4.1 Introduction

An effective and efficient transport system is critical to the social, economic and cultural wellbeing of the Auckland Region and its inhabitants. Transport infrastructure represents a significant physical resource in the Region which requires careful management. Similarly, the effects of the transport system on the environment are of considerable importance to the Auckland Region.

The form of development of Auckland and the pattern of activities in the Region has been profoundly influenced by transport systems. Initially water transport dominated, focusing on coastal waters and the Region's harbours. Next came roads, and then the tram system, enabling longer trips to work and some dispersal of shopping to suburban areas. In recent times the system of arterial roads and motorways has evolved, resulting in a sprawling, low-density city. Most people enjoy high levels of accessibility and mobility, and appreciate the opportunities and quality of life that this provides.

Population, employment and economic activity in Auckland have increased steadily, resulting in more trips being made. The number of vehicle trips made per person has also increased, accentuating the increase in total trips. The increase in use of vehicles reflects changes in commercial distribution systems, individuals becoming involved in more activities, and replacement of walk and cycle trips by vehicle trips. The increase is placing greater pressure on the transport system and highlighting its adverse effects on the environment.

There is increasing recognition that the Region's transport system needs to be developed in a more sustainable manner.

A more sustainable transport system is one in which trip numbers and lengths are minimised, and the use of energy and space-efficient modes of transport, such as public transport, cycling and walking, are viable and encouraged. The development of such a system in the Auckland Region would work towards minimising adverse environmental effects, meeting accessibility needs and improving safety.

The major direction of transport policy in Auckland will be set by the RPS. The components of that policy are more fully developed through the Regional Land Transport Strategy (RLTS) which has been prepared pursuant to section 23 of the Transit New Zealand Act 1989 (as amended by the Transit New Zealand Amendment Act 1993).

The RLTS identifies:

(i) the future land transport needs of the Region;

(ii) the most desirable means of responding to those needs in a way which is safe, cost effective, and takes into account environmental effects;

(iii) an appropriate role for each mode of transport.

The Transit New Zealand Act 1989 requires that the RLTS must not be inconsistent with the RPS. The RLTS takes effect through a requirement that any project included in district or regional land transport programmes (the annual funding requests to Transit New Zealand) must comply with the RLTS. The National Land Transport Programme prepared by Transit New Zealand must have regard to the RLTS.

Some policies and methods included in the RLTS do not directly affect land transport programmes. These measures deal with the interaction between land use and transport and may be incorporated in a regional plan prepared under the RM Act at a later date.

4.2 Issues

4.2.1 The transport system can influence urban form in a way which detracts from wider resource management objectives

Chapter 2 discusses the effect of the form of urban development on natural and physical resources and outlines the way in which urban development needs to be managed more sustainably.

The transport system is recognised as being one of the major determinants of urban form. The way in which the transport system is developed is therefore one of the major instruments in guiding the form of urban development. Consequently, the objectives, policies and methods in this chapter must be considered in that wider context.

The role of transport in achieving the most appropriate form of urban development is dealt with in Chapter 2 and not repeated in this chapter. There are therefore no objectives, policies or methods relating to that issue in this chapter.

4.2.2 The transport system has adverse effects on the environment

As well as the effects the transport system has on the environment through its contribution to urban form, transport has a direct impact on the environment. Motor vehicles are the largest contributor to air pollution in metropolitan areas and vehicle emissions are important contributors to greenhouse gases. Motor vehicle emissions can also affect public health. The effect of emissions deposited on roads or stripped by rainfall, together with road surface accumulation from vehicle use (tyre wear, oil leaks, etc.), is that runoff from roads is an important source of water quality degradation.

In addition, the earthworks required to construct facilities generate dust and water-borne sediments. They may affect valued or sensitive places such as estuaries and areas of bush.

The transport system is a relatively high user of energy and relies on the consumption of non-renewable resources, including fuels, construction materials and land.

Transport impacts detract from public amenities. Roads and motorways also have more localised effects, including noise and the hazards of speeding traffic, which may be mitigated at source through traffic controls.

In the case of water-borne transport, the design and operation of vessels, notably their speed, can have impacts on adjacent coastal land areas because of the vessel wakes produced. These have potential to adversely impact on seawalls, beaches and other coastal features.

4.2.3 The domination of the transport system by cars inhibits the ability of some parts of the community to provide for their social, economic and cultural wellbeing

The personal mobility provided by the car has played a large part in the development of a low-density city spread over a large area. People expect to have ready access to jobs, beaches, parks and social activities. This lifestyle is highly valued by the people of the Region. This form of development, however, with dispersed activities and high availability of cars, means that public transport is difficult to provide in a cost-effective manner. This reduces travel choices and opportunities for those who prefer to travel by public transport and, in particular, affects those without access to a private car – including the old, young, disabled and poor – who are dependent on public transport to meet their working, educational, health, recreational and social needs.

4.2.4 The transport system is a significant regional resource providing for the movement of people, goods, services and resources. The existence of deficiencies in the transport network leads to poor access between some parts of the Region and congestion in parts of the transport network, inhibiting the ability of the community to provide for its social, economic and cultural wellbeing

A healthy economy is vital to the future of Auckland and this requires good transport links between important activity areas. The major activity areas include the ports of Auckland and Onehunga, Auckland International Airport, the major production and servicing areas, the main employment areas, residential areas, larger educational institutions, important shopping centres, and major health care centres. In addition, access to metropolitan facilities and services from the surrounding rural areas is essential. Good transport links to other regions and other countries are necessary.

Ports and airports play a vital part in fulfilling the latter role and it is important that land uses surrounding them do not compromise their effectiveness. Ports and airports are primarily dealt with in Chapter 2 and that work is not repeated in this chapter.

The increase in the number of vehicle trips in the Region has outstripped the ability of the road system to accommodate those trips, with the result that in some time periods and on some parts of the road network, traffic congestion is a significant problem. In locations where roads are currently congested (including central parts of the motorway system, the harbour bridge and northern motorway), traffic demand is expected to continue to increase, yet in many cases there is no realistic prospect of significantly increasing roading capacity. In this situation, congestion and delays will continue to increase. Further travel during peak periods is likely to be discouraged. People will then search for alternative routes or modes to reach their destination. They may change their travel times, or change the places where they live, work, shop or carry out their business and social activities.

4.2.5 The transport system has a high cost in terms of fatalities and injuries and this inhibits the ability of people and communities to provide for their health and safety

The safety record of the Auckland transport system is not good by international or national standards and this needs to be improved.

In 1994 105 people were killed in road crashes in the Auckland Region and 4853 people were reported injured in road crashes. Motor vehicle crashes are the leading cause of hospitalisation for injury.

The cost of all reported motor vehicle crashes (fatal, injury and non-injury) to the Auckland Region in 1994 is estimated at $2.05 billion. This includes health costs, property damage, legal costs and a costing for loss of life/ permanent disability.

4.3 Objectives

1. *To avoid, remedy, or mitigate the adverse effects of transport on the environment and, in particular:*
   - *(i) to avoid, remedy, or mitigate the adverse effects of transport on air quality and water quality;*
   - *(ii) to reduce the need for the transport system to use non-renewable fuels;*
   - *(iii) to avoid, remedy, or mitigate the adverse effects of the transport system on local amenities and infrastructure.*
2. *To develop a transport network which enables all sections of the community to gain access to community resources.*
3. *To develop a transport network which provides an acceptable level of accessibility between important activity areas.*
4. *To develop a transport network which is as safe as is practicable.*

4.4 Policies, Methods and Reasons

4.4.1 Policy

The following policies and methods give effect to Objective 4.3-1.

1. ***Land use and transport planning will be integrated in a way which reduces the need for vehicle travel.***
2. ***Development of the transport system will be guided in a way which:***
   - ***(i) promotes the use of forms of transport which have fewer adverse effects on the environment;***
   - ***(ii) reduces the environmental effects of transport at source;***
   - ***(iii) reduces the need to use non-renewable fuels;***
   - ***(iv) avoids, remedies, or mitigates the adverse effects of transport on water quality;***
   - ***(v) avoids, remedies, or mitigates the adverse effects of transport in the modification of landscape and the destruction of natural habitats;***
   - ***(vi) avoids, remedies, or mitigates the adverse effects of transport on local amenities.***

See also Chapter 3 – Iwi; Chapter 5 – Energy; Chapter 6 – Heritage; Chapter 9 – Water Quality; Chapter 11 – Air Quality.

4.4.2 Methods

1. ***Land use and transport planning should be integrated by:***
   - ***(i) District plan provisions which address the interaction between land use and the transport system and, in particular, should contain provisions concerning:***
     - ***(a) control of new land use so as to enable new developments to be serviced efficiently by public transport;***
     - ***(b) ensuring that planning controls do not unnecessarily restrict working from home or telecommuting;***
     - ***(c) encouragement of land use changes so that persons can work and obtain goods and services within local areas, so as to avoid the need to travel by motor vehicle.***
   - ***(ii) Auckland RLTS will recognise the impact which transport has on land use and should guide development of the transport system in a way which is compatible with land use planning.***
2. ***The Auckland RLTS and district plans will contain provisions which recognise the advantages of modes of transport which have fewer adverse environmental effects than trucks or single occupant cars, such as public transport (including***

buses, Light Rail Transit, passenger rail and ferries) high occupancy vehicles, cycling, walking and rail freight.

3. ***The ARC will take a strong advocacy and educational role in support of the reduction of motor vehicle use and the encouragement of fuel efficient modes.***
4. ***The ARC will take a strong advocacy role, requesting central government to introduce effective methods for the reduction of emissions and noise from individual vehicles and for reducing the use of non-renewable fuels.***
5. ***The ARC will undertake, in a way which complements the actions of other organisations, an educational campaign directed towards promotion of the awareness of the consequences of motor vehicle emissions, promotion of regular tuning and maintenance of motor vehicles, and promotion of the use of alternative fuels.***
6. ***The ARC will include in a regional plan rules for sediment discharge from road construction and will implement a Stormwater Quality Control Programme as detailed in Method 8.4.8-2 which will address the adverse effects of stormwater discharges from roads.***
7. ***The Auckland RLTS and district plans will contain provisions which reduce the adverse impacts of traffic on local amenities.***

See also Chapter 9 – Water Quality; Chapter 11 – Air Quality; Chapter 6 – Energy.

4.4.3 Reasons

Many of the adverse environmental effects of transport (particularly emissions and polluted runoff from roads) are related to the amount of vehicle travel. Reducing the amount of vehicle travel would tend to reduce the adverse effects.

Where there are alternative means of providing for transport demand, environmental objectives can be achieved by giving preference to transport alternatives with lower environmental effects. The environmental effects which the ARC will seek to reduce include:

- air pollution
- water pollution
- C^o2 emissions
- noise
- transport accidents.

Public transport, high occupancy vehicles, cycling, walking and rail freight generally perform better than cars and trucks regarding these effects. Within the range of public transport options, light rail has benefits over buses for the southern and western corridors. Steps are being taken to ensure the protection of these routes for light rail and the introduction of light rail is being encouraged. The feasibility and likely effects of economic instruments, such as road pricing and parking charges, will be investigated. These measures may help travellers understand the full cost of use of each mode of transport. They can then make informed decisions about which mode to use.

The most effective means of reducing motor vehicle emissions is through measures aimed at the whole vehicle fleet. Such measures include changing tax incidence, regulation, efficiency labelling etc. which can only effectively be tackled by central government at the national level.

Similarly, reducing the need to use non-renewable fuel will require central government to introduce regulations or tax measures to encourage the use of renewable fuels.

Policy supporting the use of low polluting fuels will assist in avoiding the adverse environmental effects of the transport system.

Reducing the adverse effects of the transport system on water quality and air quality will require:

(i) encouragement of the efficient use of fuel and thus reduction in the amount of vehicle emissions;

(ii) giving effect to voluntary and educational programmes to reduce emissions 'at the tailpipe' under a range of operating conditions in order to limit adverse effects on air quality;

(iii) treating stormwater discharges from roads to limit the adverse effects on the quality of receiving waters.

These measures may have cost implications which may affect the rate at which they can be implemented.

Measures for addressing localised environmental impacts include where appropriate:

(i) introduction of traffic calming measures;

(ii) noise reduction measures;

(iii) introduction of Heavy Motor Vehicle routes;

(iv) introduction of routes for the transport of hazardous substances.

4.4.4 Policy

The following policy and method give effect to Objective 4.3-2.

The public transport system will be managed to better enable existing and potential users to get to work, services, shops, educational, social and recreational facilities.

4.4.5 Method

The Auckland RLTS and the Auckland Regional Passenger Transport Plan (prepared pursuant to the Transport Services Licensing Act 1989) will include policies and methods to improve the effectiveness of the public transport system.

4.4.6 Reasons

In order to better provide for people's accessibility needs and to encourage the reduction of vehicle trips, the public transport system needs to become more attractive to users and wider use needs to be promoted. The public transport system needs to enable existing and potential users to get to work, services, shops and social and recreational facilities. The attractiveness of public transport will be improved through:

(i) development of services which meet the needs of existing and potential users in terms of coverage, timetables, frequency and integration of timetables, ticketing and fares;

(ii) where practicable introducing measures such as bus priorities which will enhance the speed of services;

(iii) accommodating people with special transport needs (such as people with disabilities);

(iv) ensuring public transport is affordable to those who are unable to operate, or who cannot afford, a car and is competitively priced;

(v) upgrading transfer facilities;

(vi) ensuring service information is readily available and easy to use;

(vii) ensuring vehicles and facilities provide reasonable levels of comfort and security.

The directions in which the public transport system will be developed are outlined in the Auckland RLTS and described in some detail in the Passenger Transport Plan.

4.4.7 Policies

The following policies and methods give effect to Objective 4.3-3.

1. ***Transport links which promote the efficient movement of people, goods and services throughout the Region will be identified in the Auckland RLTS and will be required to be protected in district plans.***
2. ***The efficiency of congested transport corridors will be increased by encouraging increases in person-carrying capacity (i.e., by supporting public transport, car pooling and high occupancy vehicles) and freight carrying capacity (i.e., by supporting consolidation of loads and rail freight) rather than vehicle capacity.***
3. ***Central government will be requested to ensure that funding is available to enable the development of a safe, effective, affordable transport system.***

4.4.8 Methods

1. ***The Auckland RLTS will identify the major elements of the existing transport system in the form of the regional components of the transport network hierarchy and will also identify the additional regional components of the transport network hierarchy which will be required in the five year period following the production of each RLTS. The RLTS will also identify any components which are likely to be required in the longer term.***
2. ***District plans shall provide for the protection of the regional components of the transport network hierarchy identified in the Auckland RLTS as either existing or required in the future.***
3. ***The Auckland RLTS will contain policies and methods for increasing the person-carrying and freight-carrying capacity of the northern, southern and western corridors.***
4. ***The ARC will request central government to ensure that land transport funds are allocated on a fair and appropriate basis.***

4.4.9 Reasons

Ensuring appropriate transport links are available between major activity centres will involve identification of the parts of the transport network (both road and rail) essential for moving goods and services within and in and out of the Region. Processes which will ensure that this network can carry out this function will need to be introduced. Determination of the need for inclusion of particular transport links in the Regional transport network, either currently or in the future, will include consideration of the following matters :

- transport proposals which have not yet been implemented;
- areas where recent developments have meant that increased travel demand (or likely increased future demand) is not well catered for;
- areas where improved transport links are needed to assist development.

In congested transport corridors where roading capacity cannot be significantly increased, efforts will be mainly directed at reducing the increase in demand for vehicle travel. This will be achieved by increasing efficiency of use of vehicles – by increasing the ratio of persons per vehicle rather than by increasing the number of vehicles. This means support for high occupancy vehicles including public transport. Particular projects include as at September 1995:

(i) North Shore priority lane alongside the northern motorway;

(ii) connection of the southern rail line to the Britomart public transport terminal in the CBD and to Manukau City centre;

(iii) the introduction of Light Rail Transit in the southern and western rail corridors.

Similarly, attention needs to be given to reducing the need for heavy motor vehicle travel, through measures such as consolidation of loads and encouragement of rail freight where appropriate.

In recent years high-speed ferries have emerged as an increasingly important mode of commuter and tourist transport on the Waitemata Harbour and Hauraki Gulf. Water transport should be encouraged to play a significant alternative role in linking the city centre to Auckland's marine suburbs.

The feasibility and likely effects of pricing mechanisms, such as electronic road pricing, cordon tolls, supplementary licensing/area pricing and parking levies, to manage traffic demand in congested areas and corridors need to be investigated.

Allocation of funding to recognise the needs of the Auckland Region would result in a greater share of the land transport funds raised in Auckland being allocated back to Auckland than has been the case in the past. Greater ability for regions to allocate funds within the Region will enable funds to be allocated to proposals more appropriately.

4.4.10 Policies

The following policies and methods give effect to Objective 4.3-4.

1. ***Co-operation and information sharing between road safety groups will be actively encouraged.***
2. ***Priority areas will be identified for the targeting of road safety resources.***

4.4.11 Methods

1. ***The ARC will convene a working group of representatives of the major parties involved in road safety in the Region with the purpose of improving co-operation and information sharing among road safety organisations (the Auckland Regional Road Safety Working Group currently fulfils this role).***
2. ***A strategy will be produced and reviewed at regular intervals identifying road safety issues in the Auckland Region and targeting priority areas for the allocation of resources (the Auckland Road Safety Action Plan currently fulfils this role).***

4.4.12 Reasons

The National Road Safety Plan, published by the Officials Committee on Road Safety in July 1991, gives regional councils a planning, co-ordinating, monitoring, reporting, and quality assurance role. These functions are being undertaken through the Auckland Regional Road Safety Working Group, made up of representatives of the Regional Council, each city and district council, the Accident Compensation Corporation, North Health, the Land Transport Safety Authority, Transit New Zealand and the Automobile Association.

There is a need to provide guidance for the effective allocation of resources in the road safety area. The Auckland Regional Road Safety Working Group has prepared the Auckland Road Safety Action Plan which identifies the particular road safety issues in Auckland and the priority measures for dealing with these. The current plan targets:

(i) alcohol and speed as priority road user issues;

(ii) pedestrians, pedal cyclists, and child occupants as priority road-user groups;

(iii) intersections as priority engineering issues, and local authority planning as the priority management issue.

4.5 Environmental Results Anticipated

The policies are intended to produce a transport system which:

(a) is less reliant on non-renewable energy sources and requires less land to function effectively;

(b) reduces adverse impacts on air quality (including greenhouse gases) and water quality;

(c) has acceptable community impacts;

(d) provides a reasonable level of access to work, services, shops and social and recreational facilities for all groups in the community, including those without access to a car;

(e) ensures the regionally significant parts of the transport network are able to function effectively and efficiently;

(f) improves the effectiveness of the public transport system;

(g) is as safe as practicable.

4.6 Monitoring

Section 42A of the Transit New Zealand Act 1989 requires every regional council to prepare an annual report on progress in implementing its RLTS. The issues, objectives, policies and methods outlined in this chapter are all elements of the Auckland RLTS. The annual report on the RLTS is the means through which this chapter of the RPS is monitored. The RLTS annual report is produced in October each year under the guidance of a Technical Advisory Committee comprising officers from the Regional Council, each city and district council, Transit New Zealand, the Ministry of Transport and the Land Transport Safety Authority, reporting to the Regional Land Transport Committee.