



5 Freight Issues

In developing this freight strategy, the views of the freight industry, selected freight customers, and TAs were canvassed to identify the main freight-related issues facing the region.

In general, the freight industry's concerns are directed towards ensuring that freight can move freely on the transport system at minimum cost and that freight terminals and local deliveries are not unnecessarily compromised by restrictions resulting from inappropriate planning that has not taken adequate account of freight industry needs.

The needs of the freight industry must, in turn, be balanced with those of local government, whose perspective on the situation has a different emphasis. Whilst recognising the importance of freight movement as part of the local economy, local government has to reconcile the conflicts that occur between freight operations and other activities in the community, in the context of strong growth pressures

and limited financial resources from local and central government.

The key issues emerging from industry consultation are described in the Regional Freight Strategy Issues Paper and are summarised below. Issues have been grouped into key emerging themes.

5.1 Freight Efficiency and Congestion

Congestion is unanimously agreed to be the most important over-arching issue in regional freight transport and the main stumbling block to freight efficiency. A study carried out by consultants Ernst and Young in 1997 concluded that under investment in land transport is costing the manufacturing and distribution sectors around NZ \$100 million each year and impacting negatively on the local economy by around NZ \$185 million per annum.



A modern economy is characterised by the production and consumption of goods and services. All goods production, marketing, consumption and disposal involve the movement and storage of freight. The ability to competitively supply goods to the domestic and export markets depends on being able to deliver freight reliably, on time and at minimum cost.

Ultimately, the economic health of the region and its contribution to the national economy rely on a responsive and cost-efficient freight system.

Currently in Auckland, freight movement is seriously impaired by road congestion that, in turn, is a product of the backlog of deferred investment in transport infrastructure in the face of a rapidly expanding population.

Although arguably more essential to the well-being of the region than discretionary private car travel, freight is faced with the same delays as other traffic, and this results in many undesirable and, ultimately, costly effects that the region can ill afford.

The immediate results of congestion include:

- Longer and less reliable delivery times and lower utilisation of vehicles
- Higher costs to the transport industry which are ultimately passed on in the cost of goods
- Higher costs of inland transport links for export products and imported goods
- Adverse effects on new business investment in the region, and migration of existing business to other centres or overseas
- Local undesirable effects as freight vehicles try to avoid congestion – use of inappropriate routes, movements in unsocial hours
- A general increase in toxic and greenhouse gas emissions, lower fuel economy and adverse health effects.

5.2 Achieving a Balance in Managing Freight Impacts

Recognition of financial and physical constraints on investment in expanded transport infrastructure, management of traffic demand and mitigation of adverse social and environmental effects must form a component of the regional freight strategy as it does for transport as a whole.

Long-term strategic planning needs to take an holistic view of how the various components of the region's built environment, social and economic structure and natural resources interact and will develop over the long term. In this respect, the regional freight strategy must establish linkages with the RGS and be compatible with regional environmental planning.

The freight strategy therefore needs to promote an efficient freight system, to facilitate economic growth, that is environmentally sustainable. This will require finding cost-effective ways of mitigating conflicts and, where these exist, recognising the needs of both the freight industry and the community.

5.3 Freight Transport and Land Use

The movement of freight is multi-stage and complex. Freight transport has as its basis the demand for goods and services in the economy and so is closely related to the levels of economic activity and to the degree of centralisation and specialisation that the economy has achieved.

The demand for freight movement is inter-related with the supply of fixed transport infrastructure, the spatial distribution of land use, and transport technology. Better transport infrastructure and logistics allow the production, intermediate processing, distribution of goods, and the recycling/disposal of wastes, to take advantage of economies of scale and specialisation.

In turn, this influences where the intermediate processing and distribution enterprises decide to locate, in relation to their input suppliers and customers. Over time, these locational decisions feed back into the pattern of transport demand and the



pressures for expanding and extending the transport infrastructure. The freight demand is also affected by a string of exogenous factors such as trade states, the economic advantage of the region *vis a vis* competitors, and many others.

5.4 Demand Management and Freight

TDM is increasingly regarded as an important tool in managing the demand for passenger movement in conditions of limited supply of transport infrastructure.

However, while much of private car usage may be discretionary, that of freight transport is much more inelastic. Whereas there are alternatives to using private vehicles, and opportunities for higher occupancy trips through pooling or public transport, the same does not apply to freight.

The concept of constraining demand for freight is likely to result in outcomes contrary to the growth objectives and employment policies for the region. Goods are transported to be consumed as primary products, as inputs to production or as final consumption goods. In all cases, they have an ultimate value only if they have been transported to the place of use on time and in good condition. Thus, efficient transport adds value to goods and, in turn, to the production processes of which they are part.

As a consequence, the role of demand management is less of an issue in freight transport than it is in passenger transport. Or rather, its role is different, as there are strategies which, in the interests of improving efficiency, see complementary reduction in tonne-kilometres or kilometres performed in the movement of freight.

Consequently, transport demand management strategies need to distinguish between freight and passenger movement and apply different levels and forms of constraint to each. A single approach to all traffic that does not make a distinction between passenger and freight movement runs the risk of damaging the economic health of the region and wider economy.

Improvements to rail freight facilities, which can attract traffic away from the highway network, can make a contribution to travel demand measures by providing alternatives to the movement of freight by road without suppressing the overall demand for freight. However, a successful overall travel demand strategy may result in increasing demand for passenger rail services, which may limit the capacity that is available for rail freight.

5.5 Freight Transport Regulation

While more efficient and cost-reflective pricing would assist freight transport, regulation has a part to play in ensuring that minimum standards are recognised and enforced.

New Zealand has, as with most other countries, moved away from a system of regulating when, where and how freight can move, and instead concentrates on regulation of minimum safety and environmental standards, and of legal and fair competition.

This regulatory framework is through national legislation and, to some extent, through local application of bylaws and conditions exercised as part of various local government consenting processes.

Freight transport safety is regulated primarily through national agencies, in particular the Land Transport NZ, and enforced on the road by the Commercial Vehicle Investigation Unit of the Police.

5.6 Environmental and Social Impacts

There are a number of environmental and social impacts related to the distribution of freight in regional Auckland. These are discussed next.

Noise and Vibration

Traffic noise is caused by tyres on footpaths, exhaust brakes, loads rattling, engines and transmissions, exhaust, refrigeration units and audible reversing warnings.



Other noises, such as loading and unloading of vehicles at depots or on streets, can affect nearby residents or workplaces. Noise impact is also a cause of concern for rail and for port and airport terminals. A common concern is that trains will sound a horn at unprotected railway crossings at night for safety reasons.

Common ways of mitigating these impacts include:

- Re-routing heavy vehicles
- Educating drivers to be more careful in the use of horns and exhaust brakes
- Requiring loose equipment to be secured
- Introducing curfews by either statute or planning consent provisions
- Improving vehicle designs
- Protecting more rail crossings with barriers
- Reducing vehicle numbers
- Providing acoustic barriers along critical route sections
- Noise insulation of buildings
- Using district plan zoning techniques to ensure appropriate development where elevated noise levels cannot be avoided.

Air Emissions

Heavy vehicles which are predominantly diesel-powered introduce gaseous and particulate emissions into the atmosphere. The range of substances includes carbon monoxide, nitrogen oxides, sulphur dioxide, inhalable particulates of various size ranges and polycyclic aromatic hydrocarbons.

The effects of these range from long-term carcinogenic impacts through ill health, particularly in

relation to respiratory complaints, to discomfort, itchy eyes, shortness of breath and headaches.

Emissions from vehicles also cause discolouration and dirt on buildings and other structures.

Some air emissions are deposited back onto the road and, together with oil from engine leaks, brake lining materials and particles from tyre wear, are washed into the stormwater system, eventually discharging into rivers or to the coast.

Possible responses are to introduce and enforce emission controls, to improve fuel quality, and to switch to lower emission fuels and power systems. Emission controls can be requirements on new vehicles entering the fleet and in-service checking and correction of maintenance defects.

Congestion and stop/start traffic leads to higher emissions, so improved traffic flow and reduced vehicle numbers also assist in limiting emission problems.

Over a similar line haul distance, air emissions per tonne of freight are lower for rail than for road transport, so transfer of freight to rail can, in some instances, result in lower emissions as well as removing the emissions source from proximity to the susceptible population. However, true comparisons must be made on an individual case-by-case basis, and take account of pick-up and delivery journeys and handling, the routes used for freight movements though the urban area and their proximity to residential and other sensitive areas.

Another way to address emissions is to introduce pricing mechanisms to charge for these externalities associated with freight transport. The concept of 'polluter pays' for the damage has been widely studied but is short on application as the damage effects and their economic costs are difficult to establish and admit a wide range of uncertainty.

Recent changes to vehicle emissions policy have been progressed through the Land Transport Vehicle Exhaust Emission Rule 2003, that was gazetted in



September 2003 and comes into force for heavy vehicles in 2006.

The vehicle emissions policy package includes:

- Emissions screening of pre-used imported vehicles at the New Zealand border to ensure minimum emissions performance at entry as part of pre-registration
- Emissions screening of in-service vehicles regularly during their life on the road as part of Warrant of Fitness or Certificate of Fitness
- Education of vehicle users on the need for, and benefits of, vehicle maintenance.

Some environmental controls are applied locally through mechanisms such as bylaws limiting access to routes, and curfews at loading docks.

Hazardous Goods Spillages and Leakages

The transfer of dangerous goods is a pressure on any system. Deservedly, there are stringent standards and regulations that dictate the safe passage of such commodities. Nevertheless, the potential effects of a spill or accident are significant.

Land-use planning will normally seek to maintain a separation between hazardous goods storage and other land use but, inevitably, transport of hazardous cargo must pass along transport corridors used by the general public. In Auckland, the location of the tank farm on the Western Reclamation is a case where hazardous materials are required to move to and from this facility through the edge of the downtown area. Desirably this, and any other similar situations, should be resolved over time by relocation of the hazardous goods storage.

In the meantime, there are responses that can assist in minimising the risks, through specifying routes and times of day for such traffic, requirements for advance notice of shipment, and special piloting of vehicles.

Other measures include advance preparation in case of emergency – such as spill response equipment being stored on or near critical routes, particularly where they intersect with sensitive waterway areas. The response ought to be proportional to any risk and common sense suggests that emergency response paradigms would give guidance in this area of sustainable outcomes.

Community Severance

Freight routes using rail and road can effectively sever communities. This phenomenon is more evident in the case of new links or roads. The response is to improve planning, design and route selections with enhanced consultation.

5.7 Visual and Physical Intrusion of HCVs

This is as much about perception as it is related to fact. The juxtaposition of large vehicles on road space occupied by passenger vehicles can appear daunting. There is little to do, save removing vehicles from roads, which is seldom a practical response.

There are some firms who have strict appearance policies for their fleet. Trucks are washed and cleaned regularly. Care is taken to light the vehicle well, to provide skirts to prevent spray and to run full under-run protection around the sides and rear of the vehicles. In addition, proactive firms have a prominent toll-free number displayed on their truck to report any poor behaviour by their drivers. These community-conscious firms market this to their clients as a positive side of the client service ethos.

5.8 Safety and Health Impact

The Regional Road Safety Plan 2003 to 2006 (RoadSafe Auckland) provides a framework for tackling road safety issues in the region. The plan sets out a vision, goals, strategies and performance measures for road safety over this four-year planning period.



The plan provides some analysis of road crash data for Auckland compared with the remainder of New Zealand. No specific issues related to heavy traffic, or commercial goods traffic in general, are highlighted.

Potential and actual safety issues affecting road safety and freight transport are discussed below:

Driver/Operator Safety

- Pressures on drivers to exceed legal driving hours – which can be a result of longer delivery times and unreliability due to congestion
- Driver training issues – e.g. regular and formalised skill reviews
- Awareness of the needs of other road users
- Driver burnout and consequent shortage of good drivers prepared to work in Auckland; replacement with less suitable and 'cowboy' operators
- Poor financial returns to truck operators, thus inducing them to take risks.

Vehicle Safety

- Insecure loads constitute a safety risk for other road users and result from a combination of poor operator practice and inappropriate transport equipment
- Overturning risk due to high centre of gravity has been a recent concern, particularly for logging trucks
- Risk of crash-related or other spillages of hazardous loads is a safety issue – codes of practice for hazardous materials transport, monitoring of particularly hazardous loads and designation of routes to be followed, are possible management actions
- Perceptions by the public of the 'danger' attached to larger, heavier rigs, currently being sought by the Road Transport Forum.

Safe Road Design

- Proximity of heavy and/or fast moving freight vehicles to cyclists and pedestrians through lack of cycleways, narrow lane widths, narrow shoulders, narrow footpaths close to the traffic flow, and high relative speeds, are sources of perceived and real risks; windwash from trucks can cause cyclists to lose control
- Inadequate sightlines, inadequate facilities for trucks to manoeuvre into and out of site for pick-up and delivery sites; poor internal circulation brings pedestrians and trucks into conflict situations; lack of through-flow circulation; requirements to back and fill, especially into the traffic stream.

Rail/Road Level Crossing Safety

The intersection of road and rail at level crossings are conflict points. The risk of collision is mitigated by providing warning signage or alarms and a set of regulations for road traffic passing over level crossings. These regulations confirm the priority for rail movements and since trains are not able to stop quickly or swerve, it is critical that road and pedestrian traffic complies with the regulations on the use of level crossings.

Rail operators are diligent about reporting accidents and near-hit events at crossings and in actively following up with responses which aim to prevent repeat incidents.

Rail/road level crossings historically have been a safety concern, a matter that was vigorously addressed by the previous rail operator, Tranz Rail, and continues to be addressed by Toll and ONTRACK. Toll and ONTRACK work with local government and industry on the Level Crossing Forum convened by Land Transport NZ. This type of forum, used successfully overseas, captures all the available resources of interest groups to focus them on engineering, education and enforcing correct behaviour to improve safety at crossings.

However, level crossings represent a safety risk and this may increase as levels of conflicting road and



rail traffic increase. When crossings are closed for the passage of a train, road traffic is delayed and this can lead to congestion and associated costs. Given concern about safety and road congestion, the removal of level crossings remains a priority for ACC.

5.9 Rising Oil Prices

During preparation of the ARFS, there has been a significant rise in oil prices, both internationally and in New Zealand. It has been predicted that global production will peak at some point in the future ('Peak Oil') and then go into long-term decline, with a consequent impact on prices. Although there is a lot of uncertainty around these predictions, it is generally accepted that the cost of oil will increase over time.

The RLTS acknowledges this issue, notes some of the likely impacts, but does not attempt to address it. Instead, the RLTS states that this matter will be more fully considered in the next review of the strategy. But it does note that the transport system needs to be flexible and resilient enough to continue to operate in a manner that meets the objectives of the RLTS, regardless of potential oil price rises and/or restrictions in supply.

For that reason, the ARFS does not address the issue of rising oil prices. However, the matter will be addressed more fully once the review of the RLTS has been completed.

Nonetheless, the measures contained in the ARFS aim to improve the efficiency of the freight industry through the encouragement of the introduction of more fuel-efficient vehicles, and the switch of traffic to modes such as coastal shipping and rail, which again offer the potential for savings in fuel consumption. While these will provide benefits in a future scenario, when fuel supplies are more tightly constrained than at present and prices are higher, the main potential for saving lies in the more efficient use of the road vehicle fleet. This will continue to handle the greater majority of the freight moved within the Auckland region and will be severely impacted by general conditions on the highway network.

A number of the measures proposed in the ARFS will help to improve conditions for freight vehicles and allow them to operate more efficiently. By making better use of the resources available, this will help mitigate the impacts of any increases in oil prices or shortages of supply.



