

DRAFT PROPOSAL DOCUMENT

# Regional Fuel Tax



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# DRAFT PROPOSAL FOR A REGIONAL FUEL TAX

## Introduction

The unprecedented growth of Auckland and a history of underinvestment in transport infrastructure, particularly public transport, are key contributors to existing issues of congestion with the Auckland transport system.

Addressing the transport issues has been a major focus of Auckland Council since its formation in 2010. Progress has been made in some areas and one of the key success factors is the shift to public transport of many commuter journeys. However, congestion of all major arterials continues to grow with the consequent cost to the economy and, without major new investment, the existing public transport network will struggle to provide increased capacity. Road safety also continues to deteriorate with a 65% increase in road deaths and serious injuries in Auckland since 2013.

To unlock the benefits of its growth Auckland needs a transport system that provides safe, reliable and sustainable access. This means:

- Easily connecting people, goods and services to where they need to go
- Providing high quality and affordable travel choices for people of all ages and abilities
- Seeking to eliminate harm to people and the environment
- Supporting and shaping Auckland's growth
- Creating a prosperous, vibrant and inclusive city.

The role of transport in enabling, supporting and shaping the way Auckland grows is also critical to addressing the housing challenge.

Achieving this vision for transport in Auckland will require transformational change, not just to our investment priorities, but also to where and how the city grows, and how we optimise existing infrastructure – including through policies like road pricing and making the most of new technology.

Through the Auckland Transport Alignment Project (ATAP), agreement has been reached between Auckland Council and government on the key outcomes, focus areas and a package of projects and programmes to achieve those outcomes. Auckland Council's existing funding tools constrain the ability to deliver the package identified by ATAP. It is proposed to introduce a Regional Fuel Tax for Auckland of 10 cents per litre (plus GST) for 10 years, raising an estimated total of \$1.5 billion. The Regional Fuel Tax enables a significant increase in the funding available to Auckland Council to realise the ATAP outcomes.

This proposal is prepared conditional on the enactment of the Land Transport Management (Regional Fuel Tax) Amendment Bill which is currently progressing through the Parliamentary process. Following public consultation, the final proposal will be submitted to the relevant Ministers for approval, once the legislation has been passed.

## Proposed transport programme

The proposed transport programme has been developed following the reviews of the Auckland Transport Alignment Project (ATAP) and the Draft Government Policy Statement (GPS) on land transport. These strategic documents have guided the development of a programme that will create a step-change improvement to transport in Auckland.

Through prioritisation of the projects in the Regional Land Transport Plan and identification of those that could not be implemented without the additional funding enabled by a Regional Fuel Tax, a programme of projects has been developed. The key objectives of this programme are to:

- Support substantial growth in key rapid transit corridors, especially where these are now being accelerated. This investment greatly enhances the potential for further housing growth around rapid transit corridors, and realising this growth potential will be critical to ensure the whole transport network can function effectively as Auckland grows to around two million people by 2028.
- Provide for and encourage a step-change in public transport and cycling mode-share in Auckland. This mode shift will deliver significant safety, environmental, health and congestion benefits and leave Auckland much better placed for the introduction of road pricing over time.
- Continue to enable growth in greenfield areas, where around 30% of new homes are forecast to be located over the next decade.
- Improved access as a result of the provision of more congestion-free alternatives for travel and changes in land use enabled by rapid transit investment.
- Improve safety outcomes with an expected significant reduction in deaths and serious injuries each year.
- Reducing the transport system's environmental impacts by improving the attractiveness, reliability and safety of more sustainable travel options (walking, cycling, public transport, carpooling).

The key elements of the programme are to:

- increase capacity and use of the existing public transport network, with particular focus on the high growth areas of the south and east
- continue to encourage active transport options through the extension of the walking and cycling network
- increase the capacity of the existing road network to improve overall performance
- increase investment in road safety initiatives
- support key growth areas with appropriate transport infrastructure

## Summary of projects in the overall programme

The table below summarises the projects included in the overall programme. Some of these projects are already planned but at a much lower level of investment e.g. Road Safety initiatives, Walking and Cycling infrastructure. The table sets out the total cost of each project along with the direct contribution of the Regional Fuel Tax and additional investment that will be enabled by that direct contribution. The additional funding comprises development contributions collected by Auckland Council for growth related infrastructure and subsidies received from NZTA.

While this is based on the best information currently available, it is likely as time progresses and projects are developed that both the costs and timing could change. Similarly, the council will continue to explore commercial opportunities to partially fund some projects where appropriate.

Project \$ million	Additional capital investment		Additional operating cost	
	Total	RFT contribution	Total	RFT contribution
1 Bus priority improvements	266	100	72	35
2 City Centre bus infrastructure	163	62		
3 Improving Airport Access	68	26		
4 AMETI Eastern Busway	743	193	17	8
5 Park and Rides	63	24		
6 Electric trains and stabling	396	150	129	63
7 Downtown ferry redevelopment	73	28		
8 Road Safety	552	210	30	15
9 Active transport	342	112		
10 Penlink	200	66		
11 Mill Road corridor	508	102		
12 Road corridor improvements	302	87		
13 Network Capacity and Performance improvements	296	99		
14 Growth related transport infrastructure	300	126		
<b>Total</b>	<b>4,271</b>	<b>1,385</b>	<b>248</b>	<b>121</b>

## Strategic Alignment

The strategies and plans that guide investment in transport include: ATAP, the GPS, the Auckland Plan and the Regional Land Transport Plan (RLTP).

The recent review of both the GPS and ATAP have enabled the development of a programme for Auckland that aligns the policy objectives of the draft GPS with an agreed programme of transport investment for both Government and Auckland Council, which is captured in ATAP. The ATAP programme has directly influenced the prioritisation of projects in the RLTP. The base, currently funded programme in the RLTP delivers only committed projects (such as City Rail Link) and renewals of existing assets.

The additional transport programme enabled by the Regional Fuel Tax contributes to the key strategies and plans as follows:

### GPS

**Safety** – The GPS seeks a significant reduction in deaths and serious injuries in the 10 year period, with an overall objective of a system that is free of death and serious injury. The Regional Fuel Tax programme has a specific project focused on safety on both rural and urban roads with a target of reducing deaths and serious injuries by 60% by the end of the 10 year period. In addition a number of the other projects such as Road Corridor improvements will improve safety.

**Access** – The GPS objectives are to provide increased access for economic and social opportunities, enabling greater transport choice (including a shift from private vehicles to public transport and active transport) and greater network resilience. The Regional Fuel Tax programme has a significant emphasis on improving public transport, particularly in those areas that are poorly served currently; are forecast for significant housing growth; and also with a focus on improved access to employment and education opportunities. The Road Corridor project and Network Capacity and Performance improvement projects are also focused on improving travel times on major routes, while Active Transport is a key project with an initial focus on improved cycling networks.

**Environment** – The GPS objectives are focused on reducing the impact of transport on the global climate, local environment and public health. A major shift to public transport and active transport is the focus of the investment in a number of the projects in the Regional Fuel Tax programme. The consequent reduction in private vehicle use will be a significant contributor to the positive impacts on climate, environment and public health. Improvements to the efficiency of the road network through several other projects in the programme will also help in the reduction of congestion and its negative environmental and health impacts.

**Value for money** – The GPS seeks to ensure best value for money from investment decisions and improved returns from investments. The projects in the Regional Fuel Tax programme are at different stages of development but usual business case practices, including value for money review, will apply as part of project approval. In addition several of the projects in the programme are focused on extending the capacity and efficiency of existing infrastructure.

### ATAP and the RLTP

As already mentioned above, work on ATAP has been underway for several months and has resulted in agreement between government and Auckland Council on the key transport outcomes, focus areas and a package of projects and programmes for the next 10 years. That agreed programme has directly guided the prioritisation of projects in the RLTP. Delivery of the RLTP programme is constrained by current council funding. The Regional Fuel Tax is Auckland Council's opportunity to deliver the outcomes and projects of ATAP and the RLTP by raising \$1.5 billion and thereby enabling an additional \$4.3 billion of investment in transport. Essentially the Regional Fuel Tax proposal represents the otherwise unfunded, priority projects of the RLTP and ATAP.

### Auckland Plan

The programme also supports the Council's long-term outcomes (Auckland Plan review 2018) in the focus areas of:

- Make better use of existing transport networks, including a greater focus on influencing travel demand
- Target new transport investment to the most significant challenges
- Move to a safe transport network, free from death and serious injury
- Develop a sustainable and resilient transport system.

### Positive and Negative effects

The proposed programme has been designed to achieve a number of positive outcomes i.e.

- Improved road safety with a corresponding reduction in deaths and serious injuries
- Increased availability and use of public transport which results in improved economic, environmental and social outcomes from less pollution and people and business traffic spending less time in congestion
- More active transport options (walking and cycling) with resultant health benefits and a positive impact on congestion
- Improving access to employment areas which will enable improved economic and social outcomes
- Enabling growth and housing development to address the current shortfall in housing stock.

However, while the overall impact of the programme will be positive, individual projects are likely to have negative impacts (primarily in the immediate area) both during construction and ongoing i.e.

- Noise of construction and/or additional traffic
- Impact on the amenity or character in the local area
- Disruption of services or traffic flows during construction
- Increases in property value in certain areas leading to affordability issues
- Increased fuel prices leading to more costly travel for private and commercial vehicles.

## Why a Regional Fuel tax should be a funding source

Auckland Council's usual approach to funding investment in long-life assets, such as transport infrastructure, is from borrowing. However, the capacity to borrow sustainably is limited, as we reach our prudential limits.

Without additional funding sources the Council will be delivering a 10 year transport programme that will include only renewals of existing assets and currently committed projects.

The expected revenue from a regional fuel tax (\$1.5 billion over 10 years) can be used by the council to enable an additional \$4.3 billion of transport capital investment. This programme includes a number of high priority transport projects that would qualify for NZTA subsidies and development contribution funding but would not be able to be delivered as the council cannot support the remaining funding required.

The Council has considered other options for funding transport such as:

- Continuing with the Interim Transport Levy (ITL), which is due to expire in June 2018. However, there are two issues with this approach – firstly the funding raised is far short of what is needed, and secondly the ITL costs fall equally on all ratepayers regardless of how much they use the transport system.
- Increasing general rates. This option would require rate increases of 10% to 11% (on top of any other general rate increases) to fund a similar level of investment as a Regional Fuel Tax. Based on previous public consultations this would be unacceptable to Auckland ratepayers. The amount paid by each ratepayer would be in proportion to their property value and bear no relationship to their use of the transport system.

Of the current options available, the Council believes that the Regional Fuel Tax is the fairest as transport users would pay for the additional transport investment according to the amount they travel rather than every ratepayer – some of whom may be very low users of the transport system.

## Projects

Information on the projects that make-up the overall programme is detailed below. Some projects represent a collection of initiatives that, together, contribute to an overall outcome.

### Project 1: Bus Priority Improvements

#### Description

To cope with forecast growth in the population of Auckland, public transport needs to become a preferred transport choice for more Aucklanders. Increasing bus patronage will assist in reducing congestion, and the impacts resulting from congestion, and will lead to greater utilisation and productivity of arterial corridors.

The most important enablers of increased patronage are; reliability, frequency and coverage. To attract more people to choose public transport the service offering needs to provide:

- convenience and minimal stress from uncertainty: customers turn-up-and-go without reliance on a timetable enabled by high frequency services that turn up on time
- a personal time saving for customers: the service needs to be reliable and arrive when it is expected, and the service needs to offer a combination of one or both of;
  - reduced travel times relative to alternatives; and/or
  - improved utilisation of personal time

The roll-out of AT's public transport 'New Network' seeks to provide an effective public transport option, through delivery of modern, reliable and integrated public transport services. A key component of the new bus network is the delivery of the Frequent Service Network (FSN); a core network of about 30 high frequency bus services designed so that customers do not need to rely on timetables for most of the day, and that work together to provide easy service connections.

The implementation of bus priority improvements (including bus lanes, T2 / T3 transit lanes<sup>1</sup> and signal pre-emption) are essential bus priority mechanisms that enhance overall road network usage, increase bus network reliability, improve bus travel times and reduce bus operating costs. The funding provided in this proposal will allow Auckland Transport to begin capital works required to roll out a new 'whole of route' bus priority programme. The investment is designed to deliver a step change in bus priority along selected FSN routes. It aims to deliver greater corridor productivity (i.e. carrying capacity and average speed) through the provision of enhanced bus priority and resilience. Immediate routes that have been prioritised in the first five years are: Sandringham Road, New North Road, Mt Eden Road, Remuera Road and Manukau Road.

Double decker buses are also being introduced on a number of key and well-patronised bus routes due to the need to increase capacity on the network. Prior to the buses operating, the routes are surveyed to identify obstacles within the road corridor, such as trees, verandas and poles, which may compromise safety and the mitigation capital works required are part of the project.

In addition, the bus priority improvements project will deliver a new bus station and route at Sylvia Park. The new bus station will be located adjacent to the Sylvia Park rail station and provide convenient and direct transfers between services. A new route will also be provided to the station which allows buses to avoid the more congested Mt Wellington Highway intersections.

The Regional Fuel Tax will also provide operational funding to enable improved and more frequent bus services to be run on these improved routes.

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<sup>1</sup> T2/T3 lanes provide priority for vehicles with 2/ 3 or more occupants. Buses are able to use these lanes when no dedicated bus lanes are available.

## Costs and benefits

Initiatives	Indicative RFT contribution	Timing of project	Benefits
<ul style="list-style-type: none"> <li>Whole of route bus priority improvements</li> <li>Double decker mitigation works</li> <li>Sylvia Park bus improvements</li> </ul>	\$135 million +/- 10%	2018-2028	<ul style="list-style-type: none"> <li>Bus travel time savings of up to 30% on completed routes</li> <li>Increased patronage</li> <li>Improved service reliability</li> <li>Reduced operating costs through more efficient use of the bus fleet</li> <li>Double deckers provide increased passenger capacity without increasing vehicle numbers and the frequency of services</li> <li>Improved transfer and waiting environment at Sylvia Park</li> </ul>

## Value for money

Bus priority improvements, double decker mitigation and the new Sylvia Park bus station are designed to increase productivity of the public transport network. These initiatives are intended to provide faster and more reliable bus services, provide additional capacity on busy routes and improve transfer and customer service levels at Sylvia Park. The improvements are expected to drive patronage growth, which results in increased revenue.

## Project 2: City Centre Bus infrastructure

### Description

The city centre is currently the destination (or interchange point) for approximately 80,000 commuters each morning. This is expected to grow to 130,000 by 2046. Bus travel is a significant component (at least 31%) of all journeys during peak times and much of the investment in public transport over the next 10 years will increase the number of bus patrons e.g. the rollout of the new bus network across the region and initiatives such as the AMETI Eastern busway. This growth will place significant pressure on city centre bus infrastructure.

While light rail, when implemented, will provide an alternative to bus in some parts of the city, there will still be significant growth in bus journeys into the city centre and two key focus areas have been identified for investment – Downtown and the Wellesley Street corridor.

In the Downtown area, two components are required – a bus interchange in Lower Albert Street for the North Shore busway, and a similar bus interchange in Quay St East for Isthmus and Eastern services. These initiatives will allow for ongoing growth in bus customers connecting with nearby ferry and rail services, as well as the extensive commercial and residential development in the area. A key outcome is the ability to bring in significant volumes of people to the area by bus from around the region during major waterfront events, which from time to time result in the closure of the core of Quay St and Lower Queen St.

The Wellesley Street bus improvements initiative specifically serves the significant demand for bus travel to the two universities in the Learning Quarter. Currently 69% of students travel by public transport, mostly by bus, and there is strong bus travel growth expected in the Midtown area due to the New Network roll out, private developments and the opening of the City Rail Link. This initiative will include improvements for bus operations and customer facilities (primarily for North Shore and Eastern services) along Wellesley Street between Victoria Park and Grafton Gully. There will also be improved provision for people walking and cycling along Wellesley



Street. A station in the vicinity of Grafton Gully is being investigated, to be integrated into the surrounding land uses and with further development potential, providing a regionally significant passenger interchange.

Downtown bus improvements (Quay Street, Lower Albert Street) will be delivered by 2020 so they are complete prior to the Americas Cup AC36. Midtown bus improvements (Wellesley Street, Learning Quarter / Grafton Gully) are scheduled for delivery later in the ten year period.

### Costs and benefits

Initiatives	Indicative RFT contribution	Timing of project	Benefits
<ul style="list-style-type: none"> <li>Downtown bus infrastructure</li> <li>Wellesley Street bus corridor</li> </ul>	\$62 million +/- 10%	2018-2027	<ul style="list-style-type: none"> <li>Enables increasing numbers of buses from across Auckland to effectively access, circulate and terminate in the city</li> <li>Faster and more reliable travel times through provision of city centre bus priority initiatives</li> <li>Improved customer transfer and waiting environments</li> </ul>

### Value for money

The need for these initiatives is driven by the ongoing increase in public transport mode share into the city centre (which is now starting to exceed private vehicle mode share) and resultant requirement for bus and customer facilities. Other options for dealing with this growth were evaluated, however no additional traffic capacity is possible (or desirable) and alternative public transport modes are supplemental rather than replacements. The selected options have been extensively workshopped with stakeholders, and are considered to be both the most cost effective and integrated with other city centre plans.

## Project 3: Improving Airport access

### Description

Auckland Airport and the surrounding area play an important part in the economy of Auckland and New Zealand. The airport's activities are projected to grow substantially (Auckland Airport Masterplan 2014). Within 10 years passenger numbers are predicted to almost double to 24 million passengers per year; and almost double again to 40 million passengers by 2044. It is projected this will enable up to 27,000 more jobs and result in an increase of daily trips to/from the area from 63,000 currently to around 140,000 in the next 30 years.

Currently, journeys to the airport are unreliable and getting worse for all transport modes. A long term programme has been developed with a number of interventions. Some of the short term, implementable initiatives are already underway (e.g. improved bus services, improved information at airport terminals, staff parking alternatives). The next significant projects focus on improved access from across the city but with particular focus on the east and south of Auckland. East Auckland has one of the lowest levels of public transport usage in the region due to a lack of viable public transport options and South Auckland, as one of the most socio economically deprived areas of Auckland, would be offered significantly better access to employment and education opportunities at Manukau and the Airport.

The initiatives to be delivered in this programme include:

- Airport access public transport improvements – a range of medium term capital improvements to support the provision of enhanced bus services from New Lynn, Mt Roskill, Onehunga and Botany to the airport precinct. Improvements are designed to be in place by 2021/22

- Puhinui bus/rail interchange – provision of a new interchange at Puhinui Station to provide a high quality connection between the rail network and buses accessing Auckland International Airport. This initiative complements NZTA's airport to Puhinui link project.

Public transport airport access improvements and the Puhinui bus/rail interchange have both been scheduled for completion by 2021.

### Costs and benefits

Initiatives	Indicative RFT contribution	Timing of project	Benefits
<ul style="list-style-type: none"> <li>• Airport access public transport improvements</li> <li>• Puhinui Bus-Rail interchange upgrade</li> </ul>	<p>\$26 million</p> <p>+/- 10%</p>	2018-2021	<ul style="list-style-type: none"> <li>• Improved public transport access and services to the airport from the Isthmus, West, and East Auckland by 2020/21</li> <li>• New high quality bus/rail interchange at Puhinui Station to substantially improve airport access from the rail network by reducing transfer times</li> </ul>

### Value for money

These initiatives complement and maximise the benefits from recent and planned investment in infrastructure, including AMETI Eastern Busway and Manukau bus interchanges, and the proposed upgrade of SH20 by the New Zealand Transport Agency. Collectively they provide a significant improvement in access to the education and employment opportunities for communities in east and south Auckland.

## Project 4: AMETI Eastern Busway

### Description

The Eastern suburbs of Auckland have grown rapidly and currently have a population of 130,000 – similar to the size of Dunedin. Based on 2013 census information, the area has the highest level of trips to work by car and the lowest level of public transport use. This is partly due to low density land use but also poor bus reliability as the buses are caught in the same congestion as general traffic. The lack of cycle facilities and low urban amenity on main roads also makes cycling and walking unattractive.

The Auckland Manukau Eastern Transport Initiative (AMETI) project is focused on developing an integrated multi-modal transport system to support population and economic growth in east Auckland. By investing in public transport and walking and cycling infrastructure, these options will become more viable and attractive to commuters. Increased use of public and active transport by commuters will, in turn, free up road capacity for freight and business traffic. However, the project also recognises that some key congestion points along primary vehicle routes still need to be unlocked via targeted road improvements or new connections.

While the AMETI project is primarily focused on delivering transport solutions it also presents significant opportunities for transport investment to drive land-use change through high-quality redevelopment along the busway and around the new stations.

The Regional Fuel Tax would enable stages 2, 3 and 4 of the AMETI project to be accelerated. These stages consist of several major pieces of infrastructure including completing the urban busway between Panmure and Botany; associated key stations at Pakuranga and Botany; the Reeves Road flyover at Pakuranga town centre;

and new / improved pedestrian and cycle facilities. The Regional Fuel Tax will also provide operational funding to enable improved and more frequent bus services to be run on the new AMETI Eastern Busway.

The Panmure to Pakuranga stage of AMETI is scheduled for completion in 2021. The remaining components (Reeves Road Flyover, Ti Rakau Busway, Botany Bus Interchange) will be delivered over the remaining period.

### Costs and benefits

Initiatives	Indicative RFT contribution	Timing of project	Benefits
<ul style="list-style-type: none"> <li>Panmure to Pakuranga busway</li> <li>Pakuranga bus station and Reeves Road flyover</li> <li>Ti Rakau busway</li> <li>Botany bus station and Park'n'Ride</li> </ul>	<p>\$201 million</p> <p>+/- 10%</p>	2018-2025	<ul style="list-style-type: none"> <li>Increase public transport usage from 5.8% to 13% of journeys</li> <li>Reduce bus journey time (Panmure to Botany) by approximately 15 minutes at peak times</li> </ul>

### Value for money

The AMETI programme was initiated in 2006. In the intervening period it has been through many iterations and option refinement to deliver the best value set of initiatives to achieve the objectives of the project.

## Project 5: Park and Rides

### Description

Park and Ride facilities are an integral part of the public transport network. They provide access to the Rapid Transit Network and Frequent Transit Network, along with feeder bus services, walking and cycling. Auckland currently has approximately 5,500 park and ride carpark spaces across the network which provides for approximately 16% of the daily 39,000 peak commuters on the network. Approximately 85% of available Park and Ride car parks are occupied by 7.30am and nearly 100% by 8.30am. At least half of the facilities have a significant overflow onto surrounding streets affecting amenity and accessibility of town centres and residential areas. The lack of sufficient capacity in some locations can lead to users driving to other locations and creating additional road traffic.

Although overall the demand for Park and Ride facilities significantly exceeds supply, there are some facilities that are over capacity and others that could be replaced or complemented by improvements to feeder bus services or improved walking and cycling infrastructure. The Park and Ride project seeks to take a systematic approach to investment in new facilities which will maximise access to the Rapid Transit Network and Frequent Transport Network, particularly in rural-urban fringe locations which are less likely to be well served by feeder bus services and have limited opportunities for walking and cycling.

The project is expected to add approximately 1900 new parking spaces and deliver benefits associated with increased public transport and lower private vehicle usage, including:

- improved safety through a reduction in private vehicle trips / kms travelled;
- reduced emissions from fewer private vehicle trips / kms travelled;
- increased economic productivity from a more effective/efficient transport system.

Park and ride improvements will be delivered at a number of sites across the Auckland Region using the funding provided by the Regional Fuel Tax. The specific location and timing of new and improved Park and Ride



facilities will be the subject of future business cases, and are part of the wider transport system that supports access to the rapid transit network. Sites currently under consideration include:

- North – Hibiscus Coast area
- Northwest – Westgate / Kumeu area
- South – Drury and/or Paerata areas

The Matiatia initiative is considered separately to the more integrated approach of the other Park and Rides. Matiatia is the primary transport gateway for Waiheke, serving residents, tourists, freight movements, and services. However, growth is now making it difficult to accommodate these alternative users and the proposal aims to improve transport provision at Matiatia to accommodate this continued growth.

The bulk of the improvements are scheduled for delivery later in the ten-year period.

### Costs and benefits

Initiatives	Indicative RFT contribution	Timing of project	Benefits
<ul style="list-style-type: none"> <li>• Park and Ride programme</li> <li>• Matiatia</li> </ul>	\$24 million +/- 10%	2018-2027	<ul style="list-style-type: none"> <li>• Enables 31,000 additional PT passenger kms per day</li> <li>• Improved public transport accessibility in areas difficult to service using feeder buses or walking and cycling infrastructure</li> </ul>

### Value for money

The Park and Ride programme will be focused on those areas where parking facilities will provide access to public transport for a significant number of commuters more cost effectively than feeder bus services and/or walking and cycling infrastructure and where additional public transport patronage will have the most impact on optimising the transport system.

## Project 6: Electric trains and stabling

### Description

The heavy rail network forms the backbone of the current Rapid Transit Network in the west, inner east and south of the region. Past local and central government investment has succeeded in delivering the objectives of rail business cases developed in the early 2000's and, combined with historically high population growth, has generated sustained growth in patronage at unprecedented levels (approximately 20% per annum).

The Unitary Plan envisages significant greenfield growth in the south of Auckland and assumes maximum use of the rail corridor to provide greater access to jobs and services and relieve pressure on already congested State Highways. This will lead to continued growth in rail patronage. In addition, the opening of the City Rail Link (CRL) will significantly improve accessibility to the city centre and enable increases in train frequencies that will in turn generate more demand for rail services.

To accommodate this growth prior to CRL opening a further 15 electric trains are on order. Post CRL opening and along with other significant rail improvements such as the electrification to Pukekohe, further capacity will be required to run more frequent and longer train services. The Regional Fuel Tax would be used to fund an

additional 20 units in this project. New facilities to stable (house) and maintain these units will be required. A new heavy maintenance facility to overhaul the existing fleet is also required. The Regional Fuel Tax will provide funding to purchase and operate the additional electric trains in Auckland.

The exact timing of these requirements will depend upon future rail patronage growth.

### Costs and benefits

Initiatives	Indicative RFT contribution	Timing of project	Benefits
<ul style="list-style-type: none"> <li>Electric trains and stabling</li> </ul>	<p>\$213 million</p> <p>+/- 10%</p>	2021-2026	<ul style="list-style-type: none"> <li>Approximately 30% increase in total fleet capacity</li> <li>Supports development and population growth in the Southern Growth Area.</li> <li>Enables more and longer train services</li> <li>Generates additional rail patronage growth, reducing congestion and emissions</li> <li>Provides necessary facilities to house and maintain the trains.</li> </ul>

### Value for money

This project seeks to optimise usage of the existing rail network and maximise the benefits achieved from current and planned investments (e.g. City Rail Link, extension of electrification to Pukekohe, Pukekohe bus/rail interchange etc).

## Project 7: Downtown Ferry Redevelopment

### Description

Ferry services form a key part of the public transport network. They are essential to commuters from the gulf islands but also offer a direct and reliable alternative to commuters from coastal suburbs to the CBD. Auckland has a mature ferry network, where the majority of essential and complementary ferry routes are already operating. The demand for ferry services continues to grow (more than 20% over the last 3 years).

Ongoing growth is expected to result in increased demand from areas such as Beachlands, Gulf Harbour, Hobsonville and West Harbour. The Downtown Ferry Terminal (DTFT) is nearing capacity in the peak based on its current configuration and use. To facilitate growth in peak ferry services the supporting infrastructure will need upgrading. DTFT is one of the busiest public transport hubs within the Auckland public transport network along with the adjacent Britomart Transport Centre. It is the hub for ferry services and part of the gateway into Auckland for visitors arriving on cruise ships.

Currently, all berths at DTFT are utilised during both the morning and evening peaks. There is little capacity for the expected 40% growth in services over the next 10 years. There is an opportunity to upgrade the ferry terminal through a design which:

- Increases capacity of the terminal
- Increases the ease and speed at which vessels can berth
- Improves the customer experience
- Enhances revenue protection capability through the placement of additional Auckland Transport HOP ticketing controls
- Reduces congestion in the ferry basin by providing efficient, standardised berthing infrastructure.

The upgrade of piers three and four is scheduled to be delivered in 2020 to provide immediate improvements. The wider redevelopment of the Downtown Ferry Basin is scheduled for completion after the conclusion of Americas Cup AC36.

### Costs and benefits

Initiatives	Indicative RFT contribution	Timing of project	Benefits
<ul style="list-style-type: none"> <li>DTFT Piers 3 and 4</li> <li>Downtown Ferry Basin Redevelopment</li> </ul>	\$28 million +/- 10%	2018-2024	<ul style="list-style-type: none"> <li>Reduction in end-to-end journey times</li> <li>Provision of additional capacity to allow for increases in service provision and increased patronage</li> <li>Provision of infrastructure redundancy to allow for service disruption</li> <li>A purpose built facility which delivers an improved customer experience for users</li> </ul>

### Value for money

Value for money will be ensured through the normal better business case process, including development and testing of procurement and commercial models.

## Project 8: Road Safety

### Description

The Road Safety Programme 2018/28 includes expenditure to deliver both transformational and low cost safety projects at high-risk locations to reduce road deaths and serious injuries (DSI) in Auckland. It is an important part of an overall approach to improving safety outcomes that also includes vehicle safety, enforcement, education and regulation.

Improving road safety is one of the key strategies for ensuring increased public and active transport in urban areas, as well as supporting significant health, access and environmental benefits. Speed management and safe walking facilities in town centres, neighbourhoods and schools are central to this, as are improvements to high speed, high-risk rural roads.

In the last five years (2013 to 2017) Aucklanders have experienced a 65% increase in road deaths and serious injuries. In 2017 this equated to 64 deaths and 749 serious injuries, a level of road trauma that was last seen twenty years ago in 1996. The social cost for 2017 road deaths and injuries in Auckland is estimated at \$1.13 billion and does not include the considerable congestion-related costs from increasing peak-hour crash delays.

The Auckland Road Safety Programme 2018/28 will use proven designs to build a protective road network that prevents death and serious injury when inevitable human error occurs. Existing Auckland Transport safety engineering investment is at a level of approximately \$13 million per annum and currently addresses two to three of the 300 high-risk intersections and 10kms of the 1,000kms of high-risk roads per annum. It is clear from the last three year DSI results that this existing level of funding has been unable to make an impact on growing road trauma.

Additional investment of \$500m over 10 years is proposed. This will enable safety improvements to a larger number of high-risk intersections and routes, including:

- Roundabout construction
- Pedestrian and cycling crossing grade separation



- Red Light Camera installation

In the Rodney, Franklin and Waitakere areas, additional funding will improve high-risk rural routes and will deliver:

- Signage and lane marking improvements
- Skid resistance road surface upgrades
- Roadside and median barriers

The speed management programme will also be expanded to cover more of the network, in particular on routes to and from schools, public transport facilities and town centres. Funding will be applied to:

- Speed limit changes and signage
- Traffic calming measures, including speed humps
- Safety cameras
- Crossing safety improvements

The combined impact of these accelerated programmes is estimated to reduce DSI by 60% over ten years from the 2017 baseline, as well as contribute towards additional congestion reduction benefits and increased health and environment benefits. This project is part of a wider, multi-agency approach to road safety and two key elements of the project are enabling investigation resource of \$30 million over ten years as well as the ability to install and operate a greater number of safety cameras.

The accelerated road safety programme will be delivered across the ten years covered by this proposal.

### Costs and benefits

Initiatives	Indicative RFT contribution	Timing of project	Benefits
<ul style="list-style-type: none"> <li>• Safety cameras</li> <li>• Rural Road Safety Programme</li> <li>• Safer communities and speed management</li> <li>• Minor Safety Improvements</li> <li>• Urban Road Safety Programme</li> </ul>	<p>\$225 million</p> <p>+/- 10%</p>	2018-2028	<ul style="list-style-type: none"> <li>• Road deaths and serious injuries reduced by 488 over ten years or 60% from the 2017 baseline</li> <li>• Congestion reduction from reduced crash-delays</li> <li>• Health and environmental benefits from increased active transport and reduced emissions</li> <li>• 10 to 12 High-risk intersections treated per annum</li> <li>• 200km high-risk routes treated per annum</li> <li>• 10% of the high-risk speed network addressed per annum</li> </ul>

### Value for money

This project is part of a wider, multi-agency approach to road safety. The accelerated safety programme has been informed by international best practice and successful implementation in similar jurisdictions. On this basis, it is considered that the programme will deliver high value for money.

## Project 9: Active Transport

### Description

A very small proportion of people in Auckland have access to a completed part of the cycle network to take them safely and comfortably to the places they travel the most often. As a result just 1.2% of people ride to

work and just 3% cycle to school. The lack of connectivity in the network means that cycling does not currently play the significant role it could in moving people around Auckland. Nearly half of peak time vehicle trips are less than six kilometres, a distance that can be travelled in 25 minutes by bike. Over half of Aucklanders live within a 15 minute bike ride of Auckland's rapid transport network. While there has been an increase in investment in the cycling network in recent years, only a small proportion of the protected cycle network is in place.

The initial focus of the ten year walking and cycling programme is to complete the current Urban Cycleways Programme. The Regional Fuel Tax will enable the Orakei shared path to also be completed by 2021. Investigation, design and pre-implementation work on the next generation of projects will also be undertaken during this time so that construction can begin from 2021.

The walking and cycling programme will focus on supporting short trips to the city centre, public transport interchanges, schools and local and metropolitan centres. By the end of the ten-year period, major improvements will have been delivered in the following locations across Auckland:

- Isthmus - city centre, city fringe, inner west, Glen Innes, Onehunga, central isthmus and Sandringham
- West – Henderson and Te Atatu Peninsula
- North – Devonport, Northcote
- South – Manukau, Mangere East, Mangere Bridge

### Costs and benefits

Initiatives	Indicative RFT contribution	Timing of project	Benefits
<ul style="list-style-type: none"> <li>• Walking and cycling programme</li> <li>• Orakei shared path</li> </ul>	\$112 million +/- 10%	2018-2028	<ul style="list-style-type: none"> <li>• Ongoing delivery of the next generation of walking and cycling improvements</li> <li>• Increase cycling as a share of peak time travel from 1.2% to 4-5%</li> <li>• Improved health and environmental outcomes through increased active trips and fewer private vehicle trips</li> <li>• Improved safety outcomes</li> </ul>

### Value for money

By focusing on short trips to the city centre, public transit interchanges, schools and local and metropolitan centres, maximum impact on the overall transport system is achieved for the investment made.

## Project 10: Penlink

### Description

The Penlink project provides a new connection between the Northern Motorway at Redvale and the Whangaparāoa Peninsula, bypassing the constrained Silverdale interchange.

Faster than expected growth and major planned development around the Silverdale interchange has accelerated the need to progress Penlink. The new route will reduce traffic through the Silverdale interchange, thereby reducing congestion on the transport network for the communities of Wainui, Silverdale, Millwater, Weiti, Stillwater and the Whangaparāoa Peninsula. Reduced pressure on the Silverdale interchange will free up transport capacity to support planned housing and business development in the area.

Penlink is proposed as a toll road, as it provides significant time savings for users and an alternative route exists. It is expected that with a toll in place, there will be sufficient capacity as a two-lane road to meet foreseeable future demand.

The project will be complemented by public transport improvements (for example the planned bus shoulder lanes between Albany and Orewa) to encourage mode shift in the area and avoid adding more vehicles to the congested Northern Motorway.

### Costs and benefits

Initiatives	Indicative RFT contribution	Timing of project	Benefits
<ul style="list-style-type: none"> <li>Penlink project</li> </ul>	<p>\$66 million</p> <p>+/- 10%</p>	2025-2028	<ul style="list-style-type: none"> <li>Travel time savings of 12-18 minutes for Penlink toll road users, and 5 minutes for commuters who continue to use the free alternative</li> <li>Travel time savings of 20+ minutes for bus passengers commuting from the Whangaparāoa Peninsula</li> <li>Provision of pedestrian and cyclist facilities between Whangaparāoa and Stillwater</li> <li>Reduced congestion at the Silverdale interchange and along the Hibiscus Coast Highway and Whangaparāoa Road</li> <li>Supports economic activity and planned growth in the Hibiscus Coast</li> </ul>

### Value for money

As a toll road project, Penlink will require seed funding but a significant proportion of the costs will be funded from tolls. The project has a high benefit cost ratio due to the significant travel time savings it provides Whangaparāoa residents, and its overall impact on congestion in the Hibiscus Coast area.

## Project 11: Mill Road corridor

### Description

The Mill Road corridor provides an additional strategic north-south corridor for southern Auckland, connecting Manukau with Drury through a new and improved corridor to the east of the Southern Motorway. It connects future residential development in the south with employment in the north, particularly around Manukau. Once complete, it will also improve access to new employment opportunities in Drury South and provide resilience in Auckland's transport network

The full corridor will be delivered in stages over the next few decades. Funding provided by the RFT will allow the highest priority components of the corridor to be progressed over the next ten years. Key priority areas for investment include:

- Improved intersections to address the most severe congestion
- Improved parts of the northern end to address the most severe safety issues
- Construction of sections that pass directly through former Special Housing Areas at the time these areas grow
- Undertaking route protection and land purchase of the southern section.

The project is required as forecast growth in South Auckland will create chokepoints on roads around Papakura and Drury - even with the public transport network absorbing a significant share of new trips and the current /



proposed Southern Motorway widening. This will reduce the area's attractiveness for growth and disrupt freight movements.

In addition to providing capacity to reduce congestion and support growth, investing in the Mill Road corridor also helps other key routes in this part of Auckland function more effectively:

- Less pressure on the Southern Motorway means that it can function more effectively as the key route for inter-regional freight movements and other longer trips
- Less pressure on Great South Road assists plans to reallocate existing road space to bus lanes.

### Costs and benefits

Initiatives	Indicative RFT contribution	Timing of project	Benefits
<ul style="list-style-type: none"> <li>• Mill Road corridor</li> </ul>	\$102 million +/- 10%	2024-2028	<ul style="list-style-type: none"> <li>• More efficient inter-regional freight movements</li> <li>• Supports future residential and business growth in the south</li> <li>• Allows improved public transport provision on Great South Road</li> <li>• Provides resilience for the Southern Motorway</li> <li>• Safety improvements along one of Auckland's current high-risk routes</li> </ul>

### Value for money

The Mill road project unlocks housing and business growth in the southern development area, improves network resilience and safety, and releases pressure on the Great South Road and Southern Motorway corridors.

## Project 12: Road Corridor Improvements

### Description

This is a collection of initiatives to improve capacity, safety, amenity and connectivity of the existing road corridors.

The Lincoln Road initiative is focused on improving safety and congestion. It includes: widening the road to provide an additional bus and transit lane on each side; installation of an on-road cycleway segregated from the transit lane on both sides of the road; upgrades of existing intersections and building a solid raised and planted median to replace the existing painted median.

The Glenvar Road and Matakana Link Road initiatives will both provide improved connectivity and access to development areas. Matakana Link Road will reduce congestion in central Warkworth by connecting Matakana Road and State Highway 1, bypassing the busy Hill Street intersection. The Glenvar Road / East Coast Road project will support the Long Bay development area and complement the current Glenvar Ridge Road project by making improvements to East Coast Road, Glenvar Road and delivering intersection improvements along the route.

The Smales / Allens intersection upgrade delivers improvements to a key bottleneck in the East Tamaki area which will, in particular, have benefits for freight movements and other business related traffic. The intersection of Smales, Allens, Springs and Harris roads will be upgraded, and Smales and Allens roads will be widened near the intersection. The project has a very high Benefit Cost Ratio (BCR) as it delivers sizeable travel time benefits for a relatively small level of investment.

The Lake Road Improvements project aims to increase the efficiency and reliability of travel along Lake Road between Takapuna and Devonport. Lake Road is the single arterial connecting the Devonport peninsula with the rest of the North Shore and Auckland. Current congestion and travel time unpredictability is the number one issue for people living in the area, both for those in private vehicles and those using buses, also caught in the congestion. The proposal is to provide extended transit lanes along Lake and Esmonde roads and change intersections to improve traffic flow along these corridors.

Also included in this group of initiatives is funding to progress the sealing of currently unsealed roads. This will primarily address issues of dust and amenity but also has a positive benefit for motorists with improved ride quality and reduced vehicle maintenance.

The Lincoln Road and Matakana Link Road projects are due for completion by 2022, with the remaining initiatives to be delivered over the remaining years. Seal extensions are an ongoing programme and will be delivered across all ten years covered by this proposal.

### Costs and benefits

Initiatives	Indicative RFT contribution	Timing of project	Benefits
<ul style="list-style-type: none"> <li>Lincoln Road</li> <li>Matakana Link Road</li> <li>Glenvar Road/East Coast Road</li> <li>Smales / Allens intersection upgrade</li> <li>Lake Road Improvements</li> <li>Seal extensions</li> </ul>	<p>\$87 million</p> <p>+/- 10%</p>	2018-2028	<ul style="list-style-type: none"> <li>Reduced congestion and improved reliability</li> <li>Improved safety and network resilience</li> <li>Supporting current development at Long Bay</li> <li>Improved walking and cycling infrastructure</li> <li>Significant increase in funding for the seal extension programme</li> </ul>

### Value for money

These initiatives leverage the existing investments in road infrastructure and provide value for money by addressing capacity constraints and improving safety and connectivity.

## Project 13: Network Capacity and Performance Improvements

### Description

In addition to new investment to provide additional transport infrastructure, there is also the need to increase the ability of people and goods to access opportunities and markets on a day-to-day basis through small to medium-scale network capacity and performance improvements. These improvements deliver value for money opportunities to improve the return on larger scale infrastructure improvements such as City Rail Link. The project will more effectively manage congestion through capital investments to make better and more appropriate use of the existing network, and enable transport choice and access that facilitates increased mode shift to walking, cycling, public transport and sustainable modes of travel on a day-to-day basis.

For public transport this would be achieved by provision of:

- On demand services to enhance access to public transport
- First and last leg services to provide support a more connected, accessible and liveable system
- Public Transport priority movements (eg bus priority) to increase public transport access on key movement corridors and wider network

- Public Transport hub connectivity improvements to enable public transport access, and facilitate walking and cycling access to key termini/hubs and intersections

The reliability of the transport network will be improved by investment in:

- Real time signage and travel information to better inform travel choice opportunities
- Real-time active network management to better facilitate, intervene and prioritise appropriate access and movement of people and goods on the network
- Intersection traffic flow improvements to improve network resilience and performance
- Intelligent transport systems to support active network monitoring, efficient network management and improved customer travel choice information
- Signalling system upgrade to improve network management capabilities

Road capacity can be significantly improved through the implementation of:

- Dynamic lanes where appropriate
- T2/T3 lanes on key people movement links to increase access, enable transport choice and reduce congestion
- Freight priority on key freight connections to increase access to economic markets
- City Centre/metropolitan/town centre connectivity improvements to provide connected, accessible and liveable areas that support social prosperity and economic productivity

These initiatives would be rolled out over the 10 year period and have the advantage that, because they leverage off existing investment, they achieve improvements more quickly than some other projects.

### Costs and benefits

Initiatives	Indicative RFT contribution	Timing of project	Benefits
<ul style="list-style-type: none"> <li>• PT access</li> <li>• Network reliability</li> <li>• Repurposing existing road space</li> </ul>	\$99 million +/- 10%	2018-2028	<ul style="list-style-type: none"> <li>• Travel time savings of up to 500,000 hrs/year, including improved bus travel times</li> <li>• Reliable journey times including retaining good and reliable travel times for freight routes year to year</li> <li>• Increased people and goods movement productivity</li> <li>• Enforcement of dedicated bus and transit lanes to increase people movement throughput at peak times</li> <li>• Improved customer information being available allowing the ability to make informed travel choices</li> <li>• Improved mode share and increase network capacity</li> </ul>

### Value for money

This project enables capacity improvements to existing public transport and road networks ensuring maximum value is extracted from investments made.



## Project 14: Growth related transport infrastructure

### Description

Auckland is New Zealand's largest city - home to about a third of the nation's population - and continues to be the country's fastest-growing region. An additional 700,000 to one million people are expected to call Auckland home over the next 30 years, growth that will require about 400,000 new homes and create 277,000 new jobs.

While most of Auckland's growth will take place within the existing urban areas, around 15,000 hectares of greenfield (mainly rural) land has been identified for development in the Auckland Unitary Plan (Operative in part). This includes areas zoned 'future urban' (rural land zoned for future urban development), as well rural land that has been 'live zoned' (zoned for immediate urban development).

The majority of this growth will be located in:

- Pukekohe, Drury, Paerata, and Takanini in the south
- Silverdale, Dairy Flat, Wainui, and Warkworth in the north
- Kumeu, Redhills, and Whenuapai in the north west.

Over the next 30 years, it is expected that there will be around 110,000 new homes and 50,000 new jobs in these growth areas. To enable this growth, encourage use of public transport and active modes and provide a reasonable level of service, significant investment in transport infrastructure will be needed. Auckland Transport, Auckland Council, and the New Zealand Transport Agency have collaborated to develop the transport network plan needed to support these future urban areas. The funding provided in this proposal will enable the highest priority projects to be progressed over the next ten years.

The \$300 million in this programme is forecast to be spent over the whole ten-year period.

### Costs and benefits

Initiatives	Indicative RFT contribution	Timing of project	Benefits
<ul style="list-style-type: none"> <li>• Growth related transport projects</li> </ul>	\$126 million +/- 10%	2018-2028	<ul style="list-style-type: none"> <li>• Enabling PT services to growth areas</li> <li>• Improve arterial road connections to future urban areas</li> <li>• Ensure transport networks are in place to enable urban development</li> <li>• Ability to partner with developers and leverage off the their investment</li> </ul>

### Value for money

The cost of the full Supporting Growth preferred programme has an indicative benefit cost ratio between 3.3 and 4.8. The funding provided in this proposal allows the highest priority initiatives from the full programme to be progressed over the next ten years.

## Proposed Regional Fuel Tax scheme and application of revenue

The Regional Fuel Tax is proposed to apply to sales of petrol and diesel by retailers within the boundaries of Auckland Council (excluding Great Barrier Island)<sup>2</sup> starting on 1 July 2018 and expiring on 30 June 2028.

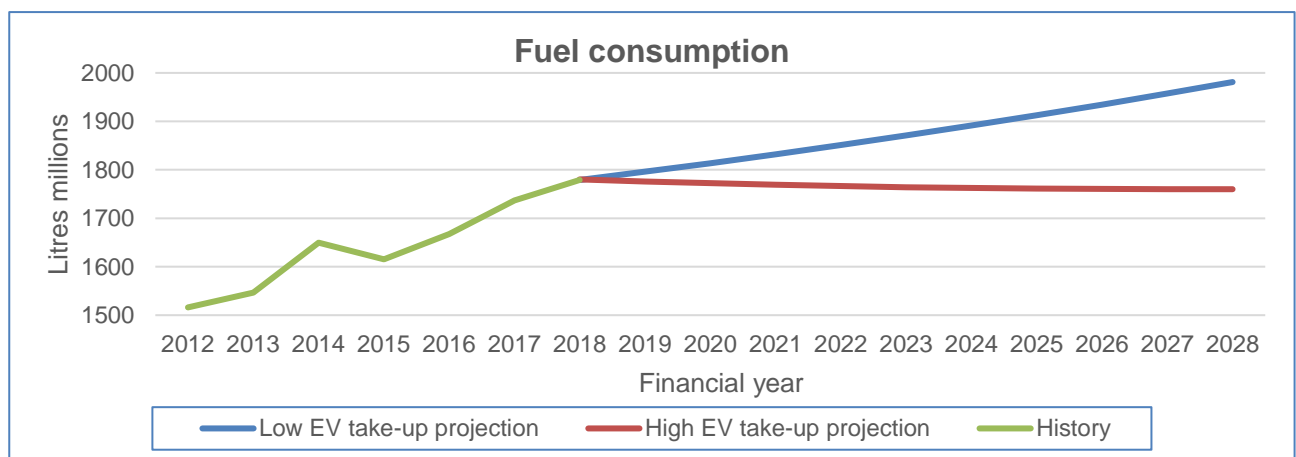
The amount of the tax is proposed at 10 cents per litre plus GST for a 10 year period.

The amount of revenue forecast to be realised from the Regional Fuel Tax is \$150 - \$170 million per annum.

The following information and assumptions formed the basis of the forecast revenue calculations.

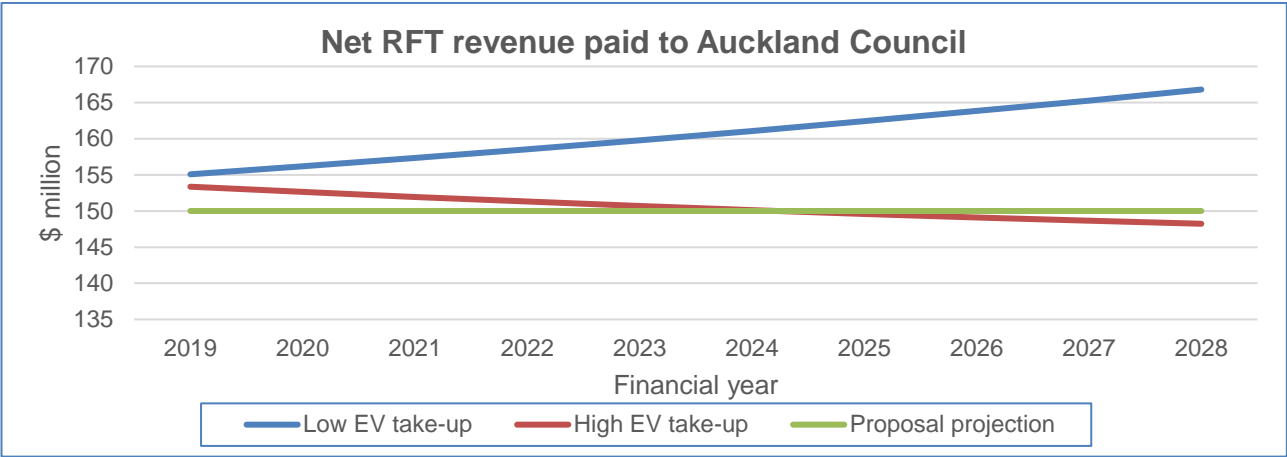
Factor	Assumption
<b>Fuel volumes</b>	Volume is based on submitted returns for Local Authority Fuel Tax over recent years, plus growth of 1.2% per annum for petrol and 4.5% for diesel. The growth is based on long-term averages.
Impact of electric vehicles	Ministry of Transport estimates project 15% of the vehicle fleet to be electric by 2028. A higher take-up of 30% by 2028 has also been modelled.
Rebates	Based on Ministry of Transport analysis of national rebate levels under existing Fuel Excise Duty and Road User Charges schemes, rebates have been estimated at 2% of petrol and 30% of diesel sales.
Impact on demand of additional cost of RFT	A small reduction (0.12%) in demand has been assumed in response to the increased costs of RFT and signalled increases in central government excise tax. This reduction has only been applied to petrol vehicles as generally there is more ability to change travel behaviours and modes.
Costs of administration	Estimates of the deductions by NZTA to cover costs of administering the RFT schemes are based on fixed costs of \$500,000 per annum and 5% of the rebates.

## Fuel consumption projections



<sup>2</sup> While the current draft legislation does not have provision to exclude a geographic area, a submission to allow for this has been made by Auckland Council. Great Barrier Island residents rely on fuel for power generation, already pay very high rates for their fuel and will not directly benefit from the proposed transport projects. Should the legislation be amended as requested, Auckland Council proposes to exclude Great Barrier Island from the Regional Fuel Tax.

Revenue projections







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Te Kaunihera o Tamaki Makaurau

