

Public Transport Fare Structure Review

Exploration of Options

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Executive summary

The objective of the fare review is to develop a fare structure that is

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

A number of options have been considered for fare structure, fare products and fare concessions. These include for the structure retaining the existing 14 concentric zones (ie status quo), large zones and a distance based fare; for products, period passes, fare capping and targeted products; for concessions, changes to the existing concessions for children and young adults and SuperGold card holders, plus new concessions for people with disabilities, low income adults and tertiary students.

Moving to larger zones simplifies the fare structure, however in a revenue neutral environment, the fare for short trips will increase across the region. This can be offset in Wellington City by introducing an inner city zone, or across the region by introducing a short trip fare. Having a short trip fare for journeys less than 3km resolves the issue in Wellington city, but in outer areas, such as Kapiti, the less dense urban form and need for collector type routes means a 'short trip' is up to 6km. Implementing different short trip lengths across the region is complex to understand and is not favoured.

Moving to a distance based fare with a fare per kilometre decreasing with distance travelled increases the revenue generated from the fare structure. However, users in Porirua, Lower Hutt, Upper Hutt and Kapiti tend to pay higher fares under this scenario, whilst users in Wellington are more favourably impacted. Any patronage gains within Wellington city are offset by patronage reduction elsewhere in the region.

The issue then becomes whether a change in fare structure delivers sufficient benefits to warrant the level of change required. Distance base fares add complexity to the fare structure and make fares less transparent. District based zones simplify the fare structure but in order to generate sufficient fare revenue, the single zone fare has to be set at a relatively high level. As such, neither option offers sufficient advantage over the existing concentric zone structure to justify major change.

The conclusion of this report is that there are insufficient benefits from alternative structures to warrant substantial change to the current concentric zone model.

Current fare products are recommended to be gradually phased out to be replaced by a single, time based ticket per zone and fare capping at a daily and / or weekly level. A weekend family pass, event tickets and bulk purchasing scheme are suggested. It is recommended that the total number of products is reduced.

Concessions for people with disabilities are supported in the long term, and may be implemented through a universal off peak fare or targeted concession for people with disabilities. The introduction of an off peak fare is supported. Further work on a bulk purchase scheme which may benefit tertiary students is identified.

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Public Transport Fare Structure Review

Exploration of Options

1. Purpose

The purpose of this report is to present

- the feedback from recent consultation
- a summary of international case studies of fare structures and
- an evaluation of options for a fare structure, products and concessions.

The report provides background information and analysis for the Council decision making process.

2. Background

The Economic Wellbeing Committee agreed the terms of reference for the Fare Structure Review (FSR) in November 2011. The review covers the way in which fares are calculated and charged and includes the fare charging structure, any concessions and the types of fare products to be offered. The review excludes the fare levels which are reviewed annually by the Council.

The Fare Structure Review has undertaken three streams of work, these being:

1. Seeking feedback from operators and public transport stakeholders and the community through establishing a Fare Structure Review Reference Group, undertaking consultation on a range of potential options, holding a discussion forum for public transport advocates and interest groups and holding a series of focus groups around perceived value for money and fare structure preferences
2. Undertaking international case studies of fare structures in cities around the work
3. Analysing the options including modelling the patronage and revenue impacts of the various options.

A Reference Group with representatives from regional councillors, users and operators considered the potential options and explored the potential impacts of changes to the fare structure, concessions and products. A limited number of options were agreed by the Council in May 2012 (Report 12.151) for public consultation. Consultation on potential options for the fare structure was held in July, August and September 2012.

A report to the Economic Wellbeing Committee in October 2012 (Report 12.462) outlined the initial results from modelling work around the revenue and patronage impacts of some the options for fare concessions. The report also presented the feedback received through the consultation process.

This report summarises the 3 streams of work and explores options for a preferred fare structure. Further modelling and analysis will be undertaken on the impact of the preferred fare structure as part of the work to develop the business case for the Integrated Ticketing and Fares project later in 2013/14.

3. Objectives and assessment criteria

The objective of the fare review as established in the FSR Terms of Reference is to develop a fare structure that is:

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

The FSR Reference Group has developed a set of criteria for assessing the impact of any fare structure. These criteria reflect the principles articulated in the Review Terms of Reference and were signed off by the Economic Wellbeing committee in May 2012 (Report 12.151) as part of the public consultation on the fare structure. These criteria for any assessment of an alternative fare structure are as follows:

Criteria	Description
Simple, easy to understand and use:	<i>This indicates the extent to which users potential users find the fare structure simple and easy to understand and they are not discouraged from using the services and paying appropriate fares</i>
Encourage patronage growth:	<i>Encouraging increases in level of patronage (boardings) and passenger kilometres expected within the specified financial constraints</i>
Affordability for users:	<i>Public transport provides an affordable travel option for people who depend on public transport (i.e. those who don't have access to motor vehicles or can't walk or cycle for most of their trips)</i>
Ease and costs of fare / ticketing system implementation and on-going administration:	<p><i>This reflects</i></p> <ul style="list-style-type: none"> • <i>any differences between options in the capital and operating costs of the proposed electronic ticketing system</i> • <i>the extent of any technology-related difficulties anticipated in the initial implementation and periodic adjustments of the proposed fare structure/ ticketing system</i> • <i>the extent of difficulties anticipated in adjusting operator contracts in response to introducing and periodically adjusting the new fare structure</i>
Support efficient network design, operations and asset utilisation:	<p><i>This reflects the fare structures contribution to:</i></p> <ul style="list-style-type: none"> • <i>encouraging supporting efficient network design by removing any fare impediments (e.g. by allowing free transfers)</i> • <i>encouraging peak spreading (travel outside peak periods / peak</i>

Criteria	Description
	<p><i>directions) which also means improving the use of public transport assets and reducing the capital operating costs for a given transport task</i></p> <ul style="list-style-type: none"> • <i>reducing bus boarding and alighting times which will also reduce operating costs and encourage increased patronage</i> • <i>reducing fare collection and ticketing costs</i>
Deliver sufficient revenue:	<i>The fare structure must generate sufficient revenue to meet the current fare-box recovery policy as specified in the Regional Public Transport Plan</i>
Economic efficiency:	<i>Fares have a consistent relationship to the economic costs of different trips</i>

4. Consultation and Engagement feedback

A number of different consultation methods have been used to understand community views on the current and future options for the public transport fare structure in Wellington. These include

- the formal consultation feedback (reported to the Economic Wellbeing Committee in October 2012 - Report 12.462),
- a discussion forum for public transport users, advocates and residents groups on the issues around any change to the public transport fare structure, and
- focus groups around the relative perceived value for money of public transport in the region
- A Fare Structure Review Reference Group comprising representatives from operators, councillors and users.

These are summarised below. A summary of the relevant results from the annual user satisfaction survey is also presented.

4.1 Formal consultation - mid 2012

During the formal consultation carried out last year, respondents were asked to comment on a range of alternative options for the fare structure in Wellington.

Overall, respondents were evenly split between retaining existing 14 zones or moving towards coarser 5 or 7 zone option. 70% of those who preferred coarse zones preferred a combined approach of zones for cash and distance based for smart card users with a higher preference for a purely zonal structure from respondents outside Wellington city who would typically be travelling longer distances on public transport.

When asked to consider a distance based fare structure, the majority of respondents supported fare increments to decrease with distance travelled, with a higher percentage of people supporting this in Kapiti and Wairarapa.

Overall two thirds of respondents supported a concession fare for tertiary students which may be a reflection of the high number of under 25 year olds who responded to the survey. Around 40% supported extending the child concession fare to all people under 20 years old and over half of all respondents considered the level of discount offered should be 50%. Three quarters of respondents considered that concession fares should continue to be offered to people with disabilities.

Overall opinion was evenly split for or against an off peak fare, although support for an off peak fare increased with respondent age. Only a quarter of respondents considered that concession fares for beneficiaries or people with disabilities should be replaced with a universal off peak fare.

When asked about preferences for future payment systems, 40% of respondents who use public transport for more than 20 trips per month preferred to pay using a periodical ticket, whereas 57% of respondents who use public transport less frequently (1 to 4 trips per month) prefer the option of paying on a trip by trip basis with a stored value card. Generally, people who use the train as their main public transport mode preferred periodical tickets, and those who identify the bus as their main public transport mode prefer to pay by stored value card reflecting the current payment systems in place. Just under two thirds of respondents supported payment with a smart card.

4.2 Public transport discussion forum

At the forum for public transport users and advocates, views were varied. There appeared to be a general consensus that whichever fare structure is adopted, the Council should be focusing on increasing patronage on public transport.

The group considered that public transport must be affordable, easy to access and use. Integrated ticketing and a single smart card system across the network were needed as this would encourage patronage growth and make the network easier to use.

The group considered that the overarching objective for the fare structure review should be that the fare structure results in fares that are fair, reasonable and equitable. Maximising patronage and ensuring any fare system is simple and easy to use were considered the next most important attributes of a fare structure.

The group considered that concession fares should be offered to those most in need, however who was most in need was debated by participants. Tertiary student representatives argued for concession fares for students, whereas other participants argued other low income users, such as cleaners or other service workers, were equally as 'deserving' of a concession fare.

4.3 Focus groups on value for money

Six focus groups were held around the region with the objective of exploring public transport user's perception of the value for money of current public transport fares, and their views on any future changes to the fare structure.

Participants generally perceived that under the current fare structure, longer distance public transport travel was better value for money than shorter public transport trips. Rail was considered to offer better value for money than bus travel on a fare per kilometre travelled basis, however participants considered that because bus stops were generally closer to where

people want to go and the journey was more ‘direct’ this added value for money for bus users.

Participants were asked to consider the relative fare for a number of short, medium and long distance trips around the region. Under the current fare structure, short trips in Wellington have a higher fare than an equivalent trip in the Hutt and Kapiti, and Wairarapa travellers tend to pay more for a 50km trip length than Kapiti users. Participants raised multiple reasons for why the relative cost of journeys in the region could be seen as ‘fair’, with reasons ranging from fares set by distance travelled, duration of journey, level of congestion along route, social good reasons, topography, ability to pay, and willingness to pay. Only a few participants considered the same length of journey should cost the same across the region, mainly as they perceived other factors also influenced the cost of a journey.

A quarter of participants supported retaining the current 14 zone structure, all of these participants (bar one) lived in Kapiti. The remaining participants were evenly split around whether they preferred large zones or distance based fares. Larger zones were seen to discriminate against short trips, whereas distance based fares were seen to discriminate against longer distance travellers.

Participants were evenly split between whether there should be a differential between peak and off peak fares, however, of those who supported a differential were also evenly split between whether off peak fares should be lower or higher than peak fares. The reasons ranged from that at peak times, public transport is more crowded and unpleasant so should cost less, to lower off peak fares are needed to encourage more public transport use.

4.4 Public Transport Fare Structure Review Reference Group

The review criteria were discussed by the FSR Reference Group who considered fairness and equity considerations are unlikely to differentiate between different structures as every fare structure requires some trade-offs between different user groups and types.

The FSR Reference Group considered that the two most important criteria for the review where that any fare structure must be simple and easy to understand and use and encourage patronage growth. All other criteria are balanced in terms of the level of importance, although these criteria may present significant impediments for some options.

The FSR Reference Group also considered that the fare structure should reward the types of behaviours the Council considers important, an issue identified in the original terms of reference for the project. As such, the fare structure should reward:

- frequent users
- users who travel outside the peak period
- users who pay using a smart card system.

In addition, the FSR Reference Group considered that the fare structure should be mode neutral with the same products available on bus, rail, and ferry. Fares for some services could be set at a premium, for example on the ferry, recognising either the nature or additional cost of the service.

Based on the underlying assumption that the fare structure should reward specific types of behaviours rather than users, the FSR Reference Group also considered that concessions for specific users were not supported. The FSR Reference Group considered that there should be a national approach to concessions for people with disabilities, beneficiaries and tertiary students similar to the Super Gold card which provided clarity and consistency to the provision of concession fares.

In relation to specific products, the FSR Reference Group supports:

- In general, using fare capping in preference to periodical products
- Extending the current child discount to everyone under 19
- Retaining (rather than extending) the national definition of ‘off-peak’ for SuperGold card holders.
- An off peak fare in preference to a tertiary discount, although a bulk buying discount for students should also continue to be investigated.
- Allowing adults travelling at weekends to take children with them for free (as long as administrative issues can be overcome).

4.5 Annual public transport user satisfaction survey

The GWRC annual public transport user survey has shown over the last few years that users have become less satisfied over time with the affordability of both train and bus fares. Over the last 5 years, the level of satisfaction with public transport affordability has declined from around 52% for rail users and 58% for bus users in 2008 to 32% for rail and 34% for bus in 2012. Whilst this decline has to be set against a background of a tough economic environment, the decline of over 20% in satisfaction across the 5 years is significant. Between 2008/09 and 2011/12, overall patronage grew by just 0.4% against a population growth of 5%.

When the current 14 zone structure was introduced in 2006, GWRC public transport fares were increased by around 15%. Between 2008 and 2012, GWRC public transport fares have increased by approximately 20%, in addition to the 2.5% increase in GST introduced in 2010. Over the same period, the general Consumer Price Index has risen around 8.5%. A further fare increase of 2.5% for most products is planned for 2013.

5. Comparison to other cities

A number of case studies of other cities around the world were completed. The case studies looked at 14 different cities around the world and were grouped as follows:

Distance based fare structure:	Singapore (3.2km + 1km increments), Seoul (10km + 5km increments), Amsterdam (flag fall plus 1km increment or one hour ticket)
Zonal based fare structure	Perth (1 city zone plus 8 concentric zones), Brisbane (1 city zone plus 22 concentric zones), Melbourne (2 zones), London (inner London: 6 concentric zones), Newcastle upon Tyne (6 district based zones), Nottingham (1 zone), Seattle (3 zones), Zurich (7 district zones), Oslo (5 concentric zones), Bergen (7 city zones), Frankfurt (4 concentric zones plus airport zones).

All cities studied allowed free transfers with most products with the exception of Nottingham where every trip is a new fare.

Off peak fares were offered by Singapore (for trips prior to 7.45am), London (after 9.30am), Newcastle (after 9am), Seattle, Brisbane (with go card) and Zurich (between 9am and 5pm). Off peak discounts tended to vary across the zones from inner city to outer regions and ranged from 5% to 40%.

All cities studied offered concession fares for children and seniors. Cities in the UK provide concession fares for people with disabilities meeting nationally specified criteria. Tertiary students are eligible to travel for the child fare in some UK and European cities. In the US, tertiary students are offered fare concessions through bulk purchase schemes offered by universities.

The fare products offered were varied. A mix of single, short journey, daily, weekly, monthly and annual tickets were available in many cities. Amsterdam used time based tickets of 1 hour, with additional charge for carrying a bike. Brisbane and Perth have standard zonal tickets with 2 or 3 hour time limits. Just 2 cities used multi trip tickets. In London, fares are capped at a daily maximum which is slightly below the all-day travel card value. The daily cap is equivalent to between 2.8 and 4 smart card single tickets.

US cities use employer based bulk purchase schemes, however these often have local and federal tax incentives associated with them which are unavailable in New Zealand. Melbourne has a similar bulk purchase scheme for employers which gives an additional 5% discount over the weekly ticket price.

Most cities provided some discount incentive to use a smart card rather than cash to pay for fares. In London, the smart card fares are discounted at between 30% and 50% from the cash fare for inner London zones and between 10% and 20% for outer London zones. Perth has a system where the level of discount is dependent on the method used to top up the smart card (i.e. higher discount for automatic top up compared with loading a card at a shop). Denmark offers the highest discount to people who register their smartcards.

6. Current travel patterns

Current travel patterns are outlined in Appendix 2 to this report.

The analysis of travel patterns shows that in the morning peak, 80% of trips finish in the Wellington CBD. Around 50% of trips in the morning peak originate from within Wellington city itself, with around 15% from Porirua, 20% from Lower Hutt, 5% each from Kapiti and Upper Hutt and 3% from the Wairarapa. These figures show that public transport usage in the region is heavily Wellington city centric.

Around 48% of all trips occur in the off peak period. In the inter peak period, 50% of all trips are to the Wellington CBD. Just under 65% of all inter peak trips originate from within Wellington city, 18% of trips originate in Lower Hutt and around 9% in Porirua.

Just over a quarter of all public transport trips in the region are less than 3km, with around 60% of these within the Wellington CBD, and almost 85% in Wellington city. Two thirds of trips less than 3km occur in the inter peak period.

Based on smart card usage on buses, 28% of smart cards used in a week are used only one day per week, and just 16.5% are used 5 days a week. Smart card usage is highest during the peak period, with over 75% of journeys paid by smart card and lowest during the inter-peak period with just over 40% being paid by cash.

Based on smart card data from buses, in any one day, 54% of smart card users only travel in the peak period and 52% only make one trip in a day either in the peak or off peak of which 64% are in the peak period. Given that regular users are likely to be smart card users, this means the predominant travel pattern on buses in Wellington city is for people to make only one trip a day on public transport. Around a third of regular users who travel 5 days a week using public transport use public transport in the morning and evening peak times.

Just over 40% of rail users travel using a monthly pass. Given that monthly passes provide value for money if used more than 30 times a month, the rail travel patterns are likely to include a significantly higher proportion of people travelling twice or more a day and are more oriented towards commuter travel.

7. Modelling of the impact on patronage and revenue

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. Any increase or decrease in fares in the interpeak period will have a greater impact on patronage than a similar change to fares in the peak period. As a result, the model assumes 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. These elasticities are an approximation to reflect the overall change in usage across the population, however within the population, different groups are likely to be more price sensitive than others. An example would be low income public transport users are likely to be more affected by fare increases than higher income users consequently the elasticities for lower income public transport users are likely to be higher than for higher income public transport users.

It has been assumed that integrated ticketing will be implemented alongside the implementation of the decisions on the fare structure 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. The revenue impacts of introducing integrated ticketing are discussed below.

Modelling work presented in this report on the impact of altering concession fares and introducing a peak / off peak fare differential has been carried out based on the existing 14 zone structure and on either a revenue neutral basis or with the revenue impact identified.

Modelling work around moving to larger zones or distance based fares is presented as a comparison against the existing patronage and revenue figures. 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.

8. Integrated fares and ticketing

Integrated ticketing has been implemented in a number of cities and regions around the world whereby one ticket can be purchased for a journey which may include multiple legs or use multiple public transport modes. One driver for implementing integrated ticketing is to make travelling by public transport easier for passengers, making public transport more attractive for users. Increases in patronage have been reported after such schemes have been implemented.

The Council has signalled its intention to introduce a single smart card system across the network which will enable integrated ticketing across bus and rail. Implicit in integrated ticketing is that fares will also become integrated. Integrated fares means that the same fare is paid for the same journey no matter which route or mode of travel is used. There are two possible definitions of integrated fares, these are that any subsequent leg of a journey is charged:

1. without the flag fall component of a fare for any subsequent legs of a journey, or
2. without any fare increment if subsequent leg of journey is within the same zone as alighting point at end of previous leg of journey (i.e. the journey is charged based on the number of zones travelled regardless of how many vehicles used to make the journey).

The definition of integrated fares to be used by the Council when implementing its integrated ticketing project has not been finalised, however, the first definition tends to lend itself to a fare structure based on distance travelled and the second to a fare structure based on zones.

As the majority of transfers in the network are currently treated as new trips, there is a potential revenue implication from moving to integrated ticketing under either definition above. The number of transfers within the current travel patterns has been estimated based on survey data carried out in 2005 and 2010 and ETM data in 2011. These sources point towards around 12% of rail journeys either being accessed or egressed by bus. There is a large variation in the number of bus to bus transfer trips estimated from the different data sources varying from 2% to 3% to just under 20%. More robust information will be obtained as part of the business case for the integrated ticketing project, however at the worst case, the introduction of integrated ticketing may reduce revenue by around \$3 million per annum. This is based on a revenue loss equivalent to a one zone fare for 12% of rail journeys and 3% of bus journeys. This figure would be reduced by any increase in patronage resulting from integrated ticketing.

9. Fare structure

The fare structure establishes the rules and methods used to calculate the fare charged for any particular journey. The options for fare structure vary from a flat fare where one fare is paid irrespective of distance travelled through to a point to point distance based fare structure

where fares are charged based on a unique station to station or stop to stop fare. Time based fares are not typically used however many systems use a hybrid of zones plus time based structure which enables transfers to be made on one ticket.

Whilst smart card systems provide the technological opportunity to introduce a more differentiated fare structure based on distance, the case studies showed that many European cities still have retained a coarse zonal structure even after implementing a smart card technology to collect fares. The use of zonal structures is justified on the basis that the greater simplicity and ‘marketability’ of such a zonal structure is able to attract greater patronage of the public transport network.

In Asian cities, such as Singapore and Seoul, a distance based fare structure has been implemented with fare increments charged for every 1km and 10 km respectively. The literature around fare structures tends to point to distance based fares as being used where a more commercial focus for public transport is desired, mainly due to their ability to raise more revenue than a flat fare or very coarse zonal system.

The benefits of distance based fares and a highly differentiated fare structure are around increased equity and economic efficiency. With a distance based fare structure, journeys of similar distance tend to cost the same and fares increase with distance travelled, both of which are perceived by users as being a more equitable. User support for a coarse zonal structure or a flat fare structure often depends on the level of fare charged, with evidence in Europe showing that the acceptability of a flat fare system is greatest with a very low flat fare.

The strengths and weaknesses of the different fare structures are summarised below:

Fare structure	Strengths	Weaknesses
Flat fare	<ul style="list-style-type: none"> • Simple and easy to understand • Easy to implement free transfers 	<ul style="list-style-type: none"> • No relationship between fare and distance travelled • Implicit cross subsidisation of costs of short and long trips • Transfers within the zone included in fare
Coarse zonal structure	<ul style="list-style-type: none"> • Relatively simple and easy to understand • Easy to implement free transfers • Broad relationship between distance travelled and fare 	<ul style="list-style-type: none"> • Implicit cross subsidisation of costs of short and longer trips within one zone • Issues for short journeys crossing zone boundaries • Transfers within a zone included in fare

Fare structure	Strengths	Weaknesses
Distance based	<ul style="list-style-type: none"> • Generally perceived as fair by users • Strong relationship between distance travelled and fare 	<ul style="list-style-type: none"> • Users unable to know with certainty what the fare will be prior to boarding for new journey • Difficulty in establishing fares for indirect or circuitous routes (collector routes) • Transfers dealt with through removal of flag fall for second journey
Time based (duration)	<ul style="list-style-type: none"> • Simple and easy to understand • Facilitates transfers between services 	<ul style="list-style-type: none"> • Fare has no relationship with distance • Difficulties setting fares when congestion, or for express services vs standard services • Cancelled or late services become more of an issue as may reduce value of the ticket
Time of travel (peak / off peak – can be used with any of above zone, distance or time based structures)	<ul style="list-style-type: none"> • Relatively simple and easy to understand • Encourage users to shift journey time from peak • Encourages increased usage in off peak period • Increases alignment of fare and cost of service provision 	<ul style="list-style-type: none"> • Potential to increase disputes around fares • Weakens differentiation between fare and distance travelled • Potential to add complexity for transfers from peak to off peak services within one journey

9.1 Current fare structure

Under the current 14 zone system, the zone boundaries are closely spaced in Wellington city and gradually increase in spacing outside Wellington city. This means that in effect the fare per kilometre reduces outside Wellington city and fares for travel to and from Wellington CBD reduce with distance travelled. A second consequence of the increased spacing outside Wellington city is that local journeys within each town or city may be entirely within one zone or cross only one zone boundary whereas a similar journey in Wellington city may cross two zone boundaries.

Just under 50% of all trips in the morning peak and 65% of the inter peak trips originate in Wellington city. The relatively high usage of public transport in Wellington city, together with the closely spaced zones, shorter journeys and current fare levels means that public transport within Wellington city is able to generate around 40% of the morning peak revenue from 16% of the passenger kilometres and 60% of the inter peak revenue from around 33% of the passenger kilometres. As a consequence, the fare level and the predicted impact of any proposed fare structure on patronage in Wellington city strongly influences the total annual predicted changes in revenue.

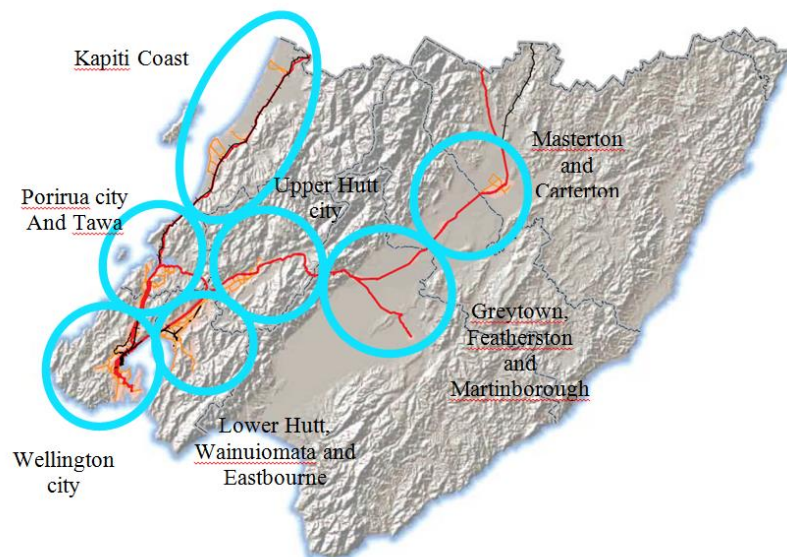
9.2 Modelling results

Modelling of the 7 district based zone and a distance based fare structure has been undertaken using a range of fare levels. The 5 zone option was not modelled in detail as the revenue and patronage impacts were proportional to the 7 zone model as 5 zones is a more extreme version of the 7 zone model. For each fare structure option, a number of iterations using different fare levels were carried out to achieve a balance between revenue and patronage impacts. The results of the modelled are discussed below:

Seven zones

The modelling work has shown that the impact of a coarse seven zone model on revenue and demand is sensitive to the level of the one zone fare. If the one zone fare is set at the same level across the region, then short trip fares in Kapiti, Wairarapa, Porirua and the Hutt Valley increase, negatively impacting on patronage in these zones. Lowering the one zone fare means that insufficient revenue is generated from Wellington city from the current 3 zone trips. Given that a greater proportion of trips in the inter-peak period are short trips, the impact on patronage when moving from the current structure to the larger zones is more pronounced in the inter peak (See Appendix 3: Table A).

Figure 1: Seven zone option



Two methods of mitigating the impact on short trips were considered. These were to introduce an eighth inner Wellington zone or a hybrid structure with the seven larger zones plus a fare for short trips less than 2.5km or 3km.

Eight zones

Adding an eighth inner Wellington zone addresses the issue of the impact of larger zones on short trips within Wellington city CBD, however does not address this issue elsewhere in the region. The modelling results for an 8 zone option with an inner city zone are given in Table B of Appendix 3. The inner Wellington zone was defined as either

- at current zone 1/2 boundary (Appendix 3: Table B: options 3a and 3m),
- at the current zone 2/3 boundary (Appendix 3: Table B: option 3c), or
- with the current zone 2 being an overlap zone between the inner and outer Wellington zones (Appendix 3: Table B: option 3b).

In the eight zone scenario, the greatest impact on patronage is for trips originating in current zone 2 in the morning peak. Patronage is also negatively affected in all zones outside Wellington CBD, particularly in the inter-peak period where shorter trips are a more significant proportion of all trips undertaken. Of the various eight zone options modelled, the options with the inner CBD zone on the current zone 1 boundary has the best overall balance of revenue and patronage impacts (see Table 1 below or Appendix 3: Table B, option 3a).

Seven zones plus short trip fare

The introduction of a short trip fare within the seven larger zones addresses the issue of the higher one zone fare for short trips and is also a mechanism to address the issue of short trips across zone boundaries. The intention of a short trip fare is for users making local trips and those moving along the Golden Mile are able to do so for the current one zone fare. The journey from the bus terminus at Wellington railway station to the corner of Courtenay Place and Kent and Cambridge Terrace is around 2.5km. Modelling has been undertaken for a short trip fare for a 2.5km journey and a 3km journey. The results of these are given in Table C in Appendix 3. It should be noted that around a third of all trips in the inter-peak period are 3km or less, around 20% are 3km or less in the peak period and 60% of all trips less than 3km occur in the peak period.

Of the short trip fare options modelled, a short trip fare of around \$1.50 for all trips less than 3km appears to balance the revenue and patronage impacts (Appendix 3: Table C, option 3ii and shown below in Table 1).

The 3km short trip distance is appropriate for Wellington inner city trips. In Kapiti and Wairarapa, the lower density urban form and nature of the bus routes in these areas means that local trips are likely to be longer than in Wellington city with its more compact urban form. As the current spacing of zones in Kapiti and the Wairarapa is around 10km, then a 'local' one zone trip in these areas could be as much as 6 or more kilometres. In Wellington city, the fare for a 6km trip is typically charged at the 3 zone fare. If the seven zone plus short trip fare structure is preferred, further consideration of the length of the short trip is needed. This would need to balance the various 'local trip' lengths across the region to find an appropriate trip length that balanced the impact on patronage for short trips with predicted revenue. Different 'short trip' lengths across the region are not supported as this would create complexity for users and administration and issues around boundaries between short trip zones.

Table 1: Preferred options for 8 zone and 7 zone plus short trip fare

		8 zones with Inner Wgtn CBD zone (Option 3a)			7 zones all short trips (less than 3.0km) charged at \$1.50 (Option 3ii)		
Trip origin	Current fares to Wgtn CBD	Fare to Wgtn CBD	Demand	Revenue	Fare to Wgtn CBD	Demand	Revenue
AM peak							
Wellington - Current Z1	\$1.60	\$1.13	2%	-9%	\$3.38	-3%	5%
Wellington - Current Z2	\$2.66	\$3.38	-6%	19%	\$3.38	-3%	6%
Wellington - Current Z3	\$3.54	\$3.38	1%	-6%	\$3.38	1%	-6%
Wellington - Total			-1%	0%		-1%	-2%
Porirua (inc Tawa)	\$4.86	\$5.25	-1%	-1%	\$5.25	-1%	-1%
Kapiti	\$8.84	\$9.75	-1%	0%	\$9.75	-1%	0%
Lower Hutt	\$3.98	\$4.50	0%	-2%	\$4.50	0%	-2%
Upper Hutt	\$7.83	\$7.50	-3%	10%	\$7.50	-3%	9%
Wairarapa	\$11.95 (south) or \$14.05 (north)	\$11.3 (south) or \$13.1 (north)	-1%	1%	\$11.25 (south) or \$13.1 (north)	-1%	1%
All regions - Total			-1%	0%		-1%	-1%
Interpeak							
Wellington - Current Z1	\$1.60	\$1.13	2%	-6%	\$3.38	0%	4%
Wellington - Current Z2	\$2.66	\$3.38	-6%	16%	\$3.38	-2%	3%
Wellington - Current Z3	\$3.54	\$3.38	-1%	-3%	\$3.38	-1%	-2%
Wellington - Total			1%	-1%		-1%	2%
Porirua (inc Tawa)	\$4.86	\$5.25	-5%	-5%	\$5.25	-3%	-7%
Kapiti	\$8.84	\$9.75	-9%	-8%	\$9.75	-9%	-10%
Lower Hutt	\$3.98	\$4.50	-3%	0%	\$4.50	-1%	-2%
Upper Hutt	\$7.83	\$7.50	-6%	6%	\$7.50	-5%	2%
Wairarapa	\$11.95 (south) or \$14.05 (north)	\$11.3 (south) or \$13.1 (north)	-	-	\$11.25 (south) or \$13.1 (north)		
All regions - Total			-2%	-1%		-1%	-1%
Annual							
All regions - Total			-1%	0%		-1%	-1%

Distance based

A range of options for distance based fares were modelled and these are shown in Tables D and E of Appendix 3. Distance based fares were calculated on the basis of a flag fall component for the first kilometre travelled plus an increment for each subsequent kilometre.

The options modelled were as follows:

Appendix 3: Table reference	Flag fall including first kilometre of travel	Increment for subsequent length of journey
Table D, Option 3o	\$0.75	Flat rate increment of 12c per km
Table D, Option 3p	\$0.75	Increments increasing gradually from 12c to 20c per km over the first 40 km of a journey and remaining length of journey at 20c per km
Table D, Option 3q	\$0.75	Decreasing gradually from 20c to 12c per km over the first 40 km of a journey and remaining length of journey at 12c per km
Table D, Option 3r	\$0.75	Steeply decreasing from 30c per km to 7c per km over the first 40 km of a journey and remaining length of journey at 7c per km
Table E, Option 2a	\$1.50	Flat rate increment of 12c per km
Table E, Option 2b	\$1.50	Increments increasing gradually from 12c to 20c per km over the first 40 km of a journey and remaining length of journey at 20c per km
Table E, Option 2c	\$1.50	Decreasing gradually from 20c to 12c per km over the first 40 km of a journey and remaining length of journey at 12c per km
Table E, Option 3l	\$1.50	Steeply decreasing from 30c per km to 7c per km over the first 40 km of a journey and remaining length of journey at 7c per km

The fares for typical journeys in the morning and inter peak in Wellington city are reduced under all scenarios modelled except of those with the steep decrease in fare increment (options 3r and 3l). As a result, patronage is predicted to grow under all scenarios except these two options. Predicted revenue is significantly reduced for the constant or gradual reduction in fare increments with revenue reduced by over a quarter for these options with a \$0.75 flag fall.

Option 3r (\$0.75c flagfall plus steep decline in fare per km increment) presents the best balance between patronage and revenue impacts and is shown in Table 2 below. This is the only distance based option where fares in Wellington city are roughly comparable to the existing fares and patronage is predicted to rise within Wellington city. This is mainly due to an increase in trips in zones 2 and 3. Fares for longer journeys and local trips outside Wellington city are increased under this scenario meaning revenue increases from journeys originating outside Wellington, however there is a negative impact on patronage in these areas. Overall, this scenario has low impact on current patronage levels (-1%) and increases potential revenue by up to (9%), however the impacts across the region vary significantly and are larger in some areas.

Table 2: Distance based fares – option 3r

\$0.75 flag fall plus 'severe' decreasing fare per kilometre (3r)					
Trip origin	Current fares to Wgtn CBD	Approx. Distance travelled (km)	Fare to Wgtn CBD	Patronage	Revenue
AM peak					
Wellington - Current Z1	\$1.60	4	\$1.65	0%	-1%
Wellington - Current Z2	\$2.66	6	\$2.55	5%	-11%
Wellington - Current Z3	\$3.54	10	\$3.75	4%	-5%
Wellington - Total				3%	-6%
Porirua (inc Tawa)	\$4.86	20	\$6.00	-4%	25%
Kapiti	\$8.84	45	\$9.98	-5%	23%
Lower Hutt	\$3.98	20	\$6.00	-4%	27%
Upper Hutt	\$7.83	30	\$8.40	-8%	28%
Wairarapa	\$11.95 (south) or \$14.05 (north)	75	\$12.75	-2%	9%
All regions - Total				-1%	12%
Inter peak					
Wellington - Current Z1	\$1.60	4	\$1.65	-2%	-4%
Wellington - Current Z2	\$2.66	6	\$2.55	7%	-10%
Wellington - Current Z3	\$3.54	10	\$3.75	1%	-2%
Wellington - Total				1%	-5%
Porirua (inc Tawa)	\$4.86	20	\$6.00	-10%	7%
Kapiti	\$8.84	45	\$9.98	-21%	15%
Lower Hutt	\$3.98	20	\$6.00	-9%	13%
Upper Hutt	\$7.83	30	\$8.40	-12%	11%
Wairarapa	\$11.95 (south) or \$14.05 (north)	75	\$12.75	0%	0%
All regions - Total				-4%	2%
Annual					
All regions - Total				-1%	9%

9.3 Assessment against review criteria

The table below summarises the assessment of the three most viable fare structure options against the review criteria. These options are considered viable as they have a positive or neutral impact on revenue and neutral or small negative impact on patronage. Options that had a negative predicted impact on patronage or revenue of 1% or more have not been considered further.

The assessment considers whether the option presented performs better or worse than the current 14 zone fare structure.

Criteria	8 zone with Inner Wgtn CBD zone (Option 3a)	7 Zone with short trip fare (Option 3ii)	Distance based \$0.75 flag fall plus steep decrease in fare increment with distance (Option 3r)
Simple, easy to understand and use:	✓✓✓ <i>Reducing the number of zones simplifies the structure</i>	✓ <i>The reduced number of zones simplifies the structure but the short trip fare adds complexity and potential uncertainty for users.</i>	✘✘ <i>Distance based fares are conceptually simple however a user would not necessarily know what their fare would be prior to alighting. Having large distance increments reduces the complexity of the system as it becomes more akin to radial zones, however this reintroduces boundary issues</i>
Encourage patronage growth:	= Short trips in Wgtn CDB ✘✘ Short trips outside Wgtn ✘✘ Medium length trips ✓ Long distance trips	✓ Short trips in Wgtn ✘ Short trips outside Wgtn ✘✘ Medium length trips ✓ Long distance trips	✓✓ Short trips in Wgtn ✘✘✘ Short trips outside Wgtn ✘✘ Medium length trips ✘ Long distance trips
Affordability for users:	= Short trips in Wgtn CDB ✘✘ Short trips outside Wgtn ✘✘ Medium length trips ✓ Long distance trips <i>Affordability for single trip reduces unless trip includes transfer</i>	✓ Short trips ✘✘ Medium length trips ✓ Long distance trips <i>Affordability for single trip reduces unless trip includes transfer</i>	✓✓ Short trips in Wgtn ✘✘✘ Short trips outside Wgtn ✘✘ Medium length trips ✘ Long distance trips <i>Affordability for trips improves in Wellington and reduces elsewhere in the region</i>
Ease and costs of fare / ticketing system implementation and on-going administration:	✓✓✓ <i>Zones are clearly defined, simple structure</i>	✘ <i>Potential issues around how a ticketing system would deal with the short trip fare. Short trip fare adds complexity to system</i>	✘✘ <i>Complex fare structure if increments at 1km or less. Larger distance increments simplify the structure.</i>

Criteria	8 zone with Inner Wgtn CBD zone (Option 3a)	7 Zone with short trip fare (Option 3ii)	Distance based \$0.75 flag fall plus steep decrease in fare increment with distance (Option 3r)
Support efficient network design, operations and asset utilisation:	= <i>Fare structure simple. All structures assume integrated ticketing and free transfers. May increase more use of train to bus transfers in the morning peak as no additional fare. May reduce pressure on park and ride facilities</i>	✘ <i>More complex fare structure may add costs to ticketing system. All structures assume integrated ticketing and free transfers. May increase more use of train to bus transfers in the morning peak as no additional fare. May reduce pressure on park and ride facilities</i>	✘ <i>More complex fare structure may add costs to ticketing system. All structures assume integrated ticketing and free transfers. Train to bus transfers in morning peak would be with no second flag fall and would add only small cost to overall fare</i>
Deliver sufficient revenue:	= <i>Predicted no change in annual revenue</i>	= <i>Predicted no change in annual revenue</i>	✓✓✓ <i>Predicted 9% change in annual revenue</i>
Economic efficiency:	✘ <i>Coarse zones have 'loose' relationship with economic cost of different trips</i>	✓ <i>Coarse zones have 'loose' relationship with economic cost of different trips. Short trip fare reflective of cost of local trips</i>	✓✓ <i>Distance based fares have strong relationship with economic cost of trip.</i>

The feedback from the community and Reference Group is that the two key criteria are that the structure is simple and easy to understand and use and encourages patronage growth. Against these two criteria, the distance based fare structure performs less well than the seven and eight zone structures mainly on the assessment of the complexity of the fare structure and the impact on long distance journeys. Reducing the fare increment more steeply over the first 20km rather than 40 km would reduce some of the negative impact on patronage for medium length journeys, and would reduce the overall predicted revenue.

The acceptability of a change to larger district based zone structure would depend on the one zone fare level. The modelling indicates that a relatively high one zone fare (\$4.50 cash or \$3.40 smart card) is required to maintain revenue at approximately current levels. The short trip fare for trips less than 3km mitigates the issue of a high one zone fare in Wellington city, however this is not effective in other parts of the region. The eighth inner Wellington zone only addresses the issue in Wellington CBD, but not elsewhere in the region. User opinion of the acceptability of the high one zone fare is unlikely to be favourable however the acceptability may be increased by other perceived benefits through fare products that could be developed.

Overall, neither a distance based nor a coarse zonal system performs significantly better than the current 14 zone fare structure against the two top criteria of simplicity and encouraging patronage. Against all other criteria, none of the options significantly outperforms the current 14 zone structure, except for the level of revenue generated from distance based fares. Given the negative impact of distance based fares on short and medium length trips outside Wellington city, transitioning to a distance based fare structure is not recommended.

10. Peak / off peak fare differential

Off-peak fares are attractive as they have the potential to increase patronage in the off-peak period and may encourage some users to shift their journey time from the peak to the off-peak periods. Initial modelling work has been undertaken on a peak / off-peak fare differential using two different definitions of off peak times. These were presented to the Economic Wellbeing Committee in October 2012 and were that off peak was either

- limited to the inter peak period between 9am and 3.30pm Monday to Friday, or
- at all times outside the Monday to Friday morning and afternoon peak periods.

Whilst the modelling work presented to the Economic Wellbeing Committee included the impact of an off peak fare under both definitions, this latter definition (i.e. all times outside the Monday to Friday am and pm peak times) has been used in this evaluation as this is more consistent with overseas examples.

Modelling results

Two options were modelled for how the peak / off peak differential is generated, either that peak fares are increased to create the differential to retain overall fare revenue at current levels (i.e. the revenue neutral scenario), or that the off peak fares were discounted from the current fare. 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:

Table 3: Estimated revenue and patronage impact of implementing a peak / off-peak differential

Peak / off peak differential	Modelled peak fare increase for revenue neutral scenario	Estimated increase in patronage for revenue neutral scenario		Approximate reduction in revenue if no peak fare increase	Estimated increase in patronage if no peak fare increase	
		Bus	Rail		Bus	Rail
25%	8%	3.6%	-0.5%	\$4.5m	6.4%	0%
50%	21%	5.5%	-0.8%	\$12.0m	12.8%	2.9%

In the scenarios where there is no increase in peak fares, the revenue impact increases with increasing off-peak fare differential.

The modelling of the impact of introducing an off peak fare for rail is complicated by the following issues

- the current rail off-peak cash fare discount varies between 14% and 23% when travelling between 2 and 10 zones;
- the current multi-trip discount varies between 20-29% (which is greater than the rail off peak discount), and
- many people travel on a monthly pass which gives a further substantial discount.

In the modelled revenue neutral scenarios, current off peak rail cash fares available in the inter-peak are likely to increase slightly to maintain the constant 25% differential with peak fares and no increase in patronage in the rail inter-peak period is predicted. Extending an off-peak fare to early mornings, evenings and weekends is likely to increase patronage in these times.

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. This is a result of the around three quarters of the rail patronage being in the peak periods. Patronage for bus is predicted to increase in each option. The most balanced scenario in terms of increase in patronage and the potential increase in fares for both rail and bus is a 25% differential.

If peak fares rise to maintain current revenue, a substantial predicted loss of patronage in the peak period for bus is predicted (11%) with a 50% peak off peak differential, this is likely to increase congestion in Wellington city centre. The small reduction in peak patronage with a 50% peak / off peak differential 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 modelling work assumed that around 10% of the increase in patronage during the off peak was from people shifting their travel time from peak to off peak to take advantage of the lower fare. The majority of the remaining increase in patronage would be from existing off peak users increasing the number of trips made, and a lesser proportion would be from new users. Any increase in bus patronage for the off-peak period is unlikely to occur immediately after any fare reduction and would be expected in the short to medium term.

An alternative option could be to introduce an off peak fare at a lower differential than the 25% and 50% modelled above. Any revenue and patronage impacts would be lesser than those predicted above. Overseas examples of off peak fares generally use between 15 and 20% as the peak and off peak fare differential. Using a 15% off peak differential, the estimated reduction in revenue with no peak fare increase is between \$2.5 million and \$3 million.

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 be around 4% 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 8.5%. These figures are indicative only.

In the modelling of the fare structure options presented above in Section 9.2, the greatest percentage impact of changing to an alternative fare structure is in the off peak period. Introducing an off peak fare would mitigate some of the predicted negative impact on off peak patronage under the various options, particularly outside Wellington city. Given that patronage in the peak period is also impacted under the different fare structure for some trips, increasing the peak fares to maintain a revenue neutral scenario is not desirable and is likely to impact negatively on patronage.

10.1 Assessment against review criteria

The introduction of an off peak fare for bus and rail is assessed against the review criteria below. The assessment does not include the revenue neutral option where peak fares are increased to off set any revenue loss in the off peak period as the increase in peak fares is unlikely to be acceptable to regular users on an affordability basis.

Criteria	Peak / Off peak fare differential	
	Bus	Rail
Simple, easy to understand and use:	✓✓ <i>on smart card system</i> ✗ <i>cash fares</i>	= <i>already operating</i>
Encourage patronage growth:	✓✓ <i>25% differential</i> ✓✓✓ <i>50% differential</i>	= <i>25% differential</i> ✓ <i>50% differential</i>
Affordability for users:	✓✓ <i>25% differential</i> ✓✓✓ <i>50% differential</i>	= <i>25% differential</i> ✓ <i>50% differential</i>
Ease and costs of fare / ticketing system implementation and on-going administration:	✗ <i>on smart card system</i> ✗✗ <i>cash fares</i>	= <i>already operating</i>
Support efficient network design, operations and asset utilisation:	✓ <i>differential needs to be sufficiently high to encourage users to switch their time of travel</i>	✓ <i>differential needs to be sufficiently high to encourage users to switch their time of travel</i>
Deliver sufficient revenue:	✗✗ <i>25% differential</i> ✗✗✗ <i>50% differential</i>	✗ <i>25% differential</i> ✗✗ <i>50% differential</i> <i>(currently no off peak rail fare for longer journeys)</i>
Economic efficiency:	✓ <i>differential needs to be sufficiently high to encourage users to switch their time of travel</i>	✓ <i>differential needs to be sufficiently high to encourage users to switch their time of travel</i>

Introducing an off peak fare supports efficient network design and asset utilisation on the basis that shifting patronage from the peak to the off peak is a more cost effective mechanism than having to provide additional buses or trains to meet growing peak demand. However, the differential between peak and off peak fares needs to be sufficient to encourage the types of behaviour desired. The increases in patronage particularly on buses is significant, however the negative impact on fare revenue and impact on regional rates are a disincentive.

11. Fare products

11.1 Current issues

The current fare structure comprises a range of products including single, 10 trip tickets, stored value and monthly passes. The range of different products adds complexity and inconsistencies / anomalies to the current fare structure. Some of the current fare products are a result of operators offering different fare products for travel on their services, some are for historical reasons and others have been introduced to deal with a particular issue arising in the past.

Other anomalies arise through the limited range of integrated fares offered to rail monthly pass holders travelling from Kapiti, Wairarapa and Hutt Valley. For Kapiti users, the cost of travel by bus to and from the train station is included in the purchase of a rail monthly pass. For travel from the Hutt Valley and Martinborough, an additional fare is added to the rail monthly pass for travel by bus to the train station, with the additional amount between 40% and 70% of the fare for the bus journey.

Travel across Wellington city is charged at 3 zones if travelling on a route which crosses the city centre but does not require a transfer. For example from Miramar to Karori (bus route 18), is charged as 3 zones, however the same journey is charged as 2 separate fares 3 zone fares if travelling on a number 2 from Miramar to the city and a number 3 from the city to Karori.

Overall, there are inconsistencies between products available on different modes, and on buses, between products offered by different operators. These inconsistencies include treatment of transfers, groups and the level of discount available under period passes.

Removing complexity from the fare structure through limiting the number and range of products available is desirable, as is consistency of products between modes. Simplifying the fare products and increasing consistency is intended to smooth the transition to a region wide electronic payment system and integrated ticketing. The introduction of a region wide electronic payment system also gives the Council the opportunity to look at other products which can utilise the data processing and handling capabilities of a smart card.

No detailed modelling of the revenue and patronage impact of changing fare products has been undertaken. All fare structure options have been modelled with the same fare products as currently in place to enable a comparison with the existing 14 zone fare structure.

11.2 Possible future fare products

Three core products have traditionally been used by public transport operators and are used in Wellington region. These core products are the single, multi trip and period pass. Any fare structure must include a single ticket; however whether both a multi trip and period pass is

required is arguable. In addition, with the introduction of a stored value card, the need for multi trip and period passes may dissipate.

The strengths and weaknesses of the various fare products are shown below:

Fare product	Strengths	Weaknesses
<p>Single: <i>One off ticket purchased on day for single journey</i></p>	<ul style="list-style-type: none"> • Premium revenue obtained from trip • Easy to purchase 	<ul style="list-style-type: none"> • No discounts for user • No customer incentive or reward for greater public transport use • Inconvenience of selling and purchasing ticket each time trip is made • On bus ticket sales slow buses and add to cost of busy services • Requires customer to have cash
<p>Multi trip: <i>Pre-purchased ticket for specified number of journeys usually with discount level applied</i></p>	<ul style="list-style-type: none"> • Convenience of pre purchase of ticket • Usually no time limit on use • No incentives to 'share' tickets to obtain discounts • Increases commitment of passenger over single trip 	<ul style="list-style-type: none"> • Upfront cost of ticket may be barrier for low income earners • Trips must be marked off each time taken • No flexibility to use for different journey lengths
<p>Period pass: <i>Usually pre-purchased ticket allowing unlimited travel within specified origin and destination criteria within specified timeframe (daily, weekly, monthly or longer timeframe)</i></p>	<ul style="list-style-type: none"> • Generally higher discounts for longer period passes • Discounts increase depending on the number of trips made within period • Improves cash flow with revenue upfront • Can generate increased loyalty and patronage amongst users 	<ul style="list-style-type: none"> • Purchase price may be too high for lower income passengers • There may be revenue dilution as users may take more trips than the 'break-even' trip rate • Potential for customers to share passes
<p>Stored value – single or other product <i>Card can be loaded with dollars and fare automatically deducted from balance</i></p>	<ul style="list-style-type: none"> • Flexibility for users • Fare can be automatically calculated (if tag on tag off) • Flexibility to make different journeys/lengths with the same card • Users not locked into a set journey as with monthly and multi trip tickets 	<ul style="list-style-type: none"> • Needs to build trust and confidence • Advantages gained through higher levels of usage • Upfront cost of card purchase unlike other products • Minimum loading values may become a barrier to use • Cards may be damaged and hard to replace

Fare product	Strengths	Weaknesses
<p>Stored value - capped fare <i>Card can be loaded with dollars and fare charged per trip up to maximum for predefined period</i></p>	<ul style="list-style-type: none"> • Flexibility for users • Fare can be automatically calculated up to guaranteed maximum for specified period • Can cap fare over any predetermined timeframe • Has potential 'marketability' benefits • Provides discounts based on usage with more usage meaning greater the savings 	<ul style="list-style-type: none"> • Requires region wide integrated electronic ticketing system • Requires clearing house to reconcile revenue between operators

Single ticket

Any fare structure needs a single ticket. A key consideration for the single ticket is its compatibility with integrated ticketing and how transfers are dealt. Overseas examples for how transfers are dealt with are based on

- Time based single integrated ticket – for example a ticket valid for 2 hours with either a set maximum or unlimited number of transfers
- Zonal based single integrated ticket – for travel within specified zones with either no limits on the number of transfers, a requirements to travel in one direction, a set limit on the number of transfers, or with a defined period a transfer must occur within (e.g. 30 minutes) otherwise the journey is considered a new fare.

The initial view of officers is that a time based single ticket valid for up to 2 hours with unlimited transfers is preferable as the two hour timeframe enables the longest journey from Masterton to Wellington city with transfers at either end of the rail journey. Further work on how transfers will be handled in the future fare structure will be undertaken as part of the business case for the integrated fares and ticketing project.

Cash vs stored value card

Current stored value fares are discounted by approximately 25% from the cash fare to encourage users to switch from cash to smart cards to pay for fares. Removing cash from the fare system has a number of benefits from speeding up boarding times, increasing safety and security for drivers and minimising potential for fraud, fare evasion or overriding.

Retaining a premium for cash fares is supported for any future fare structure. The premium could be set higher than the current 25% to further incentivise smart card usage once the region wide smart card system is introduced or be set at larger increments with step increments by zone 1,4, 6,8,10, 12, 14 rather than each zone. Further work on the level of the premium for a cash fare will be undertaken as part of the integrated fares and ticketing project.

Fare capping

Other fare products are included in a fare structure to meet various other objectives such as to encourage patronage, reward frequent users and build loyalty to public transport.

Fare capping is used in a number of cities including London, Melbourne and Christchurch and provides for a pay as you go fare up to a maximum fare cap in any specified time period. Fares can be capped over any length of time and typically capped at daily or weekly levels. Fare capping uses the data processing capability of a smart card and has the loyalty benefits associated with a period pass in that it provides a guaranteed maximum fare for travel within a specified period.

Fare capping also manages the possible negative aspects of a period pass in that it does not necessarily require the user to pay large upfront charges prior to travel as the cap is generally over a shorter period of time than the period pass and only sufficient value needs to be loaded on the card for the next journey and not a whole month. This removes a potential barrier for people with lower incomes who may be unable to purchase a period pass with higher discounts and purchase single, cash fares or multi trip tickets with no or lower discounts. A capped fare also removes the risk to the user of purchasing a period pass when their circumstances or travel patterns may change and they can no longer obtain the benefit of the period pass.

Officers consider that a fare capping regime around daily and/or weekly timeframes would be appropriate. The maximum daily fare would be likely to be set at between 2 and 3 times the single fare for the longest journey of that day. For zones, this would mean that someone travelling only within one zone would have a maximum daily cap of between 2 and 3 times the single fare. The daily cap would enable people of low income to 'save' their public transport journeys and undertake multiple trips on one day with certainty of paying up to a maximum fare. It could potentially enable shift workers and part time workers who only work say three days per week to access also public transport discounts. A weekly cap could be tailored towards providing a discounted fare for commuters and regular users. Preliminary high level estimates indicate that the reduction in revenue from the introduction of a fare capping regime could be of the order of \$2 million to \$5 million. The actual revenue impact would be determined by how a cap operates.

Further work on the feasibility of capped fares and their potential impact will be undertaken as part of the development of the integrated fares and ticketing business case.

Period passes

Currently period passes are offered on rail and for some bus journeys. The monthly pass on rail offers a 25% discount on the 10 trip / smart card fare based on 40 trips per month. No other product offers a similar discount level. The bus monthly passes offer no or limited discount depending on the number of zone boundaries crossed based on 40 trips per month. Rail monthly passes are currently offered to address issues around ease of ticketing and revenue collection on rail.

Consistency of products across bus and rail is a key objective to simplify the fare structure. Providing a similar discount as the rail monthly pass to bus users would impact on revenue (reducing current revenue by approximately 6%). Removing the monthly pass and retaining the 10 trip ticket for rail would negatively impact on rail patronage by 3% and increase revenue from rail by 5% per annum or 2% of total revenue. Given that rail usage tends to be for longer journeys this would negatively impact on patronage on the longer journeys from the Hutt Valley, Porirua, Wairarapa and Kapiti.

Once electronic ticketing is introduced on rail, the current basis for providing a heavily discounted rail monthly pass is no longer valid and the period pass could be discontinued. If the rail period pass is removed, then this would need to be phased out slowly over time with the discount offered slowly reduced at each annual fare review. Alternatively, a fare structure with a lower long distance fare could be introduced which did not include a monthly pass or an alternative product, such as capped fares could replace the monthly pass.

Other products

A number of other products are used overseas to build patronage from discounted travel at weekends, free commemorative day passes on public holidays to bulk purchasing of public transport fares.

Bulk purchasing of public transport fares has the potential to offer increased discounts over period passes (or equivalent product) to the recipients and better cash flow for the public transport operators. These are widely used in the US where there are tax incentives for companies and individuals to become involved in schemes. Many universities use bulk purchasing of public transport passes to offer students free public transport travel when attending the university. Whilst the tax incentives regime does not exist in New Zealand, a bulk purchasing scheme is an attractive option which could be explored further in the future.

The Council has little robust data on weekend travel patterns and the transport model approximates weekend travel as being equivalent to the inter peak period. Many weekday users of public transport do not consider using public transport at the weekends when travelling with family as the combined cost of public transport is substantially higher than using the car. For example, for a family of 2 adults and 3 school age children would cost around \$26 return to travel from Johnsonville, Island Bay or Miramar into the CBD at the weekend. Once the cost of public transport is compared to free weekend parking, there is no incentive to use public transport at the weekends for these types of users. A potential option to attract more families to use public transport would be to introduce a weekend 'family pass' where up to 4 children travel free when accompanied by a fare paying adult. There are a number of issues around defining the upper age for such a family pass which would need to be worked through prior to any decision on its implementation. Combined adult and child passes currently offered include the current Metlink Explorer ticket (allows a child under 15 years old to travel free with an adult ticket holder) and the family Somes Island pass on the ferry (allows for 2 adults and up to 4 children under 15 years old to travel on the family pass).

High public transport usage is achieved when the cost of public transport is included in the entrance fee of an event. For example, the recent Round the Bay's Run entry fee included free travel on any Go Wellington and Valley Flyer bus all the day of the event. This resulted in a high level of entrants relying on public transport to get to and from the event. Large event organisers could be encouraged to work directly with the public transport operators to make similar arrangements or the Council could build this opportunity into the next contracting round.

12. Fare concessions

The impact of concession fares has been calculated based on existing data held by GWRC. This data is limited in its ability to differentiate between types of users and the following impacts are estimates only.

12.1 Concession fare for tertiary students

Modelling results

The initial modelling work presented to the October 2012 Economic Wellbeing committee is summarised below. The modelling assumed a set number of public transport trips undertaken by students at 8 single trips each week and 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 was:

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

Under these assumptions, tertiary travel represents around 10% of all public transport 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

The above increases in tertiary student travel are equivalent to between a 0.5% and 1% increase in overall patronage.

Bulk purchase scheme

Based on the modelling work presented, the Economic Wellbeing Committee asked officers to further investigate a bulk purchase option for students as an alternative to a tertiary student discount.

Since this time, preliminary discussions around a bulk purchase option have been held with VUWSA and the Victoria University. Similar bulk purchase schemes are operated overseas whereby a university or business make a bulk purchase of public transport period passes for their students or employees. The passes are then on sold or provided free to students or employees as part of their university enrolment or employment package. In the USA, bulk purchase schemes for employers and employees are seen as a mechanism to increase public transport usage and are supported by local, state and / or federal tax incentives. Similar tax incentives are not available in New Zealand. If a scheme of this nature is viable for tertiary students, there is an opportunity to extend a similar bulk purchase scheme to other organisations and businesses across the region.

Options for how a bulk purchase option could work for tertiary students in Wellington were discussed including

- the full cost of an annual pass is included in the compulsory student levy with all students being issued a travel card as part of their enrolment package giving them unlimited travel within either Wellington city or the region;
- adding a percentage of the cost of an annual pass to the compulsory student levy with all students being offered the option to purchase either an annual or term travel card giving them unlimited travel within the city or region.

A key issue is the pricing of any pass and further work and discussions on the price and other aspects of the scheme are required. Currently compulsory fees at Victoria University are between \$600 and \$700 per annum. Adding the full cost of an annual pass to the compulsory fee could add as much as an additional 75% to 85% depending on the scope, how the cost of the pass is calculated and what the anticipated take up rate would be. This is unattractive from the University's point of view, and would be difficult for students to support.

Any bulk purchase scheme that has a component in the compulsory fees would require political support from central government as the nature and quantum of any compulsory student levy must be approved by the Minister for Tertiary Education.

Off peak tertiary discount

An alternative option would be to offer an off peak concession for tertiary students. The approximate reduction in revenue if an off peak concession for tertiary students is introduced is estimated as follows based on the assumption that one third of tertiary student trips will still occur in the peak period:

Potential tertiary student discount	Estimated change in tertiary student patronage	Approximate reduction in revenue if no adult fare increase
25%	5%	\$1.0m
33%	7%	\$1.5m
50%	9%	\$3.0m

Officers consider a bulk purchase scheme for tertiary students is preferred to an off peak concession or tertiary students.

Availability of concession fares for tertiary students around New Zealand

The following table on the availability of tertiary student fares is based on fare information available on the web.

Region	Tertiary student concession
Bay of Plenty	Tertiary student concession in some towns; Concession level varies across the region: Murupara and Tauranga: 40% discount Rotorua: None Te Puke: 33% discount

Region	Tertiary student concession
Horizons	Tertiary student concession with subsidy by UCOL and Massey Universities: UCOL and Massey staff and students have free bus travel within Palmerston North and Wanganui
Auckland	Tertiary student concession on most services: Reported as 35% discount from equivalent adult cash fare, not listed online
Taranaki	Tertiary student concession in New Plymouth only: 25% discount on adult cash fare; 33% discount on smart card fare within New Plymouth only
Hawkes Bay	Tertiary student concession: Tertiary students eligible for 33% discount from adult cash or smart card fare.
Tasman / Nelson	Tertiary student concession \$0.50 discount from adult cash fare (equivalent to between a 12.5% and 20% discount) \$1.50 to \$0.50 on 10 trip cost of \$20 to \$32 (equivalent to between a 1.5% and 7% discount)
Otago	No tertiary student concession funded by ORC. Operator concession on one route (Forth Street to Concord) which is available only on weekly or monthly pass with 33% and 38% discount from multi-trip fare.
Wellington	No GWRC funded concession. Victoria University subsidises trips between Kelburn and downtown campus Operator concessions on East by West Ferry - 20-30% discount Operator concessions on Cable Car – students receive the same fares as children, a 38-48% discount on the adult fare
Canterbury, Gisborne, Marlborough, Northland, Southland and Waikato	No tertiary student concessions

12.2 Concession fare for all under 20 year olds

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 19 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

This option was suggested as a potential mechanism to address the issue of a concession fare for tertiary student. Victoria University stated in their submission in August 2012 that a concession fare of this nature would not meet the needs of tertiary students as many first year students live in halls of residence within easy walking distance of the university campuses. As such, this option is not supported.

12.3 Concession fare for all school age students

The current concession for secondary school students is only available to students attending school, and excludes most students being home schooled, at other education providers or undertaking distance learning. An option considered as part of the formal consultation was to extend the concession fare to all under 19 years olds. The current cut off age of 15 for automatic eligibility for a secondary school concession fare is reflected of a time when many students left school at 16. Nowadays, the majority students remain in secondary school education until they are 18 and are eligible for concession fares. Raising the automatic eligibility age for concession fares to under 19 year olds would remove any issues around eligibility for 16 to 18 year olds who are home schooled, attend correspondence school or are at other education providers.

Estimated costs for extending the discount to all under 19 year olds are given below:

Potential 'under 19' discount	Increase to current fares for revenue neutral scenario	Approximate reduction in revenue if no adult fare increase
25%	0.5%	\$0.5m
50%	1%	\$0.75m

Some secondary school students are permitted under the Education Act 1989 to continue to attend school until their 21st birthday. Officers consider any students attending secondary school beyond their 19th birthday should also be eligible for a concession fare.

12.4 Concessions for beneficiaries and people with disabilities

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. This strategy is generally focused towards removing physical barriers to using public transport rather than financial ones. In the Wellington region, the provision of physically accessible buses and trains and speaking real time signs meets in part the needs of people with disabilities.

Overseas, most concessions for people with disabilities are often mandated at a national level, even if not funded from a national level. Many surveys overseas identify that transport costs

are a significant barrier to social inclusion for people with disabilities. People with high needs due to their disability are often low income and reliant on public transport to access the services they need. Concession fares are provided to support people with disabilities accessing the services they need and participating in the activities they wish to.

In New Zealand, there is no equivalent national scheme similar to the SuperGold card for people with disabilities. WINZ provide financial assistance to people on the Invalids Benefit for travel to medical appointments and a limited range of other specific purpose travel costs. General travel is not subsidised through the current benefit allowances.

Current concessions in the region

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 concessions for beneficiaries living in Wellington city through the blue card issued by Wellington City Council and funded by GWRC. Beneficiaries must have a letter from WINZ to obtain a card. These cards are valid for 12 months and only for travel by bus in Wellington city. Uptake of the card is low with around 300 beneficiaries holding a current card.

Potential future concessions

The Council currently provides concession fares for users where there can be justified on a decongestion basis or reflects central government policy. The Regional Public Transport Plan also recognises that public transport has social good aspects and services are provided where these are not justified on commercial basis but on an access basis. As such, the Council does not have a strong policy framework around concessions for people with disabilities, other than through the current Total Mobility scheme.

The Total Mobility scheme is a central government scheme aimed at assisting “people with impairments to access appropriate transport to enhance their community participation.” To be eligible person for the scheme, a person must have an impairment that prevents them from accessing and travelling on public transport unaccompanied. The impairment must not be temporary, and may be psychological, psychiatric, physical, neurological, intellectual, sensory or other impairment.

The Total Mobility scheme recognises that some people with impairments do have periods where their condition may improve and they are able to use public transport. This does not exclude them from the scheme. Given this is an existing scheme administered by the Council, there is an opportunity to extend the purpose of the Wellington scheme and develop eligibility criteria for a concession fare for public transport users meeting the Total Mobility eligibility criteria, and using the Total Mobility card for identification purposes when using public transport.

The Total Mobility scheme currently has 6000 registered users of Total Mobility. If the scheme is extended to be the eligibility test for a concession on public transport, then there are likely to be additional administration costs for the scheme in the future. Officers consider this option is potentially viable if the Council wished to offer a concession fare for people

with disabilities, however further work would need to be completed to assess the financial impact of broadening the scheme both in terms of the revenue impacts from a concession fare but also on the cost of the subsidised taxi service provision component of the scheme.

An alternative option is to provide concessions for all people with a disability who receive the Invalids Benefit. The Invalids Benefit is provided to people over the age of 16 who are permanently and severely restricted in their capacity for work because of sickness, injury or disability or are totally blind. Currently there are around 60,000 people in the Wellington region who receive the Invalids Benefit. Given the eligibility criteria for the Invalids Benefit, those receiving the benefit are likely to be low income and little capacity to earn higher income at any time in the future. As noted above, WINZ provide limited support for transport costs for medical related travel, however this does not address wider travel related costs. If the Council considered that a concession fare for people with a disability and on low incomes is desirable, then providing a concession to people on the Invalids Benefit is an alternative eligibility criteria to the Total Mobility scheme. Eligibility could be managed in a similar manner to the current Blue Card for beneficiaries, in that WINZ could provide a letter confirming receipt of the benefit which would entitle the holder to an annual pass entitling the holder to travel at a concession fare rate.

If the Council decides to provide an off peak fare, this will in part address some affordability issues for people with low incomes or disabilities. This report recommends a small off peak discount be introduced, however the level of discount for the off peak fare is likely to be less than the child fare which the current concessions provide for.

If the Council is of a mind to introduce a concession fare for people with disabilities and low income, then it is recommended that eligibility for a concession fare be set around anyone with a disability receiving the Invalids Benefit.

In addition, it is recommended that the Council approach NZTA and central government to raise the issue of affordable transport for people with disabilities and the respective roles of local and central government in this regard.

12.5 Extending the SuperGold card concession

The SuperGold 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. Currently there are very few trips undertaken by seniors in the afternoon peak period (less than 1% of senior trips). Around 7% of senior trips are made after 6.30pm. If these trips shifted to the afternoon peak, there would be no revenue impact, however the shifting of travel by people in the off peak trips to the peak times is not desirable as this would impact on capacity issues in the peak times.

The issue would be whether new trips would be generated from an extension of the time. Throughout the day, the use of the Super Gold card is fairly steady, and extending to the afternoon peak may increase overall patronage as new trips are generated. Given they are likely to be new trips rather than replacement trips, the revenue impact is likely to be small, however GWRC has no data which can be used to quantify the impact.

NZTA do not fund any extension of the SuperGold scheme to the afternoon peak. Auckland are the only Council that currently funds SuperGold in the afternoon peak and have signalled that this will be reviewed in the future. Officers do not consider that additional concessions

for SuperGold card holders is a priority for GWRC funding given the existing concessions they receive and the extension of the SuperGold scheme to the after peak is not supported. It is not recommended that the Council agree to extending the Super Gold concession to the afternoon peak times.

13. Possible packages

Based on the recommendations above, four potential fare structure packages have been developed. All packages assume that PTOM has been implemented and new contracts are in place. In addition, a fully integrated smart card system has been deployed across the region with free transfers as part of the integrated ticketing.

The packages are based around:

- Package 1: Current 14 zones
- Package 2: Eight zones including a Wgtn CBD zone
- Package 3: Seven zones plus short distance fare
- Package 4: Distance based with \$0.75 flag fall & steep decline in fare /km increment

Each package would have the following suite of products

- Single smart card for use on all MetLink services
- No transfer penalties
- Fare capping
- Family pass at weekends with up to 4 kids travel free with a fare paying adult
- Bulk purchase scheme for large groups.

The following concessions would apply

- Under 5's travel free
- 5 to 19 year olds – 50% concession
- All people with a disability receiving the Invalids Benefit
- Retain existing SuperGold concession.

Each of the fare structure options in the packages have been assessed against the review criteria and are included in the packages based on their positive contribution towards the review criteria. The review criteria also indicate an off peak fare is favourable. The table below identifies the overall revenue and patronage impacts for the 4 packages with and without a 25% peak / off peak differential.

	No peak / off peak differential		25% peak / off peak differential with no increase in peak fares	
	Predicted impact on revenue ²	Predicted impact on patronage ¹	Predicted impact on revenue ²	Predicted impact on patronage ¹
Package 1: 14 zones	-2%	-1%	-7%	3%
Package 2: 8 zones including a Wgtn CBD zone	-1%	-1%	-6%	3%

	No peak / off peak differential		25% peak / off peak differential with no increase in peak fares	
	Predicted impact on revenue ²	Predicted impact on patronage ¹	Predicted impact on revenue ²	Predicted impact on patronage ¹
Package 3: 7 zones plus short distance fare	-3%	-2%	-8%	2%
Package 4: Distance based with \$0.75 flag fall & steep decline in fare /km increment	7%	-2%	2%	2%

¹ All patronage figures exclude any positive impacts on patronage anticipated from integrated fares and ticketing and capped fares

² All revenue figures exclude an estimated 3% negative revenue impact for implementing integrated fares and ticketing. The revenue impact of capped fares has not been quantified.

13.1 Assessment of packages

The above table shows that revenue impact is a central issue in considering the future fare structure. As noted above, these revenue estimates exclude any impact on revenue and patronage from the implementation of integrated ticketing and fare capping. The preliminary estimates of the impact of integrated ticketing show that potentially the integrated ticketing may reduce revenue by just over 3%.

The only package that is revenue positive with a peak / off peak fare differential is based on distance based fares. Whilst distance based fares are not considered simple and easy to use, this package both increases revenue and patronage. Distance based fares present some challenges. These include

- increasing the complexity of the fare structure
- reducing the transparency, as it is harder for users to know the fare before they undertake a journey
- setting of fares for indirect routes or collector routes which by their nature will be longer and therefore cost more than a direct service and
- managing the transition to the new structure.

Based on the above implementation issues and the negative impact on patronage outside Wellington, this option, whilst attractive from a predicted revenue and patronage view point, is not recommended.

The three remaining options are the status quo, 8 zones plus an inner CBD zone and 7 zones with a short distance fare with no peak / off peak differential.

Both the 8 zone and 7 zone plus short trip fare packages have a modelled single zone fare of \$4.50 cash or \$3.38 smart card. The smart card fare is high by international comparison and the acceptability of such a fare may be a significant issue for users. Reducing the one zone fare below this level significantly impacts on the revenue from Wellington city and the overall revenue generated from fares. The inner CBD zone resolves this issue in central Wellington but not in other parts of the region. The short trip fare also works better in Wellington than other parts of the region, mainly due to the lower fares currently in place in

these centres and the longer average trip length outside Wellington city. Given these issues with the negative impact on the fare for short trips neither of these options is supported.

The only remaining option is to retain the status quo 14 zones and install the suite of products and concession identified above in the packages. The key issue remains whether an off peak fare should be implemented. An immediate introduction of an off peak fare will have substantial impact on regional rates as public funding makes up the shortfall in fare revenue. One option is to gradually phase in an off peak fare over a number of fare reviews as peak fares are increased and off peak fares are maintained at current levels. A gradual phasing in of the off peak fare will delay the realisation of any positive impacts from anticipated patronage increases and peak users shifting their time of travel. As such, whilst an off peak fare may be desirable in the long term, it is not recommended in the short to medium term.

14. Next steps

The integrated ticketing project will undertake further modelling work on the impact of changing the fare structure on revenue and patronage. As part of this, further investigation of the current travel patterns of public transport users will be undertaken particularly around the number of public transport trips per day users take, as well as the number of transfer trips. The results of these surveys will influence the acceptability and impact of fare capping and the appropriate fare cap, plus the revenue impacts of integrated ticketing.

Further discussion with the universities and students associations is required around developing a tertiary bulk purchase scheme. This is anticipated to be implemented after the implementation of the network wide smart card system in 5 to 7 years' time. Public consultation on the preferred fare structure will be undertaken through the consultation around the Regional Public Transport Plan in 2013/14 where trade-offs between the cost of implementing initiatives to generate more patronage through changes to the fare structure and through other service enhancements can be made.

15. Conclusion

It is recommended that the Council adopt in principle a preferred fare structure which will enable appropriate contracting arrangements to be developed in preparation for the next round of tendering of public transport services.

Appendix 1: Comparison of current and proposed fare structure

COMPONENT	CURRENT FARE STRUCTURE	PREFERRED OPTION
FARE STRUCTURE		
Basic structure	<ul style="list-style-type: none"> • ‘zonal’ based with tickets valid for single boarding only. Very limited free transfers on identified special purpose tickets 	<ul style="list-style-type: none"> • Zonal for cash and stored value fares
Zonal based principles, numbers and geographic structure	<ul style="list-style-type: none"> • Concentric zones radiating out from Wellington’s CBD • 14 zones • Fares calculated according to number of zones travel within (unless on cross Wgtn city routes then maximum fare = 3 sections) 	<ul style="list-style-type: none"> • Retain 14 zones with some minor changes to zone boundaries • Fares calculated according to number of zones travel within (for trips longer than short trip fare distance)
Transfer ticket conditions	<ul style="list-style-type: none"> • Very limited free transfers on identified special purpose tickets • Limited free transfers (between services of same operator) 	<ul style="list-style-type: none"> • Transfer penalties removed
Fare vs distance	<ul style="list-style-type: none"> • Most current fares are based on the number of zones travelling in. As the zones are geographically more spaced the further away from Wellington CBD, longer journeys tend to have a lower cost per km, and shorter journeys closer to Wellington CBD have a much higher cost per km 	<ul style="list-style-type: none"> • 14 zones as proxy to distance based fares; shift zone boundaries to align with similar distance travelled along Porirua/ Kapiti line and Hutt/ Wairarapa lines
Fare vs time period	<p>Some off peak discounts</p> <ul style="list-style-type: none"> • Rail – inter peak fares (20 to 25% off the cash fare with off peak defined differently on various lines) • Bus – no off peak discount for single or return trips but some day tickets valid after 9am 	<ul style="list-style-type: none"> • Peak / off peak differential in the longer term • Time based single ticket

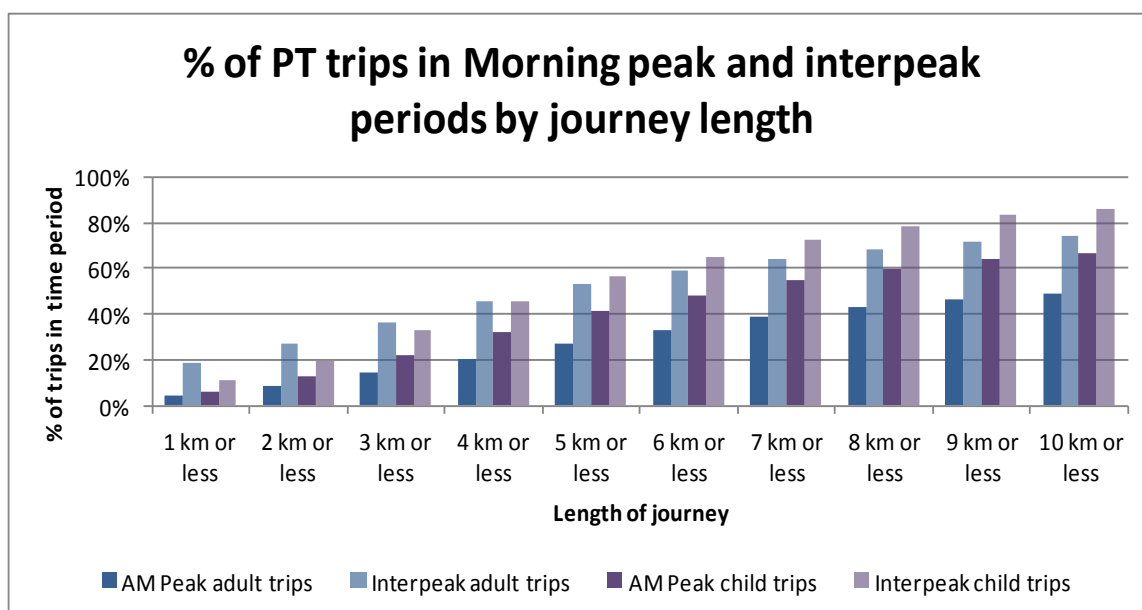
COMPONENT	CURRENT FARE STRUCTURE	PREFERRED OPTION
FARE PRODUCTS		
Cash tickets	Single ride tickets based on <ul style="list-style-type: none"> • Zone based • Adults / children • Same fares for bus and rail • No transfers generally • Priced at 25% above SV card (bus) or 10 (rail) trip ticket • Fares for commercial services separately prices 	Single ride tickets based on <ul style="list-style-type: none"> • Zones travelled in • Adults / children • Same fares for bus and rail • Multiple transfers allowed • Priced at premium set above SV card fare
Stored value and multi-trip tickets	SV card (bus) or 10 (rail) trip ticket <ul style="list-style-type: none"> • Zone based • Adults / children • No transfers generally • Fares for commercial services separately prices 	Stored value card with single ride tickets based on <ul style="list-style-type: none"> • Zones travelled • Adults / children • Same fares for bus and rail • Multiple transfers allowed Daily and / or weekly fare capping
Periodicals	Rail monthly (paper) tickets <ul style="list-style-type: none"> • Station to station basis • Adults/children • Price 25% below the 10-trip tickets Bus monthly stored-value card <ul style="list-style-type: none"> • 3 different smart card systems • Commercially set fare • Adults only School term passes – rail (paper) <ul style="list-style-type: none"> • Station to station basis • Price 25% below 10 trip tickets 	<ul style="list-style-type: none"> • Fare capping only • School term passes retained
Special passes	<ul style="list-style-type: none"> • Group passes 	<ul style="list-style-type: none"> • Weekend family pass which allows up to 4 children to travel free when accompanied by one or more full fare paying adult
FARE CONCESSION GROUPS		
Infants and pre-schoolers	<ul style="list-style-type: none"> • Free 	<ul style="list-style-type: none"> • Free

COMPONENT	CURRENT FARE STRUCTURE	PREFERRED OPTION
School children (5-15) and high school children (16-19)	<ul style="list-style-type: none"> • General trips – discounts typically 50% (longer trips) with school ID or uniform • To/from school – school term passes, discounted 25% from SV card/ 10-trip tickets 	<ul style="list-style-type: none"> • All under 19 year olds to receive a concession fare of 50% • Weekend family pass which allows up to 4 children to travel free when accompanied by one or more full fare paying adult
Tertiary students	<ul style="list-style-type: none"> • No concession for tertiary students 	<ul style="list-style-type: none"> • Explore bulk purchasing scheme for tertiary students
Seniors (65+)	<ul style="list-style-type: none"> • Free except during weekday peak periods (before 9am, 3pm to 6.30pm) • Government scheme (SuperGold card) 	<ul style="list-style-type: none"> • Free except during weekday peak periods (before 9am, 3pm to 6.30pm) • Government scheme (SuperGold card)
Beneficiaries, people with disabilities	<ul style="list-style-type: none"> • Limited concessions for specific disabilities (e.g. blind) • Only available on some services 	<ul style="list-style-type: none"> • Concessions for people with a disability on receiving the Invalids Benefit if no off peak fare implemented • Advocate for national scheme for concession fares for people with disabilities, low income and tertiary students

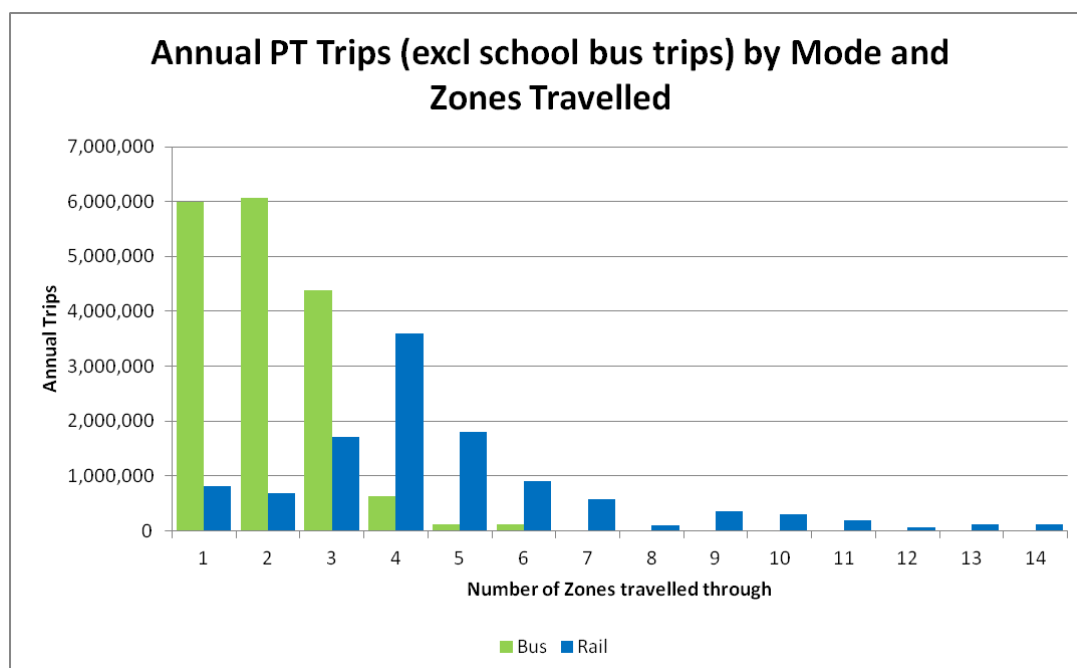
Appendix 2: Summary of relevant current travel patterns

Length of journey

There are significant differences in PT trip length in the peak and interpeak times with just of 50% of all adult morning peak trips being 10km or less compared to 74% in the interpeak.



95% of bus journeys are 4 zones or less; 80% of train journeys are 3 zones or more



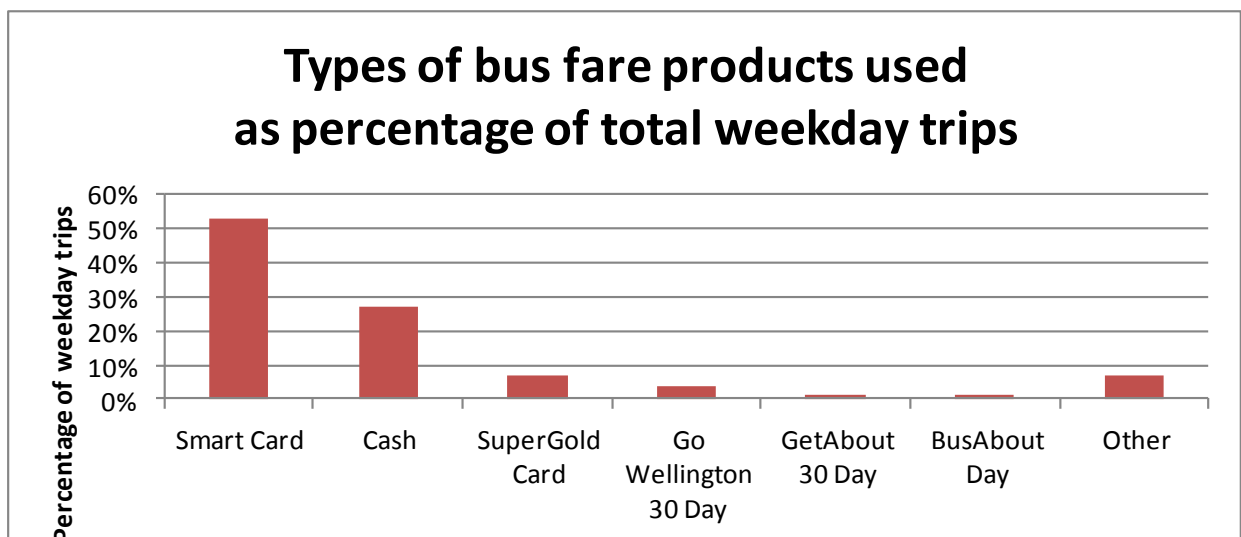
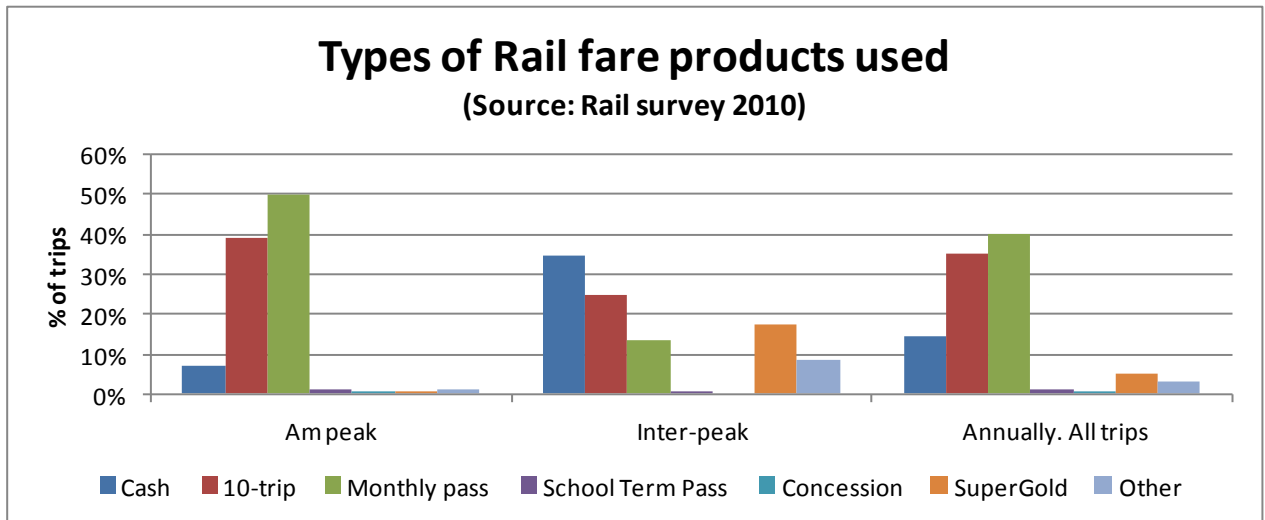
Overall, approximately 27% of all journeys are less than 3km and 23% less than 2.5km.

Generally more short trips occur in the interpeak period when 40% of all trips are less than 3km, compared to the morning peak when 18% are less than 3km. Approximately 57% of short trips in the interpeak originate in the inner city Wellington zone.

The table below shows the percentage of total morning or interpeak trips that are under or over 3km by where the journey originates.

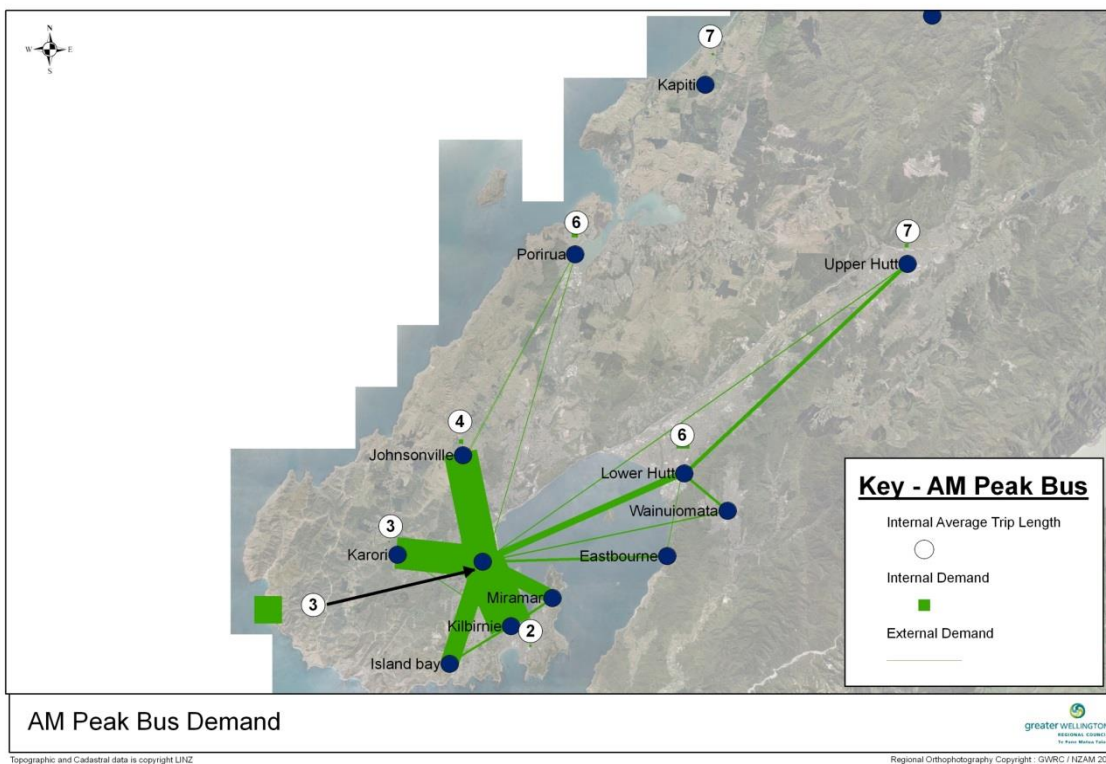
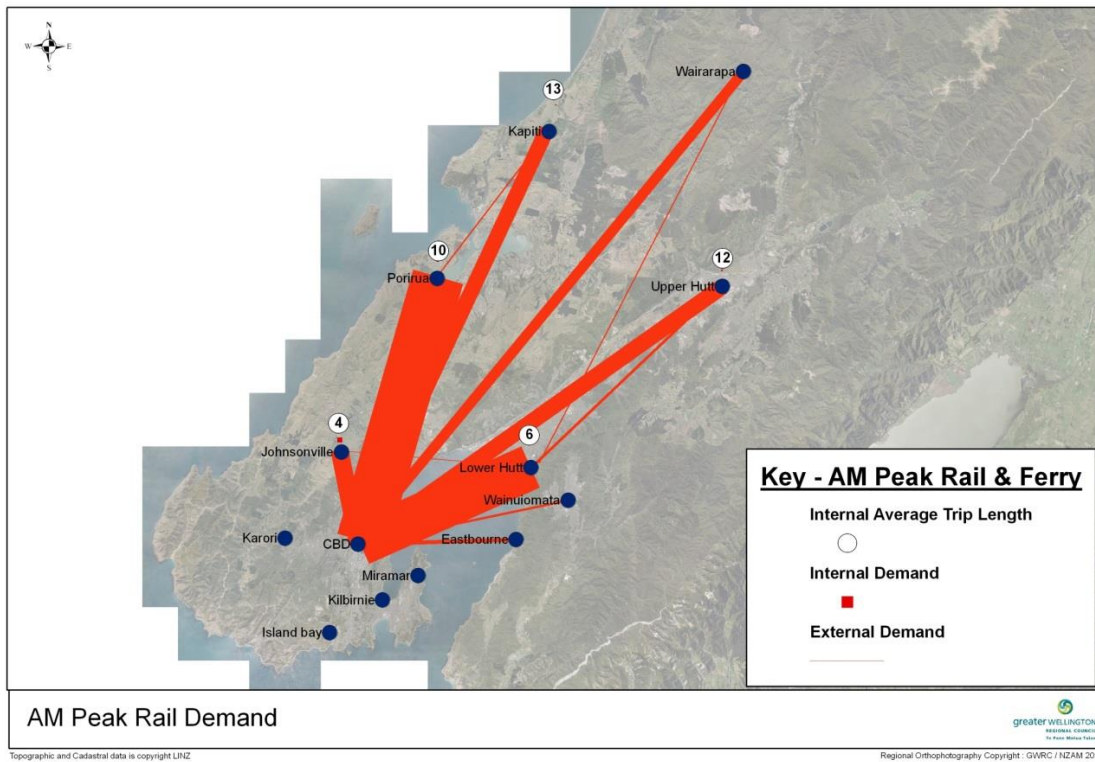
Origin Sector	AM peak			Interpeak		
	% of Trips >3.0km	% of Trips <3.0km	Total	% of Trips >3.0km	% of Trips <3.0km	Total
Wellington Zone 1	3%	7%	10%	13%	23%	35%
Wellington Zone 2	10%	5%	14%	6%	6%	12%
Wellington Zone 3	24%	2%	26%	14%	3%	18%
Porirua	15%	0%	15%	7%	2%	9%
Kapiti	5%	0%	5%	4%	1%	4%
Lower Hutt	21%	1%	22%	14%	4%	18%
Upper Hutt	5%	0%	5%	3%	1%	4%
Wairarapa	3%	0%	3%			
Total	85%	15%	100%	60%	40%	100%

Ticket products used



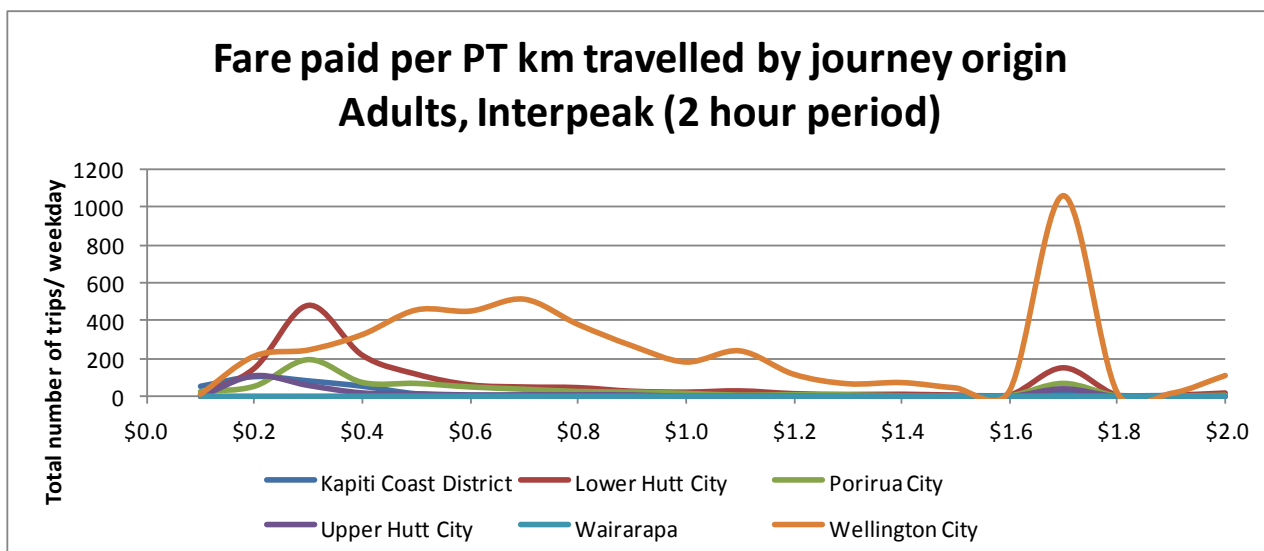
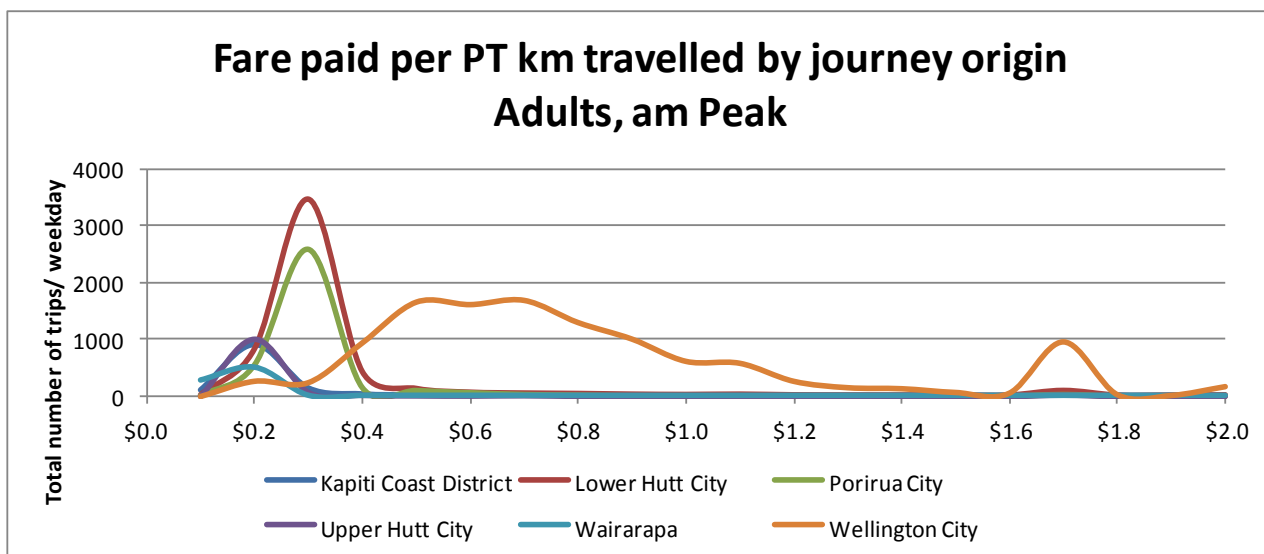
Over 50% of Smart cards are used only once a day. Of the 30% of bus users that use their smart card twice a day, just under 2/3rd use it for one trip in the morning and one trip in the evening peak.

Journey Origin in Morning Peak



The above diagrams show the number of trips between the main origin and destination points in the region. The width of the lines are proportional to the number of trips between those two points, the numbers in the circles are the average trip length within a particular area. These show that the majority of bus use is within Wellington city in the morning peak.

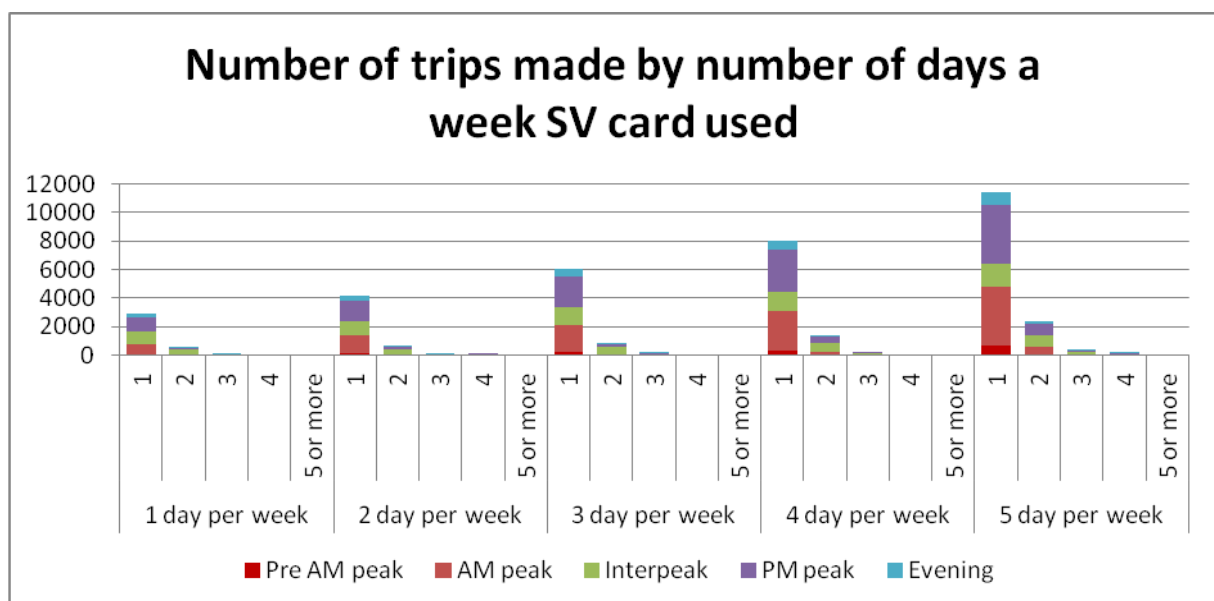
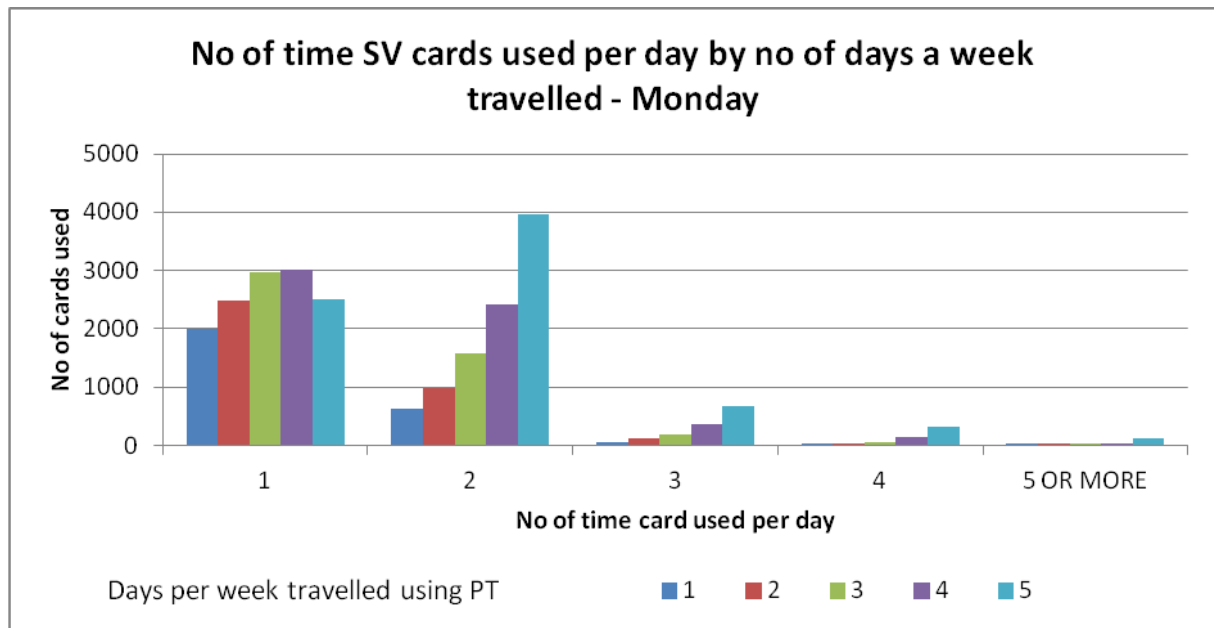
Fare per in-vehicle distance travelled



Fares paid by Wellingtonians on a per km basis are generally higher than that paid for by public transport users in other areas of the region. This is a result of a number of factors including

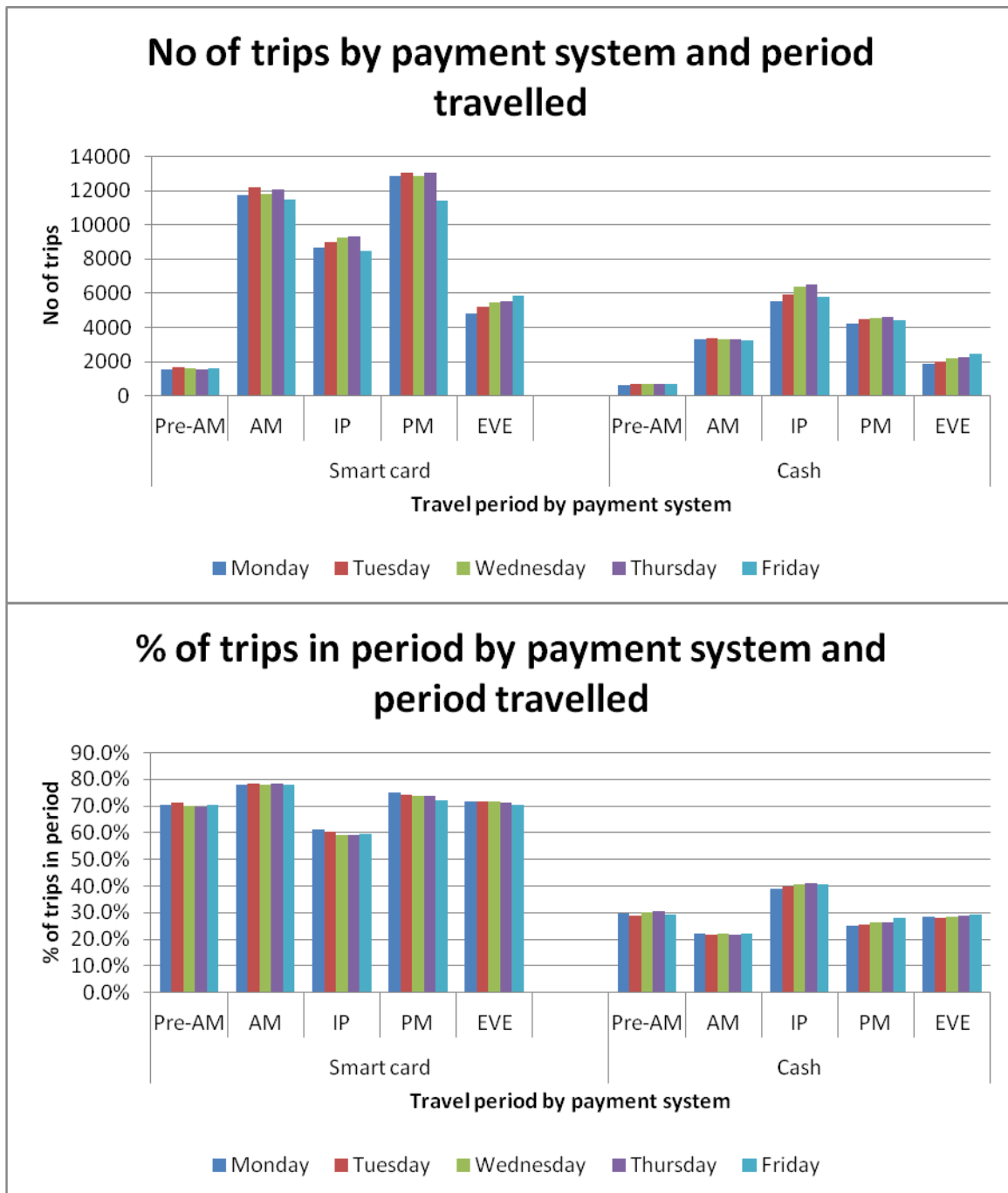
- the closer spacing of the zones in Wellington,
- most trips in Wellington use the bus (and therefore cannot access the monthly pass discounts on rail)
- a higher proportion of shorter trips in Wellington compared to the rest of the region making the flag fall component a great proportion of the total fare.

Frequency of public transport use in a week



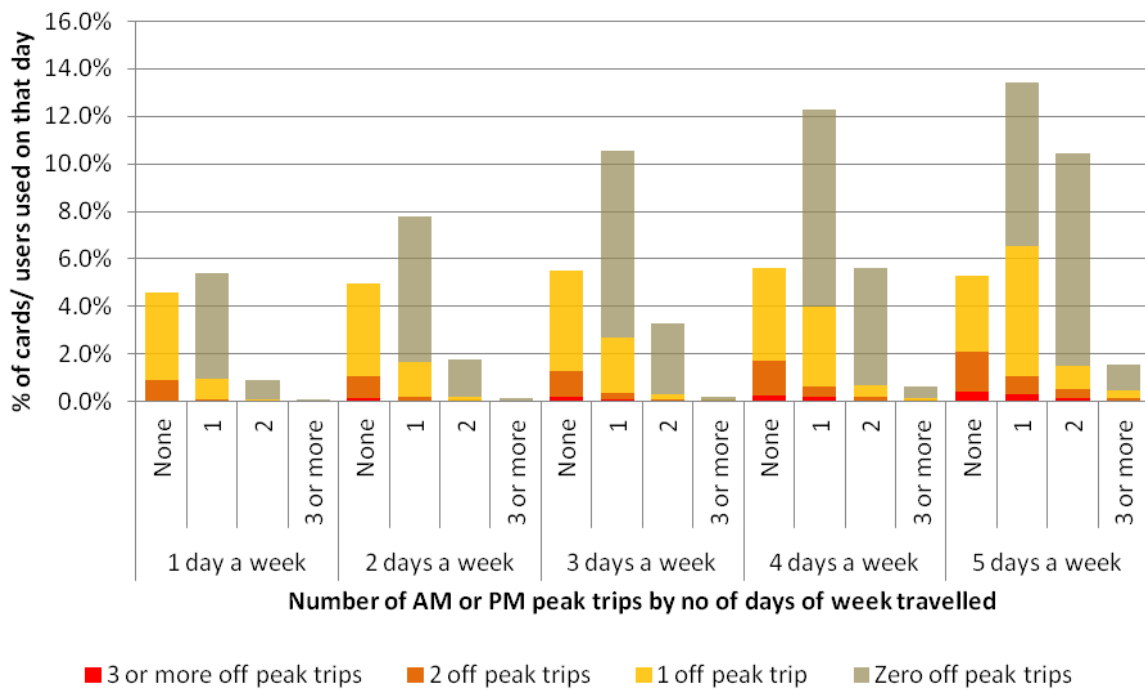
Around 50% of all SV cards used in a week are used on any given day. On any working day:

- over 50% of the SV cards are used only once a day
- 30% of SV cards are used 5 days a week
- just 39% of SV cards are used by people who make 2 trips on the day and only 1/3rd of these travel 5 days a week
- just 10% of SV cards are used 3 or more times during the day.



Overall, around 70% of trips are paid for using a SV card. Use of cash is highest in the inter-peak period.

% of SV cards used in one day making peak and off peak trips - Adults only



Appendix 3: Summary of modelling results – fare structure options

Table A: Summary of modelling results – 7 zones

Trip origin	Current fares to Wgtn CBD	7 zones (1a)			7 zones (3k)		
		Fare to Wgtn CBD	Demand	Revenue	Fare to Wgtn CBD	Demand	Revenue
AM peak							
Wellington - Current Z1	\$1.60	\$2.63	-8%	20%	\$3	-12%	29%
Wellington - Current Z2	\$2.66	\$2.63	0%	0%	\$3	-3%	11%
Wellington - Current Z3	\$3.54	\$2.63	5%	-22%	\$3	3%	-13%
Wellington - Total			1%	-11%		-2%	-1%
Porirua (inc Tawa)	\$4.86	\$4.88	1%	-5%	\$4.5	2%	-10%
Kapiti	\$8.84	\$9.38	-1%	-2%	\$7.5	3%	-17%
Lower Hutt	\$3.98	\$4.13	1%	-6%	\$4.5	-1%	1%
Upper Hutt	\$7.83	\$6.75	-1%	3%	\$6	0%	-3%
Wairarapa	\$11.95 (south) or \$14.05 (north)	\$11.6 (south) or \$13.1 (north)	-1%	1%	\$7.5 (south) or \$9 (north)	5%	-26%
All regions - Total			1%	-6%		-1%	-6%
Inter peak							
Wellington - Current Z1	\$1.60	\$2.63	-13%	2%	\$3	-20%	5%
Wellington - Current Z2	\$2.66	\$2.63	-3%	1%	\$3	-9%	8%
Wellington - Current Z3	\$3.54	\$2.63	2%	-13%	\$3	-2%	-6%
Wellington - Total			-7%	0%		-13%	2%
Porirua (inc Tawa)	\$4.86	\$4.88	-7%	-3%	\$4.5	-9%	-2%
Kapiti	\$8.84	\$9.38	-13%	-5%	\$7.5	-14%	-8%
Lower Hutt	\$3.98	\$4.13	-6%	2%	\$4.5	-11%	9%
Upper Hutt	\$7.83	\$6.75	-9%	4%	\$6	-13%	7%
Wairarapa	\$11.95 (south) or \$14.05 (north)	\$11.6 (south) or \$13.1 (north)	-	-	\$7.5 (south) or \$9 (north)	-	-
All regions - Total			-7%	-2%		-12%	2%
Annual							
All regions – Total			-4%	-6%		-6%	-2%

Table B: Summary of modelling results – 8 zone model, Wellington split into 2 zones

Trip origin	Current fares to Wgtn CBD	8 zones with Inner Wgtn CBD zone (3a)			8 zones with Inner Wgtn CBD and suburbs zone (3m)			8 zones with Inner Wgtn zone with zone 2 as overlap zone (3c)			8 zones with large inner Wgtn suburbs and CBD zone (zones 1 & 2) (3b)		
		Fare to Wgtn CBD	Demand	Revenue	Fare to Wgtn CBD	Demand	Revenue	Fare to Wgtn CBD	Demand	Revenue	Fare to Wgtn CBD	Demand	Revenue
AM peak													
Wellington - Current Z1	\$1.60	\$1.13	2%	-9%	\$1.50	-1%	4%	\$1.50	0%	-4%	\$2.25	-6%	17%
Wellington - Current Z2	\$2.66	\$3.38	-6%	19%	\$3.75	-8%	27%	\$1.50	8%	-36%	\$2.25	2%	-10%
Wellington - Current Z3	\$3.54	\$3.38	1%	-6%	\$3.75	0%	0%	\$3.75	0%	0%	\$3.75	-1%	1%
Wellington - Total			-1%	0%		-3%	7%		2%	-10%		-1%	0%
Porirua (inc Tawa)	\$4.86	\$5.25	-1%	-1%	\$5.25	-1%	-1%	\$5.25	-1%	-1%	\$5.25	-1%	-1%
Kapiti	\$8.84	\$9.75	-1%	0%	\$9.75	-1%	0%	\$9.75	-1%	0%	\$9.75	-1%	0%
Lower Hutt	\$3.98	\$4.50	0%	-2%	\$4.50	0%	-2%	\$4.50	0%	-2%	\$4.50	0%	-2%
Upper Hutt	\$7.83	\$7.50	-3%	10%	\$7.50	-3%	10%	\$7.50	-3%	10%	\$7.50	-3%	10%
Wairarapa	\$11.95 (south) or \$14.05 (north)	\$11.3 (south) or \$13.1 (north)	-1%	1%	\$11.3 (south) or \$13.1 (north)	-1%	-57%	\$11.25 (south) or \$13.1 (north)	-1%	1%	\$11.3 (south) or \$13.1 (north)	-1%	1%
All regions - Total			-1%	0%		-3%	-2%		1%	-4%		-1%	-1%
Interpeak													
Wellington - Current Z1	\$1.60	\$1.13	2%	-6%	\$1.50	-3%	3%	\$1.50	2%	-6%	\$2.25	-10%	6%
Wellington - Current Z2	\$2.66	\$3.38	-6%	16%	\$3.75	-11%	12%	\$1.50	13%	-29%	\$2.25	0%	-4%
Wellington - Current Z3	\$3.54	\$3.38	-1%	-3%	\$3.75	-1%	-2%	\$3.75	-1%	-2%	\$3.75	-2%	0%
Wellington - Total			1%	-1%		-4%	3%		3%	-9%		-6%	2%
Porirua (inc Tawa)	\$4.86	\$5.25	-5%	-5%	\$5.25	-5%	-5%	\$5.25	-5%	-5%	\$5.25	-5%	-5%
Kapiti	\$8.84	\$9.75	-9%	-8%	\$9.75	-10%	-9%	\$9.75	-10%	-9%	\$9.75	-10%	-9%
Lower Hutt	\$3.98	\$4.50	-3%	0%	\$4.50	-4%	-1%	\$4.50	-4%	-1%	\$4.50	-4%	-1%
Upper Hutt	\$7.83	\$7.50	-6%	6%	\$7.50	-8%	4%	\$7.50	-8%	4%	\$7.50	-8%	4%
Wairarapa	\$11.95 (south) or \$14.05 (north)	\$11.3 (south) or \$13.1 (north)	-	-	\$11.3 (south) or \$13.1 (north)	-	-	\$11.25 (south) or \$13.1 (north)	-	-	\$11.3 (south) or \$13.1 (north)	-	-
All regions - Total			-2%	-1%		-4%	1%		0%	-6%		-6%	-16%
Annual													
All regions - Total			-1%	0%		-3%	1%		0%	-5%		-3%	0%

Table C: Summary of modelling results - 7 zone system with short trip fare

Trip origin	Current fares to Wgtn CBD	7 zones with all short trips (less than 2.5km) charged at \$1.13 (3h)			7 zones with all short trips (less than 2.5km) charged at \$1.50 (3hi)			7 zones all short trips (less than 3.0km) charged at \$1.13 (3i)			7 zones all short trips (less than 3.0km) charged at \$1.50 (3ii)		
		Fare to Wgtn CBD	Demand	Revenue	Fare to Wgtn CBD	Demand	Revenue	Fare to Wgtn CBD	Demand	Revenue	Fare to Wgtn CBD	Demand	Revenue
AM peak													
Wellington - Current Z1	\$1.60	\$3.38	2%	-8%	\$3.38	-4%	8%	\$3.38	3%	-13%	\$3.38	-3%	5%
Wellington - Current Z2	\$2.66	\$3.38	-2%	9%	\$3.38	-4%	12%	\$3.38	0%	0%	\$3.38	-3%	6%
Wellington - Current Z3	\$3.54	\$3.38	1%	-6%	\$3.38	1%	-6%	\$3.38	2%	-7%	\$3.38	1%	-6%
Wellington - Total			0%	-3%		-1%	-1%		1%	-6%		-1%	-2%
Porirua (inc Tawa)	\$4.86	\$5.25	0%	-1%	\$5.25	-1%	-1%	\$5.25	0%	-1%	\$5.25	-1%	-1%
Kapiti	\$8.84	\$9.75	-1%	0%	\$9.75	-1%	0%	\$9.75	-1%	0%	\$9.75	-1%	0%
Lower Hutt	\$3.98	\$4.50	0%	-3%	\$4.50	0%	-2%	\$4.50	0%	-3%	\$4.50	0%	-2%
Upper Hutt	\$7.83	\$7.50	-2%	9%	\$7.50	-3%	9%	\$7.50	-2%	9%	\$7.50	-3%	9%
Wairarapa	\$11.95 (south) or \$14.05 (north)	\$11.25 (south) or \$13.1 (north)	-1%	1%	\$11.25 (south) or \$13.1 (north)	-1%	1%	\$11.25 (south) or \$13.1 (north)	-1%	1%	\$11.25 (south) or \$13.1 (north)	-1%	1%
All regions - Total			0%	-1%		-1%	0%		1%	-3%		-1%	-1%
Inter peak													
Wellington - Current Z1	\$1.60	\$3.38	4%	-8%	\$3.38	-1%	5%	\$3.38	6%	-10%	\$3.38	0%	4%
Wellington - Current Z2	\$2.66	\$3.38	-1%	0%	\$3.38	-4%	7%	\$3.38	2%	-7%	\$3.38	-2%	3%
Wellington - Current Z3	\$3.54	\$3.38	-1%	-3%	\$3.38	-2%	-1%	\$3.38	0%	-5%	\$3.38	-1%	-2%
Wellington - Total			2%	-5%		-2%	3%		4%	-8%		-1%	2%
Porirua (inc Tawa)	\$4.86	\$5.25	-2%	-10%	\$5.25	-3%	-7%	\$5.25	-1%	-11%	\$5.25	-3%	-7%
Kapiti	\$8.84	\$9.75	-9%	-11%	\$9.75	-10%	-10%	\$9.75	-9%	-11%	\$9.75	-9%	-10%
Lower Hutt	\$3.98	\$4.50	1%	-5%	\$4.50	-1%	-2%	\$4.50	1%	-6%	\$4.50	-1%	-2%
Upper Hutt	\$7.83	\$7.50	-3%	-1%	\$7.50	-5%	3%	\$7.50	-3%	-2%	\$7.50	-5%	2%
Wairarapa	\$11.95 (south) or \$14.05 (north)	\$11.25 (south) or \$13.1 (north)			\$11.25 (south) or \$13.1 (north)			\$11.25 (south) or \$13.1 (north)			\$11.25 (south) or \$13.1 (north)		
All regions - Total			1%	-6%		-2%	1%		2%	-8%		-1%	-1%
Annual													
All regions - Total			0%	-3%		-2%	0%		1%	-5%		-1%	-1%

Table D: Summary of modelling results – Distance based - \$0.75 flag fall

Trip origin	Current fares to Wgtn CBD	Approx dist to Wgtn CBD	\$0.75 FF + flat (0.12c) increment per km (3o)			\$0.75 FF + slightly increasing increment per km (3p)			\$0.75 FF + slightly decreasing increment per km (3q)			\$0.75 flag fall plus 'severe' decreasing fare per kilometre (3r)		
			Fare to Wgtn CBD	Demand	Revenue	Fare to Wgtn CBD	Demand	Revenue	Fare to Wgtn CBD	Demand	Revenue	Fare to Wgtn CBD	Demand	Revenue
AM peak														
Wellington - Current Z1	\$1.60	4	\$1.13	13%	-41%	\$0.98	15%	-46%	\$1.31	12%	-36%	\$1.65	0%	-1%
Wellington - Current Z2	\$2.66	6	\$1.43	19%	-49%	\$1.28	20%	-54%	\$1.88	17%	-44%	\$2.55	5%	-11%
Wellington - Current Z3	\$3.54	10	\$1.88	18%	-47%	\$1.65	21%	-54%	\$2.63	16%	-41%	\$3.75	4%	-5%
Wellington - Total				17%	-47%		20%	-53%		15%	-41%		3%	-6%
Porirua (inc Tawa)	\$4.86	20	\$3.00	11%	-26%	\$2.63	14%	-36%	\$4.35	8%	-16%	\$6.00	-4%	25%
Kapiti	\$8.84	45	\$5.84	6%	2%	\$4.80	7%	1%	\$7.35	5%	2%	\$9.98	-5%	23%
Lower Hutt	\$3.98	20	\$3.00	10%	-26%	\$2.63	14%	-37%	\$4.35	7%	-16%	\$6.00	-4%	27%
Upper Hutt	\$7.83	30	\$4.13	7%	-18%	\$3.68	10%	-27%	\$5.93	5%	-10%	\$8.40	-8%	28%
Wairarapa	\$11.95 (south) or \$14.05 (north)	75	\$9.8	0%	5%	\$8.63	0%	9%	\$8.63	1%	0%	\$12.75	-2%	9%
All regions - Total				13%	-28%		16%	-35%		11%	-22%		-1%	12%
Interpeak														
Wellington - Current Z1	\$1.60	4	\$1.13	22%	-35%	\$0.98	26%	-40%	\$1.31	19%	-30%	\$1.65	-2%	-4%
Wellington - Current Z2	\$2.66	6	\$1.43	31%	-43%	\$1.28	35%	-48%	\$1.88	28%	-39%	\$2.55	7%	-10%
Wellington - Current Z3	\$3.54	10	\$1.88	27%	-40%	\$1.65	32%	-47%	\$2.63	23%	-34%	\$3.75	1%	-2%
Wellington - Total				25%	-38%		29%	-44%		22%	-33%		1%	-5%
Porirua (inc Tawa)	\$4.86	20	\$3.00	13%	-31%	\$2.63	17%	-38%	\$4.35	9%	-24%	\$6.00	-10%	7%
Kapiti	\$8.84	45	\$5.84	-1%	-11%	\$4.80	2%	-15%	\$7.35	-4%	-7%	\$9.98	-21%	15%
Lower Hutt	\$3.98	20	\$3.00	17%	-25%	\$2.63	22%	-33%	\$4.35	13%	-18%	\$6.00	-9%	13%
Upper Hutt	\$7.83	30	\$4.13	11%	-22%	\$3.68	15%	-29%	\$5.93	7%	-15%	\$8.40	-12%	11%
Wairarapa	\$11.95 (south) or \$14.05 (north)	75	\$9.8	0%	0%	\$8.63	0%	0%	\$8.63	0%	0%	\$12.75	0%	0%
All regions - Total				21%	-33%		25%	-39%		17%	-27%		-4%	2%
Annual														
All regions - Total				15%	-29%		18%	-36%		13%	-24%		-1%	9%

Table E: Summary of modelling results – Distance based - \$1.5 flag fall

Trip origin	Current fares to Wgtn CBD	\$1.5 FF + flat (0.12c) increment per km (2a)			\$1.5 FF + slightly increasing increment per km (2b)			\$1.5 FF + slightly decreasing increment per km (2c)			\$1.5 flag fall plus 'severe' decreasing fare per kilometre (3l)		
		Fare to Wgtn CBD	Demand	Revenue	Fare to Wgtn CBD	Demand	Revenue	Fare to Wgtn CBD	Demand	Revenue	Fare to Wgtn CBD	Demand	Revenue
AM peak													
Wellington - Current Z1	\$1.60	\$1.88	0%	-6%	\$1.73	1%	-11%	\$2.06	-1%	-1%	\$2.40	-8%	29%
Wellington - Current Z2	\$2.66	\$2.18	5%	-20%	\$2.03	6%	-24%	\$2.63	4%	-15%	\$3.30	-4%	15%
Wellington - Current Z3	\$3.54	\$2.63	7%	-26%	\$2.40	8%	-32%	\$3.38	5%	-20%	\$4.50	-3%	13%
Wellington - Total			5%	-22%		6%	-27%		4%	-16%		-4%	16%
Porirua (inc Tawa)	\$4.86	\$3.75	4%	-9%	\$3.38	6%	-18%	\$5.10	2%	0%	\$6.75	-8%	40%
Kapiti	\$8.84	\$6.59	2%	11%	\$5.55	3%	10%	\$8.10	1%	11%	\$10.73	-7%	32%
Lower Hutt	\$3.98	\$3.75	2%	-6%	\$3.38	4%	-16%	\$5.10	0%	3%	\$6.75	-9%	44%
Upper Hutt	\$7.83	\$4.88	1%	-4%	\$4.43	3%	-12%	\$6.68	-1%	4%	\$9.15	-11%	40%
Wairarapa	\$11.95 (south) or \$14.05 (north)	\$10.5	-2%	11%	\$9.38	-3%	15%	\$9.38	-1%	7%	\$13.50	-4%	15%
All regions - Total			4%	-9%		5%	-15%		2%	-4%		-6%	28%
Inter peak													
Wellington - Current Z1	\$1.60	\$1.88	2%	-9%	\$1.73	3%	-13%	\$2.06	0%	-5%	\$2.40	-13%	16%
Wellington - Current Z2	\$2.66	\$2.18	7%	-16%	\$2.03	9%	-20%	\$2.63	6%	-13%	\$3.30	-7%	11%
Wellington - Current Z3	\$3.54	\$2.63	7%	-19%	\$2.40	9%	-25%	\$3.38	5%	-14%	\$4.50	-9%	13%
Wellington - Total			4%	-14%		6%	-18%		3%	-9%		-11%	14%
Porirua (inc Tawa)	\$4.86	\$3.75	-2%	-12%	\$3.38	0%	-19%	\$5.10	-5%	-6%	\$6.75	-18%	21%
Kapiti	\$8.84	\$6.59	-10%	2%	\$5.55	-8%	-2%	\$8.10	-12%	5%	\$10.73	-26%	25%
Lower Hutt	\$3.98	\$3.75	1%	-4%	\$3.38	3%	-11%	\$5.10	-2%	2%	\$6.75	-18%	29%
Upper Hutt	\$7.83	\$4.88	-3%	-5%	\$4.43	0%	-12%	\$6.68	-5%	1%	\$9.15	-19%	23%
Wairarapa	\$11.95 (south) or \$14.05 (north)	\$10.5			\$9.38			\$9.38			\$13.50		
All regions - Total			2%	-10%		4%	-16%		0%	-5%		-14%	19%
Annual													
All regions - Total			4%	-14%		6%	-19%		3%	-9%		-10%	24%