

Domestic Transport Costs and Charges Study

Working Paper C3 Road Expenditure and Funding Overview

Prepared for Te Manatū Waka Ministry of Transport (NZ)
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Disclaimer

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Research, Economics and Evaluation

The Research, Economics and Evaluation team operates within the System Performance and Governance Group of Te Manatū Waka Ministry of Transport. The team supports the Ministry's policy teams by providing the evidence base at each stage of the policy development.

The team is responsible for:

- Providing sector direction on the establishment and use of the Transport Evidence Base (see below) – including the collection, use, and sharing of data, research and analytics across the transport sector and fostering the development of sector research capabilities and ideas.
- Leading and undertaking economic analyses, appraisals and assessment including providing economic input on business cases and funding requests.
- Performing the evaluation function for Te Manatū Waka, including designing monitoring and evaluation frameworks and approaches, developing performance metrics and indicators, and designing, conducting and procuring evaluations.

The Transport Evidence Base

The Transport Evidence Base Strategy creates an environment to ensure data, information, research and evaluation play a key role in shaping the policy landscape. Good, evidence-based decisions also enhance the delivery of services provided by both the public and private sectors to support the delivery of transport outcomes and improve wellbeing and liveability in New Zealand.

The Domestic Transport Costs and Charges study aims to fill some of the research gaps identified in the 2016 Transport Domain Plan (Recommendation R6.2), which forms part of the Transport Evidence Base.

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For more information

For more information about this project and associated report, please contact:
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Glossary of terms and abbreviations

ACC	Accident Compensation Commission
Crown funding	Funding derived directly from Crown resources rather than the funding generated by Waka Kotahi itself
DoC	Department of Conservation
ETS	Emissions Trading Scheme
FED	Fuel excise duty
HIF	Housing Improvement Fund
LAPT	Local Authority Petroleum Tax
LR	Local roads
NLTF	National Land Transport Fund
NLTP	National Land Transport Programme
NZTA	New Zealand Transport Agency (now renamed as Waka Kotahi)
PEFM	Petroleum or Engine Fuel Monitoring Levy
PGF	Provincial Growth Fund
RFT	Regional fuel tax - payable in the Auckland area only
RUC	Road user charges. Charges levied on diesel powered vehicles based on the vehicle type and distance travelled and used to recover the costs of road use for these vehicles
SH	State Highways
TLA	Territorial Local Authority. The second tier of local government in New Zealand, below regional councils
WK	Waka Kotahi

Executive Summary

Introduction

This working paper looks at the sources of revenues to support roading and public transport activities funded by the public sector and the ways in which these revenues are spent. The roading and public transport sectors form a major part of the overall domestic transport task. Therefore, understanding the associated flows of funds is an important component in understanding the pattern of costs and charges in the sector, including in particular:

- the way in which different activities contribute to the overall totals, and
- the extent to which revenues match expenditures for activities which are intended to be self-financing

This then gives the potential to assist in determining whether the levels of funding and expenditure are appropriate or whether they need to be adjusted in the light of the evolving priorities in the domestic transport sector. We have aimed as far as possible to include all the significant flows of funds to provide a comprehensive assessment of the position, while recognising that some of these are for activities which are essentially self-financing.

It should be noted that the information in this paper is drawn from a number of sources, for which the method of calculation and assessment may differ, in part because of different accounting conventions and approaches. There may therefore be some minor inconsistencies in some of the numbers, but this is not considered to affect the broad picture of the patterns of funding flows for the revenues and expenditures in the sector.

The broad structure of the payments for roading and public transport are set out in Figure ES.1. In essence payments are made primarily by road users into the National Land Transport Fund (NLTF), the majority of which funding goes into supporting the National Land Transport Programme (NLTP) but with some funding going to support the transport related activities of the police. Revenues from public transport fares go directly to the regional councils to support their public transport activities.

Funding from the NLTP goes to Waka Kotahi, supplemented by revenues from the Crown for particular schemes (which include for example the Kaikoura Earthquake response) and by limited revenues from other sources including the management of Crown land.

The revenue available to Waka Kotahi is spent in three main ways:

- Spending on Crown schemes, reflecting the funding that it has been given to support these
- Payments to approved organisations, primarily local authorities, but also including payments for activities undertaken by agencies such as HIF, PGF and DoC.
- Direct expenditure by the Agency.

The payments to local authorities (regional councils and TLAs) are supplemented by funding raised from the authorities' own resources, including revenues from targeted and general rates, public transport fares and a range of other sources.

The broad outline of the process is set out in Figure ES.1.

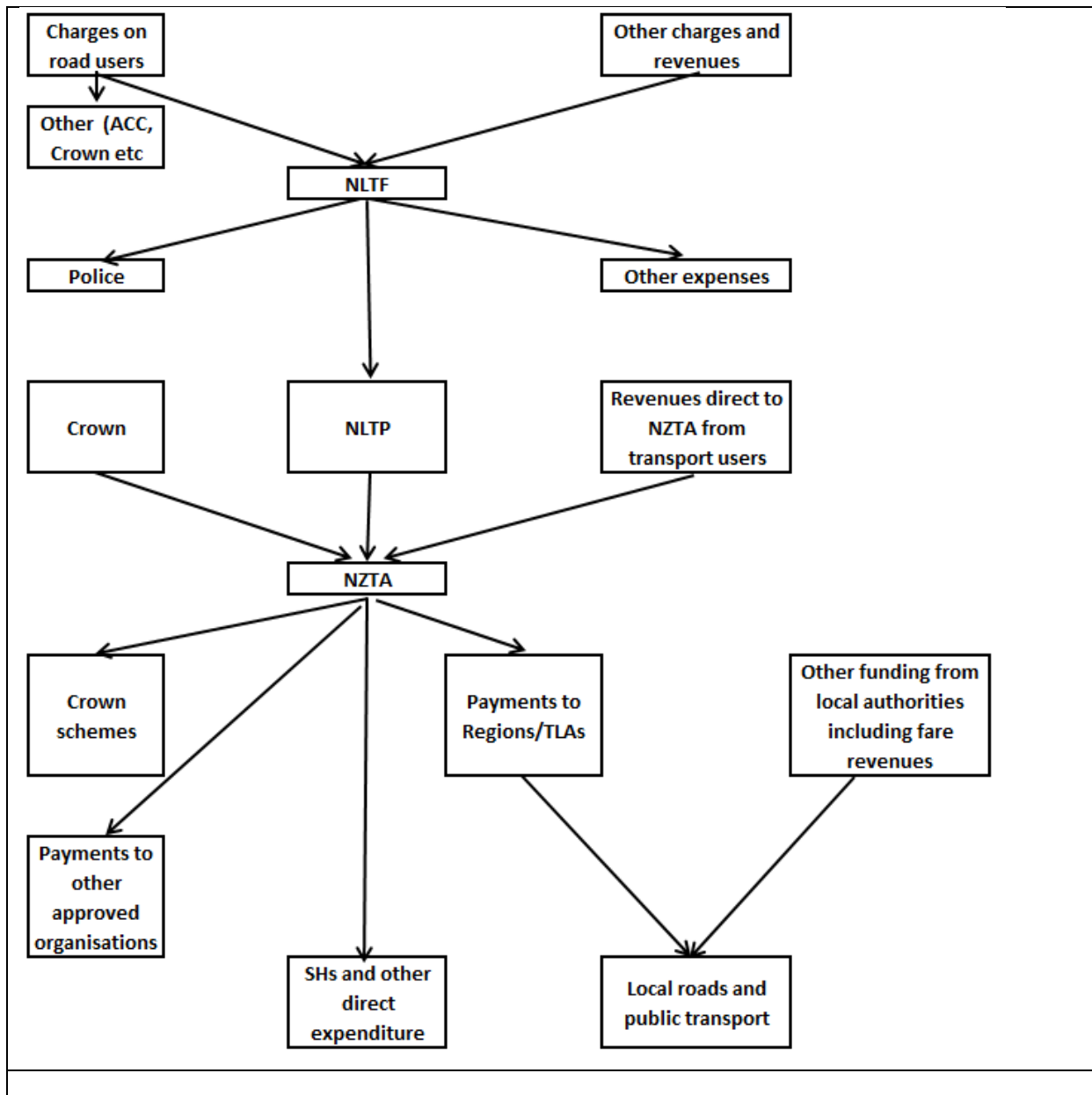


Figure ES.1 Outline structure of roading and public transport revenue and expenditure flows

Expenditure

Expenditure on the road network and public transport services in New Zealand in 2018/19 amounted to about \$6.1bn. Of this, the total expenditure through Waka Kotahi amounted to about \$4.1bn of which about \$2.0bn was paid to approved organisations, mainly local authorities. These local authorities contributed a further \$2.bn from their own resources, giving total local authority expenditure of \$4.0bn. Payments to other agencies, mainly to the police, amounted to about \$0.3bn. Of the balance after payments to local authorities, the Agency spent \$1.9bn on its own schemes and \$0.2bn on schemes for the Crown. Payments to other approved organisations amounted to about \$0.1bn.

This is summarised in Table ES.1.

Table ES.1 Total transport expenditure by Waka Kotahi and local authorities 2018/19

Expenditure type	\$m
Waka Kotahi - Own activities	1,907
Waka Kotahi - Crown schemes	199
Waka Kotahi - Support for approved organisations (S)	2,002
(A) Total Waka Kotahi including support for approved organisations ⁽¹⁾	4,108
Local authorities	1,938
Local authorities - funding from own resources including public transport fares and rates	2,024
(B) Total local authorities ⁽¹⁾	3,963
(C) Approved organisations other than local authorities	64
Total (A) + (B) + (C) – (S) ⁽²⁾	6,132

Notes:

- (1) The support for approved organisations is included in the totals for both Waka Kotahi and the local authorities so the total is less than the sum of these two items
- (2) The total excludes expenditure on the police of about \$0.3bn which is taken from the National Land Transport Fund before allocating the balance to the NLTP and subsequently to Waka Kotahi

Local authorities are responsible for a large share (70 %) of the total expenditure on roading and public transport, funded either from their own resources (43 %) or with support by Waka Kotahi (27 %). Waka Kotahi expenditure for its own purposes including operating expenditure amounts to about a quarter of the total, similar in magnitude to its funding of approved organisations. The balance is split between funding for Crown schemes (schemes funded directly by the Government rather than through the revenues generated by Waka Kotahi itself) and payments to other approved organisations.

Revenues

The sources of revenue for these expenditures on the road and public transport systems are mainly provided by motorists and public transport users through a variety of channels, although a significant proportion is separately financed from the local authorities' own resources. These revenues that go towards the National Land Transport Programme are summarised in Table ES.2. In addition, road users also pay fees and levies to other agencies, mainly the Accident Compensation Commission (ACC) and, through fines and infringement revenues, to the Crown.

Table ES.2 Revenues from road and public transport users 2018/19

	Total (\$m)	%
Fuel excise duties (FED)	2,734	48.1
Road user charges (RUC) ⁽¹⁾	1,667	29.3
Licensing and registration	458	8.0
Tolls	39	0.7
Other user revenues	242	4.3
Public transport fares	358	6.3
Fines	192	3.4
Total	5,689	100.0

Notes (1) Road user charges are levied directly on diesel vehicles to recover the costs of road use

As noted earlier, this table does not include other revenues from the local authorities' own resources, which amounted to about \$2.0bn in 2018/19.

Duties on fuel represent almost half the total payments of users towards the funding of the roading and public transport network, with road user charges from diesel-powered vehicles representing a further 30 %.

Chapter 1 Introduction

1.1 Study Scope and Overview

The Domestic Transport Costs and Charges (DTCC) study aims to identify all the costs imposed by the domestic transport system on the wider New Zealand economy, including costs (financial and non-financial) and charges borne by the transport user.

The Study is an important input to achieving a quality transport system for New Zealand that improves wellbeing and liveability. Its outputs will improve our understanding of the economic, environmental and social costs imposed by different transport modes - including road, rail, coastal shipping and domestic passenger aviation - and the extent to which those costs are currently offset by charges paid by transport users.

The DTCC is intended to support the Te Manatū Waka's wider policy framework, especially the Transport Outcomes Framework (TOF). The TOF seeks to make clear what government wants to achieve through the transport system under five outcome areas:

- Inclusive access,
- Economic prosperity,
- Healthy and safe people,
- Environmental sustainability, and
- Resilience and security.

Underpinning the outcomes in these areas is the guiding principle of mode neutrality. In general, outputs of the DTCC study will contribute to the TOF by providing consistent methods for (a) estimating and reporting economic costs and financial charges; and (b) understanding how these costs and charges vary across dimensions that are relevant to policy, such as location, mode, and trip type.

Robust information on transport costs and charges is critical to establishing a sound transport policy framework. The Study itself does not address future transport policy options; but the study outputs will help inform important policy development in areas such as charging and revenue management, internalising externalities, and travel demand management.

The Study was undertaken for the Ministry of Transport by a consultant consortium headed by Ian Wallis Associates. The Study was divided into a number of topic areas, some of which relate to different transport modes (including road, rail, urban public transport, and coastal shipping), and others to transport-related impacts or externalities (including accidents, congestion, public health, emissions, noise, biodiversity and biosecurity).

Working papers (25) have been prepared covering each of the topic areas. Their titles, topic areas and specialist authors are listed in Appendix 2.

1.2 Costing Practices

The focus of DTCC is on NZ transport operations, economic costs, financial costs and charges for the year ending 30 June 2019 (FY 2018/19). Consistent with this focus, all economic and financial cost figures are given in NZ\$2018/19 (average for the 12-month period) unless otherwise specified.

All financial costs include any associated taxes and charges (but exclude GST); while economic costs exclude all taxes and charges.

The DTCC economic and financial analyses comprise essentially single-year assessments of transport sector costs and charges for FY 2018/19. Capital charges have been included in these assessments, with annualised costs based on typical market depreciation rates plus an annualised charge (derived as 4% pa, in real terms, of the optimised replacement costs of the assets involved).

1.3 Scope of this paper

This working paper looks at the sources of revenues to support roading-related activities (including the associated funding of public transport) by the public sector and the ways in which the revenues are spent.

It should be noted that the information in this paper is drawn from a number of sources, for which the method of calculation and assessment may differ, in part because of different accounting conventions and approaches. There may therefore be minor inconsistencies in some of the numbers, but this is not considered to affect the broad picture of the patterns of funding flows for the revenues and expenditures in the sector.

The broad structure of the revenues and expenditures associated with roading (and public transport) in New Zealand is set out in Figure 1-1.

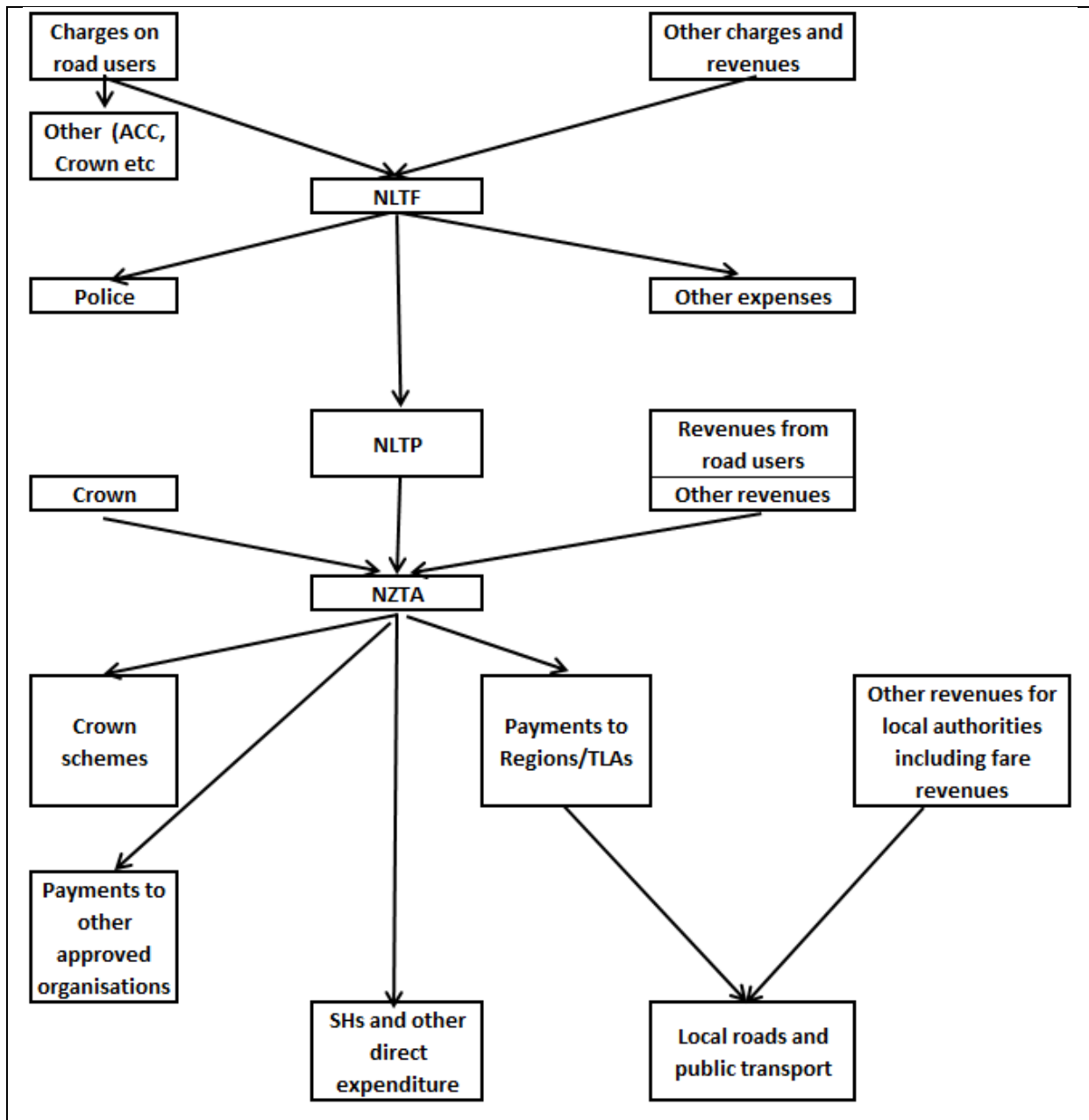


Figure 1-1: Outline structure of roading and public transport revenues and expenditures

This paper should be considered in conjunction with WP C4: ‘Road Vehicle Ownership and Use Charges’: in particular: that paper provides further information on the charges imposed on road users, the revenues raised from these charges and the allocation of these revenues by road type.

Chapter 2 Charges imposed on road users

2.1 Introduction

Road users provide the largest share of revenues for the public sector activities in the road transport sector. While a number of charges are imposed on road users, the most important of these comprise:

- Taxes and levies on the purchase of fuel
- Road user charges (RUC)
- The costs of registering and licensing road vehicles
- Fines
- Other charges levied on road use.

Each of these is discussed below.

2.2 Fuel taxes and levies

A range of taxes and levies are imposed on the price of fuel. These include:

- Fuel excise duty (FED).
- Regional fuel tax (in the Auckland area).
- Accident Compensation Commission (ACC) levy.
- Local Authority Petroleum Tax (LAPT). This is paid to local authorities but is not ring fenced for transport expenditure.
- Petroleum or Engine Fuel Monitoring (PEFM) Levy. This is aimed to meet the costs of maintaining a stockpile of oil products to meet international obligations and monitoring fuel quality. This is paid to the Ministry of Energy and Resources.
- Emissions Trading Scheme (ETS) Levy.

While all these taxes and levies apply to petrol sales, only the LAPT, PEFM, regional fuel tax and ETS levy apply to sales of diesel fuel. Unless otherwise indicated, all estimates in this working paper exclude GST.

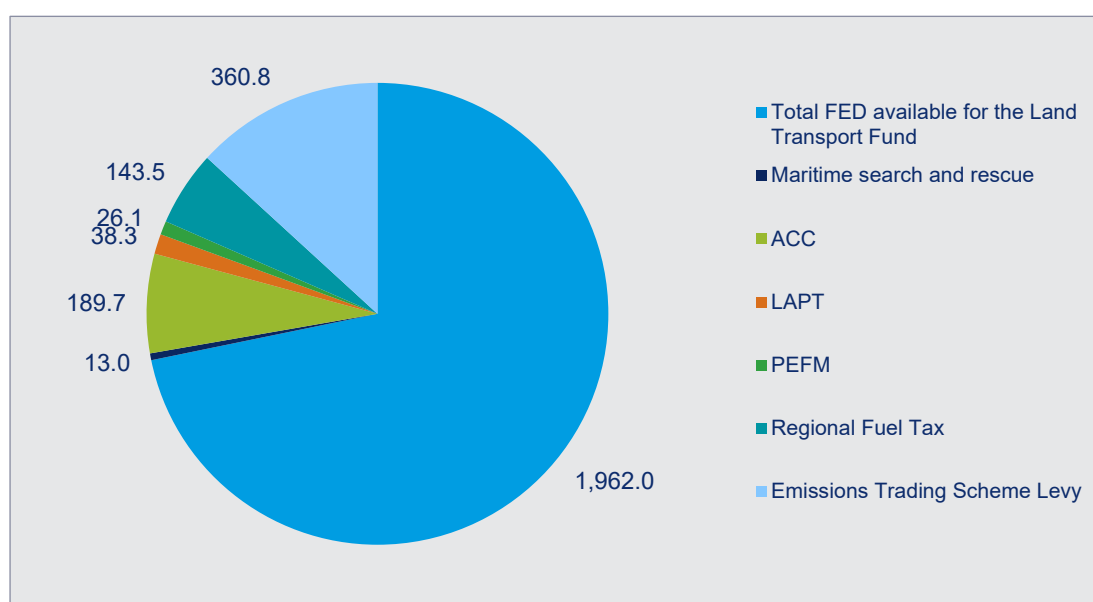
The estimated sums raised from the sales of petrol and diesel are set out in Table 2.1 and Figure 2.1.

Table 2.1 Revenues generated from levies and charges on automotive fuel sales 2018/19 (\$m)

	Petrol	Diesel	Total	Source
Total fuel excise duty collected for the Land Transport Fund	2,040.2			(1)
Refunds and bad debts	(78.2)			(1)
Total FED available for the land transport fund	1,962.0		1,962.0	(1)
Other levies on fuel:				
Maritime search and rescue	13.0		13.0	(1)
ACC	189.7		189.7	(2)
LAPT	29.9	9.1	38.3	(3)
PEFM	17.8	8.3	26.1	(3)
Regional Fuel Tax	83.9	59.6	143.5	(3)
Emissions Trading Scheme Levy	197.1	163.8	360.9	(3)
Total other levies and taxes	531.4	240.8	772.2	
Total taxes and levies on fuel	2,493.4	240.8	2,734.1	

Sources

- (1) Waka Kotahi 2018/19 annual report P257
(2) Information from ACC
(3) Consultant estimates based on data from MBIE and Waka Kotahi

**Figure 2-1: Allocation of revenues from fuel taxes and levies (\$m)**

2.3 Road user charges

Road user charges are levied on diesel-powered vehicles on a distance-related basis as an alternative to the fuel excise duty levied on petrol. There are different charge levels by size and weight for powered vehicles and unpowered vehicles towed by the powered vehicles.

The total road user charges levied in 2018/19 are set out in Table 2.1.

Table 2. 1 Collection of road user charges 2018/19 (\$m)

	\$m
Total collected for Land Transport Fund	1,726.9
<u>Less:</u> Refunds and bad debts	(60.4)
Total road user charges allocated to the Land Transport Fund	1,666.5

Source: Waka Kotahi Annual Report 2018/19 (p.257).

2.4 Vehicle registration and licensing

Charges are collected for initial vehicle registration and subsequent licensing. These charges also include an ACC levy. The total charged to road users is set out in Table 2.2.

Table 2.2 Motor vehicle registration and licensing charges 2018/19 (\$m)

	\$m
Total Motor vehicle registration and licensing fees collected for Land Transport Fund	227.7
<u>Less:</u> Refunds and bad debts	(1.8)
Total available for Land Transport Fund	225.9
Other levies: ACC levy on vehicle registration and licensing	232.5
Total vehicle registration and licensing revenues	458.4

Sources: Waka Kotahi Annual Report 2018/19 p257 and ACC data from Accident Compensation Corporation.

Revenues from these three types of taxes provide the bulk of the revenues for the Land Transport Fund, contributing a total of \$3,854.4m in 2018/19.

2.5 Other charges on road users

Road users also face a number of other charges and levies, some of which are directed to the transport sector.

2.5.1 Fines and infringements for road user offences

Fines on road users are imposed by the police for a number of offences and infringements. Once collected, fines and infringements accrue to general Crown revenues and are not ring-fenced for transport expenditure.

Estimated total amounts of fines and infringements issued are set out in Table 2.4. It should be noted that this data is supplied by the police and is based on the face value of the infringement notices issued by the police. The totals may be different to the amounts actually collected as the infringement may be waived or referred to the Ministry of Justice for an unpaid fee.

Table 2.3 Amount of fines and infringements issued 2018/19 (\$m)

Infringement type	Value of infringement notices (\$m)
Traffic offences	
Red light	4.02
Restraints	5.87
Alcohol and drugs	3.00
Mobile phone	2.30
Mobile speed cameras	24.62
Static speed cameras	60.58
Office- Issued speed fines	32.35
Police speeding	0.38
Other infringements	
Certificate of loading	0.21
Cycling, pedestrian and other road users	0.15
Dangerous driving	3.03
Driver licence	17.14
Failure to comply	1.63
Failure to stop/give way	3.04
Logbook	0.39
Motorcycle helmet	0.02
Other goods/service vehicle related	0.99
Parking	0.22
Road user charges	2.89
Vehicle bylaw	0.11
Vehicle conditions	0.75
Vehicle over-dimension/mass	2.32
Vehicle licensing and registration	7.81
Noise	0.85
WoF/CoF	16.68
Worktime offences	0.00
Miscellaneous	0.12
Total	191.46

Source: Communication from New Zealand Police.

2.5.2 Other charges to road users

A range of other charges made directly or indirectly on transport users are collected by Waka Kotahi are set out in Table 2.4.

Table 2.4 Other charges collected by Waka Kotahi

Other charges paid by transport users	\$m
Motor vehicle licensing fees (1)	51.7
Driver licensing fees	35.8
Driver testing fees	24.3
Road user charges collection	13.0
Certification review fees	11.9
Transport licensing fees	11.2
Standards development fee and certification levies	6.9
Over-dimensional and overweight permit	1.3
Rail licensing fees	1.2
Border inspection fees	0.8
Tolling fees and contributions-allocated to meeting Waka Kotahi operating costs	16.0
Levy on sales of personalised plates	3.8
Total revenues from other activities	177.9

Source: Waka Kotahi Annual Report 2018/19 (p. 94).

Notes (1) These are the amounts charged by Waka Kotahi to cover the costs of the collection of motor vehicles licencing fees.

2.6 Total charges to road users

Putting together all the information on the charges to road users (including rail licensing fees), the total charges are set out in Table 2.5.

Table 2.5 Total charges to road users 2018/19 (\$m)

	Total	To Waka Kotahi /NLTF	To other agencies	Collection costs/ refunds etc
Revenues from taxes primarily for the Land Transport Fund:				
Charges related to fuel use	2,747.2 ⁽¹⁾	1,962.0	772.2	13.0
RUC	1,726.9	1,666.5		60.4
Registration and licensing	458.4	225.9	232.5	0.0
Total revenues from road users for the land transport fund		3,854.4		
Other charges imposed:				
Fines and infringements issued	191.5		191.5	
Other miscellaneous charges collected by Waka Kotahi (See Table 2.5) (2)	177.9	177.9		
Total from road users	5,301.9	4,032.3	1,196.2	73.4

Notes (1) Including collection costs

(2) When comparing these figures with those in WP C4 it should be noted that the WP C4 numbers exclude toll charges (which are included separately), the costs of the collection of motor vehicles licencing fees and rail incensing fees.

Chapter 3 Other revenues for the Land Transport Fund

3.1 Revenues for the Land Transport Fund

Other revenues to support the National Land Transport Programme are summarised in Table 3.1.

Table 3.1: Total other revenues to the Land Transport Fund 2018/19 (\$m)

Revenue type	\$m
Management of Crown Land	53.9
Tolling-designated for repayment of Crown Debt	11.3
Interest revenue	9.9
Total	75.1

3.2 Other revenues

Other revenues are received from other sources as set out in Table 3.2.

Table 3.2: Revenues from other activities excluding road users direct to Waka Kotahi (2018/19 (\$m))

Revenue type	\$m
Recoveries from National Land Transport Programme activities including developer contributions	33.6
Interest and finance income	15.4
Admin fee from ACC	1.0
Miscellaneous	1.4
Total revenues from other activities direct to Waka Kotahi	51.4

Source Waka Kotahi Annual Report 2018/19 p94

The position is summarised in Figure 3-1 Of the total payments by road users, 73 % goes as land transport revenues, 26 % goes to other agencies and 1 % is taken up by collection costs and rebates.

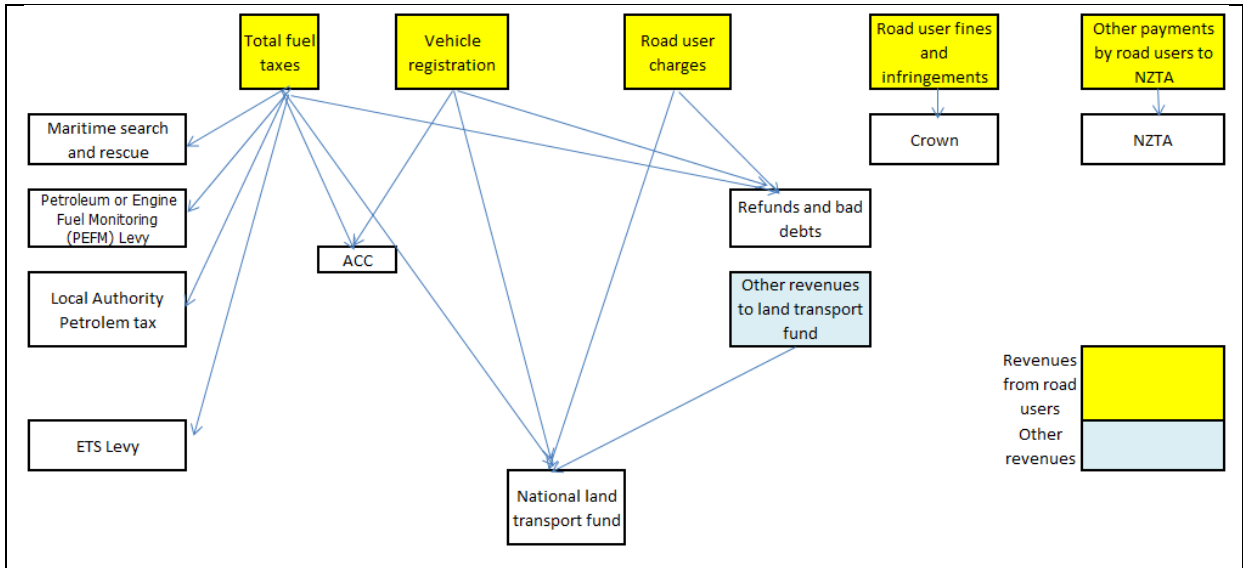


Figure 3-1: Uses of revenues from road users and other contributions to the National Land Transport Fund

Chapter 4 Total land transport funds to Waka Kotahi

4.1 Overall picture

Combining the total revenues to the Land Transport Fund from users with the other revenues set out in Section 3 (Table 3.1 **Error! Reference source not found.**) gives a total of \$3,929.5m available to the National Land Transport Fund. This funding is then allocated between a number of parties:

- Police
- National Land Transport Programme (managed by Waka Kotahi)
- Other expenses.

The total available to Waka Kotahi is supplemented by:

- Payments from the Crown
- Other revenues from road users
- Other revenues.

The overall position is summarised in Figure 4-1.

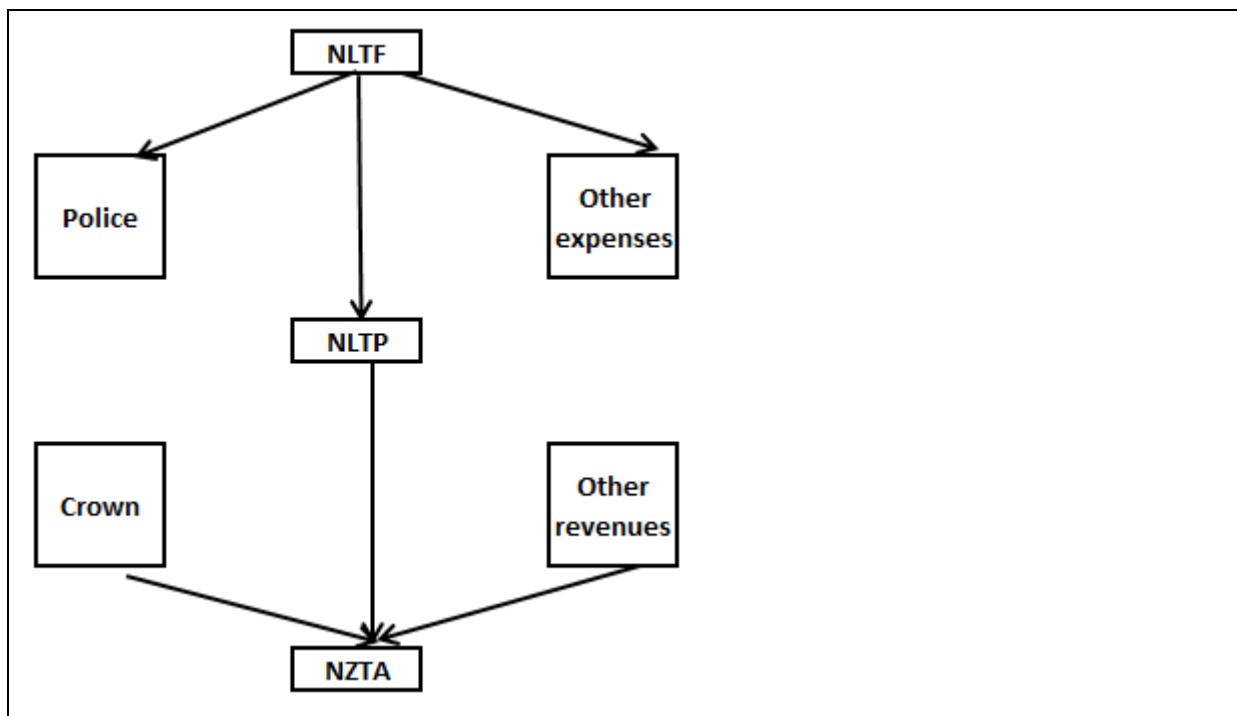


Figure 4-1: Sources of revenues accruing to Waka Kotahi

4.2 Contributions from the Crown

Crown funding to Waka Kotahi covers a range of activities. The details of these and the level of Crown capital and operating funding are set out in Table 4.1

Table 4.1: Crown Funding Allocation 2018/19 (\$m)

Funding type	\$m
Operating funding	
Kaikoura earthquake response	41.9
Supergold card administration	29.4
Urban Cycleways programme	12.9
Local road improvements (PGF)	10.9
Investment management (PGF)	5.4
Other Crown funding	6.8
Total Crown operating funding	107.1
Capital funding	
Kaikoura earthquake response	71.2
Accelerated Regional Roding Programme	18.8
Regional improvements (PGF)	0.8
Urban Cycleways programme	0.3
Total Crown capital funding	91.1
Total Crown capital and operating funding	198.2

Source Waka Kotahi Annual Report 2018/19, pp 91 and 93

4.3 Other expenses deducted

A range of expenditures are deducted from the NLTF revenues before they are made available for the National Land Transport Programme to be administered by Waka Kotahi. These include payments to the police for the Road Policing Programme and to the Ministry of Transport for forecasting and strategy. The payment for FED/RUC administration reflects the cost to Waka Kotahi for providing these services. These are set out in Table 4.2.

Table 4.2: Expenses deducted from the National Land Transport Fund 2018/19 (\$m)

Expense	\$m
Police	337.5
FED/RUC administration	4.9
Forecasting and strategy	1.0
Finance charges	4.9
Total	348.3

4.4 Total funding available to Waka Kotahi

The total funding made available to Waka Kotahi to support its activities in 2018/19 is summarised in Table 4.3.

Table 4.3: Total land transport revenues 2018/19 (\$m)

Revenue type	\$m
Total road user revenues to the National Land Transport Fund	3,854.4
Other revenues (see Table 3.1)	75.1
Total available from the National Land Transport Fund	3,929.5
Crown funding	198.2
Other charges paid by road users	177.9
Other miscellaneous revenues	51.4
Subtotal	4,357.0
Less	
Expenses deducted from the National Land Transport Fund	348.3
Deficit funding	(99.5)
Total available to Waka Kotahi	4,108.4

Chapter 5 Total Waka Kotahi expenditures

5.1 Introduction

The funding accruing to Waka Kotahi is used to support a range of activities. These include:

- Activities undertaken on behalf of the Crown
- Activities funded by the NLTF. These include both activities undertaken directly by the Agency itself and also payments to approved organisations including local authorities, Provincial Growth Fund (PGF), Housing Investment Fund (HIF) etc to support their transport activities
- Waka Kotahi operating expenses.

Each of these is considered below.

The overall structure of the expenditure undertaken by Waka Kotahi is summarised in Figure 5-1. The detailed figures for this are included in the material in Section 6. These figures exclude public-private partnership (PPP) funding and expenditure of \$724.3m in 2018/19.

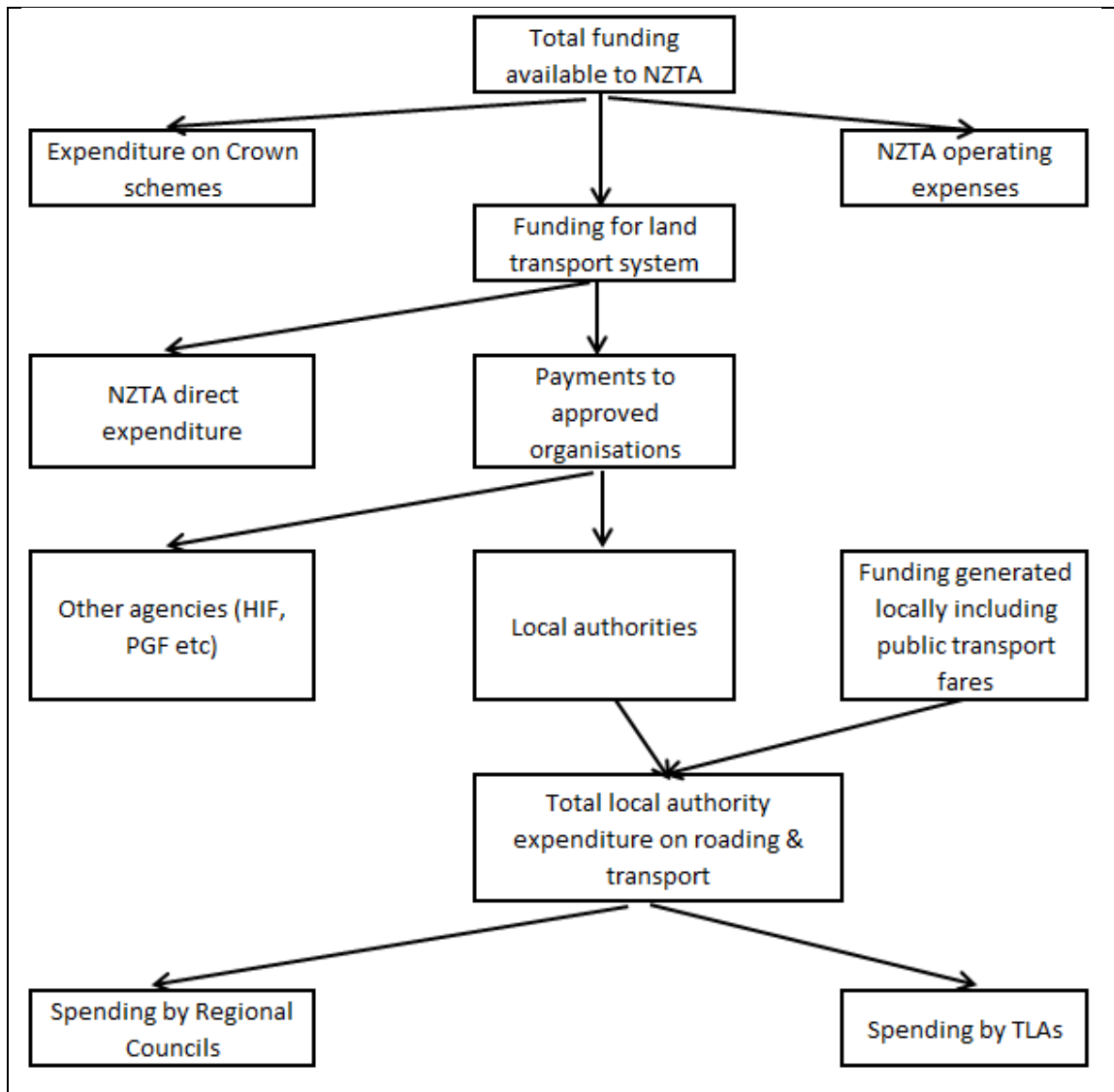


Figure 5-1: Outline of expenditure flows for Waka Kotahi and local authorities

5.2 Expenditure on activities funded by the Crown

Expenditures on activities funded by the Crown are set out Table 5.1. These largely match the funding provided by the Crown in Table 4.1.

Table 5.1: Expenditure on Crown funded activities 2018/19 (\$m)

Operating expenditure	\$m
Kaikoura earthquake response	41.9
Supergold Card administration	29.4
Urban Cycleways programme	12.9
Local road improvements (PGF)	10.9
Investment management (PGF)	5.4
Other Crown funding	7.6
Total operating expenditure on Crown projects	107.9
Capital expenditure	
Kaikoura earthquake response	71.2
Accelerated Regional Roding Programme	18.8
Regional improvements (PGF)	0.8
Urban Cycleways programme	0.3
Total capital expenditure on Crown projects	91.1
Total operating & capital expenditure	199.0

5.3 Waka Kotahi operating expenses

Waka Kotahi operating expenses and payables including payments to staff amounted to \$335m. These are set out in Table 5.2.

Table 5.2: Waka Kotahi employee costs and operating expenses 2018/19 (\$m)

Waka Kotahi employee costs and entitlements	\$m
Employee costs	107.0
Employee entitlements	15.0
Total Waka Kotahi employee related costs	122.0
Operating expenses:	
Commissions and transaction costs	71.0
Contractors and professional services	51.0
Information technology	33.0
Road user safety advertising	18.4
Operating lease expense	16.5
Office and building management	7.5
Staff travel	6.7
Impairment of receivables	1.5
Meetings and conferences	0.6
Fees to principal auditors	0.8
Other operating expenses	6.0
Total Waka Kotahi operating expenses	213.0
Waka Kotahi employee costs and operating expenses	335.0

Source: Waka Kotahi Annual Report p 105-106

Further investigation into the balance of this expenditure between roading and public transport suggests that the employee costs are split between roading and public transport related activities in the ratio of about 96%:4% in favour of roading. The details of this are set out in Appendix 1. In the absence of any breakdown of the operating expenses, these are assumed to be split in a similar ratio.

5.4 National Land Transport Programme (NLTP) activities

5.4.1 Overall funding patterns

After deduction of expenditure associated with the Crown schemes and Waka Kotahi operating expenses, the expenditure by Waka Kotahi funded from the NLTF for the NLTP amounted to \$3,696.4m in 2018/19. Of this, payments to approved organisations amounted to \$2,002.3m¹, of which \$1,938.4m went to local authorities² with the balance to other agencies including the PGF and HIF. Expenditure by Waka Kotahi on the State Highway network is estimated to amount to \$1,694.1m. The position is summarised in Table 5.3.

Table 5.3: Waka Kotahi funding and expenditures 2018/19 (\$m)

	\$m	\$m
Total funding available to Waka Kotahi (Table 4.3)		4,108.4
Expenditure on Crown schemes (Table 5.1)		199.0
Waka Kotahi operating expenses (Table 5.2)		213.0
Funding available for expenditure by Waka Kotahi on the land transport system		3,696.4
Payments to approved organisations:		
Local authorities (TLAs plus regions)	1,938.4	
Other agencies	63.9	
Total to approved organisations		2,002.3
Waka Kotahi direct expenditure		1,694.1
Sub-total		3,696.4

5.4.2 Local authority funding and expenditure

The revenues from Waka Kotahi fund only a part of total local authority (regional council and TLA) transport expenditures on roading and public transport: the authorities themselves also contribute substantial funding from a range of sources to the overall total. These sources include:

- Funding from targeted rates
- Funding from general rates
- Revenues from public transport fares
- SuperGold Card payments (from central government sources)
- Sales and other operating incomes including payments from public transport users and parking
- Regulatory income and petrol tax
- Deficit financing.

¹ Waka Kotahi annual report P92

² Data from Waka Kotahi

While some of the expenditure by local authorities is "approved" by Waka Kotahi and qualifies for subsidy from the NLTF, other expenditures fall outside this category and are funded directly by the local authorities from their own resources. While the total expenditure for each local authority is typically included in their Annual Reports, the aggregate for all local authorities is not recorded. Because of the number of local authority reports which would need to be consulted to obtain the exact numbers, we have therefore made an estimate of the extent to which this is different to the expenditure approved by Waka Kotahi based on a sample of the authorities. This suggests that expenditure approved by Waka Kotahi would be exceeded by about 17 % for roading and by about 80 % for public transport (mainly reflecting high expenditures in Auckland). This would give the total estimated Local Authority spending on roading and public transport for 2018/19 set out in Table 5.4. It should be noted that because of the way in which these figures have been derived they should be regarded as indicative only and further work would need to be undertaken to refine these.

Table 5.4: Total estimated expenditure on roading and public transport by local authorities 2018/19 (\$m)

Type of expenditure (\$m)	Total	Waka Kotahi subsidy	Total from LA sources
Roading	2,247	1,398	849
Public transport	1,716	540	1,175
Total	3,963	1,938	2,024

Note: Figures do not sum to the totals due to rounding.

An approximate breakdown of the total funding for local authorities is set out in Table 5.5.

Table 5.5: Local authority transport funding sources 2018/19

	Total (\$m)	%
Funding from Waka Kotahi	1,938	49
Locally raised finance:		
Passenger fares	358	9
SuperGold Card	29	1
LA petroleum tax	38	2
Regional fuel tax	144	7
Rates and other sources	1,456	37
Total locally raised funds	2,025	51
Total local authority transport funding	3,963	100

In total, the funding from local sources is estimated to amount to \$2,025m, or about 51 % of the total of \$3,963m. Of this \$1,716m is estimated to be on public transport, which is primarily the responsibility of the Regional Councils (including Auckland Council) - although some public transport infrastructure is funded by the TLAs. The balance for roading is primarily undertaken by the TLAs and Auckland Council.

5.4.3 Waka Kotahi expenditure by type

The expenditure of Waka Kotahi can be broken down by type including the amounts allocated to the local authorities. The main expenditures using funding from the NLTF either for local authorities or for the Agency's own purposes are set out in Table 5.6 and the breakdown summarised in Figure 5-2.

Table 5.6: Breakdown of Waka Kotahi operational expenditure by type (\$m)

Expenditure type	Current	Capital	Total
Local road maintenance	653.4		653.4
State highway improvements	564.0	646.9	1,210.9
State highway maintenance	494.1	222.9	717.0
Public transport	449.3	62.0	511.3
Local road improvements ⁽¹⁾	225.7		225.7
Investment management	62.6	0.9	63.5
Walking and cycling	42.7	14.6	57.3
Road safety	44.3	1.0	45.3
Regional improvements	23.6	114.9	138.5
Transitional rail	19.2		19.2
Road user charge collection	5.0		5.0
Local Road improvements (HIF)	3.0		3.0
Refund of FED	0.8		0.8
Auckland transport package		12.5	12.5
Rapid transit		9.9	9.9
Financial charges		0.9	0.9
Total	2,587.7	1,086.5	3,674.2 ⁽²⁾

Source: Waka Kotahi Annual Report 2018/19 pp 91 and 93

Notes

(1) Although local road improvements are treated as a current item by Waka Kotahi, since the assets are not owned by the Agency, these will be recorded as capital items by the TLAs

(2) Because of the ways in which the figures are collected there is a slight difference between the total in this table and that in Table 5.3.

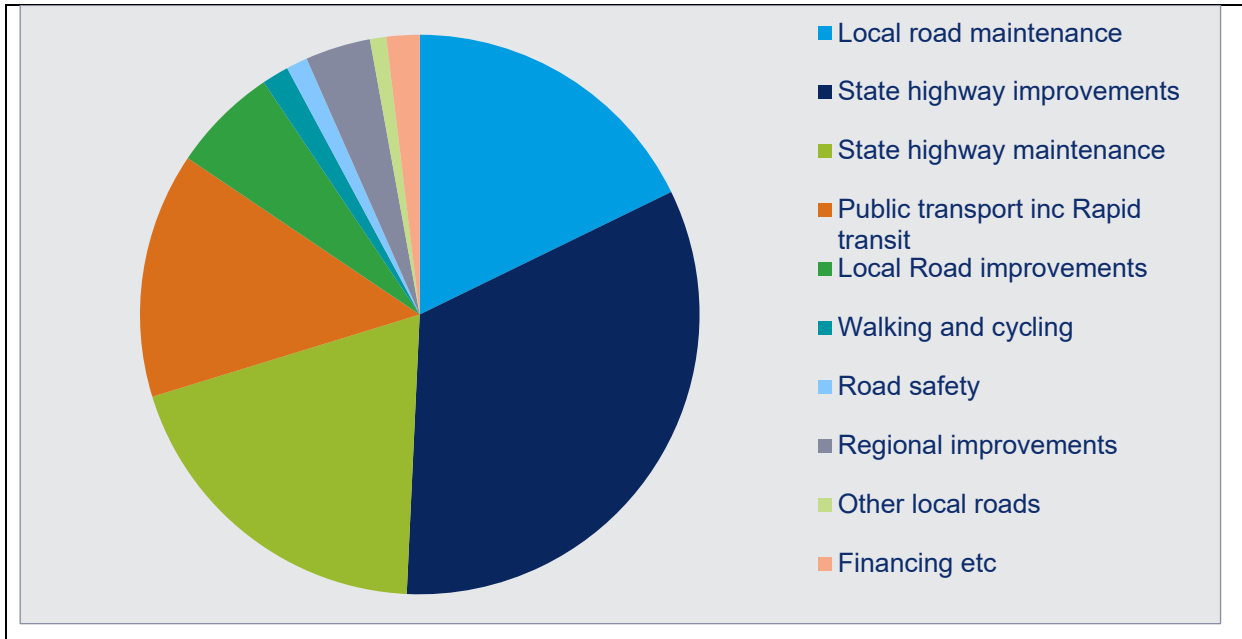


Figure 5-2: Breakdown of \$3.7bn Waka Kotahi expenditure by type 2018/19

5.4.4 Local authority expenditure by type

No information is available on the detailed breakdown of local authority transport expenditure by type.

Chapter 6 Overall expenditure patterns

The overall 2018/19 revenue and expenditure patterns, including references to the original source tables in this paper, are summarised in Figure 6-1.

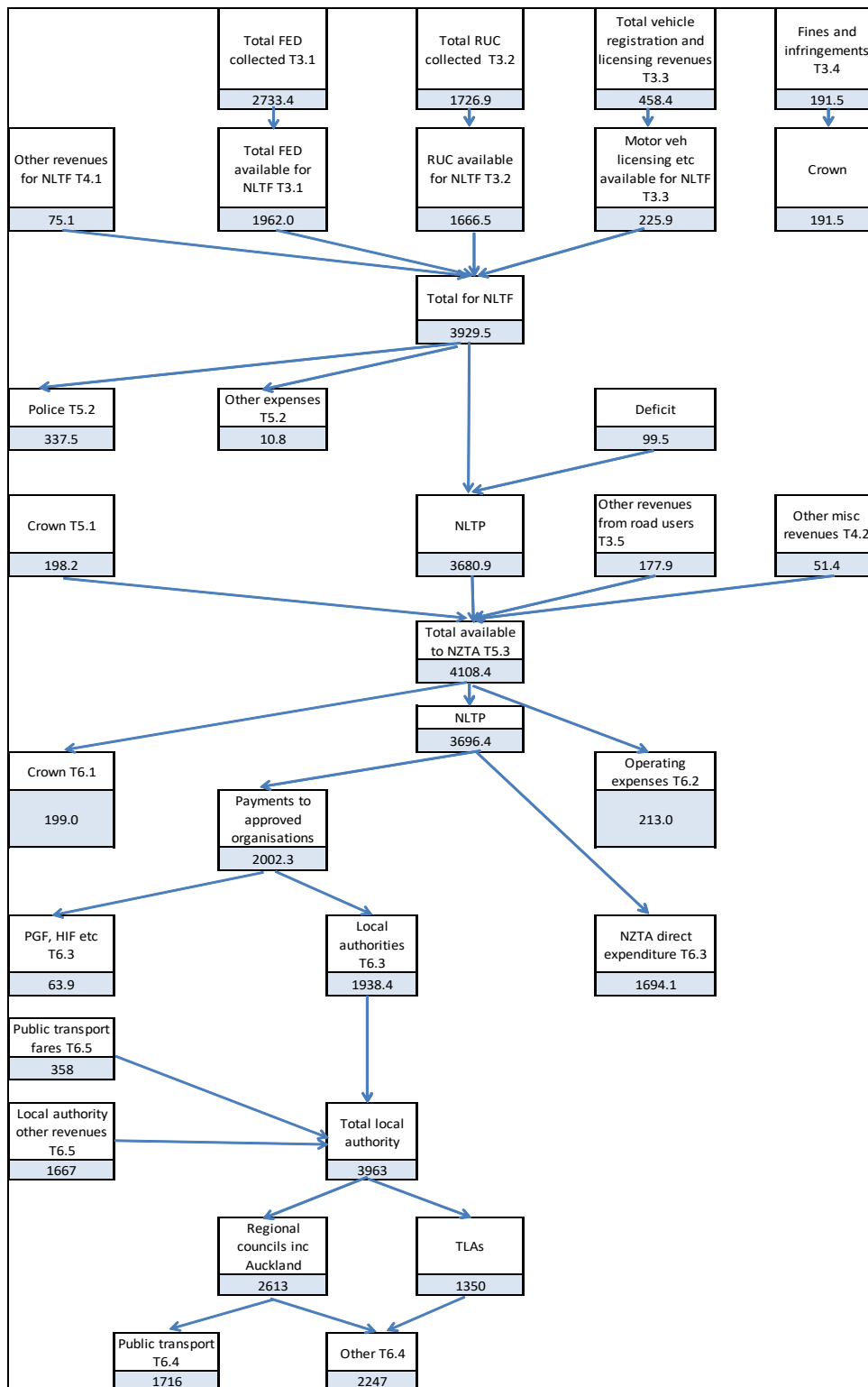


Figure 6-1: Outline structure of revenue and expenditure flows, 2018/19

Chapter 7 Potential further work

While there are estimates of the expenditures on roading and public transport by local authorities approved by Waka Kotahi, in practice examination of a sample of the local authorities' Annual Reports indicates that in many instances, expenditures are higher than these approved figures. However there appears to be no centralised information on these actual expenditures on roading and public transport and estimates of the totals therefore had to be made. Because of the number of authorities involved these estimates were based on just a sample of these authorities and the results therefore need to be regarded with a degree of caution.

In order to provide a higher level of certainty on the levels of expenditure on roading and public transport, it is therefore recommended that further work should be undertaken to provide a comprehensive analysis of the relevant information from each of the local authorities: this seems likely to be a significant task, given anticipated differences in financial reporting practices between councils. The output would help to provide a more comprehensive assessment of total expenditures in the transport sector.

POTENTIAL FURTHER WORK

Appendix 1 Breakdown of Waka Kotahi Staff Expenditure and Overheads

Waka Kotahi staff and overheads expenditure as set out in the Waka Kotahi Annual Report amounted to \$335m in 2018/19. However, these are not allocated to the area of work to which they might apply. Further investigation in conjunction with Waka Kotahi has been undertaken to provide a reasonable allocation of this total and this is set out below.

While data is not available directly for 2018/19, the breakdown for 2019/20 has been made available and the pattern of expenditure by allocation has been assumed to be similar for 2018/19.

The allocation of expenditure on staff by output class in 2019/20 is set out in Table A1.1.

Table A1.1: Personnel costs by Output Class -Waka Kotahi 2019/20 Annual Report (\$000s)

Output Class	\$000's
Investment Management	31,711
Road Safety Promotion	2,156
State Highway maintenance	23,937
Renewal of State highways	885
Rapid Transit	413
Licensing Activities and Regulation. Implementation & Enforcement	51,648
Motor vehicle registry	12,473
FED refund	529
RUC Collection, Investigation & Enforce	6,290
Tolling	6,101
Walking & Cycling	-
Public Transport	-
Public Transport Infrastructure	63
Total	136,206
Total exc Rapid Transit (since this not included in 2018/19)	135,793

This pattern of expenditure was applied to the 2018/19 total which gave the 2018/19 allocation of personnel costs set out in Table A1.2.

Table A1. 2: Waka Kotahi estimated personnel costs by Output Class - 2018/19 Annual Report

Output Class	\$000's
Investment Management	28,490
Road Safety Promotion	1,937
State Highway maintenance	22,301
Renewal of State highways	-
Rapid Transit	-
Licensing Activities and Regulation. Implementation & Enforcement	46,402
Motor vehicle registry	11,206
FED refund	475
RUC Collection, Investigation & Enforce	5,651
Tolling	5,481
Walking & Cycling	-
Public Transport	-
Public Transport Infrastructure	57
Total	122,000
Total exc Rapid Transit (since this not included in 2018/19)	122,000

Excluding investment management, which is considered separately below, the breakdown of these costs by roading and public transport gives a total allocation of \$93.5m for roading activity and \$0.1m for public transport. Investment management has been split by the proportion of total Waka Kotahi expenditure by activity class as set out in Table 5.5 which gives a split of 85 % for roading activities and 15 % for public transport. Together these would give a total allocation of \$117.6m (96%) for roading activities and \$4.4m (4%) for public transport.

A similar allocation has been assumed for the other Transport Agency operating expenses of \$213m set out in Table 5.2, giving an allocation of \$204m for roading and related expenditures and \$9m for public transport.

Overall, therefore the total allocation of Waka Kotahi staff costs and overheads to roading activities (including walking and cycling and safety) would amount to about \$322m with \$13m allocated to public transport.

POTENTIAL FURTHER WORK

Appendix 2 Listing of DTCC Working Papers

The table below lists the Working Papers prepared as part of the DTCC Study, together with the consultants responsible for their preparation.

Ref	Topic/Working Paper title	Principal Consultants	Affiliation
MODAL TOPICS			
C1.1	Road Infrastructure – Marginal Costs	David Lupton	David Lupton & Associates
C1.2	Road Infrastructure – Total & Average Costs		
C2	Valuation of the Road Network	Richard Paling	Richard Paling Consulting
C3	Road Expenditure & Funding Overview		
C4	Road Vehicle Ownership & Use Charges		
C5	Motor Vehicle Operating Costs		
C6	Long-distance Coaches	David Lupton	David Lupton & Associates
C7	Car Parking	Stuart Donovan	Veitch Lister Consulting
C8	Walking & Cycling		
C9	Taxis & Ride-hailing		
C10	Micro-mobility		
C11.2	Rail Regulation	Murray King	Murray King & Francis Small Consultancy
C11.3	Rail Investment		
C11.4	Rail Funding		
C11.5	Rail Operating Costs		
C11.6	Rail Safety		
C12	Urban Public Transport	Ian Wallis & Adam Lawrence	Ian Wallis Associates
C14	Coastal Shipping	Chris Stone	Rockpoint Corporate Finance
C15	Cook Strait Ferries		
SOCIAL AND ENVIRONMENTAL IMPACT TOPICS			
D1	Costs of Road Transport Accidents	Glen Koorey	ViaStrada
D2	Road Congestion Costs	David Lupton	David Lupton & Associates
D3	Health Impacts of Active Transport	Anja Misdrak & Ed Randal	University of Otago (Wellington)
D4	Air Quality & Greenhouse Gas Emissions	Gerda Kuschel	Emission Impossible
D5	Noise	Michael Smith	Altissimo Consulting
D6	Biodiversity & Biosecurity	Stephen Fuller	Boffa Miskell

Note:

The above listing incorporates a number of variations from the initial listing and scope of the DTCC Working Papers as set out in the DTCC Scoping Report (May 2020).

A large, light blue Sierpinski triangle pattern is overlaid on the white background, extending from the top right towards the bottom left. The pattern consists of nested triangles, with smaller triangles inside larger ones, creating a fractal-like structure.

Domestic Transport Costs and Charges Study

Working paper C3

Road Expenditure and Funding
Overview

transport.govt.nz

ISBN 978-1-99-117849-7



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