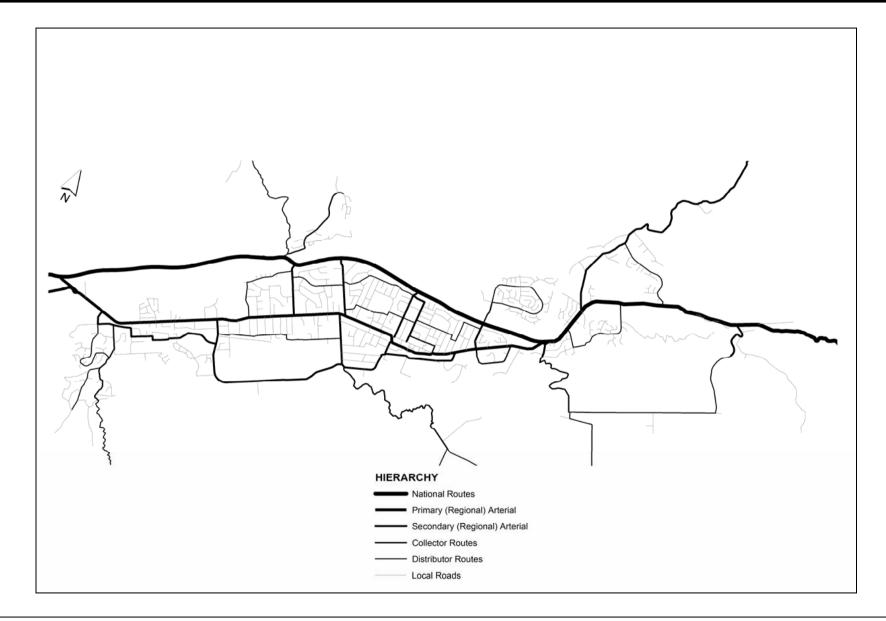


# **Good Transport and Infrastructure Systems**

### **Road Hierarchy**



#### **Overview**

The design of the city's infrastructure has a fundamental impact on how people live and what demands are placed on the environment to meet their needs. Infrastructure sets the pattern of development and this pattern may last for many years. Key assets may be expected to function for 100 years. Road layout is generally not changed for many more years.

Consequently, infrastructure must be designed for the next 50 to 100 years as a minimum, and with regard to the key external risks and pressures facing the country, in particular climate change, the growing cost of fossil fuels, and energy use and efficiency. As increasing emphasis is placed on finding more sustainable ways to live in urban areas, Council and the community will need to consider new responses to infrastructure requirements.

The urban areas of Upper Hutt are well served by roads, and reticulated water and waste services. Council places a top priority on the development, renewal and maintenance of these essential urban services. These programmes are detailed in the Asset Management Plans for each service, and the work programme for the next ten years is presented in the Long Term Council Community Plan. Council is also an active participant in the Regional Land Transport Committee and Hutt Valley Services Committee.

Asset management planning for future infrastructural services has been based on assumptions that are now being challenged as a result of research for the Urban Growth Strategy. Council now considers that the assumptions used for growth are too modest, given that a forecast increase of only 86 household units per year over the next 15 years was made, and over the past ten years over 150 household units per year have been created. Council now forecasts that most greenfield residential areas will be developed within the next five to ten years, and as new land must be identified for growth, additional infrastructure will be required.

#### Land Transport

Land transport covers all aspects of mobility by land, including roads, public transport, cycling and walking. While transport by air and sea are important, they are not discussed in this Strategy because the nearest commercial port facilities are based in Wellington.

#### Strategic Road Network

Good access to and from the regional network and the Upper Hutt arterial road network is essential for the city's wellbeing, and Council will continue to participate fully in the regional and national processes which direct this network's development.

Council will also advocate for Upper Hutt's interests, to ensure that the needs of the national highway network are balanced against the community's needs for convenient and safe access both to the network and across the highway to the Hutt River or, further north, to other communities. Further access would only be advocated where there are gaps or a need to improve the existing network.

The map of the roading hierarchy is shown page 62.

#### Local Road Network

Upper Hutt's local road network links homes and businesses with the strategic road network. Council has identified a roading hierarchy, which determines the design standards that will be set for a particular road serving a particular purpose within the network, e.g. secondary arterials, collector routes. The District Plan categorises each street within the city according to its function and design capacity. Depending on the growth options adopted under the Urban Growth Strategy a number of new or upgraded linkages could be possibilities for the extended urban area, and which could include the following:

#### PROPOSED ROADS & BRIDGES

	AREA	NEW ROAD PROPOSED
1	Pinehaven Guildford	New road from Silverstream, along the ridgeline to link with the Blue Mountains /Whiteman's Valley area
2	AgResearch Wallaceville	<ul> <li>New roads within the site:</li> <li>Alexander Road, linking with the new Alexander Park industrial subdivision</li> <li>Ward Street, linking through to Racecourse Road</li> </ul>
3	Riverstone Terraces - Totara Park	New road and bridge linking Riverstone Terrace with Totara Park
4	Kingsley Heights - Cruickshank	New road linking King Charles Drive with Cruickshank Road
5	Teasdale	New road and bridge linking Gillespies Road with new development at Teasdale and Gemstone Drive, near State Highway 2.
6	Mt Marua - Mangaroa	New road and bridge with potential to link Mt Marua with the lower Mangaroa Valley.
7	Silverstream	Capacity upgrade to Silverstream bridge.
8	Mangaroa	Upgrade to Mangaroa Hill Rd bridge, in the Mangaroa Valley.

Again depending on the growth options adopted under the Strategy possibilities for a number of intersections to be upgraded may also be needed, including:

- All links to State Highway 2, including:
  - o Te Marua /Maymorn
  - o Gemstone Drive /Birchville
  - o Akatarawa Road /Brown Owl
  - o Totara Park Bridge
  - o Whakatiki Street
  - o Moonshine Road
  - o Moonshine Hill Road
  - o Silverstream
- Gibbons Street / Main Street / Fergusson Drive
- Whakatiki Street /Fergusson Drive /Ward Street
- Mangaroa Hill /Fergusson Drive /SH2 at Maoribank

#### **Public Transport**

Public Transport is a function of the Greater Wellington Regional Council, and Council participates in the direction of these services through the Regional Land Transport Committee.

Council will advocate for the following specific service upgrades:

#### PROPOSED PUBLIC TRANSPORT IMPROVEMENTS

	AREA	PROPOSAL
1	Upper Hutt Station	Replace with new rail station Opening up of rail underpass
2	Timberlea	Extend rail commuter service New rail station
3	Maymorn	Upgrade rail station Extend rail and bus commuter service
4	Riverstone Terraces	New bus service [this may be subject to a new road link to Totara Park being created first]

#### Car parking

Council will continue to review the demand for car parking within the CBD, with the intention of ensuring that convenient parking is available for shoppers.

Council will continue to review the demand for commuter parking, in association with the Regional Council.

#### Pedestrian and Cycle Network

The network of roads, paths, reserves and open space provide good access throughout most of the city, and new developments are designed to ensure that this connectivity is extended.

There are some improvements that may be considered, including:

- Improving access across State Highway 2 to the Hutt River
  - o Totara Park Bridge intersection
  - o Linking Harcourt Park /Brown Owl with Emerald Hill, Timberlea and Mt Marua.
- Improving linkages from Field Street and Fergusson Drive to the Hutt River at Silverstream.
- Upgrading pedestrian facilities on the valley floor to enable easy use by those with mobility scooters or disabilities.
- Designing roads on the periphery of the urban areas to allow sufficient space for use by pedestrians, cyclists and horse riders, as these roads also often extend into the rural area.

#### Water and Sanitary Services

A Water and Other Sanitary Services Assessment was completed in 2005 which described these services and provided an estimate of future demands, based on the existing District Plan. The focus of this section is on additional infrastructure requirements that may be needed for the higher growth now forecast.

#### Water Supply

The key issue identified for the public supply of water was the possibility of the current level of security against raw water shortages being eroded with growth in the region. This is a complex area with the issue being the ability to supply water to a one in fifty year drought.

Bulk water for metropolitan Wellington [Wellington, Porirua, Hutt and Upper Hutt Cities] is supplied by the Greater Wellington Regional Council from the Kaitoke Water Catchment area, the Orongoronga's, and the aquifer under the Hutt Valley. The Regional Council is currently investigating future water supply options, including new catchment sources on the Whakatiki and Pakuratahi Streams. It applied for and was granted, resource consent in early 2007 to investigate groundwater in the vicinity of Wallaceville.

Council will advocate to ensure that water sourced from within Upper Hutt City is available to meet the needs of Upper Hutt homes and businesses, now and for the future.

#### Wastewater

The key issue identified for the disposal of wastewater was the risk of overflows due to too much stormwater getting into the wastewater system.

Some parts of the piped system may not be adequate to meet the level of growth previously forecast, and further modelling will be required depending on the density and spread of growth that the community now considers acceptable for Upper Hutt. Council with Hutt City Council will also need to review trunk wastewater services.

#### Stormwater

A number of key issues were identified for stormwater, including:

- Flooding of habitable floor levels [excludes nuisance flooding]
- Risks from growth and development or other issues like climate change
- Any future stormwater quality issues that may affect public health

Parts of the city are not reticulated for stormwater, including much of Poets Block, Barton Road, Golf Road and part of the Hudson Ave/Oxford Cres area.

Council will require new developments [both infill and greenfield] to provide satisfactory management of additional stormwater generated. This could include the ability to store or delay the peak stormwater loads before discharging to the reticulated system, or to utilise stormwater for gardening and non-potable use in the home.

#### Solid Waste

The Silverstream landfill has sufficient capacity to meet anticipated solid waste disposal needs for the next 50 years.

#### **Other Infrastructural Services**

A number of other infrastructural services are also installed at the time of land subdivision and development, including:

- Electricity
- Gas
- Telecommunications

Council will continue to work with the entities supplying these services, as required. Further work at a national level may also impact on Council such as a proposed National Environmental Standard on telecommunication facilities in road reserve.

#### **Strategy: Servicing Future Development**

There are three key themes in the strategy for servicing future urban development:

- 1. Design to minimise infrastructure demands.
- 2. Undertake more detailed investigations where additional growth may impact on existing levels of service.
- 3. Update the works programme and development contributions.

#### 1. Design to Minimise Infrastructure Demands

Council will take take a holistic approach in planning for future infrastructure requirements, ensuring that each additional new urban development is able to be well integrated with existing development, and has also considered the likely needs of any future developments.

Council will consider proposals for development that incorporate new and innovative ways of addressing basic infrastructural requirements, particularly those that provide a range of transport options, foster safe and efficient water use practices, that create more 'liveable' spaces, and that while built to last are also adaptable to change through time.

Council will also review its Code of Practice for Civil Engineering Works, which sets out the infrastructural standards for new developments, in line with best practice and to meet local demands.

#### 2. Undertake More Detailed Investigations

Council will identify which additional new areas it wants to have investigated further to assess whether they are practical and affordable to service.

Council will then undertake more detailed feasibility work into transport, water and waste servicing requirements including how services will be funded and provided associated with future growth.

Once this work is undertaken for a new area, Council will review the capacity of the area for urban development, and for those areas that are suitable, it will identify appropriate development contributions for extending these services prior to their release for urban development.

For significant areas of greenfield development, this information will be used by Council in developing the structure plan, which, in turn will be given effect through the subdivision process. For infill developments and smaller greenfield extensions, this information will be used by developers in the structure plan for each proposal. The structure plan will show how the development proposal fits into the existing area, and how it will impact on any future infrastructural requirements for the area.

## 3. Update the Works Programme and Development Contributions

One of the purposes of the Urban Growth Strategy is to be able to plan ahead for areas where we know growth will occur, and currently without such a Strategy it is difficult to plan for how growth will be funded. As any variations to Council's works programmes or changes to its Policy on Development Contributions must be consulted on as part of the process of preparing the Annual Plan and Long Term Council Community Plan, the public will have a further opportunity to submit on Council's proposals before they come into full effect.

### **Areas Served by Public Transport**

