

# CHAPTER 11: LAND TRANSPORT EFFECTS

## 11.0 INTRODUCTION

The District's land transport system consists of an extensive network of roads linking over 30 small dispersed settlements and rural areas. The District contains a more limited network of walkways and few cycleways. It provides an access service for a number of transport modes, including private and commercial vehicles, heavy freight vehicles, passenger transport services, cyclists and pedestrians.

The District has no rail service, so it is entirely dependent upon roading for its land transport needs, supported by air and sea links. The land transport system is, therefore, an important utility service within the District, and both the Council and New Zealand Transport Agency fund its maintenance and development. The Council has a Regional Land Transport Strategy implemented jointly with Nelson City Council for the purpose of strategic management of the transport system.

Roading, parking and other traffic infrastructure is provided in the District largely through works, services and financial levies on new development. New development also adds traffic to existing infrastructure. That additional traffic may be within the design and capacity parameters of existing facilities. Where it exceeds them, requiring maintenance or upgrading earlier than otherwise scheduled, it may be appropriate that new development contributes to those costs.

Parking in commercial areas is likely to be an issue if parking is only provided through a levy on new commercial development. Many shops and offices will be able to accept an increase in their volume of business without having to enlarge their premises. Unless businesses voluntarily increase their customer parking, Council will need to look at means other than Plan rules and development levies to avoid adverse effects of inadequate parking.

## 11.1 EFFECTS ON TRANSPORT SAFETY AND EFFICIENCY

### 11.1.1 Issue

The adverse effects on the safe and efficient provision and operation of the land transport system, from the location and form of development and carrying out of subdivision and land use activities.

#### Explanation

The dispersed nature of settlements and developments in the District requires an extensive network of state highways and local roads that takes significant cost and effort to maintain and upgrade. Transport needs for a wide range of activities are served by the network, including forestry, horticulture, farming, fishing, commercial, commuter and tourist travel. Future increases in population and primary production transport are predicted at a rapid rate, imposing demands on the physical capabilities of roads, particularly arising from increased heavy traffic volumes. Tourist traffic is also expected to continue increasing. Increases in traffic volumes from adjacent land use activities that generate vehicle trips may put pressure on particular routes. Urban subdivision and development as well as rural development may increase the demand for upgrading routes, including attention to travel time and hazardous roading situations. The form and location of development, such as clustering of development, can help to maintain a relatively safe and efficient use of the road network, with an appropriate rate of road upgrading. Policies in this section are not only about providing a safe driving environment, but also about ensuring safety for people in the environment through which vehicles are driven. Amenity in that environment is also a relevant issue.

### 11.1.2 Objective

A safe and efficient transport system, where any adverse effects of the subdivision, use or development of land on the transport system are avoided, remedied or mitigated.

### 11.1.3 Policies

*Refer to Policy sets 5.1, 6.1, 6.3, 6.5, 6.6, 6.9 - 6.12, 6.14, 6.18, 6.19, 6.21, 7.2, 7.3, 13.1*  
*Refer to Rule sections 16.2, 16.3, 17.1 - 17.12, 18.7, 18.8, 18.9, 19.2*

- 11.1.3.1** To promote the location and form of built development, particularly in urban areas, that:
- (a) avoids, remedies or mitigates adverse effects of traffic generation;
  - (b) provides direct and short travel routes by vehicle, cycling and pedestrian modes between living, working, service, and recreational areas;
  - (c) avoids an increase in traffic safety risk;
  - (d) allows opportunities for viable passenger transport services to be realised;
  - (e) provides a clear and distinctive transition between the urban and rural environments;
  - (f) segregates roads and land uses sensitive to effects of traffic.
- 11.1.3.2** To ensure that land uses generating significant traffic volume:
- (a) are located so that the traffic has access to classes of roads that are able to receive the increase in traffic volume without reducing safety or efficiency;
  - (b) are designed so that traffic access and egress points avoid or mitigate adverse effects on the safety and efficiency of the road network.
- 11.1.3.3** To avoid, remedy or mitigate adverse effects of high traffic-generating land uses on the community cost of the road network resource of the District.
- 11.1.3.4** To avoid, remedy or mitigate adverse effects of traffic on amenity values.
- 11.1.3.5** To ensure that all subdivision design, including the position of site boundaries, has the ability to provide each allotment with vehicle access and a vehicle crossing sited to avoid adverse effects on the safety and efficiency of the road network.
- 11.1.3.6** To control the design, number, location and use of vehicle accesses to roads; including their proximity to intersections and any need for reversing to or from roads; so that the safety and efficiency of the road network is not adversely affected.
- 11.1.3.7** To ensure that adequate and efficient parking and loading spaces are provided, either on individual sites or collectively, to avoid or mitigate adverse effects on the safety and efficiency of the road network.
- 11.1.3.8** To avoid, remedy or mitigate adverse effects from the location, design and operation of intersections.
- 11.1.3.9** To ensure rural structures and vegetation do not cause or aggravate:
- (a) restricted visibility at road intersections; or
  - (b) icing on roads.
- 11.1.3.10** To avoid or mitigate likely adverse effects on the integrity of the road network arising from sea-level rise, climatic change and natural hazards.
- 11.1.3.11** To ensure that signs do not detract from traffic safety by causing confusion or distraction to or obstructing the views of motorists or pedestrians.
- 11.1.3.12** To facilitate a regional cycle trail.

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## 11.1.20 Methods of Implementation

### 11.1.20.1 Regulatory

- (a) Rules and zones limiting the location of residential and rural-residential development to areas in close proximity to established town centres.
- (b) Rules limiting the location and traffic generation effects of rural workplaces.
- (c) Rules defining the form and density of urban subdivision and development.
- (d) Rules that control the potential effects of activities on the environment, including their traffic generation and effects on the safety and efficiency of the roading network.
- (e) Rules limiting the location of certain activities which are not suitable adjoining major roads due to their sensitivity to traffic volumes.
- (f) Rules relating to the size, shape, location and size of lettering, illumination and message on signs.
- (g) Rules regarding the size and design (surfacing) of car parking spaces, loading and manoeuvring areas for each activity, based on the traffic generation and duration of stay of vehicles associated with the site. Such rules to specify requirements for staff, visitors, goods deliveries, customers and residents. NPS-UD  
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- (h) Rules relating to queuing space on site for car parks containing more than 20 spaces.

*[Method (i) deleted]*

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- (j) Rules regarding car parking requirements for people with disabilities.
- (k) Rules requiring the setback of structures and trees from the road boundary in rural areas to ensure that the carriageway can receive full sun between 10.00 am and 2.00 pm on the shortest day.
- (l) Standards of the Nelson Tasman Land Development Manual 2019 that address network layout and design, access, vehicle crossings, intersections and sight distances to ensure the safety, efficiency and effective functioning of the transportation network. C69 6/19  
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### 11.1.20.2 Investigations and Monitoring

- (a) Investigation of and support for layby kiosks for signs.
- (b) Monitoring of accident rates, causes and locations.
- (c) Establish the means to be used in assessing the road maintenance or repair impacts of activities subject to resource consents.
- (d) Develop, in consultation with road users, a procedure for determining fair and reasonable contributions for upgrading roads.

### 11.1.20.3 Education and Advocacy

- (a) Promotion of a sustainable form and sustainable operation of the transport system through means such as the local Agenda 21 initiative, the Healthy Communities programme.

### 11.1.20.4 Works and Services

- (a) Continuing provision of funds and bids for government funding support for the Annual District Land Transport Programme, including maintenance and upgrade of the roading network, safety improvements, monitoring and research, and expenditure on planning, construction and maintenance of the land transport system.

- (b) Continuation of Council’s tourist facility symbol scheme.
- (c) The provision of car parking, service lanes and other traffic management facilities.

### **11.1.30 Principal Reasons and Explanation**

The location and form of built development and other traffic-generating activities is a strong determinant of the form of the transport system, a major physical resource of the District. Compact urban form, with a minimum of ribbon development, enables development of an efficient network for through traffic. There is a legacy of ribbon development in parts of the District, such as at Hope, Wakefield and Ruby Bay. Any more intensive development in such areas will need to avoid adversely affecting traffic safety and efficiency.

Intensive traffic-generating activities such as commercial and industrial activities need convenient access to major routes. Because access causes a reduction in the carrying capacity of roads and a potential conflict with passing vehicles, the location and detailed design of access is important. Accesses that are too wide or too narrow, at a position of impaired visibility or located too close to intersections, can cause traffic conflict.

Adequate on-site parking is required for activities to prevent the spread of on-street parking, which can interfere with the safe operation of the transport network and property access to the network.

To reduce accident risk on rural roads where traffic speed tends to be higher, clear visibility needs to be maintained and shading which could cause icing problems avoided.

Other hazards, such as a predicted sea-level rise of up to 25 centimetres by the year 2025 indicates a need for prudence in expenditure on road infrastructure in areas such as Ruby Bay, which may be affected most by sea-level rise.

Signs adjacent to roads have the potential to cause driver distraction. Traffic signs should be easily read. To achieve the highest degree of safety, roadside information directed at road users needs to be kept to a minimum, located in positions with adequate visibility and have clear and concise messages that can be rapidly read by road users.

### **11.1.40 Performance Monitoring Indicators**

- 11.1.40.1 Number and severity of accidents on rural and urban roads due to adjacent land uses.

## **11.2 EFFECTS ON THE ENVIRONMENT**

### **11.2.1 Issue**

The adverse effects on the environment from the location, construction and operation of the land transport system.

### **11.2.2 Objective**

The avoidance, remedying, or mitigation of adverse effects on the environment from the location, construction, and operation of the land transport system, including effects on:

- (a) the health and safety of people and communities;
- (b) the amenity of residential areas, workplaces and recreational opportunities;
- (c) air and water quality;

- (d) natural habitats and ecosystems;
- (e) landscapes and natural features;
- (f) aggregate and energy resources;
- (g) the productivity and use of land.

### 11.2.3 Policies

*Refer to Policy sets 5.2, 6.1, 6.5, 6.11, 7.3, 7.4, 9.1.*

*Refer to Rule sections 16.2, 16.3, 17.1 – 17.13, 18.7, 18.8, 18.9, 19.2.*

- 11.2.3.1 To maintain a hierarchy of roads and to classify roads according to their traffic and access functions. C69 6/19  
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- 11.2.3.2 To regulate the effects of traffic generation and traffic speed on the safety and amenity of places of significant pedestrian activity.
- 11.2.3.3 To promote transport routes, and approaches and methods of design, construction, and operation which avoid, remedy, or mitigate adverse effects on:
  - (a) the health and safety of people and communities; in particular, cyclists and pedestrians;
  - (b) amenity values of neighbourhoods and areas of special character;
  - (c) air and water quality;
  - (d) natural habitats and ecosystems;
  - (e) landscapes and natural features;
  - (f) aggregate and energy resources;
  - (g) the productivity of land.
- 11.2.3.4 To ensure that the road network provides continuous routes for the use of over-dimensioned and over-weight vehicles, located, constructed and maintained in a manner that avoids, remedies, or mitigates adverse effects on:
  - (a) street furniture;
  - (b) road surfaces;
  - (c) under-road structures or services.
- 11.2.3.5 To protect future road alignments that ensure that roads can be connected where appropriate.
- 11.2.3.6 To promote choice between using roads, walkways or cycleways for walking or biking.

### 11.2.20 Methods of Implementation

#### 11.2.20.1 Regulatory

- (a) Rules specifying performance standards for road construction, pavement construction, intersection spacing, and street lighting, including provisions that recognise areas of special character or amenity value such as St Arnaud.
- (b) Rules controlling the design of areas set aside for brief stopping on roads by a large number of vehicles, such as near schools.
- (c) Rules for financial contributions to improve the quality of the transport network, including cash-in-lieu of parking requirements, as an option in specified areas.
- (d) Rules which define those facilities required to provide for the loading and unloading of goods service vehicles.

- (e) Rules relating to joint use of parking areas, use of adjacent sites for parking, and recognition of different hours of operation of activities.
- (f) Identifying locations on the planning maps which may be required for possible future roads.
- (g) Rules for financial or other contributions for walkway or cycleway purposes, for transport or amenity reasons.
- (h) Standards of the Nelson Tasman Land Development Manual 2019 that can ensure the design and construction of roads that are safe, effective and efficient.

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#### 11.2.20.2 Investigations and Monitoring

- (a) Investigation of the need for new or altered traffic routes, including walkways and cycleways.
- (b) Investigation in consultation with affected landowners of walkway or cycleway linkages, for example, on road reserves (formed or unformed), along river margins, between national parks and elsewhere, where appropriate.
- (c) In determining road routes, identify habitats of value for indigenous species and wildlife, including areas of potential habitat restoration.

#### 11.2.20.3 Works and Services

- (a) Continuing provision of funds and bids for government funding support for the Annual District Land Transport Programme, including maintenance and upgrade of the roading network, safety improvements, monitoring and research, and expenditure on planning, construction and maintenance of the system.
- (b) Development of networks of routes for over-dimension and over-weight vehicles as part of the Regional Land Transport Strategy, after consultation with industry and other affected parties.
- (c) Construction and maintenance of walkways and cycleways.
- (d) Ensuring that disposal of spoil and debris from road works is environmentally acceptable as well as economically efficient.

### 11.2.30 Principal Reasons and Explanation

The existence of the roading network creates adverse effects on adjacent land uses and the quality of living and other environments. Traffic emits fumes and noise, and can generate dust and other contaminants. Traffic is a potential hazard to people's safety. Reduced amenity in the vicinity of roads results from increased road size and traffic volumes and speeds. Demands for extension or upgrade to the network can put space needs for new road alignments in conflict with existing land uses or it may restrict future opportunities. Land resources such as open space, natural habitats or heritage features may be adversely affected by this space need. Aggregate and water are required for road building; space for roads may permanently remove the option for production or living space. Design of additions to the road network must consider the most efficient and safest way of providing route options for future traffic. In some instances the exact location of a future road alignment may not be known but developers need to be aware of locations where connectivity is required to sustain the network. The generation of traffic at certain locations may require consideration of reciprocal effects of the network and of land use activities.

Council's Land Development Manual sets out mandatory standards and good practice matters that can ensure the effective and efficient design and construction of the region's transportation network where that system will form part of or affect Council's transportation network.

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**11.2.40 Performance Monitoring Indicators**

- 11.2.40.1 Number of traffic accidents resulting from poorly located signs, vegetation or access.
- 11.2.40.2 Changes in traffic volumes on indicator roads.

**11.50 ENVIRONMENTAL RESULTS ANTICIPATED**

- 11.50.1 A safe, efficient and accessible land transport system.
- 11.50.2 Predictable and consistent driving conditions.
- 11.50.3 Convenient availability of parking.
- 11.50.4 Improved pedestrian and cyclist safety and accessibility.
- 11.50.5 Construction of new roads, access and parking areas to appropriate use and safety standards.
- 11.50.6 Efficiency in the use of transport energy, through increased use of alternative forms of transport, rather than private cars.
- 11.50.7 Reduced adverse effects on the environment from transport activities.

