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Regional Council
TE RAUHITANGA TAIAO

Strategy Affordability Assessment

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This document supports the development of the Auckland Regional Land Transport Strategy 2010. It is the culmination of work developed by the Technical Advisory Committee (TAC) to support the Auckland Regional Transport Committee. The TAC includes representatives from all local territorial authorities, Auckland Regional Transport Authority, Auckland District Public Health Board and other technical experts.

Reviewed by:

A handwritten signature in black ink, appearing to read 'Don Houghton', written in a cursive style.

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Date: October 2009

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Strategy Affordability Assessment

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1 Purpose

This report has been prepared to assist the Auckland Regional Transport Committee with preparation of the Auckland Regional Land Transport Strategy 2010.

2 Introduction

The Land Transport Management Act (LTMA) requires the Regional Transport Committee (RTC) to “take account of the land transport funding likely to be available within the region for implementing the strategy during the period covered by the strategy” (Clause 4(B) of Schedule 7) and “be satisfied that the strategy contributes to the aim of achieving an affordable, integrated, safe, responsive and sustainable land transport system (Clause 3(i) of Schedule 7).

This working paper outlines:

- the likely sources and level of transport funding that will be available within the Auckland region over the 30 years 2010/11 to 3040/41,
- the estimated costs of implementing the preferred strategy and
- the affordability of the strategy – the likely funding gap and its implications.

3 Funding availability

There are three main sources of public funding for transport:

- Central Government (through the New Zealand Transport Agency (NZTA),
- Local funds (territorial authorities and regional council),
- Kiwi rail (Government).

The Government Policy Statement on Land Transport Funding (GPS) indicates the amount of NZTA national funding available over the next ten years within funding bands for each activity class. The National Land Transport Programme (NLTP) shows NZTA funding for each authorised organisation at activity level for the next three years. There is no funding information available at the regional level beyond the next three years, and no funding information available at all beyond ten years.

In order to provide some basis to take into account funding likely to be available, three estimates have been developed, characterised as “conservative”, “best” and “optimistic.” The main components are estimates of the NZTA funding likely to be available nationally, the share of this funding that might be allocated to the Auckland region, and a matching contribution (except for State Highways) from local sources (including developer contributions).

3.1 Funding assumptions

The assessment of the level of funding that is likely to be available from these sources over the 30 years of the strategy was based on the following assumptions:

First ten years

- NZTA: based on the National Land Transport Programme (NLTP) 09/12 allocation (for the first three years) plus (for remaining seven years) an estimate based on the assumption that the region will attract the same share of the national allocation (identified by the GPS) as for the first three years – ie an average 35.4 per cent of national funding allocation.
- Local funds: estimated based on the local share required to match NLTP allocation.
- Kiwi Rail: estimated based on assumption of total funding of proposed rail system (including EMU, diesel train upgrades, station upgrades etc) from Government.

Subsequent 20 years – Best estimate

This estimate was based on the assumption that regional funding remains at the same level (in real terms) as the first ten years. To determine the 30 year estimate, the ten year figure is simply multiplied by three.

Subsequent 20 years – Optimistic estimate

Average two per cent growth in real level of national (NZTA) funding in line with projected GDP growth. Local share grows in line with this growth.

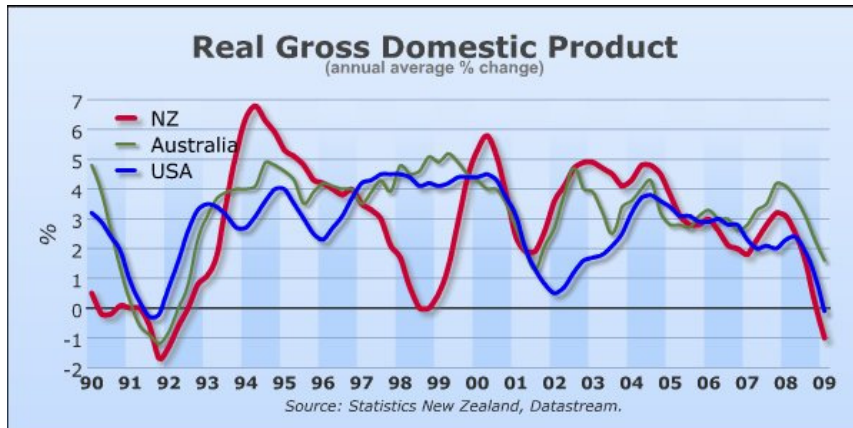


Figure 1: Historic National GDP Levels

Auckland funding share grows in line with share of population – from the current NLTP allocation of 36.4 per cent in 2010-19 to 40 per cent in 2040.

Subsequent 20 years – Conservative estimate

The conservative estimate is based on the assumption that the Auckland region's share of national transport funding will return to around 27 per cent – the average level of funding of the last 10 – 15 years (Figure 2).

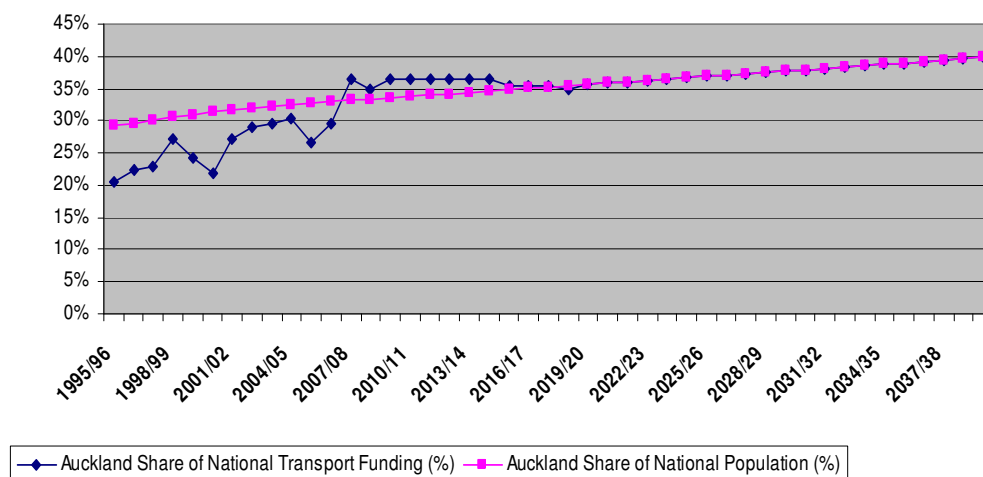


Figure 2: Historic Auckland Share of National Transport Funding and Share of National Population

Projected Funding

Based on these assumptions, it is estimated the level of land transport funding that is likely to be available over the 30 years of the strategy, is between \$33b (conservative estimate) \$39b (best estimate) and \$47b (optimistic estimate) – an average \$1.1b to \$1.6b pa.

Around 68 per cent of this funding will come from central government (NZTA), 23 per cent from local funds (Auckland Council) and nine per cent from Kiwi Rail.

The projected level of funding over the 30 years is shown in Figure 3 below.

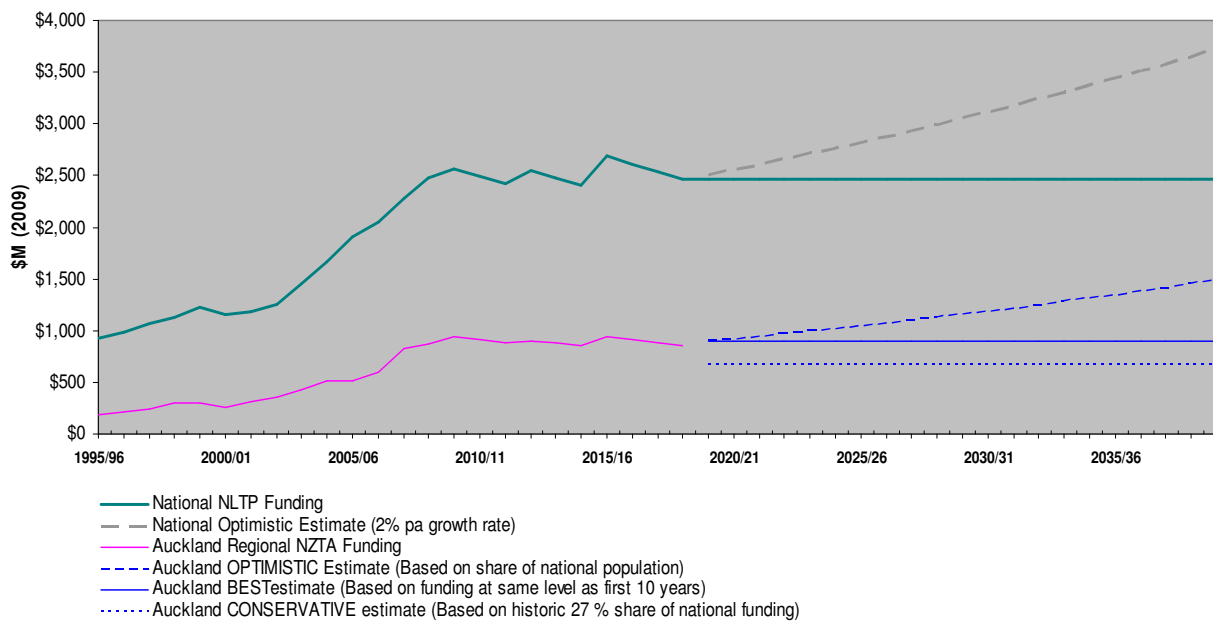


Figure 3: Projected level of NZTA funding over the 30 years

Uncertainties

The main uncertainties around this estimate of the level of funding likely to be available are:

- The validity of assuming a continuation of rail funding at the first ten year level. The effect of this assumption could be to overestimate available funding.
- An underestimation of the growth in funding of PT services from fare box recovery (it was assumed that there would be a continuation of current 44 per cent level of recovery). The effect of this assumption could be to underestimate the level of funding.

4 Estimated cost of preferred strategic option

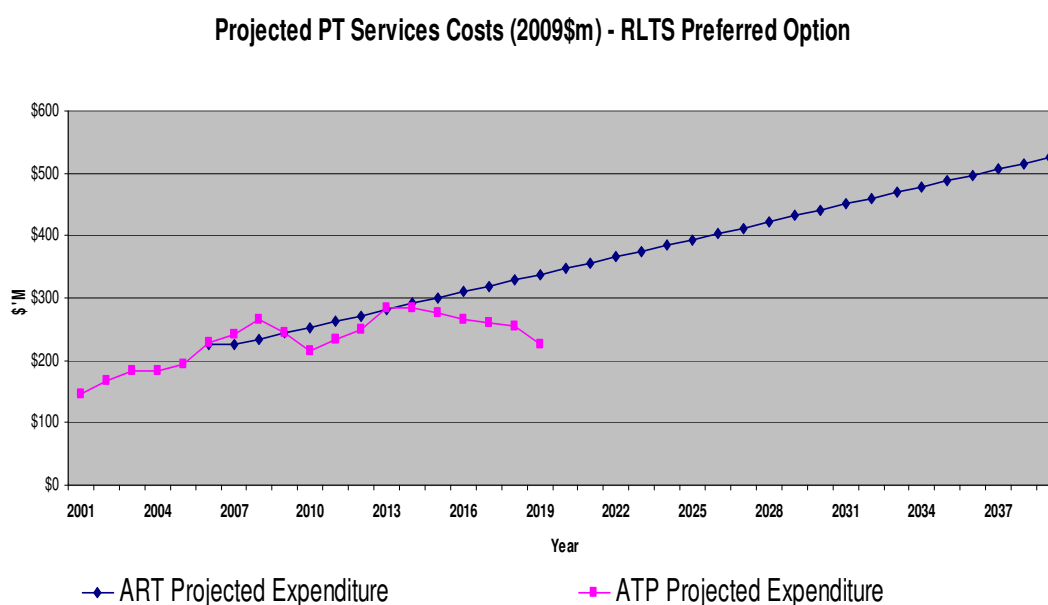
The assessment of the cost of implementing this strategy over 30 years was based on the following assumptions:

First ten years

The cost of implementing the first ten years of the strategy is based on the funding required to implement the Auckland Transport Plan 2009-19 (based, in turn, on the Regional Land Transport Programme (RLTP) 2009-12).

Subsequent 20 years

- PT services: Based on Auckland Regional Transport (ART) model projection (an average three per cent pa).



- Demand Management: a 20 per cent increase in level of expenditure for each subsequent ten year period.
- Walking and cycling facilities, maintenance local roads, maintenance state highways, renewal local roads and state highways: Continuation of expenditure at 2009-19 growth rate.

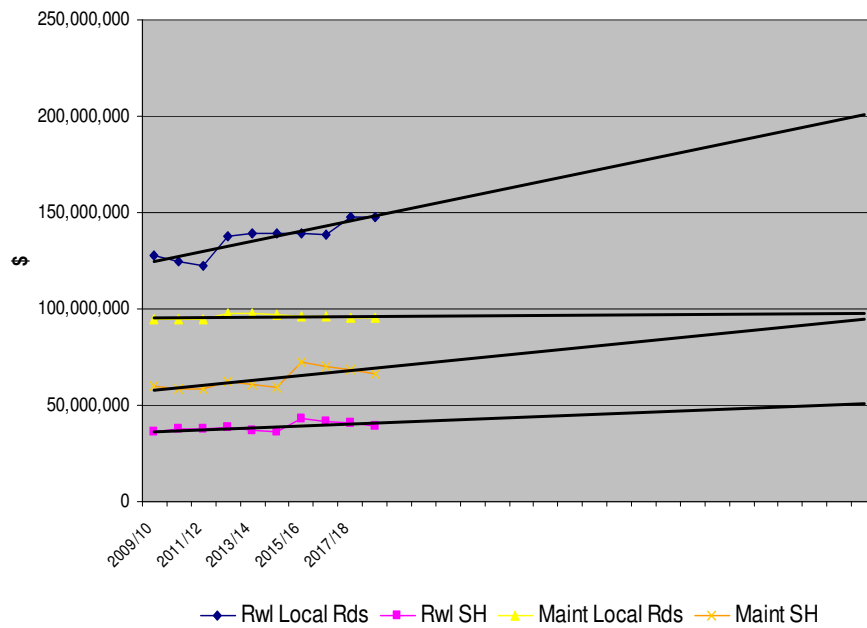


Figure 5: Projected Road Maintenance and Renewal Costs (\$2009) – RLTS Preferred Option

- New infrastructure local roads and new infrastructure state highways:
 - Core operational and minor improvements based on a continuation of expenditure at average 2009-19 level.
 - Major local roading and state highway improvements costed on an individual project basis ('bottom up' assessment).

Projected Cost

Based on these assumptions, it is estimated the cost of implementing the preferred strategy over 30 years, is around \$46b (an average \$1.5 pa).

The level of expenditure by activity class for each of the ten year periods of the 30-year strategy is shown in Figure 6.

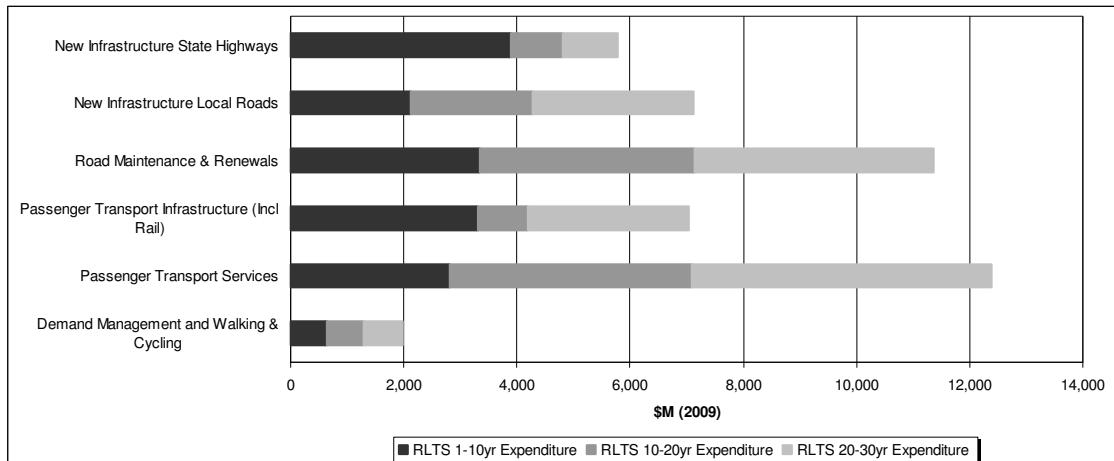


Figure 6: Projected Costs (\$2009) by Activity Class – RLTS Preferred Option

Uncertainties

The main uncertainties around this estimate of the likely cost of implementing the preferred strategy are:

- A continuation of expenditure at ATP/RLTP growth levels (road renewals, maintenance, walking and cycling, roading operations and minor improvements).
- Improved efficiencies arising from the development of the PT network (bus lanes, integrated ticketing) – potentially lower costs.
- Historically only 80 per cent of TA allocation actually spent – potentially lower costs.
- Major project costings (potentially higher or lower costs):
 - CBD Rail Loop - \$1.5b
 - Regional Arterial Roding (RARP) priority projects - \$2.9b
 - Auckland International Airport Link - \$1.1b
 - Avondale to Onehunga Rail Line - \$1b
 - South Western to East Tamaki - \$1.6b
 - Puhoi to Wellsford - \$2.2b

5 Strategy affordability – the funding gap

The uncertainty around likely funding is so high, particularly after the first ten years, that it is difficult to reach firm conclusions as to how much funding is likely to be available.

The overall funding gap ranges from a surplus of \$1b (optimistic funding estimate) to a shortfall of between \$7b (best funding estimate) and \$13b (conservative funding estimate) – a surplus of two per cent and a shortfall of between 17 per cent and 42 per cent of the estimated total level of available funding.

The funding gaps based on the 'best' and 'optimistic' funding estimates are, however, generally within the margin of error of the funding and expenditure estimates. The likely funding gap depends on future funding decisions, future PT revenue and Opex, and detailed costs of major CAPEX projects. The funding gap may be manageable given the scope to optimise the scale and timing of the key elements of the strategy over its 30 year planning period.

The funding gap based on the 'conservative' funding estimate is, however, more significant. The proposed strategy could not be fully implemented under this funding scenario and would necessitate a significant review of the high cost elements of the strategy (as outlined above).

There is also potentially a significant funding and expenditure misalignment at activity class level if funding is allocated over the 30 year period based on the 2009-12 NLTP funding allocation. This is highlighted in Figure 7 (based on the 'best' funding estimate).

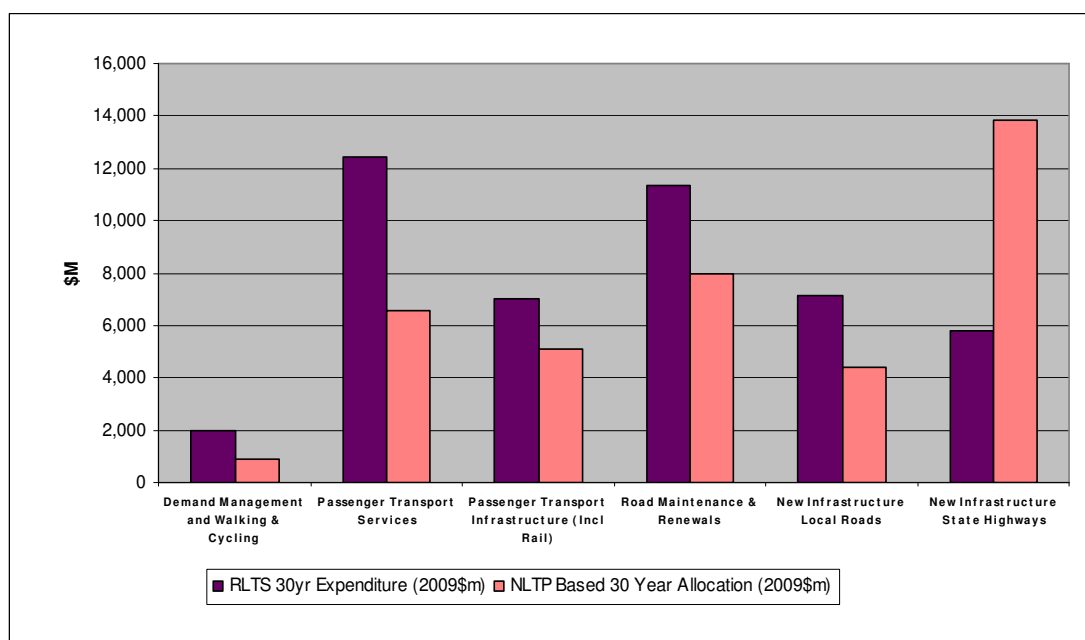
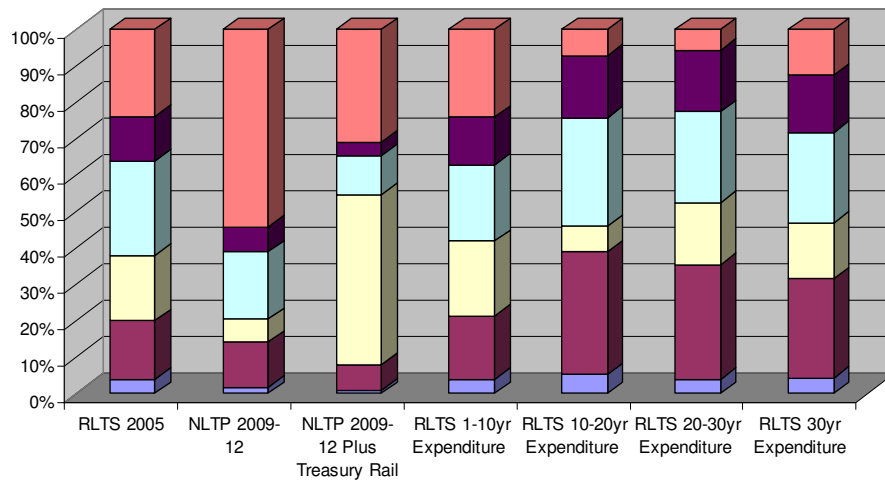


Figure 7: Potential Expenditure and Funding Allocation – RLTS Preferred Option

To fund this strategy, the available funds would be required to be allocated over the three ten year periods of the strategy as follows:



Activity Class	RLTS 1-10yr Expenditure	RLTS 10-20yr Expenditure	RLTS 20-30yr Expenditure	RLTS 30yr Expenditure
Demand Management and Walking & Cycling	4%	5%	4%	4%
Passenger Transport Services	17%	34%	31%	27%
Passenger Transport Infrastructure (Incl Rail)	21%	7%	17%	15%
Road Maintenance & Renewals	21%	30%	25%	25%
New Infrastructure Local Roads	13%	17%	17%	16%
New Infrastructure State Highways	24%	7%	6%	13%
Total	100.0%	100.0%	100.0%	100.0%

Figure 8 – Funding allocation required to implement strategy

To support the RLTS 2010 strategic direction there is thus a need to:

- maintain/enhance current share of national funding,
- change the funding regime (NZTA funds currently spent on State Highways need to be used to support local share (rail, PT opex and local roads) and ensure funding raised in Auckland is not diverted out of Auckland).

Given the wide range of possible funding outcomes and the uncertainties surrounding the costs of the strategy it can be concluded that the strategy is potentially fundable, but that this depends on a number of assumptions about:

- the growth of the Land Transport Fund,
- the amount of national funds allocated to Auckland,

- seeking alternative sources of funding,
- careful management of costs, particularly relating to major projects.

6 Strategy affordability – implications

Potential funding shortfall

This assessment suggests that the level of funding likely to be available to implement the strategy over the next 30 years may be insufficient to implement the strategy. It will be necessary to develop new funding sources (such as developer contributions and tolling) to ensure that there is sufficient funding available to develop the transport system and financing mechanisms (such as loan funding and public private partnerships) to allow timely delivery of the strategy.

Misalignment of funding allocations

Figure 6 shows the expected proportion of expenditure in each activity class over the period of the strategy. The expected funding allocation of the first ten years of the draft RLTS are based on provisions in the GPS and NLTP rather than on the direction set by the draft RLTS.

For the first ten years, expenditure is dominated by State Highway infrastructure projects, particularly the Roads of National Significance. The focus on new State Highway infrastructure for ten years is in contrast to the focus on public transport investment (particularly services) required to implement the RLTS in years ten to 20 and 20 to 30 (and also to the proposed expenditure profile in the RLTS 2005).

Unsupportive funding rules

The analysis shows that the strategy is not fundable in the medium to long term under the current funding rules. The strategy confirms the approach agreed in the 2005 RLTS to move from a heavy emphasis on state highway construction to a much stronger emphasis on public transport improvements (both investment in new infrastructure and additional operating expenditure) and on improvements to local roads (particularly improved operation of regional arterials). Whereas State Highway expenditure is currently 100 per cent funded by NZTA, public transport infrastructure and operations and local roads are currently funded approximately 50 per cent by NZTA.

Under these rules, the shift in strategy means a shift of the funding burden from nationally collected transport funds to locally collected funds (largely rates collected by local government). There are limits on how much local funding can be increased to match this change in emphasis, and there is a strong equity argument that a large part of the funds raised from transport users in the Auckland region should be used to improve transport in the Auckland region. It will, therefore, be necessary to develop new mechanisms that ensure funding rules support the strategy.

Need to review high cost projects

An important component of the Preferred Strategic Option, both in terms of effectiveness and cost, is a number of very high cost capital projects. Clearly an essential component of managing the costs of implementing the strategy are to carefully review these large projects to ensure cost effective projects are developed, and that their implementation is staged where appropriate. These reviews would need to look at long terms costs (including environmental costs) and benefits over the life of the project.