



7. ROADING AND TRAFFIC

Description

The roading and traffic significant activity consists of five sub-functions – roading and footpaths, street cleaning, street lighting, traffic management and parking. Council provides, maintains and cleans sealed roads and footpaths throughout the city. Traffic control measures are utilised to ensure the efficient and safe movement of motor vehicles, cyclists, pedestrians and other forms of transport. Street lighting is provided to ensure the safety and security of road and footpath users at night.

Parking involves the provision, maintenance and regulation of on-street and off-street carparks in the commercial areas of the city. The location and regulation of carparks is designed to ensure fair, easy and efficient access to the city's commercial areas.

Community Outcomes

s101(3)(a)(i)

This activity primarily contributes to the following Community Outcomes:

- Outcome 1 – Community Prosperity “a local economy that is attractive to both businesses and residents”
- Outcome 2 – Connected “enhanced roading system”
- Outcome 6 – Regional Foundations “roading, water and waste (including recycling) work and are accessible to all”
- Outcome 7 – Sense of Place “a built environment that is attractive, safe and healthy”; and “a more attractive Hutt City”.

Distribution of Benefits

s101(3)(a)(ii)

This significant activity comprises a set of functions including roading, street cleaning, traffic management, street lighting and parking. These activities have distinct economic characteristics, which are discussed separately below.

Roading

The provision of roads is a legal requirement. The public nature of the road reserve and the absence of private markets result in Council's role as asset owner and funder.

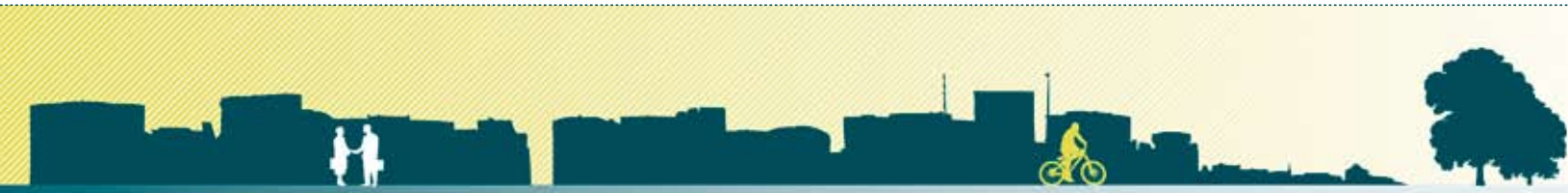
Roading provides a strip of commonly owned land by which people and goods can move without having to enter into complex transactions with individual land owners. This common strip is generally non-rival and practically non-excludable and the benefits of it go to the community in general. This aspect of the road network has negligible operating costs associated with it. Its costs lie in the purchase price of the land and the opportunity cost of keeping the community's resources in that form (cost of capital).

Maintaining the road surface and structure, or “carriageway”, is where the bulk of the operating costs lie. Carriageway technology is provided almost exclusively for motorists. The benefits, therefore, are received by an identifiable group within the community.

The whole community does not benefit equally from this expenditure – the more you use the road, the more you benefit. Road surfaces are technically excludable through vehicle registration. In reality Council is unable to exclude any users by law (given a legal vehicle) and is unable in law to place a toll on the road. They are also rival in that they are worn out as each vehicle passes over them (exponentially according to the weight of the vehicle). They are also rival when congested, as every extra vehicle that goes on to the road imposes a cost on all the other vehicles present. In this sense the carriageway aspect is not a pure public good.

Footpaths, like carriageways, are designed for a certain transport mode – mainly pedestrians. Unlike the carriageway, however, they are not easily worn out through use, are more difficult to exclude from use and are rarely congested. For these reasons they more closely resemble public goods.

Prestige values are also present in that people express considerable concern to Council over the state of roads in their localities. People generally feel that untidy or damaged roads reflect poorly on the city as a whole.



Generally major arterial routes more than pay their own way in fuel tax and road user charges. At the other extreme cul de sacs will never do so. The roading system is a network, however, and such individual components can only crudely be treated in isolation. The best outcome would be to have all approved carriageway costs funded from road user sources rather than rates. However, road tolling is practicable in only limited circumstances and Hutt City Council already maximises its roading “subsidy” from Land Transport NZ. The level of rates funding must continue if Council is to maintain and improve its roading network. Applying the principles of the Act suggests that Council should seek the replacement of rates funding for approved carriageway expenditure with Land Transport NZ money.

A greater contribution from Land Transport NZ would also eliminate the need for any rates differentiation on the basis that commercial traffic accounts for approximately 50% of traffic counts around the city and a proportion greater than 50% by axle weight.

Roading provides a higher level of user benefit to urban residents and businesses because of higher surface, footpath and lighting standards. For these reasons allocation of a lower proportion of costs can be considered for rural ratepayers.

Total benefit to the community as a whole: 35%
Total benefit to individuals or identifiable parts of the community: 65%

Street Cleaning

Street cleaning is necessary owing to natural and human factors. Leaves and dust are unavoidable consequences of weather. The litter component falls into the exacerbator principle.

Prestige values again are present in that people express considerable concern to Council over the amount of litter in their localities.

Total benefit to the community as a whole: 80%
Total benefit to individuals or identifiable parts of the community: 20%

Traffic Management

In traffic management Land Transport NZ and Greater Wellington Regional Council subsidised works are regarded to be of private benefit to users of the road with the balance relating to cyclists and pedestrians throughout the whole city. Public benefits come from the safety aspect to the community in general. The Land Transport NZ subsidy meets the costs of the private benefits to, and negative effects caused by, vehicle users.

Total benefit to the community as a whole: 60%
Total benefit to individuals or identifiable parts of the community: 40%

Street Lighting

Street lighting is provided to certain standards for traffic and pedestrian safety in a way that is both non-rival and non-excludable. Also the cost of providing the service is largely independent of the number of users once certain levels are reached.

There are private benefits obtained from the service though, and the major beneficiaries are the motorists. Motorists are an identifiable group of beneficiaries best recognised and dealt with through the Land Transport NZ subsidy. This subsidy is currently at around 45% and this should be used as a proxy for private benefit.

Total benefit to the community as a whole: 55%
Total benefit to individuals or identifiable parts of the community: 45%

Parking

The legal status and public nature of the road reserve requires that Council own the parking asset. Council is responsible for regulation and enforcement owing to its legal ability to ration carparks through by-laws.

Parking fees are seen as a short term rental on a plot of land that has an excess demand for its use, and are therefore a private good, as parking spaces are both rival and excludable. Parking fees are a rationing mechanism for a scarce resource. Parking fines are a mechanism to force the user to vacate the park and allow another user the



opportunity to rent the space. Free alternatives are available as private landowners offer free rentals to entice customers into their properties. In areas where supply exceeds demand no rationing mechanism is needed and parks are free.

The private funding of 150% includes an allocation of 50% to provide for a return on the cost of capital including new meters.

Total benefit to the community as a whole: -50%
Total benefit to individuals or identifiable parts of the community: 150%

Exacerbator Pays

s101(3)(a)(iv)

Road and parking congestion has exacerbator pays considerations that point towards use of user charges to ensure effective use of the resource.

The litter component of street cleaning falls into the exacerbator principle. It is not possible to identify the exacerbator in most cases, however, and even large penalties would not generate enough net revenue to fund street cleaning, even while reducing the need for it.

Costs and Benefits of Distinct Funding

s101(3)(a)(v)

Roading

The Land Transport NZ portion of funding covers the private good element of roading.

Roading costs make up the majority of this activity and vehicle weights are the major factor in creating damage. The majority of the costs of roading are therefore caused by heavy vehicle movements, which are generated by businesses. This is recognised in the road user charges system run by Central Government.

Under the Local Government (Rating) Act 2002 Council has no ability to directly impose charges on road users. All road reserves are free to access for all vehicles. A separate Act of Parliament is needed to collect tolls on a specific road. The level of user charges is therefore set at the level of subsidy received from Land Transport NZ. This situation could change in the medium term with the Government now reviewing transport legislation.

Street Cleaning

There is an issue of whether the cost of street cleaning in commercial areas should be significantly borne by the business community. This is probably more fair and efficient than charging the community at large. Not all people use the commercial areas equally and where the cost is placed on the business owners it:

- Provides incentives for businesses to reduce packaging
- Offers the opportunity for business owners to pass on the cost to those who actually use the shopping areas
- Gives businesses the incentive to seek from Council the level of service they require.

Traffic Management

Council recognises that the operating subsidies do not cover the private benefits of pedestrian areas and cyclists. In order to promote alternatives to the use of car-based trips this benefit is seen to be one that should be paid for by the public in general.

Street Lighting

Street lighting is a relatively pure public good that is most appropriately funded from general rates.

Roading Excluding Parking

Total costs allocated to the community as a whole: 78%

Total costs allocated to individuals or identifiable parts of the community: 22%

Parking

The target has been modified to reflect the current level of charges. Income from this activity is applied to general roading and traffic expenditure.

Total costs allocated to the community as a whole: -58%

Total costs allocated to individuals or identifiable parts of the community: 158%

FINAL COST ALLOCATION PERCENTAGE**Private Funding**

User Charges	15.0
Operating Subsidies	15.0
Total Private Funding	30.0

Public Funding

General Rate	
Residential	17.3
Business	43.7
Utility	8.8
Rural	0.2
Total Public Funding	70.0
TOTAL	100.0

In recognition of the fact that businesses give rise to the majority of the costs of maintaining the roading network, 75% of public funding requirements have been allocated to businesses, including utility networks. The remaining public funding has been allocated between residential and to a lesser extent rural ratepayers for reasons discussed in the benefits section above, in direct proportion to each segment's share of the total capital value of the city.

8. WATER**Description**

This activity involves the supply of high quality drinkable water for domestic and commercial use. Council purchases bulk water from Greater Wellington Regional Council, and this accounts for 56% of the total cost of water supply to the city. Water is then distributed around the city through the local pipe network. Council's ownership of the pipe network is historical. There is a legal requirement for Council to retain control of these assets.

Community Outcomes**s101(3)(a)(i)**

This activity contributes primarily to the following Community Outcomes:

- Outcome 1 – Community Prosperity “a local economy that is attractive to both business and residents”
- Outcome 4 – Healthy Environment “clean air, water and land”.

Distribution of Benefits**s101(3)(a)(ii)**

The public health benefits lie in the treatment of the water and in having a sealed reticulation system made from safe materials. The treated water is both excludable and rival.

Third party benefits are considered to exist in the avoidance of infectious waterborne diseases. The expenditure on the public health component is costs associated with treatment and the marginal cost of “healthy” pipe technology eg, the extra expense of having non-asbestos pipes. The costs of using healthy pipe technology, as well as the cost of hygienic headworks (source of water), are significant.

Fire-fighting capacity is available to all within the reticulated area. Once the capacity is provided newcomers can be accommodated at negligible extra cost. In this sense it is non-rival. It is also neither practicable nor desirable to exclude people from this benefit.



Fire-fighting capacity, therefore, is a public good component. While significant, this forms a relatively minor part of the overall costs of this activity.

In the absence of metering, targeted rates can be seen as a proxy for user charges. All connections are charged the targeted rate, and this is assumed to cover the supply of the average residential user. Commercial water users are charged on a metered rate for water consumption over and above this volume. The user charges account for around 20% of the total operating cost of the activity and are 100% private benefit funded.

There is unaccounted water use equivalent to around 20% of total water use. This includes fire-fighting, flushing (cleaning) of the system and cleaning out reservoirs. Leakage from the system accounts for 10-15% of total water use. This leakage results from breaks and leaks throughout the network and cannot be attributed to any specific users. The cost of this leakage is spread evenly across all users.

Total benefit to individuals or identifiable parts of the community: 100%

Costs and Benefits of Distinct Funding

s101(3)(a)(v)

Ensuring consumers see the true costs of their consumption assists the efficient allocation of water. A general rate would not achieve this aim. Water metering would be effective, but the costs of meter installation and reading are high. A targeted rate for water is seen as a cost-effective means of providing transparency of the true cost of supply.

Total costs allocated to individuals or identifiable parts of the community: 100%

FINAL COST ALLOCATION PERCENTAGE

Private Funding	
User Charges	18.0
Targeted Rate	82.0
Total Private Funding	100.0
Total Public Funding	0.0
TOTAL	100.0

9. WASTEWATER

Description

Council ensures the treatment and disposal of household and commercial effluent according to regional and national environmental standards. A new treatment plant was commissioned in 2002 to ensure effluent is treated to higher standards.

Community Outcomes

s101(3)(a)(i)

This activity primarily contributes to the following Community Outcomes:

- Outcome 1 – Community Prosperity “a local economy that is attractive to both businesses and residents”
- Outcome 4 – Healthy Environment “clean air, water and land”
- Outcome 6 – Regional Foundations “roading, water and waste (including recycling) work and are accessible by all”.

Through treating and disposing of wastewater Council is protecting both the physical environment and the health of the community. There is also a legal requirement for Council to retain control of these assets.

Distribution of Benefits

s101(3)(a)(ii)

Public goods are generally those that the market will not supply in sufficient quantities. Wastewater, like any other form of pollution, is something we want less of. The private sector would be more than happy to supply wastewater infrastructure so any market failure lies in its monopoly characteristics. Users of wastewater services can be identified and charged and therefore the activity delivers significant private benefits.

There are also some public good characteristics in wastewater. These exist in the benefits to the community from maintaining public health (as opposed to the benefits of being healthy to an individual) and environmental protection. These benefits are in the area of public health infrastructure.



Current funding is consistent with a high, or total, private benefit component, if the targeted rate is treated as a proxy for user charges. User charges are possible via either metering wastewater, or more simply by charging for wastewater on the basis of volume of water supplied.

Commercial users of the wastewater system meet the full costs associated with the treatment and disposal of the waste they generate in the new Wastewater Treatment Plant via a trade waste charging system introduced in 2002. Charges are based on the strength of the waste as well as the volume. This has the effect of shifting part of the funding from targeted rates to direct user charges. It has no impact on the private/public benefit split as targeted rates are treated as a proxy charge for user pays.

The rural sector is generally not a user of this activity. The significant use of user charges or targeted rates ensures that payments are sought only where the service is provided.

Total benefit to individuals or identifiable parts of the community: 100%

Exacerbator Pays

s101(3)(a)(iv)

The majority of wastewater is not a public good at all, but rather an exacerbator issue, where the polluter should pay. This indicates funding via a high proportion of direct user charges to encourage waste reduction by those parties creating the pollution.

Costs and Benefits of Distinct Funding

s101(3)(a)(v)

Funding by user charges has the benefit of ensuring that polluters face the true costs of their activity and encourages waste reduction. User charges can, however, present ability to pay problems for residents with limited means and in extreme cases of hardship present public health risks if user charges result in disconnection.

Total costs allocated to individuals or identifiable parts of the community: 100%

FINAL COST ALLOCATION PERCENTAGE

Private Funding	
User Charges	4.0
Operating Subsidies	14.0
Targeted Rate	82.0
Total Private Funding	100.0
Total Public Funding	0.0
TOTAL	100.0

10. STORMWATER

Description

Council operates an effective drainage system to protect property from flooding damage. Stormwater infrastructure includes pipe networks, street-side gutters, retention dams and open watercourses. These are provided and maintained according to the reasonable costs of managing foreseeable flooding events. There is a legal requirement for Council to retain control of these assets.

Community Outcomes

s101(3)(a)(i)

This activity primarily contributes to the following Community Outcomes:

- Outcome 1 – Community Prosperity “a local economy that is attractive to both businesses and residents”
- Outcome 4 – Healthy Environment “clean air, water and land”
- Outcome 6 – Regional Foundations “roading, water and waste (including recycling) work are accessible by all”.

Distribution of Benefits

s101(3)(a)(ii)

Stormwater reticulation, watercourses, major storm events and watercourse quality management, addressed under this heading, are partly for private benefit but mainly