this Regional Land Transport Strategy has been prepared on the basis of existing policy and legislative settings which do not include road pricing.



