greater WELLINGTON
REGIONAL COUNCIL
Te Pane Matua Taiao

Report	12.462
Date	21 September 2012
File	TD/07/09/04
Committee	Economic Wellbeing
Author	Tass Larsen, Manager Policy and Projects

Fare structure review: progress update

1. Purpose

The purpose of this report is to present to the Committee the feedback from recent consultation on options for the fare structure together, with the initial evaluation of options.

2. The decision-making process and significance

The subject matter of this report is part of a decision-making process that will lead to the Council making a decision of medium significance within the meaning of the Local Government Act 2002.

This report summarises the feedback received during the recent consultation on options for the fare structure and outlines the initial modelling results which will be fed into the final decision making process.

It is intended that a draft package of options will be considered by the Committee in November 2012 and further consultation on these options will be undertaken in early 2013. A final decision on the fare structure will be taken in mid 2013.

3. Background

The Economic Wellbeing Committee agreed the terms of reference for the Fare Structure Review in November 2011. The review covers the way in which fares are calculated and charged and includes the following components:

- Fare charging structure – how fares are calculated (e.g. zonal, distance based, time based)
- Fare concessions – the availability and amount of any concessions for different sectors of the community
- Fare products – single, return, multi-trip, periodicals, time period passes and the amount of discount that may apply to each.

The Fare Structure Review excludes the fare levels which are reviewed annually by the Council.

A Reference Group with representatives from regional councillors, users and operators considered the potential options for the fare structure, concessions and products and assessed these against criteria consistent with current Greater Wellington Regional Council and central government policy. Recommendations from the Reference Group on a limited range of preferred options for initial consultation were agreed by the Council in May 2012 (**Report 12.151**).

Consultation on potential options for the fare structure was held in July, August and September 2012 consisting of targeted public information meetings, a brochure and web based survey. The options outlined in the public consultation are outlined in **Attachment 1**.

This report outlines the initial results from modelling work around the impact of some of the options on fares and patronage and presents the feedback received through the consultation process.

The modelling work on other facets of the fare structure is on-going. The results of this modelling work and possible packages of the various components will be reported to the Economic Wellbeing Committee in November 2012. Further consultation on the preferred package of options will be undertaken early in 2013.

4. Policy context and objectives of the Fare Structure Review

The terms of reference for the review set out the objectives of the review as delivering a fare structure that:

- is equitable for those using the system
- is simple and easy to understand
- reflects the policies of the Regional Public Transport Plan
- maximises patronage while achieving the necessary level of fare-box recovery of 55% – 60%.

The relevant objectives, policies and methods of the Regional Public Transport Plan (RPTP) are outlined in Attachment 2. The most significant of these not explicitly recognised in the review objectives is to retain a zone based approach to the fare charging structure.

The RPTP also articulates the Council's intention to deploy a single integrated smart card system across all Metlink services in the medium term. The implication of this for this review is that the recommended fare structure must provide for integrated fares as well as encouraging passengers to use a smart card rather than cash when paying for fares.

The Regional Land Transport Strategy identifies strategic targets to increase both peak and off-peak patronage and increase the public transport mode share during the peak times.

5. Modelling work

The Wellington Public Transport model gives an accurate picture of current public transport trip patterns, based on bus ticket machine and rail survey data. An economic analysis has been undertaken using these trip patterns to estimate how people might respond to changes in public transport fares, providing estimated patronage and fare revenue under a range of scenarios.

The modelling has used guideline 'elasticities' to reflect the fact that, in simple terms, a reduction in fare will stimulate more demand – this is generally more pronounced in the off-peak than the morning peak. It has been assumed that a 10% decrease in fare would generate a 3% increase in demand in the morning peak and a 5% increase in demand in the inter-peak period. These elasticities are drawn from Australasian and international research, as well as modelling best practice.

It is anticipated that integrated ticketing will be implemented as part of the implementation of the decisions on the fare review. Integrated ticketing is represented in the model by allowing free transfers between services across all modes, as opposed to the current situation whereby each leg of a journey is treated and charged as if it were a new trip.

Modelling work presented in this report has been carried out based on the existing 14 zone structure and on either a revenue neutral basis or with the revenue impact identified. This is to enable a comparison between the current fares and the new fares for each option, and to provide advice on the scale of the overall revenue impact.

Results of the modelling work undertaken so far are discussed alongside the consultation feedback below. Whilst both the base data and process are considered robust, to date the modelling has only been undertaken at a high level and includes assumptions relating to a range of factors. Once a preferred package of options has been identified, more detailed modelling work will be undertaken.

6. Consultation feedback

A number of public and stakeholder meetings and a web based survey were used as the main consultation processes. Attendance at the 24 public meetings ranged from two to 20. Over 2200 website responses and around 20 written responses were received over the 8 week consultation period. In addition, Victoria University of Wellington Student Association (VUWSA) ran its own survey of students around their use of public transport and views on a concession fare. The responses to this survey have been provided to the Council as part of the feedback on the fare structure options. The Council has previously received petitions from students requesting a tertiary student

discount, including one in late 2011 seeking a 50% discount which received 1865 signatures.

The website survey respondents were generally regular public transport users with 71% of respondents indicating they use public transport more than 20 times a month. Just over 50% were from people who lived in Wellington city and a further 24% from people who lived in Hutt city. 35% of respondents were students, reflecting the high level of interest in the issue of whether the Council should provide a concession fare for tertiary students. As such the responses are an indication of public opinion and are not a statistically representative sample of the region's views.

A number of respondents commented that the range of options provided in the consultation material was limited and didn't necessarily represent their preferences. Respondents raised a number of alternative options for both the zonal boundaries and potential fare products. These alternate options have been taken into account when considering further the possible fare structure options.

The key points from the consultation are discussed below.

A detailed summary of the consultation feedback is included as Appendices to this report. **Attachment 3** provides a summary of the website survey feedback, **Attachment 4** is a summary of a survey of tertiary students carried out by VUWSA as an input to the current study and **Attachment 5** is a summary of the issues raised in written feedback to the Fare Structure Review.

6.1 Zones

Feedback

- Support for shifting to (5 or 7) larger zones is slightly greater than retaining existing 14 zones (45% and 41% respectively)
- Concern around impact on the fare for short trips of changing to larger zones

Currently, just over 60% of bus trips are 3 zones or less and 95% are 4 zones or less. For rail, 74% of train trips are between 4 and 7 zones and just over 20% are 3 zones or less. The proposed larger zones based on territorial authority boundaries means an amalgamation of 4 or more current zones into one large zone. As a result, the introduction of a 5 or 7 zone configuration will effectively introduce a flat fare for the majority of bus travel within the region.

Respondents recognised the potential impact of larger zones on fares for short journeys. In a revenue neutral scenario, the likely result of introducing the larger zones will be the single zone fare level will be set at between the current 2 and 3 zone fare resulting in a fare increase for shorter trips and decrease for slightly longer 3 or 4 zone trips.

Large steps in fare levels for travel between zones are also anticipated. For passengers commuting to the Wellington CBD, those travelling from areas immediately adjacent to the zone boundary closest to Wellington city will see fare increases, and those travelling from areas adjacent to the furthest boundary of a zone are likely to see fare decreases.

All current one zone trips will be more expensive which will have an impact in Wellington CBD, other city centres and in regional towns. Given there are more alternatives through walking or cycling for shorter trips, the potential reduction in patronage for these types of trips is likely to be higher than the fare increases for longer distances.

6.2 Distance based fares

Feedback

- Support for shifting to a combined zones plus distance based fares greater than a purely zonal system (57% and 32% respectively)
- Strong support for the fare per kilometre (km) to reduce with distance travelled (62%)

Distance based fares are attractive as the user pays for the distance travelled hence there is greater equity between users and journeys. Distances can be calculated on the basis of sections or stages along a route or on a more sophisticated point to point basis where distances is measured from first boarding point to last alighting point. The current fare structure is a essentially distance based where the stage points are defined as each zone boundary.

The disadvantages of such as system are that they make it harder for users to calculate the cost of a trip, particularly for new or casual users, and the fare between two stops would vary on different routes – for example the fare between Kilbirnie and the CBD would vary depending on whether the route went via Newtown or the bus tunnel. This could be avoided by establishing rules to charge based on the shortest distance between two stops.

The complexity of the fare matrix is a potential issue for a sophisticated point to point system given the large number of boarding and alighting points (over 2800 bus stops compared to 50 rail stations) in the existing network.

The level of complexity of the fare structure can impact on the initial capital setup cost and on-going administrative costs of any new smart card system. Further investigation would be required to determine whether the funding currently allocated included for the new smart card system would need to be amended if a point to point fare system is implemented.

Currently, the charge per kilometre travelled reduces with the length of the journey. Under a distance based fare system, the charge per km travelled could remain constant for any length of journey, or increase or decrease with distance travelled. Increasing the charge per km would discourage longer trips, and decreasing the charge per km would encourage longer trips by public transport.

Amending the current systems to a constant charge per km travelled would have a negative impact on rail patronage where most journeys are 4 or more zones.

6.3 Alternative options

Introduction of larger zones could impact on the number of short trips being made using public transport. A reason for considering point-to-point fares is to increase equity between journeys particularly for short distances and short journeys across zone boundaries. Alternative mechanisms to achieve this raised by respondents include:

- a short time based ticket of 1 or 2 hours for travel within one zone for quick hop on hop off journeys (issues will remain around how these would work with different levels of traffic congestion, different routes etc or if the journey crosses a zone boundary)
- providing large overlaps of zones to minimise adverse impacts of short journeys across zone boundaries
- an inner Wellington CBD zone to support short journeys in the CBD.

Officers will include the above options in the evaluation of possible fare structure components.

6.4 Peak and off-peak fares

Feedback

- Support for and against an off-peak fare evenly split (45% and 44% respectively). Respondents who supported an off-peak fare were relatively evenly split with respect to the appropriate level of discount of 25%, 33% or 50% discount (30%, 34% and 30% respectively)
- Concern around impact on commuters and the likely increase in peak fares
- Identified as a potential alternative to tertiary student concession fares

Off-peak fares are attractive as they have the potential to increase patronage in the off-peak period and may shift some journeys from the peak period to the off-peak period. Respondents commented that the level of service should be increased between 9am and 10am to enable and promote shifting of journeys from the peak to inter-peak period.

Initial modelling work has been undertaken on a peak / off-peak fare differential. Four options have been modelled and the impact on peak fares for the different peak / off-peak fare differentials is shown below for a revenue neutral scenario and for a scenario where peak fares are not increased. This latter scenario provides an indication of the revenue impact of implementing a peak / off-peak differential.

Option	Description	Modelled peak fare increase for revenue neutral scenario	Approximate reduction in revenue if no peak fare increase
Option A	• **25 %** fare differential between the am and pm peak and inter-peak period only, Monday to Friday • Fare set for travel before 7am, evening and weekends at **peak** rate	4%	$2.5m
Option B	• **25 %** fare differential between the peak and all other times outside the Monday to Friday am and pm peak • Fare set for travel before 7am, inter-peak, evenings and weekends at **off-peak** rate	8%	$4.5m
Option C	• **50 %** fare differential between the am and pm peak and inter-peak period only, Monday to Friday • Fare set for travel before 7am, evening and weekends at **peak rate**	12%	$7.0m
Option D	• **50 %** fare differential between the peak and all other times outside the Monday to Friday am and pm peak • Fare set for travel before 7am, evenings and weekends at **off-peak** rate	21%	$12.0m

In the scenarios where there is no increase in peak fares, the revenue impact increases with increasing off-peak fare differential and length of the off-peak period. In the revenue neutral scenarios, current rail cash fares are discounted in the inter-peak period and consequently inter-peak rail fares are likely to increase slightly for options A and B to maintain the constant 25% differential with peak fares. Given the slight increase in rail inter-peak fares in the revenue neutral scenario, no increase in patronage in the rail inter-peak period is predicted for a 25% peak / off-peak fare differential. However extending an off-peak fare to early mornings, evenings and weekends is likely to increase patronage in these times.

Both the revenue neutral and revenue impact scenarios have potential financial consequences for the Council in the current contracting environment. Assuming the current NZTA financial assistance rates and mix of gross and net contracts, the financial impact of a 25% differential is estimated to be equivalent to around 2.5% (option A) or 4% (option B) on the regional rates if the peak fare remains at current levels. For a larger 50% differential with no peak fare increase, the impact on the regional rates would increase to around 5.5% and 8.5% for Options C and D respectively.

The existing net contracts do not have a standard approach to dealing with fare changes, and depending on the potential scale of changes envisaged, arrangements would need to be negotiated individually with operators. Consequently, the above figures indicating the scale the impact on regional rates of introducing a peak / off peak fare differential are indicative only.

The modelling for rail is complicated by the fact that the current off-peak cash fare discount varies between 14% and 23% when travelling between 2 and 10 zones; this is less than the current multi-trip discount (which varies between 20-29%), and many people travel on a monthly pass which gives a further substantial discount that is not available to bus users. A rail monthly pass is equivalent to 21-24 cash trips, or to 30 trips paid for with a 10-trip card.

Using fare elasticities of -0.3 in the morning peak and -0.5 in the inter-peak the impact on patronage for each of the options is shown below.

Impact of peak / off-peak fare differential on patronage for revenue neutral scenario

	Peak		Inter-peak		Overall	
	Bus	Rail	Bus	Rail	Bus	Rail
Option A	-3.7%	-0.8%	8.0%	-2.0%	2.7%	-1.1%
Option B	-4.9%	-1.6%	10.6%	2.8%	3.6%	-0.5%
Option C	-8.6%	-4.9%	14.0%	6.1%	3.8%	-2.1%
Option D	-11.0%	-6.5%	19.1%	15.7%	5.5%	-0.8%

Generally, patronage for rail is predicted to reduce slightly for all options as the negative impact of an increase in peak period fares on patronage is not offset by a greater increase in inter-peak patronage. Patronage for bus is predicted to increase in each option. The most balanced scenario in terms of increase in patronage the potential increase in fares for both rail and bus is option B. The substantial predicted loss of patronage in the peak period for bus in options C and D is likely to increase congestion in Wellington city centre.

Impact of peak / off-peak fare differential on patronage for scenario with no increase in current peak fares

	Peak		Off-peak		Overall	
	Bus	Rail	Bus	Rail	Bus	Rail
Option A1	-2.5%	0.0%	8.9%	0.0%	4.1%	0.0%
Option B1	-2.5%	0.0%	12.9%	0.0%	6.4%	0.0%
Option C1	-5.0%	-2.5%	17.8%	10.8%	8.2%	1.2%
Option D1	-5.0%	-2.5%	25.8%	16.8%	12.8%	2.9%

The reductions in peak patronage in the second scenario where there is no increase in peak fares is due to passengers shifting their time of travel to take

advantage of the cheaper off-peak fare. The significant increase in bus patronage predicted for the off-peak period under Option D1 is unlikely to occur immediately after any fare reduction and would be expected in the short to medium term.

Victoria University noted in its feedback that the off-peak concession is a viable alternative to a tertiary student concession but not their preferred option.

6.5 Concessions for tertiary students

Feedback

- Strong support for a tertiary student concession (66%) with 52% of respondents indicating that a 50% discount was appropriate (compared to 23% for a 33% discount and 12% for a 25% discount)
- Greater support for concessions for full time students rather than full time and part time students

There are approximately 22,000 full time and 4,500 part time students at Victoria and Massey Universities in Wellington who currently pay adult fares to use public transport.

Analysis of survey data provided by Victoria University gave figures for the percentage of students travelling to University by bus, rail, car or walk modes. Assuming a set number of public transport trips undertaken by students each week (8 single trips) and assuming that students are attending university for 75% of the year, an approximate estimate of the number of rail and bus trips undertaken per year by tertiary students has been made as:

- 1.6m student rail trips each year (15% of all rail trips)
- 1.8m student bus trips (7% of all bus trips).

Overall, tertiary travel represents around 10% of all PT trips within the region.

In order to estimate the impact that reducing tertiary fares might have upon both demand and patronage, elasticities of -0.25 and -0.4 were applied to tertiary rail and bus trips respectively. Using these proportions as an approximation of the use of public transport by all tertiary students, then the following table shows change to the general fares are required to maintain current revenue, and the potential overall reduction in revenue if general fares are not altered.

Potential tertiary student discount	Increase to current adult fares for revenue neutral scenario	Estimated change in tertiary student patronage	Approximate reduction in revenue if no adult fare increase
25%	3%	7%	$1.5m
33%	4%	10%	$2.0 m
50%	7%	14%	$4.0m

6.6 Concessions for all aged under 20

Feedback

- Support for an under 20's fare stronger than extending the school students fare to all school students (41% and 23% respectively). The remaining respondents supported retaining the existing school fares

Modelling of the impact of extending a concession fare to all under 20 year olds has assumed that 50% of young adults stay at school until 18 year olds, and are currently eligible for school student fare discounts. As a consequence, the modelling has assumed that only an additional 25% of 16 to 20 year olds will use a concession fare if this is extended to all young adults under 20 years old. As such, the impact on fares of extending a concession to all under 20's is less significant than the tertiary option and is predicted to be as follows:

Potential 'under 20' discount	Increase to current fares for revenue neutral scenario	Approximate reduction in revenue if no adult fare increase
25%	1.5%	$1.5m
50%	3%	$2.5m

Victoria University consider that a concession fare for under 20's would not benefit tertiary students. Approximately 26% of Victoria University's students are under 20 years of age, but the majority of these students are living in halls of residence within easy walking distance of the campus and as a consequence, will not be high users of public transport.

6.7 Concessions for beneficiaries and people with disabilities

Feedback

- Strong support for retaining the existing concessions for people with disabilities compared to replacing these with a general off-peak fare (75% and 25% respectively).

- Mixed support for concessions for low income and other beneficiaries

Currently, concessions for people with disabilities are mixed, with none being specified by Greater Wellington. Service providers do give concessionary fares to some people with disabilities; however this is not consistent between operators or modes. The Total Mobility scheme provides subsidised transport services to people with impairments that prevent them from using public transport. There are no concessions for beneficiaries (except for War Veterans through the SuperGold Card scheme).

The New Zealand Disability Strategy identifies the need to provide accessible public transport and routes and recognises the need for alternative transport options where accessible transport options don't exist.

For Wellington, the provision of physically accessible buses meets in part the needs of people with disabilities. However, many people with high needs due to their disability are often low income and reliant on public transport to access the services they need. Cost of transport can also then become a barrier to travel and a barrier to enabling people with disabilities to access the services they need.

A scheme providing concessionary fares on public transport for people with low income and / or specified physical or learning disabilities could be established for Wellington region. One option would be for the Council to provide off-peak concession fares to all Community Service Card holders issued by Work and Income. The Community Services Card is available, on application, to people on low incomes, and is available to all persons receiving the following benefits:

- Child Disability Allowance
- Domestic Purposes Benefit
- Emergency Benefit
- Invalids Benefit
- Orphans Benefit
- Residential Care Subsidy
- Sickness Benefit
- Student Allowance
- Unemployment Benefit
- Unsupported Childs Benefit
- Veterans Pension
- Widows Benefit
- Youth Payment
- Young Parent Payment

An alternative would be for concessions to be provided to those with specified disabilities – for example, a scheme in the UK is available to people who:

- are blind or partially sighted
- are profoundly or severely deaf
- are without speech
- have a disability, or have suffered an injury, which has a substantial and long-term effect on their ability to walk
- don't have arms or have long-term loss of the use of both arms
- have a learning disability
- are ineligible for a driving licence due to physical fitness (excluding causes relating to drug and alcohol abuse).

The costs of implementing such as scheme will be assessed and presented to the Committee in November 2012.

6.8 Extending the SuperGold card concession

Feedback

- Support for and against extending the SuperGold card concession to the afternoon peak was evenly split
- Comments that many SuperGold card users would only very occasionally use the card in the afternoon peak

The Super Gold card scheme is a government funded scheme providing free travel for war veterans and people over 65 years old between 9am and 3pm and after 6.30pm. Respondents sought an extension to the scheme either for the whole afternoon peak or until a specified time (for example to 4.30pm).

Auckland is the only area where SuperGold cards permit free use of the public transport system in the afternoon peak and this is subject to review. Further analysis of the cost of extending the Super Gold card scheme to the afternoon peak is underway and will be reported to the Committee in November.

6.9 Fare products

Feedback

- Preferences for future payment options were split between periodical ticket (33%), trip by trip with stored value card (36%) or capped period fare with stored value card (25%)
- Concern the options presented offered substantially less discount than currently available through monthly passes
- Concern that cost of purchase of smart card could be barrier to accessing discounts

The number of fare products included in the consultation material was limited and does not represent the complete range that could be used in the final fare structure. Generally the preference for periodical tickets was strongest amongst rail users and is reflective of their satisfaction with the current monthly passes and the larger discounts these offer.

Currently, the monthly rail pass is equivalent to 30 trips paid for by a 10 trip ticket, providing a discount of 25% for 40 trips per month. For bus commuters travelling between zones 1 to 3, there are no current products that offer additional discount on the stored value fare if public transport is only used for the daily commute (40 trips per month). The 30 day pass provides a 10% discount above the stored value fare for commuters who travel across 4 zones, again based on 40 trips per month.

The option of a capped period fare was supported by a higher proportion of people who used the bus as their main public transport mode (30%) compared

to those who used the train (17%). The option of paying trip by trip with a stored value card was supported by just over 50% of bus users. This may be a reflection of a concern that the option presented for a capped fare of paying for the 9 most expensive trips in a week and the rest being free was interpreted as a 10% discount, less than the current discount for rail period passes.

Other products suggested by respondents included:

- Family passes, or allowing children with a fare paying adult to travel free at weekends
- Loyalty credits for frequent users via smart cards
- One or two hour time limited tickets to enable a number of short trips on a single ticket
- Daily and longer period passes to encourage patronage and reward regular users.

7. Next steps

Modelling work on the fare structure options will be completed and the potential impact on patronage and fares for combinations of the options modelled for presentation to the Economic Well-being Committee in November 2012 and Council in December 2012. In addition, a broader economic impact of the proposed fare option combinations will be developed.

Subject to approval of a preferred suite of options by the Committee and Council, consultation material will be developed for further public consultation in early 2013. Feedback from the consultation will be presented to the Economic Wellbeing committee in mid 2013.

Depending on the scale and operational implications of the changes, a transition plan will be developed to phase in the new fare structure over the next two to five years.

8. Communication

No communication is needed at this stage.

9. Recommendations

That the Committee:

1. ***Receives** the report.*
2. ***Notes** the content of the report.*
3. ***Notes** the consultation preferences attached as Appendix 3, 4 and 5.*
4. ***Notes** that further work on options and their impact on fares and patronage will be reported back to the committee in November 2012.*

Report prepared by:	Report approved by:
Tass Larsen Manager, Projects and Planning	Wayne Hastie General Manager, Public Transport