Public Transport Asset Management Plan

Public Transport Asset Management Plan

Prepared for

Greater Wellington Regional Council

Prepared by

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Table of Contents

Executive Summary

Introduction

The public transport activity is a vital part of achieving the Regional Land Transport Strategy's vision:

"To deliver, through significant achievements in each period, an integrated land transport system that supports the region's people and prosperity in a way that is economically, environmentally and socially sustainable."

It assists people to travel safely, easily and efficiently through the region while maintaining good access to properties, businesses and other areas of interest. Greater Wellington is involved in providing public transport services to reduce congestion and to help meet the needs of the transport disadvantaged and regards this activity as an essential service for the public good.

The purpose of this asset management plan is to set out a systematic approach for the long-term management of Greater Wellington's public transport assets, in a manner consistent with industry best appropriate practice.

Greater Wellington is committed to initiatives to sustainably manage the public transport activity, and as part of this help manage associated potential negative effects. These potentially significant negative effects include increased vehicle emissions from aging diesel powered bus fleet, potential conflict with other forms of traffic such as cyclists and pedestrians, Potential for land take to make way for increased infrastructure, and increased funding burden on the region should NZTA funding diminish.

The services we provide

Greater Wellington recognises there is a wide range of customers and stakeholders with an interest in how the public transport activity is managed.

Greater Wellington's LTCCP is the primary document for determining and agreeing levels of service and costs with the community and stakeholders, also considering legislative requirements and accepted industry practice. Sustainable long-term management of the public transport assets will also be achieved through integration with national and regional strategies.

Council aims to provide quality, well maintained and safe infrastructure to help attract people into using public transport as an alternative to using private motor vehicles. Specific levels of service adopted are outlined in Section 2.0 of this Plan.

Projects required to close identified service gaps include installation of new bus shelters, installation of real time information facilities, purchasing land to enable increased park-and-ride parking facilities, and increased maintenance and renewals programmes, particularly targeting signs, station buildings, car parks and closed circuit television (CCTV) installations.

Further, specific programmes and projects continue to address risk issues.

The planned capital investment in closing service gaps over the next three years is around $30.9 million, of which approximately $22.5 million is forecast to be provided to others to undertake significant upgrades to rail stations and provide electronic ticketing.

Managing growth and demand

Between 2001 and 2006 the region as a whole experienced population growth of 6.0%. The region is forecast to experience moderate population growth over the next 10 years, with around an extra 32,000 people expected to live in Greater Wellington by 2016. Wellington City's population growth is largely due to increased housing density in the central city. This is expected to lead to increased use of sustainable transport modes, including public transport, and less use of the private car. The recent economic recession may limit the growth previously seen in private vehicle ownership and usage. Further, the greater awareness of climate change and sustainability may result in increased usage of public transport as an alternative to private motor vehicles.

Greater Wellington has developed targets representing increases in the use of public transport in the order of 40% between 2005 and 2016. Programmes and projects have been planned to manage the calculated increase in usage although Greater Wellington recognise that achieving this level of demand growth will be a challenge. The

key projects relevant to this Plan to manage growth are development of more car parking facilities, installation of more CCTV systems and construction of new bus shelters. Significant funding is also being provided to undertake platform alterations on the Johnsonville, Hutt and Kapiti rail lines. Total three year expenditure to meet demand needs is approximately $11.3 million, of which approximately $10 million is forecast to be provided to others to undertake the platform upgrades.

Managing risk

Risk management is an inherent part of Greater Wellington's overall public transport management philosophy. Risk is managed through the development and ongoing review of risk assessments, as well as through emergency response and business continuity planning.

The risks identified through these processes are a key input into identification and prioritisation of programmes and projects. The review as part of the development of the 2010 Plan identified the following highest public transport risks:

- Levels of service are not fully understood, including those which could be associated with assets not directly owned and/or managed by Greater Wellington.
- Insufficient car parking facilities at rail stations.
- Poor communication of key information to customers by others, such as rail service disruptions.

Greater Wellington is currently reviewing options to address these risks.

Lifecycle management

In order to enable the public transport activity, Council owns and manages infrastructure with a replacement value of approximately $5.4 million as at June 2008. This infrastructure comprises:

- Rail network assets, comprising some rail buildings and structures, minor facilities such as cycle lockers, seats and bins, some car parks, closed circuit TV security, shelters and signage
- Bus network assets, comprising some shelters and signage.

Further, Greater Wellington provides funding for others to own and/or manage rail buildings and structures, rail station car parks, bus shelters and trolley bus cables.

Greater Wellington's role in asset management is in a transitional phase, with recent legislative changes now enabling ownership of a greater range of assets.

Council manages its assets by applying the following broad strategies:

- **Operations.** Greater Wellington will manage the assets in a manner that minimises the long term overall total cost. Scheduled inspections and monitoring will be undertaken as justified by the consequences of failure on levels of service, costs, public health, safety or corporate image. The inspection programme will be modified as appropriate in response to unplanned maintenance trends. Competitive pricing will be ensured by using CPP contract structures and performance based term contracts where applicable.
- **Maintenance**. Greater Wellington will maintain assets in a manner that minimises the long term overall total cost. Competitive pricing will be ensured by using CPP contract structures and term contracts.
    - Unplanned maintenance: A suitable level of preparedness for prompt and effective response to asset failures will be maintained by ensuring suitably trained and equipped staff and contractors to allow prompt repair of key assets and mitigation of any hazards. Term contracts specify response times.
    - Planned maintenance: A programme of planned asset maintenance will be undertaken to minimise the risk of key asset failure, or where justified when considering financial, safety and social impacts. Major maintenance needs will be identified through the scheduled asset condition inspections and those generated from the investigation of customer complaints.
- **Renewals**. Greater Wellington will rehabilitate or replace assets when justified by:-
    - Asset Performance - Assets are renewed where it fails to meet the required level of service. The monitoring of asset reliability, capacity and efficiency during planned maintenance inspections and operational activity identifies non-performing assets.

- Economics - When it is no longer economic to continue repairing the asset (i.e. the annual cost of repairs exceeds the annualised cost of its renewal).
- Risk - The risk of failure and associated environmental, public health, financial or social impact justifies proactive action (e.g. probable extent of property damage, health and safety risk).

  While many of the smaller replacement (renewal) items are undertaken within maintenance, all major works are programmed as replacement items and are managed in a similar way to new capital works.

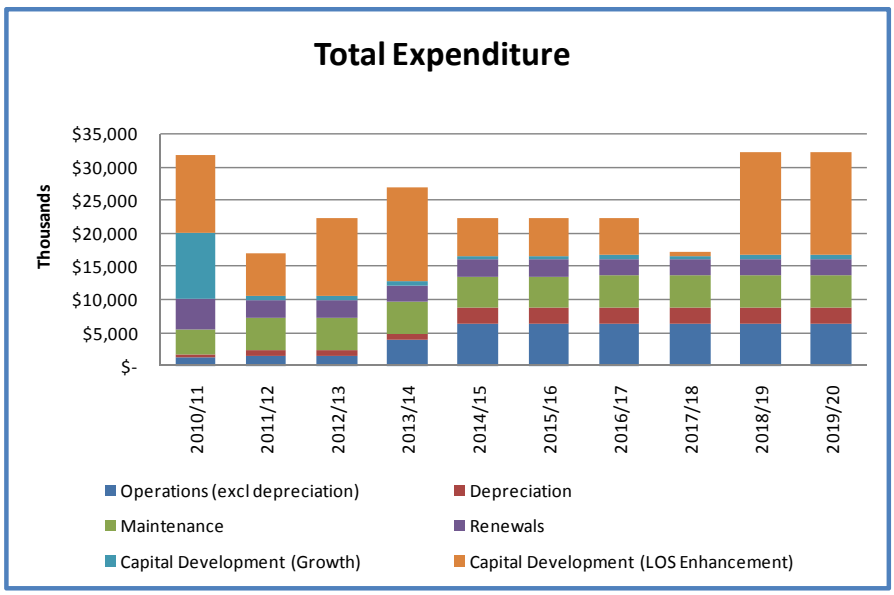
- **Capital development**. Greater Wellington will carry out a prioritisation process of all necessary development works. Works are costed and benefits assessed in terms of the following criteria: -
  - NZTA Criteria
  - Demand
  - Aesthetic or Amenity value, Health and Safety consideration, Cultural issues, etc.
  - Strategic issues in alignment with Community Outcomes.
- **Disposal**. Formal reviews will be undertaken should it be identified that an asset is surplus to Greater Wellington's requirements.

Key issues with performance or condition of the public transport assets are:

- Condition of Waterloo buildings and structures. This is to be reassessed.
- Lack of car parking at some rail stations. Greater Wellington is assessing possible land purchase/lease options to enable the provision of more car parks.
- Demand for cycle facilities exceeds supply. Greater Wellington has a programme of installing cycle facilities.
- Lack of real-time information systems. Greater Wellington has commenced the introduction of a real-time network.
- Lack of electronic ticketing capability. Greater Wellington is currently investigating electronic ticketing options.
- Many of the rail stations require upgrading to reflect increasing customer expectations and technological change. Greater Wellington has a CCTV systems programme, and provides funding to other organisations to undertake station upgrades as appropriate.

Financial summary

The forecast expenditure requirements over the ten year planning period to continue to manage the public transport activity sustainably are presented in the figure below.



The key provisions and trends in the 10-year financial forecast are:

- Operations – increases from $1.6 million to $8.9 million over the ten year planning period. This reflects introduction of electronic ticketing capability, including the associated depreciation.
- Maintenance – increases from $3.9 million to $4.8 million, largely due to increased trolley bus cable maintenance. Note that there is a reduction in trolley bus renewals over this period to offset this increase. There is also a marginal increase in shelter maintenance costs reflecting growth in the asset base.
- Renewals – Renewals are currently limited to trolley bus cable renewals, with all other replacements and rehabilitations being managed as maintenance items. Renewals reduce from $4.5 million to $2.6 million in 2011/12, with an increase in maintenance costs to partly offset this reduction.
- Capital development for growth – $10 million has been planned for 2010/11, thereafter reducing to approximately $0.6 million for the remainder of the planning period. The initial expenditure is targeted at specific rail upgrades.
- Capital development for level of service – $92.7 million is planned for over the 10 year planning period, fluctuating from an average of around $11 million per year for the first four years, reducing to around $5.6 million for the following three years. Of this $92.7 million, $66 million is associated with rail station upgrades, 14.5 million with electronic ticketing and $6 million with real time information displays.

1.0 Introduction

1.1 Purpose

The purpose of this asset management plan is to set out a systematic approach for the long-term management of Greater Wellington's public transport assets, in a manner consistent with industry best appropriate practice.

A long-term planning approach is considered necessary given the following factors:

- the importance of providing sustainable, accessible and reliable public transport within the Wellington region
- the reasonable level of capital and operating expenditure involved
- the long lives of some of the assets

1.2 Nature of this asset management plan

This is the first update of the version 1 Asset Management Plan developed by Greater Wellington Regional Council (Greater Wellington) for public transport activities. It will be improved and developed over time in line with our increasing knowledge of asset management principles and practices, and as the knowledge about our assets improves.

Greater Wellington has, until recently, been prohibited in law from owning an interest in a transport asset. Since the repeal of this legislative provision Greater Wellington has progressively become the owner of a variety of public transport assets, and the asset base is expected to increase over time. Assets that were fully funded in the past (e.g. bus shelters) but could not be owned by Greater Wellington will in the future be owned by Greater Wellington as new assets are created. In addition, Greater Wellington will seek to have the ownership of a variety of assets it has funded in the past transferred to it. Some transfers have already occurred.

Greater Wellington's role in asset management is in a transitional phase and this asset management plan should be viewed as a work-in-progress.

1.3 Why we are involved in the passenger transport activity

The Regional Land Transport Strategy's vision[1] is:

"To deliver, through significant achievements in each period, an integrated land transport system that supports the region's people and prosperity in a way that is economically, environmentally and socially sustainable."

The public transport activity is a vital part of this vision. It assists people to travel safely, easily and efficiently through the region while maintaining good access to properties, businesses and other areas of interest. Greater Wellington is involved in providing public transport services to reduce congestion and to help meet the needs of the transport disadvantaged and regards this activity as an essential service for the public good.

1.4 Scope of this plan

The scope of this Plan is limited to:

- Infrastructure owned by Greater Wellington which enables the passenger transport activity and
- Infrastructure which is owned by others but which is funded either directly or indirectly by Greater Wellington

The following activities are excluded from the plan:

- Operational activities associated with the rail and bus services. These are addressed within Greater Wellington's Passenger Transport Operational Plan.
- Activities relating to rail rolling stock. These are addressed within Greater Wellington's Rolling Stock Ownership Plan.

[1] Wellington Regional Land Transport Strategy 2007-2016

- Activities relating to infrastructure owned and managed by third parties with no funding provided by Greater Wellington. Reference and some discussion is included where Greater Wellington has some interest and/or influence in such assets.

1.5 Greater Wellington's role in public transport asset management

Greater Wellington has a varied role in public transport asset management that can be categorised in the following way:

- Asset owner – assets are owned and managed by Greater Wellington or a fully owned subsidiary. Because of the history outlined in Section 1.2, the same type of asset may be directly owned by Greater Wellington in some cases but not in others.
- Direct asset funder or co-funder - Greater Wellington is the sole funder or co-funder of asset acquisition, maintenance, replacement and enhancement.
- Indirect asset funder - Greater Wellington fully or partially funds public transport services which require assets for delivery.

Greater Wellington manages and oversees asset maintenance, replacement and enhancement but does not directly carry out the work (i.e. Greater Wellington does not employ any maintenance staff). This work is undertaken under contract to a variety of service providers. This is further discussed in Sections 1.9 and 5.1.

1.6 Objectives

Greater Wellington's overall objective is to ensure the region's public transport assets are managed to provide a level of service that meets the needs and expectations of the community now and in the future in a sustainable and affordable way.

To achieve this overall objective the Plan aims to:

- Provide a document to convey the long-term strategy for the management of the public transport assets.
- Improve understanding of service level standards and options, while helping to improve customer satisfaction and public transport's image.
- Identify minimum lifecycle (long term) costs to provide agreed level of service.
- Provide the basis for improved understanding and forecasting of asset related management options and costs to smooth peak funding demands.
- Clearly justify the long term works programmes and justification of funding requirements.
- Manage the environmental and financial risks associated with providing these assets and the services the assets enable.
- Demonstrate that the service potential of the public transport assets is being maintained.

1.7 Asset management strategies

Greater Wellington has adopted the following asset management policy and strategy to provide a framework for guiding and integrating asset management practice within the Council.

1.7.1 Asset management policy

The asset management policy states the overall intention and direction of asset management as:

- The discipline of asset management will be directed to the achievement of the Council's Community Outcomes, objectives and long-term targets as stated in the Long Term Council Community Plan (LTCCP).
- Asset management will be applied to the long term stewardship of assets, with planning undertaken for a minimum horizon of 10 years.
- Asset management will be focused on delivering the required level of service to existing and future customers in the most cost-effective way.
- Applicable legislation, regulatory and statutory requirements will be complied with.
- A robust risk management approach consistent with the corporate risk management framework will underpin all asset management activities.

- The outputs of the asset management process will be endorsed by senior management and the Council.
- The outputs of the asset management process will be communicated to relevant employees and third parties to ensure they are aware of their asset management responsibilities.
- The Plan will be available to all stakeholders.
- The Plan will be reviewed at least three-yearly to ensure it remains relevant and consistent with the LTCCP.
- Greater Wellington is committed to the continuous improvement of asset management activities to achieve an alignment between the quality of asset management and the nature and scale of Greater Wellington's assets and operations.

1.7.2 Asset management strategy

The asset management strategy to meet policy and planning objectives is:

- Levels of service
  - To formally review levels of service at least every three years. Engagement with the community on satisfaction with the levels of service provided and improvements desired will be undertaken periodically. Consultation on options will be undertaken for specific projects. The level of service reviews will inform the levels of service adopted by Greater Wellington.
- Demand forecasting and management
  - To invest in works for growth in a timely way.
  - To review demand forecasts regularly based on analysis of population and economic growth projections, social and demographic data, technological advances and other relevant data.
  - Demand management options will also be considered when planning to meet growth.
- Asset service potential
  - To maintain, or where appropriate enhance the current service potential of the asset through an appropriate level of maintenance and renewal works.
- Risk management
  - To manage risk exposure through:
    - A three-yearly review of the risk management plan and implementing risk mitigation measures where risk exposure is incompatible with corporate risk policy.
    - Undertaking performance and condition monitoring of key assets.
- Operational
  - Service agreements with contractors will contain performance measures consistent with levels of service performance measures to achieve alignment from operational level to the LTCCP.
- Information and systems
  - Data collection programmes (condition, asset performance, registers and service performance) will be closely aligned to the nature and scale of the assets and to tracking achievement of service targets.
  - Asset management system functionality will be developed to meet the requirements of core asset management planning and specific business needs.
- Organisational
  - To embed asset management capability and practices throughout the organisation.
- Asset Management Plan
  - The Plan is a 'living' document and will be reviewed on a regular basis to ensure alignment with current council, organisational and asset management policy.
  - The Plan will be subject to formal adoption by Greater Wellington.
- Continuous improvement
  - Improvement of Asset Management practices, processes, systems and plans will be undertaken in accordance with the improvement plan which will be reviewed annually.

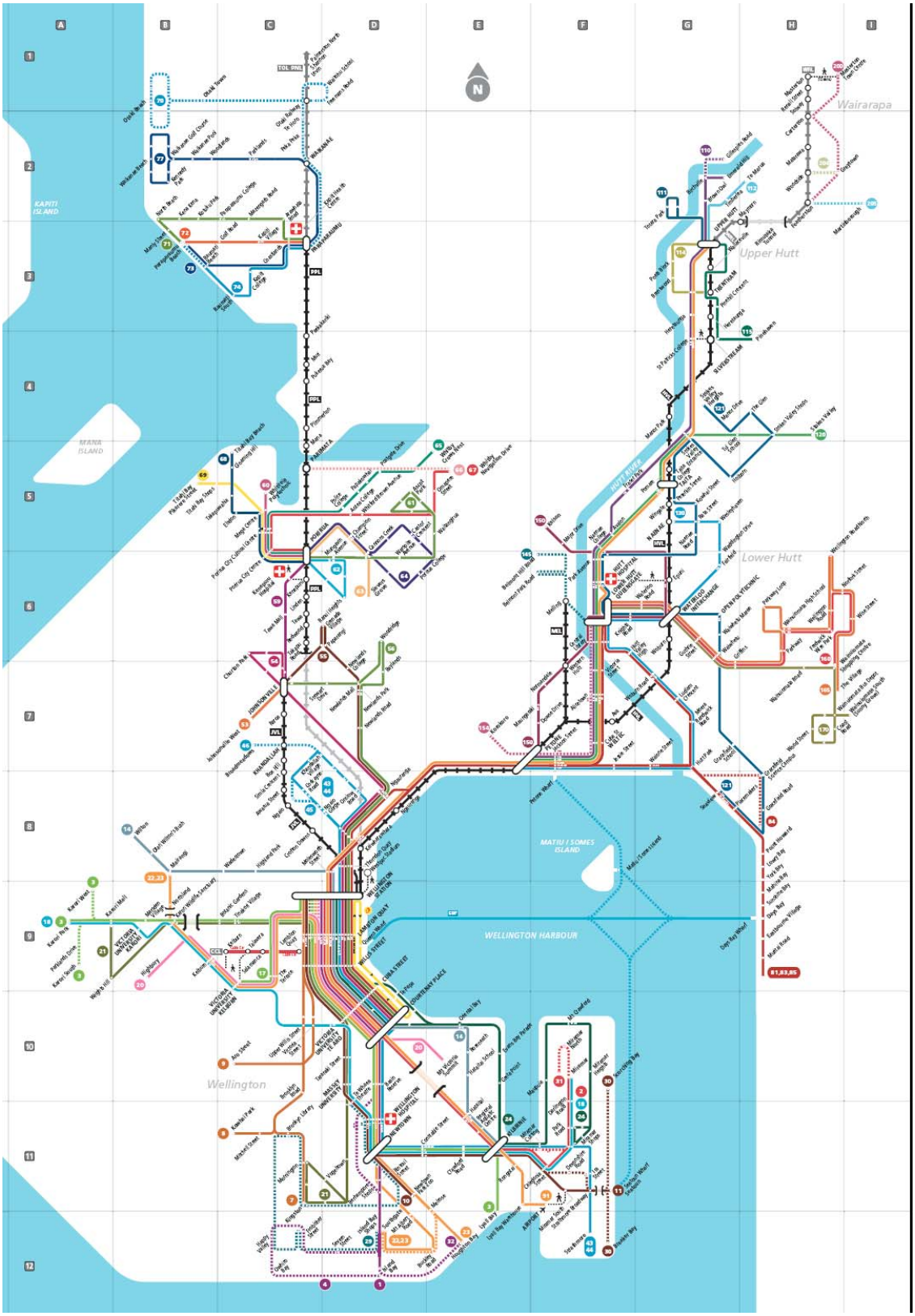
1.8 Network overview

The region's public transport network carried over 35 million passengers in 2008/09. It is a comprehensive network incorporating rail, bus, trolley bus, ferry and subsidised taxi services. The function of each mode can be summarised is as follows:

- Rail - primarily for long distance services with bus feeder routes.
- Trolley buses - provided on the busiest routes to the south and west of the Wellington Central Business district (CBD).
- Diesel buses - providing local connections and trunk services to areas without infrastructure to support trolley buses.
- Other services include; ferry services across Wellington harbour, the cable car to Kelburn and discounted taxi services for people with disabilities who are unable to use normal public transport services.

Figure 1 provides a schematic diagram of the Wellington region's public transport network.

Figure 1 Schematic Diagram of the Wellington region's Public Transport Network



1.9 Roles and responsibilities

1.9.1 Key transport providers

Although Greater Wellington has statutory responsibility for the provision of public transport services for the region, there are a number of other parties who are critical for the successful delivery of the region's passenger transport services.

The key public transport providers are:

- Greater Wellington
- New Zealand transport Agency (NZTA)
- Kiwi Rail
- Territorial authorities
- Bus and coach operators
- East by West Ferries
- Wellington Cable Car

Information on the role of each of these providers is presented below.

1.9.2 Key transport roles

The key transport roles are summarised in Table 1. More detailed explanation of the roles follows.

Table 1 Key Public Transport providers

Role	Provider
Public transport planning	Greater Wellington
Public transport funding	Greater Wellington NZTA Public transport users (through fares) Territorial authorities
Infrastructure owners	Kiwi Rail Territorial authorities Greater Wellington Rail Ltd^ Wellington Cable Car Ltd* Greater Wellington Public transport operators ^ *Fully owned subsidiary of GWRC* * *Fully owned subsidiary of WCC*
Current public transport operators	KiwiRail NZ Bus Ltd Mana Coach Services Ltd East by West Ferries Wairarapa Coachlines Ltd Madge Coachlines Ltd Classic Coaches Ltd Tranzit Coachlines

a) Greater Wellington

Greater Wellington is responsible for public transport planning, funding contracted services and infrastructure. Central government also provides significant public transport funding through the New Zealand Transport Agency (NZTA).

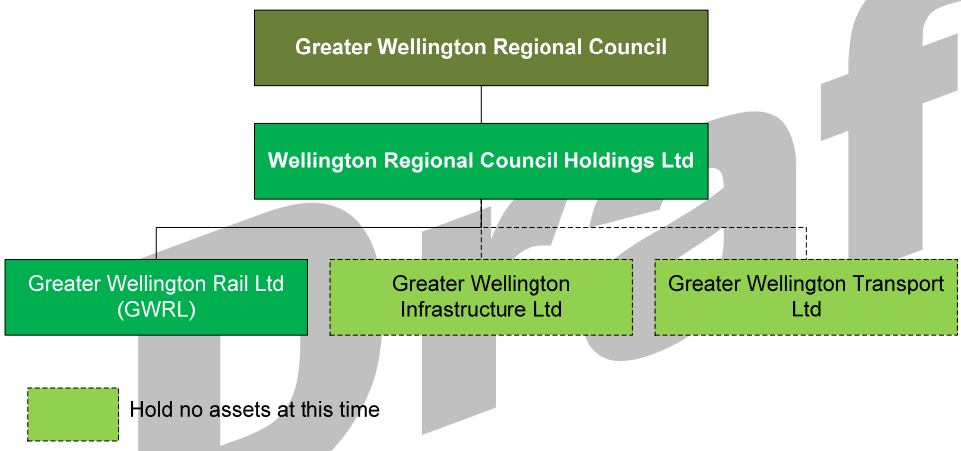
Greater Wellington formed three Council Controlled Trading Organisations (CCTOs) in July 2006 for the purpose of holding assets that relate to trolley buses, infrastructure assets, and rail rolling stock as defined by the Local Government Act 2002. These CCTOs are 100% owned by Greater Wellington.

Following consultation with NZTA there is only the requirement for rail rolling stock to be held in a CCTO. At this time no assets are held in Greater Wellington Infrastructure Ltd or Greater Wellington Transport Ltd.

Figure 2 shows the accountability relationship between Greater Wellington's three CCTOs and their shareholder (Greater Wellington). This relationship is expressed through the Statement of Intent which sets out the strategic performance targets for each of the organisations to achieve.

Greater Wellington Rail Ltd (GWRL) was set-up to own and manage the region's new or re-manufactured rail rolling stock.

Figure 2 Council controlled trading organisations structure



b) Rail service providers

Greater Wellington has two key rail service provider relationships:

ONTRACK (a division of New Zealand Railways Corporation and part of the KiwiRail Group) is responsible for managing and operating the rail network infrastructure. ONTRACK controls network operations, provides rail operators with access to the tracks, manages land and leases on the rail corridor and implements, coordinates and maintains an approved safety system for the rail network.

KiwiRail is the rail operator. It is the owner of Tranz Metro Wellington who owns the majority of the region's station buildings and is responsible for running the region's passenger rail services under a 10 year contract. KiwiRail is also responsible for maintenance of rail rolling stock.

Greater Wellington and the key service providers acknowledge the mutual and regional benefits of sharing information and undertaking an appropriate level of joint planning when developing regional strategies and capital works projects.

Greater Wellington meets with its key service providers to discuss joint planning at a general level, with additional project-specific joint planning meetings held as required.

c) Bus service providers

Buses provide public transport services in Wellington City and the Northern suburbs (in conjunction with the Johnsonville rail line). Outside of Wellington City, buses provide local public transport with connections to the rail network.

The majority of bus services operated in the Wellington region are contracted services with other services provided commercially. There are 65 contracts for services, all with a duration of 5 - 8 years. Approximately 18%

of bus service kilometres are operated commercially with no funding from Greater Wellington. The main operators are NZ Bus Ltd and Mana Coach Services Ltd.

d) Ferry, Cable Car and Taxi passenger transport service providers

The region's ferry service, operated by East by West, provides up to 15 return services on a daily basis between Queens Wharf in Wellington and the Days Bay Wharf. Services also stop at Matiu Somes Island and a commercial service operates to Seatoun.

The cable car provides a service from Lambton Quay to Kelburn and is owned and operated by Wellington Cable Car Limited.

Greater Wellington provides a region-wide subsidised taxi service (Total Mobility) for people who, because of a disability, cannot use regular bus or rail services.

These services and associated assets are excluded from the scope of this Plan.

e) Territorial Local Authorities

Local councils own much of the infrastructure associated with public transport including ; the roads on which services operate, foot paths, carparking facilities, bus shelters, covered walkways, and seats.

Wellington Cable Car Ltd is a Wellington City Council CCTO set up to own and manage the trolley bus wires and to own and operate the cable car.

f) NZ Transport Agency

The NZ Transport Agency operates the state highway network along which some bus services operate, particularly in Wellington City and owns land on which some carparking facilities are located.

1.10 Public transport assets

This section outlines the public transport assets which enable each of the main modes of public transport in the region, although, as noted, many of these assets are excluded from the scope of this Plan.

1.10.1 Rail network

The region's rail network consists of five lines and 50 stations extending from the Wellington railway station to the Wairarapa, Hutt Valley, Melling, Johnsonville and Waikanae. Table 2 summarises the stations on each line.

Table 2 Number of stations on each railway line

Line	Stations	No.
Wairarapa	Wellington*, Petone*, Waterloo*, Upper Hutt*, Maymorn, Featherston, Woodside, Matarawa, Carterton, Solway, Renall Street, Masterton.	8
Hutt Valley	Wellington*, Ngauranga*, Petone*, Ava, Woburn, Waterloo* Interchange, Epuni, Naenae, Wingate, Taita, Pomare, Manor Park, Silverstream, Heretaunga, Trentham, Wallaceville, Upper Hutt	16
Melling	Wellington*, Ngauranga*, Petone*, Western Hutt, Melling.	2
Johnsonville	Wellington*, Crofton Downs, Ngaio, Awarua Street, Simla Crescent, Box Hill, Khandallah, Raroa, Johnsonville	8
NIMT	Wellington*, Kaiwharawhara, Takapu Road, Redwood, Tawa, Linden, Kenepuru, Porirua, Paremata, Mana, Plimmerton, Pukerua Bay, Muri, Paekakariki, Paraparaumu, Waikanae, Otaki.	17
Total		**51**

*Note: * Stations that serve more than one line*

Greater Wellington owns Petone and Waterloo station buildings and 5 shelters. These assets are covered by this Plan.

Most of the rail infrastructure is owned by the government agency KiwiRail who owns the rail land, tracks, signalling, electrification, platforms, shelters, subways, and over-bridges. The railway stations are also mainly owned by rail operator KiwiRail including Wellington station building. These assets are excluded from this Plan.

The rail rolling stock (passenger units) is mostly owned by KiwiRail . Greater Wellington, through Greater Wellington Rail Ltd (GWRL), owns: the SW Wairarapa carriages, the SE carriages and an English Electric 2-car unit; and will own the new Matangi electric multiple units (EMU) currently being purchased. Rail rolling stock is not covered by this Plan.

The region's commuter park & ride facilities are managed by Greater Wellington with assistance from the relevant territorial authorities. The land occupied by these facilities is owned by a number of organisations including Kiwi Rail, NZ transport Agency, territorial authorities, and Greater Wellington. These assets are included in the scope of this Plan.

Greater Wellington also provides cycle lockers and cycle racks/cones at a number of stations across the region. These assets are included in the scope of this Plan.

Table 3 summarises the network assets included within the scope of this asset management plan. Ownership of asset types varies with location as described in Section 1.5. Further detail is presented in Section 5.0.

Table 3 Rail network assets

	Item	Refer Section	Owner	Maintained by	Funded by
Included in the scope of this Plan	Station Building Structures including shelters	5.5	Greater Wellington KiwiRail	KiwiRail	Greater Wellington NZTA
	Station Facilities (Lighting, Signage, Seating, Bins and Cycle Lockers, CCTV)	5.6	Greater Wellington	KiwiRail	Greater Wellington NZTA
	Station Carparking	5.7	Greater Wellington Various	Greater Wellington / TA's	Greater Wellington NZTA
	CCTV	5.8	Greater Wellington	Greater Wellington	Greater Wellington
Excluded from the scope of this Plan	Wellington Station		Kiwi Rail	Kiwi Rail	Central Government and track access fees
	Tracks, Signalling, Electrification		Kiwi Rail	Kiwi Rail	Central Government and track access fees
	Rolling Stock		Kiwi Rail GWRL	KiwiRail (Subcontractor)	Greater Wellington (Rates) / NZTA Central Govt
	Platforms		Kiwi Rail	Kiwi Rail	Central Government and track access fees
	Station Underpasses (Subway)		Kiwi Rail	Kiwi Rail	Central Government and track access fees
	Station Overbridges /		Kiwi Rail / Varies	Kiwi Rail / Varies	Central Government

	Item	Refer Section	Owner	Maintained by	Funded by
	Footbridges				and track access fees

1.10.2 Bus network

The region's bus network consists of approximately 70 routes and 3,316 bus stops. Table 4 summarises the number of bus stops and associated shelters across the region.

Table 4 Number of stops on the bus network

District/City	Bus Stops	Shelters
Carterton	28	18
Hutt	698	127
Kapiti Coast	359	26
Masterton	84	3
Porirua	396	61
South Wairarapa	61	3
Upper Hutt	289	25
Wellington	1,401	205
TOTAL	**3,316**	**468**

Bus vehicles are owned by the various operators in the region. The trolley buses are owned by NZ Bus and are excluded from the scope of this Plan. The overhead wires are owned by Wellington Cable Car Limited and are included in this Plan.

There are currently 468 shelters in the Wellington region (excluding Adshel and shop verandas). These assets are included in the scope of this Plan. Bus shelter installation and maintenance is funded by Greater Wellington with most existing shelters being owned by the territorial authorities. New bus shelter installations from 2008 will be in the ownership of Greater Wellington with maintenance being funded through the TA's with the exception of Upper Hutt where Greater Wellington contracts shelter maintenance direct.

Greater Wellington manages contracts for bus shelter replacements and renewals on a regional basis. The Lambton Quay Bus Interchange is the region's only dedicated bus interchange and is owned by Wellington City Council with maintenance activities funded through Greater Wellington.

Table 5 summarises the bus network assets included within the scope of this asset management plan. Ownership of asset types varies with location as described in Section 1.5. Further detail is presented in Section 5.0

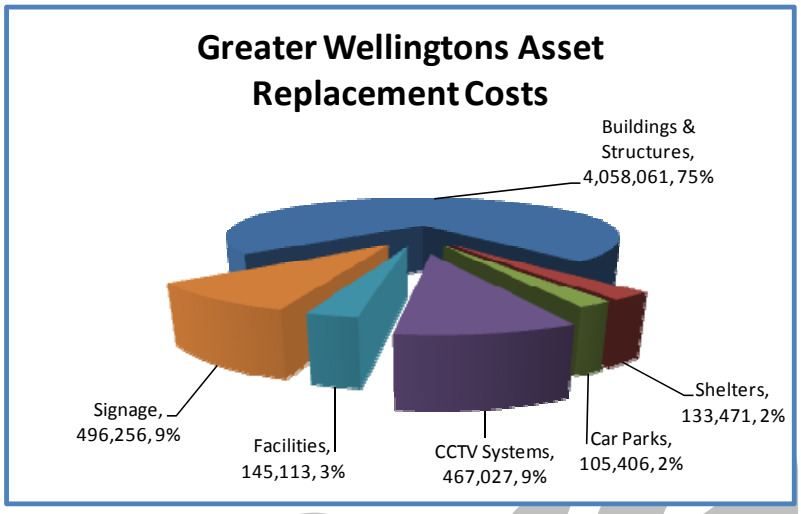
Table 5 Bus network assets

	Item	Refer Section	Owner	Maintained by	Funded by
Included in the scope of this Plan	Interchanges Lambton Quay Bus Interchange	5.5	Greater Wellington - Waterloo WCC – Lambton Quay	Greater Wellington WCC	Greater Wellington NZTA WCC
	Bus shelters	5.9	Greater Wellington TAs	Greater Wellington TAs	Greater Wellington NZTA
	Bus Signage	5.11	Greater Wellington TAs	Greater Wellington TAs	Greater Wellington NZTA
	Trolley Bus Overhead Network	5.12	Wellington Cable Car Ltd	Wellington Cable Car Ltd	Greater Wellington NZTA
Excluded	Bus vehicles		Bus operators	Bus operators	Greater Wellington and fares

1.10.3 Asset value

The replacement value of the assets owned by Greater Wellington is $5.4 million as at June 2008. Structures account for 75% of the replacement value, with most of this relating to the Waterloo Interchange ($3.6m). Figure 3 summarises the replacement costs of these assets by asset group.

Figure 3 Replacement value of network assets



1.10.4 Ferry and Cable Car networks

The harbour ferry service and the cable car are excluded from the scope of this Plan.

1.11 Sustainability and mitigating significant negative effects

As part of the Regional Land Transport Strategy, a fundamental driver for public transport is to support economic, environmental and social sustainability and avoid, where reasonably possible, adverse effects of transport on the environment and communities. Key objectives include:

- Increased use of public transport
- Increased use of cycling and walking
- Reduced use of private and company cars
- Increased energy efficiency of the vehicle fleet
- Reduced greenhouse gas emissions
- A high standard of environmental design of transport infrastructure.

There is the potential for transport projects and on-going operations to have negative effects on environmental, social, cultural and economic well-beings, although public transport does have an overall positive effect on greenhouse gas emissions due to the extensive electric trains and trolley bus networks.

Good access is important for our community and demand for access will continue to rise with continued growth in the population and the region's economy. Greater Wellington will seek to minimise the impact of transport projects and operations and will promote awareness and specific strategies to assist others to minimise the impact of their travel on the environment.

Possible significant negative effects and Greater Wellington's response are outlined in Table 6.

Table 6 Possible significant negative effects

Significant Negative Effect	Mitigation Measure

Significant Negative Effect	Mitigation Measure
Environmental	
Increased vehicle emissions from aging diesel powered bus fleet, particularly if the service is not well patronised offsetting any benefits from reducing the numbers of private vehicles.	Maintain and update Vehicle Quality Standards for contracted services Review services provision for poorly used services
Social	
The particular needs of cyclists and pedestrians and their conflicts with other forms of traffic	Monitor complaints and address any issues through either education or driver awareness
Potential for land take to make way for increased infrastructure	Consult with the community on any major project that may impact on communities ability to “get around the region easily”
Cultural	
Transportation development may impinge on culturally significant lands	Continue to consult with the regions iwi groups through Ara Tahi and continue to involve Ara Tahi in the decision making process
Economic	
Funding from NZTA will not be available to the extent forecast in strategic documents increasing funding burden on the region	Maintain relationships with NZTA and Ministry of Transport (MoT) Review plans in line with funding forecasts

2.0 Levels of service

2.1 Overview

Asset management planning enables the relationship between levels of service (LoS) and the cost of the service (the price/quality relationship) to be determined. This relationship is then evaluated in consultation with the community to determine the levels of service they are prepared to pay for.

LoS define the quality of delivery for a particular activity or service against which service performance can be measured.

This is the first time Greater Wellington has gone through the exercise of establishing LoS for Public Transport assets at this level of detail. The LoS section of the Plan identifies the gaps in Greater Wellington's knowledge of what the customer's perspectives on LoS are. It also identifies what information needs to be provided from service providers to enable measurement between customer and technical LoS.

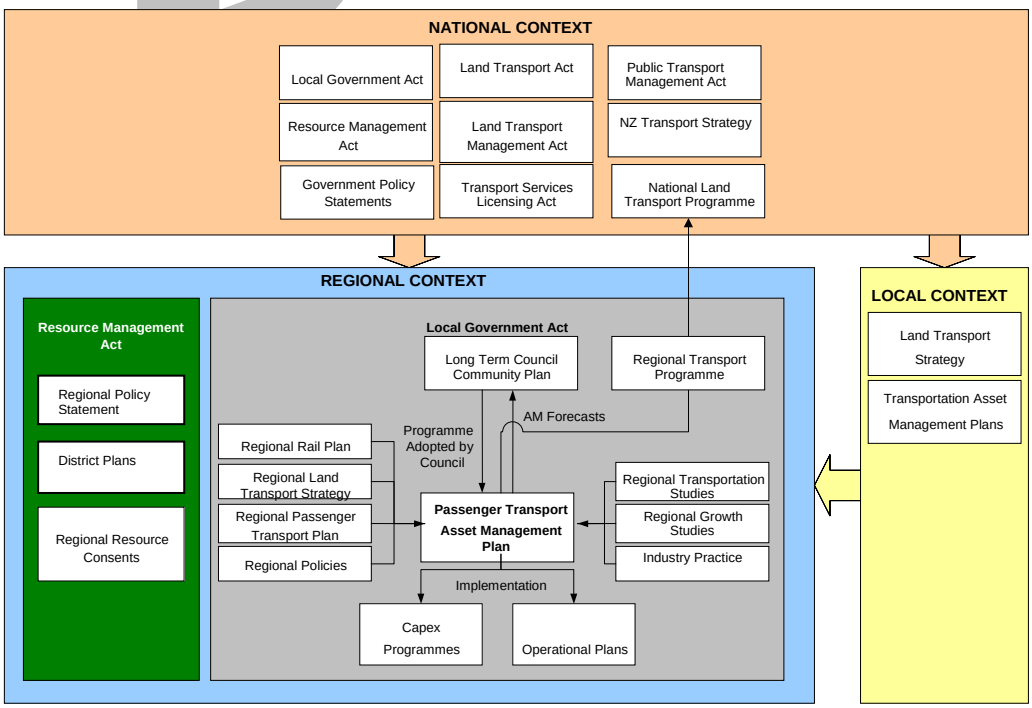
2.2 LoS drivers

The role of Greater Wellington in planning and providing for public transport services is defined by a range of transport drivers from the national, regional and local level including:

- Statutes and regulations
- Strategies and policies
- Outcomes from studies, including customer expectations
- Industry practice.

The relationship between these drivers is indicated in Figure 4.

Figure 4 Key LoS drivers



2.2.1 Legislative drivers

The key legislation for public transport is as follows.

a) Local Government Act (LGA) 2002

The LGA 2002 is based on a sustainable, effective, responsible, responsive and accountable local government being fundamental to achieving the long-term well being of communities. The LGA 2002 outlines the responsibilities of local government and the decision making process for activities undertaken on behalf of the community, primarily through the adoption of the LTCCP. The LTCCP identifies all Greater Wellington activities, including Public Transport (as a key issue) and prioritises projects for future development based on the expectant outcomes of the community.

Schedule 10(2) d of the LGA 2002 covers specific requirements relating to Asset Management Planning with a strong emphasis on the following:

- Demand – In relation to estimated additional capacity and the associated costs and funding sources, including maintenance renewal and upgrades.
- Levels of Service – Intended performance targets and other measures by which actual levels of service provision may be meaningfully assessed, and the estimated costs of achieving and maintaining identified service targets, including sources of funding.

b) Land Transport Management Act (LTMA) 2003 & Amendments

The LTMA, and its Amendments, set out requirements and process for development of Greater Wellington's Land Transport Programme and provides a framework for the receiving funding from NZTA. The LTMA 2003 was amended on 14 July 2008. On 1 August 2008 Transit New Zealand and Land Transport New Zealand were merged to form the New Zealand Transport Agency. This Crown entity brings together the functions of the 2 organisations to provide an integrated approach to transport planning, funding and delivery.

c) Public Transport Management Act (PTMA) 2008

The purpose of the PTMA 2008 is to contribute to the aim of achieving an affordable, integrated, safe, responsive and sustainable transport system.

The Act allows:

- Regional Councils to set standards for commercial public transport services that are provided in their regions, provides for, and regulates the registration of commercial public transport services.
- Regional Councils to require all or any public transport services in their regions to be provided under a contract with them, and consequently to discontinue any commercial public transport services provided in their regions that are subject to such a requirement.

The PTMA helps Regional Councils and the NZTA to obtain the best value for money in achieving an affordable, integrated, safe, responsive, and sustainable public transport system, having regard to the desirability of encouraging fair competition and a competitive and efficient market for public transport services.

d) Resource Management Act (RMA)1991 & Amendments

The RMA 1991 is New Zealand's primary legislation dealing with the management of natural and physical resources. It provides a national framework to manage land, air, water and soil resources, the coast, subdivision and the control of pollution, contaminants and hazardous substances.

The RMA has a single overarching purpose: To promote the sustainable management of natural and physical resources.

The RMA establishes a hierarchy of policy documents from national instruments to regional policy statements, and regional (and district) plans. This 'hierarchy' and requirement to ensure consistency between plans, is to promote sustainable management and ensure integrated management of natural and physical resources at a national, regional and local level.

e) Railways Act 2005

The Railways Act 2005 sets out the requirements for the licensing of persons wishing to operate a railway in New Zealand. It covers monorails, and both light and heavy railways on track with a gauge of 550 mm or greater. It also includes basic safety obligations of operators and on the general public when near a railway, and the powers the railway operators have to protect and manage the railway corridor.

f) Civil Defence Emergency Management Act (CDEM) 2002

The CDEM Act 2002 came into force on December 1, 2002. The CDEM Act 2002 ensures that New Zealand has the resources to manage disasters.

Emergency Management focuses on 'the 4Rs':

- Reduction – identifying and analysing risks to human life and property.
- Readiness – developing capabilities before an emergency occurs.
- Response – taking action immediately before, during or directly after an emergency.
- Recovery – initiating activities after impact, and extending them until the community's capacity for self-help is restored.

The CDEM Act 2002 requires:

- Greater Wellington and district and city councils in the Wellington region to form a Wellington Civil Defence and Emergency Management Group (CDEM Group)
- Development of a Civil Defence Emergency Management Plan that identifies risks from hazards and puts readiness, response and recovery procedures in place. The Plan is developed with public input to ensure hazards and risks are dealt with to a level accepted by the community.

g) Health and Safety in Employment Act 1992

The objective of the Health and Safety and Employment Act 1992 is to promote the prevention of harm to all people at work, and others in, or in the vicinity of, places of work. The Act applies to all New Zealand workplaces and places duties on employers, the self-employed, employees, principals and others who are in a position to manage or control hazards.

h) Local Government (Rating) Act 2002

The Rating Act 2002 replaced the Rating Powers Act 1988 with updated and streamlined rating powers. The intention is to ensure that the community has the opportunity to be well informed about what its money is being spent on, and to express its views when major decisions are being made.

The three main purposes of the Rating Act are to:

- provide local authorities with flexible powers to set, assess and collect rates
- ensure that rates reflect decisions made in a transparent and consultative manner
- provide for processes and information to ensure that ratepayers can identify and understand their liability for rates.

i) Building Act 2004

In New Zealand, the building of houses and other buildings is controlled by the Building Act 2004. It applies to the construction of new buildings and structures, as well as the alteration and demolition of existing buildings and structures.

j) Bylaws

Greater Wellington currently has no bylaws relating to the management of the Public Transport Assets. However these assets reside within the areas of a number of Territorial Local Authorities, whereby the assets will need to comply with relevant bylaws.

2.2.2 Strategies and policy drivers

Key planning and policy documents include the:

- Long Term Council Community Plan
- New Zealand Transport Strategy 2008
- Government Policy Statement on Land Transport Funding 2009/10 – 2018/19
- Wellington Regional Land Transport Strategy 2007-2016
- Regional Passenger Transport Plan
- Wellington Regional Rail Plan
- Regional Passenger Transport Operational Plan
- Wellington Regional Strategy
- Regional Policy Statement
- District Plan
- Health and Safety Policy

a) Greater Wellington's Long Term Council Community Plan

Greater Wellington's Long Term Council Community Plan (LTCCP) is the key document guiding the funding of Greater Wellington's public transport activities and relies on the Plan to provide information regarding the planned works activities and forecast expenditure needs.

The LTCCP identifies:

- the activities Greater Wellington plans to carry out over the next ten years and how these activities will contribute to a range of identified community outcomes
- how Greater Wellington plans to fund these activities
- how Greater Wellington will make significant decisions.

The LTCCP is updated every three years and an Annual Plan is prepared each year.

The transport group of activities, of which public transport is a sub-group, primarily contributes to the following community outcomes:

Table 7 LTCCP Community outcomes associated with the transport activity group

Community outcome	Contribution of the transport activity group to each community outcome
Connected Community	Access is quick and easy – locally, nationally and internationally. Our communications networks, air and sea ports, roads and public transport systems enable us to link well with others, both within and outside the region.
Prosperous community	By enhancing the movement of goods and people within the region.
Healthy Environment	By reducing vehicle emissions through good transport planning and the provision of public transport services.
Essential services	By providing and maintaining high quality secure public transport infrastructure and planning for roads, walkways and cycleways.
Healthy Community	By encouraging walking and cycling and reducing air pollution.
Quality Lifestyle	Supporting people's participation in the community including, by part funding taxi services, the participation of people with disabilities.

The transport activity group consists of the following activities:

- Regional transport network planning
- Encouraging sustainable transport choices
- Public transport services
  - Planning public transport services
  - Public transport operations
  - Maintain infrastructure assets and invest in new infrastructure

The policy on significance guides Greater Wellington when making decisions of varying importance. The policy also identifies those assets that Greater Wellington holds and considers to be strategic. Such significant assets include Greater Wellington's ownership of rail rolling stock and other rail infrastructure required for the operation of the passenger rail system in the region (taken as a whole).

Any decision in respect to a strategic asset will trigger certain requirements for consultation and other considerations under the Local Government Act 2002.

b) New Zealand Transport Strategy

The New Zealand Transport Strategy is a key document reflecting the major role transport plays in supporting the government's vision for sustainability. The strategy outlines the government's vision, objectives and targets for transportation up to 2040, providing guidance to regional councils and territorial authorities in the preparation of their regional and local transport strategies.

The strategy's vision for transport in 2040 is that:

"People and freight in New Zealand have access to an affordable, integrated, safe, responsive and sustainable transport system."

c) Regional Land Transport Strategy (RLTS)

The Wellington Regional Land Transport Strategy 2007-2016 (RLTS) is a statutory document that provides a long term direction for the region's land transport system. The RLTS outlines the regional vision, objectives, outcomes and policies for the transport system with a ten-year planning horizon and is consistent with the New Zealand Transport Strategy. The strategy is currently under review with a new one expected in mid 2010.

The strategy's vision is to deliver:

"…an integrated land transport system that supports the region's people and prosperity in a way that is economically, environmentally and socially sustainable."

The strategy's objectives are to:

- Assist economic and regional development
- Assist safety and personal security
- Improve access, mobility and reliability
- Protect and promote public health
- Ensure environmental sustainability
- Ensure that the regional transport programme is affordable for the regional community.

The strategy also includes outcomes and targets directly relevant to passenger transport as shown in Table 8.

Table 8 RLTS Outcomes and targets

Key/related outcome	Target (2016)
1.1 Increased peak period passenger transport mode share	• Passenger transport accounts for at least 25 million peak period trips per annum. (18.3 million in 2005/06) • Passenger transport accounts for at least 21% of all region wide journey to work trips. (17% in 2006)
1.2 Increased off-peak passenger transport use and community connectedness	• Passenger transport accounts for at least 25 million off peak period trips per annum. (16.7 million trips in 2005/06)
1.3 Improved passenger transport accessibility for all, including disabled people or from low income groups	• 80% of passenger transport services are guaranteed to be wheelchair accessible. (11.8% in 2005/06) • Most of the region's residents live within 400m (5 minutes walk) of a bus stop or train station with a service frequency of at least 30 minutes. • Passenger transport services in the highest deprivation areas are more affordable.
1.4 Reduced passenger transport journey times compared to travel by private car	• Peak period PT journey times are equal to or better than a similar journey undertaken by a private car for key selected corridors.
1.5 Increased passenger transport reliability	• Nearly all bus and train services run on time.
3.2 Reduced private car mode share	• Private vehicles account for no more than 62% of region wide journey to work trips. (68% in 2006)
6.1 Improved land use and transport integration (in line with the WRS and local authority urban development strategies)	• All large subdivisions and developments include appropriate provision for walking, cycling and public transport.
6.2 Improved integration between transport modes	• The majority of passenger transport services covered by integrated ticketing.
6.4 Improved transport efficiency	• Reduced passenger transport expenditure per passenger. • Reduced roading expenditure per GDP.

d) Regional Passenger Transport Plan (RPTP)

The Regional Passenger Transport Plan 2007-2016 prepared by Greater Wellington provides a framework for the funding and provision of passenger transport and sets out the vision, objectives and policies for passenger transport in the region.

The RPTP is focused on delivering the passenger transport outcomes and targets identified in the RLTS. It is currently being reviewed.

The vision for passenger transport is:

"a sustainable passenger transport system that … is integrated, accessible and increasingly the mode of choice for a greater number of journeys."

The RPTP also identifies the main drivers for passenger transport, which are to:

- ensure access and mobility
- reduce congestion
- support environmental sustainability.

These drivers are influenced by the following values or principles that are important in achieving the ideal passenger transport system for the region:

- Equity
- Accessibility
- Reliability
- Quality
- Simplicity
- Affordability.

The RPTP also identifies that the ideal passenger transport system should also include the following essential qualities or characteristics:

- Convenience - Coverage, degree of integration, frequency and travel time maximises convenience for passengers.
- Reliability - Services, vehicles and information are reliable and deliver on passenger expectations.
- Simplicity - Passenger transport services are easy to use and understand.
- Quality - Passenger transport services are comfortable and clean as per user expectations.
- Friendliness - Passenger transport is safe and provides a positive experience for passengers.

The following objectives and policies are particularly relevant to the management of the region's passenger transport assets:

Objective 2.1: Passenger transport infrastructure assets are accessible, sustainable and managed effectively in support of defined network standards.

Objective 2.2: Passenger transport vehicles are accessible, sustainable and managed effectively in support of defined network standards.

Policy 2.2: Manage rail, bus and ferry infrastructure through Asset Management Plans and in accordance with Greater Wellington's Long Term Council Community Plan, to ensure assets are continuously improved.

e) Passenger Transport Operational Plan

The Passenger Transport Operational Plan is a non-statutory document providing detail on how Greater Wellington plans to deliver on the activities reported in the RPTP.

f) Wellington Regional Rail Plan

The Wellington Regional Rail Plan outlines Greater Wellington's vision for the rail system, assesses options and plans development strategies in order to achieve this vision. Its purpose is to maintain and grow rail's position as the key transport mode for long to medium distance and high volume transport services over the next 25 years.

The plan recognises and encourages the increasing popularity of rail as a sustainable transport choice for passengers and freight, and recognises that rail is an essential service underpinning the effective functioning and economic development of the Greater Wellington region.

The Plan's vision is:

"To deliver a modern, reliable and accessible rail system that competitively moves people and freight in an economic, environmental, integrated and socially sustainable way."

g) Wellington Regional Strategy

The Wellington Regional Strategy is a sustainable growth strategy that has been developed by Wellington region's nine local authorities, in conjunction with central government and the region's business, education,

research and voluntary sector interests. Its aim is to make the Wellington region “internationally competitive”, in other words, a region which offers the competitive package of a great lifestyle and job opportunities, supported by a strong economy.

h) Regional Policy Statement

Under the Resource Management Act 1991, all regional councils must prepare a regional policy statement for their region. The concept underlying these policy statements is "sustainable management". This means managing the resources in the Wellington region in a way which provides for the needs of future generations, as well as for the needs of our generation.

The RPS is currently being reviewed.

i) District Plans

These core territorial authority documents incorporate policies and objectives for land use in the Greater Wellington region, and designations for future works incorporated in the Plan.

j) Health and Safety Policy

Greater Wellington’s health and safety policy strategic objective is to: "Develop, implement, and continually improve health and safety management systems that will ensure full compliance with the requirements of the Health and Safety in Employment Act (1992) and ensure that Greater Wellington provides and maintains a safe and healthy working environment for all staff and others."

2.2.3 Industry Standards

This Plan is being developed in accordance with best practice guidelines set by the National Asset Management Steering (NAMS) Group. The plan is intended to comply with the core requirements of Plans by the Office of the Auditor General.

In addition, industry standards influence the management of passenger transport. The objective of the National Rail System Standards is to provide a generic framework for the management of safety and change within the Rail Safety System (RSS). It is applicable for all activities involving the operation of Rail Service Vehicles on the National Rail System and is designed to meet the requirements set out in the relevant legislation and the Land Transport Safety Authority document "Rail Safety Licensing and Audit Guidelines”.

In addition, provision of bus shelters, signage, lighting and security measures are done so with reference to the relevant New Zealand standards.

2.3 Linking LoS to Community Outcomes

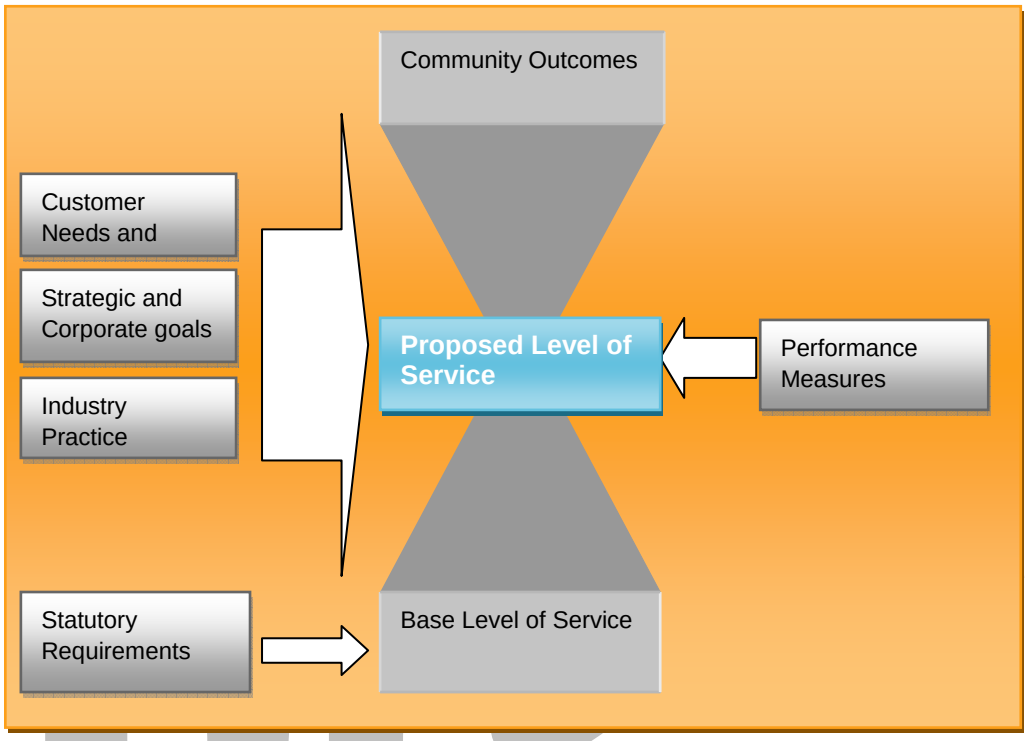
2.3.1 Developing initial levels of service

The adopted levels of service for the public transport activity scheduled in Table 10 are based on:

- Statutory requirements (Section 2.2.1) – Environmental standards, regulations, acts and Council bylaws that impact on the way assets are managed (that is, resource consents, building regulations, health and safety legislation). These requirements set the minimum level of service that must be provided.
- Community outcomes and strategic goals (Section 2.2.2) – Community outcomes provide the highest-level summary of the type of community the community wish to live in. City outcomes have been developed which address outcomes over which the Council has direct influence. Alignment with these outcomes is fundamental to the development of levels of service. Strategic goals provide guidelines for the scope of current and future services offered the manner of service delivery and define specific levels of service which the organisation wishes to achieve.
- Industry practice (Section 2.2.3) – Generally accepted national practice for the provision of wastewater services.

Greater Wellington has developed initial customer and technical levels of service through a series of workshops considering these drivers as indicated in Figure 5.

Figure 5 Levels of service drivers



2.3.2 Community consultation

Greater Wellington regularly consults on the broad level of service provided for public transport services. Consultation includes those undertaken for Regional Land Transport Strategy, Regional Public Transport Plan, Long Term Council Community Plan and specific consultation such as service reviews and consultation on specific projects. These consultations have provided clear community direction regarding the broad levels of service the regions public transport system should provide.

Information on customer satisfaction with the levels of service provided is maintained through complaints processes and satisfaction surveys e.g. annual Public Transport monitoring and three yearly Transport Perceptions survey.

2.3.3 Linkages between Core Values and Strategic Outcomes for the passenger transport network

Table 9 identifies links between customer core values identified through consultation to date, community needs, strategic objectives and strategic outcomes.

Table 9 Linking core values and strategic outcomes

Core Value	Community Needs	Strategic Objective - Regional land Transport Strategy 2007-2016	Strategic Outcome - Regional land Transport Strategy 2007-2016
Simplicity	Accessible to local communities Accessible to disabled users	Everyone knows where to find and has easy access to reliable, relevant and timely information about journeys they want to make	Increased peak period passenger transport mode share Increased off-peak passenger transport use and community connectedness Improved passenger transport accessibility for all, including disabled people or from low income groups
Quality	User feel the network is up to date and "fit for purpose" Network is clean and tidy Availability of information i.e. signs, markings, route information	Passenger transport infrastructure assets are accessible, sustainable and managed effectively in support of defined network standards Everyone knows where to find and has easy access to reliable, relevant and timely information about journeys they want to make	Increased peak period passenger transport mode share Increased off-peak passenger transport use and community connectedness
Reliability	The transport system is reliable and predictable i.e. travel times, departures, arrivals, opening hours	Everyone knows where to find and has easy access to reliable, relevant and timely information about journeys they want to make	Increased peak period passenger transport mode share Increased off-peak passenger transport use and community connectedness Increased passenger transport reliability

Core Value	Community Needs	Strategic Objective - Regional land Transport Strategy 2007-2016	Strategic Outcome - Regional land Transport Strategy 2007-2016
Friendliness	The community is adequately consulted and informed All customers are treated in a fair, consistent and respectful way e.g. rules, charges, enforcement, responsiveness, cooperation. The network is safe to use Assets are managed with respect for current and future generations Adverse effects are managed effectively i.e. traffic noise, damage Facilities and services provide social benefits to the whole community.	Passenger transport infrastructure assets are accessible, sustainable and managed effectively in support of defined network standards A funding system for passenger transport services that recognises and balances the requirements of funders, providers and users while also providing incentives for patronage growth, efficiency and effectiveness A contract procurement system that is fair to all involved and provides value for money to ratepayers Full compliance with legislative requirements and NZTA rules	Increased peak period passenger transport mode share Increased off-peak passenger transport use and community connectedness

2.4

Level of service we provide

Greater Wellington intends to continue to provide broadly the current service level for the Public transport assets, with some minor progressive improvements to the asset quality, condition and accessibility. Provision of a new real time passenger information system display has commenced. Section 2.5 identifies current and future service gaps, and Greater Wellington's strategy to close these gaps.

Performance against these targets will be reported quarterly unless specifically noted.

Customer levels of service focus on measuring how the customer receives the service. Technical measures are focused more on the technical criteria that demonstrate effective organisational performance.

The level of service we provide is presented in the following tables.

Table 10 Levels of service Bus Stops

Bus Stops		Customer LoS		Technical LoS					
Core Value	Level of Service Statement	Performance Measure	Currently Achieved	Target					
				10/11	11/12	12/13	13/15	15/20	Data Capture Source
Accessibility	The community has a high level of accessibility to bus stops.	%age of urban residents in the region within 400m of a bus stop	78%	81%	81%	81%	90%	95%	Annual Monitoring Report
Reliability	Bus stops are clearly identified	%age of bus stops with Metlink identification signage	98%	100%	100%	100%	100%	100%	Database
	Timetable information is provided at bus stops	%age of bus stops with Metlink timetable signage	93%	100%	100%	100%	100%	!00%	Database
		%age of bus stops with "real time" passenger information display	0%	80%	100%	100%	100%	100%	Database
Quality	Exposed bus stops provide shelter from inclement weather	%age of bus stops with shelters	22%	23%	24%	25%	30%	40%	Database
		%age of bus shelters which provide 75% protection from the wind and rain	100%	100%	100%	100%	100%	100%	Database
	Shelters are accessible by all	%age of shelters that are barrier free for disabled access	New Target	TBC					Audit Database
	Shelters provide a comfortable environment for the user.	%age of shelters that provide seating	100%	100%	100%	100%	100%	100%	Database
	Bus shelters are kept clean and tidy to reflect a safe and tidy environment	%age of bus shelters in cleanliness grade 3 (Moderate) or better	New Target	70%	75%	80%	85%	85%	Audit

Bus Stops		Customer LoS		Technical LoS					
Core Value	Level of Service Statement	Performance Measure	Currently Achieved	Target					
				10/11	11/12	12/13	13/15	15/20	Data Capture Source
		%age of bus shelters in condition grade 2 (Good) or better	72%	77%	82%	87%	90%	95%	Audit
	We will respond to maintenance requests promptly	%age of urgent faults or damage to shelters fully rectified within: • 4 hours of notification between 9.00am and 5.00pm Monday to Friday • By 12.00 noon on the first following working day outside these times	100%	100%	100%	100%	100%	100%	Audit Database
		%age of non-urgent damage to shelters fully rectified within10 days	100%	100%	100%	100%	100%	100%	Database
		%age of graffiti completely removed within 2 hours of notification.	100%	100%	100%	100%	100%	100%	Database
	Shelters provide a safe environment for the user.	%age of shelters which provide a 360 degree view into and around the shelter	41%	44%	48%	52%	55%	60%	Database

Table 11 Levels of service Rail Stations

Train Stations		Customer LoS	Technical LoS						
Core Value	**Level of Service Statement**	**Performance Measure**	**Currently Achieved**	**Target**					
				10/11	**11/12**	**12/13**	**13/15**	**15/20**	**Data Capture Source**
Accessibility	Park and ride facilities are provided where there is demand	%age of rail stations with park and ride facilities	68%	69%	73%	77%	80%	90%	Database
		%age of Carparks at 90% capacity or more between 9.00am and 5.00pm, Monday to Friday	84%	85%	85%	85%	90%	90%	Audit Database
		%age of Carparks at greater than 100% capacity between 9.00am and 5.00pm, Monday to Friday	30%	30%	30%	30%	25%	20%	Database
Reliability	Rail stations are clearly identified	%age of rail stations with Metlink identification signage	39%	39%	50%	100%	100%	100%	Audit Database
	Timetable information is provided at rail stations	%age of rail stations with Metlink timetable signage	100%	100%	100%	100%	100%	100%	Audit Database
		%age of rail stations with “real time” passenger information display	0	20%	80%	100%	100%	100%	Database
Quality	A safe environment is provided for the user	%age of Carparks that meet CCTV criteria have CCTV	39%	45%	51%	57%	70%	100%	Audit Database
		%age of CCTV equipment in condition grade 2 (Good) or better	70%	77%	85%	100%	100%	100%	Audit Database
		%age of Carparks have lighting to current standards (NZS 1158)	New Target	54%	63%	69%	85%	100%	Audit Database
		%age of rail stations identified as having safety issues which require patrols:	39%	39%	38%	37%	35%	33%	Audit Database
		Level 1 safety issues – %age of identified stations with on foot patrols at least once every working business day	100%	100%	100%	100%	100%	100%	Audit Database
		Level 2 safety issues – %age of identified stations with on foot patrols at least once every working business day with an additional drive through in both directions	100%	100%	100%	100%	100%	100%	Audit Database
		Level 3 safety issues – %age of identified stations with on foot patrols at least once every working business day with an additional drive through in both directions and an additional random drive through	100%	100%	100%	100%	100%	100%	Audit Database

Train Stations		Customer LoS	Technical LoS						
Core Value	Level of Service Statement	Performance Measure	Currently Achieved	Target 10/11	11/12	12/13	13/15	15/20	Data Capture Source
		Patrols provided for special events	100%	100%	100%	100%	100%	100%	Audit
	Cyclists have cycle storage facilities where there is demand	%age of stations with cycle lockers or secure cycle "cages"	22%	22%	22%	22%	22%	22%	Database
		%age of stations with cycle racks/cones	31%	50%	60%	70%	80%	100%	Database
	Rail stations are staffed to reflect the patronage	Paraparaumu - 6.00am to 6.00pm	New Target	TBC					Database
		Porirua – 6.00am to 6.00pm	New Target	TBC					Database
		Waterloo – 6.00am to 1.30 pm	New Target	TBC					Database
		Petone – 6.00am to 12.30pm	New Target	TBC					Database
		Upper Hutt – 6.00 to 6.00pm	New Target	TBC					Database
	Rail stations are maintained in a clean, tidy and safe condition.	%age of rail stations in cleanliness grade 3 (Moderate) or better	New Target	80%	100%	100%	100%	100%	Audit
		Average condition grade of buildings and structures:	New Target						
		• Group A (main stations)		2.5	2.3	2.2	2.1	2	Database
		• Group B (secondary stations)		3	2.8	2.7	2.5	2.2	Database
		• Group C (small stations)		3.3	3.1	2.9	2.7	2.5	Database
		Average condition grade of Carparks:	New Target						
		• Group A (main stations)		2.3	2.1	2	2	2	Database
		• Group B (secondary stations)		2.9	2.7	2.5	2.3	2	Database
		• Group C (small stations)		3.1	3	2.8	2.7	2.5	Database
		Maximum %age of buildings/structures in condition grade 4 (Poor) or worse	New Target	30%	20%	10%	5%	0%	Database
		Maximum %age of Carparks in condition grade 4 (Poor) or worse	New Target (27%)	20%	15%	10%	5%	0%	Audit

Train Stations		Customer LoS		Technical LoS					
Core Value	Level of Service Statement	Performance Measure	Currently Achieved	Target 10/11	11/12	12/13	13/15	15/20	Data Capture Source
		Rail station buildings, platforms, Carparks and subways in cleanliness grade 3 (Moderate) or better	New Target	50%	60%	70%	80%	95%	Audit
	We will respond to maintenance requests promptly	%age of graffiti completely removed within 24 hours of notification for category A & B stations.	New Target	100%	100%	100%	100%	100%	Audit
		%age of graffiti completely removed within 48 hours of notification for category C stations.	New Target	100%	100%	100%	100%	100%	Audit

2.5 Closing identified service gaps

Table 12 summarises the short-term service gaps identified and the strategies, programmes and forecast expenditure over the next 3 years planned to close these gaps, noting that there are generally multiple drivers for projects. The success of implementing these strategies will be routinely reviewed and the targets, timeframes to close the service gaps and/or strategies refined as necessary. These strategies and programmes are further discussed in Section 5.0

Table 12 Service gaps and Programmes to close them

Level of Service/ Performance Measure	Target by July 2013	Currently Achieved	Strategy or Programme	Project type (%)				3 Year Forecast Expenditure 2010/13 total
				Mtnce	Renewal	Growth	LOS	
The community has a high level of accessibility to bus stops.	81%	78%	New bus shelters will be installed across the region			40	60	$0 .75 million
Exposed bus stops provide shelter from inclement weather	25%	22%						
%age of shelters which provide a 360 degree view into and around the shelter	52%	41%						
Bus stops are clearly identified	100%	98%	Sign maintenance and renewals programme	100				$1.2 million
Timetable information is provided at bus stops	100%	93%						
Rail station are clearly identified	100%	39%						
%age of bus stops with “real time” passenger information display	100%	0%	Real time information project				100	$6 million
%age of Rail stations with “real time” passenger information display	100%	0%						
%age of bus shelters in condition grade 2 (Good) or better	87%	72%						
%age of rail stations with park and ride facilities	77%	68%	Carpark development- Land purchase			50	50	$560.000
%age of Carparks at 90% capacity or more between 9.00am and 5.00pm, Monday to Friday	85%	84%	Car park Maintenance & Resurfacing	100				$1.1 million
%age of Carparks that meet CCTV criteria have CCTV	57%	39%	CCTV Maintenance programme	100				$250,000
%age of CCTV equipment in condition grade 2 (Good) or better	70%	100%						
%age of stations with cycle racks/cones	50%	31%	Station Maintenance programme	100				$510,000

3.0 Demand and Growth

3.1 Overview

The demand for passenger transport is driven by a number of factors. In order to deliver an efficient and sustainable passenger transport system it is necessary to understand how these factors interplay.

This growth and demand section provides an overview of current demand for passenger transport and looks at the drivers identified as most likely to affect passenger transport growth over the next 20 years. It forecasts expected demand on the service and shows how Greater Wellington plans to meet the consequent implications to the enabling infrastructure covered by the scope of this Plan.

Growth drivers are:

Internal Drivers	Quality, performance and service levels	Community surveys indicate that aspects such as reliability, availability and frequency can influence patronage choices, and these aspects can influenced by quality, performance and service levels provided by the enabling assets.
External Drivers	Population and demographic change	Changes to the size and nature of the population is directly linked with the demand for travel.
	Economic growth	Economic growth (or recession) can affect travel demand through influence on congestion, car ownership rates and mobility choices.
	Climate change and environmental sustainability	Community awareness of the importance of environmental sustainability is increasing which may influence the use of public transport as an alternative to private vehicles.

3.2 Current demand

Every weekday there are approximately 110,000 trips made by passenger transport (bus, train and ferry) which is approximately 9% of all transport trips made in the region by passenger transport and car combined. 17% of all journeys to work trips made in the region are by public transport.

During 2008/09 there were 35.4 million boardings on bus, train and ferry, which was 2.1% higher than the previous year but lower than the longer term trend of 2.7% increase per annum since 1999.

Figure 6 shows the passenger transport mode share in 2008/09. The most heavily used service is the bus service during peak times; representing 39% of all public transport boardings followed by peak rail services, representing 22%.

Figure 6 Passenger transport mode share with travel period and mode, passengers (mpa), percentage of total patronage

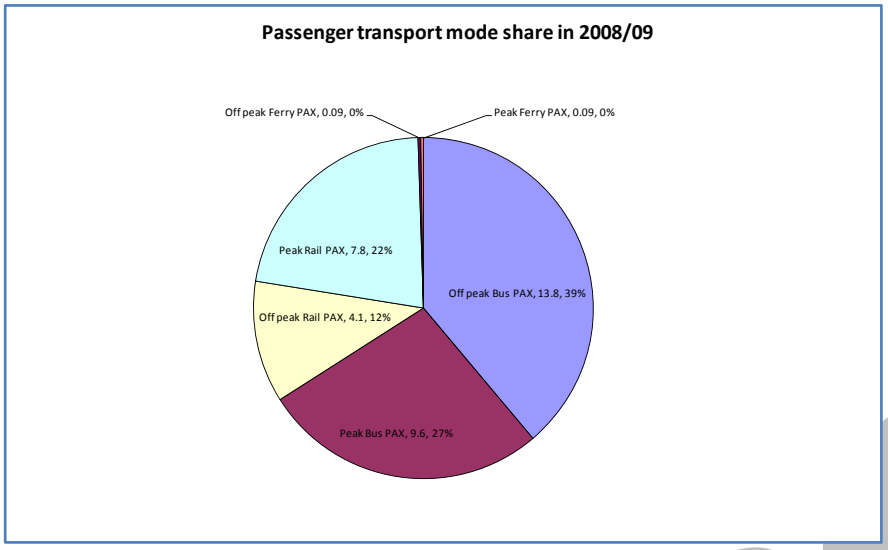
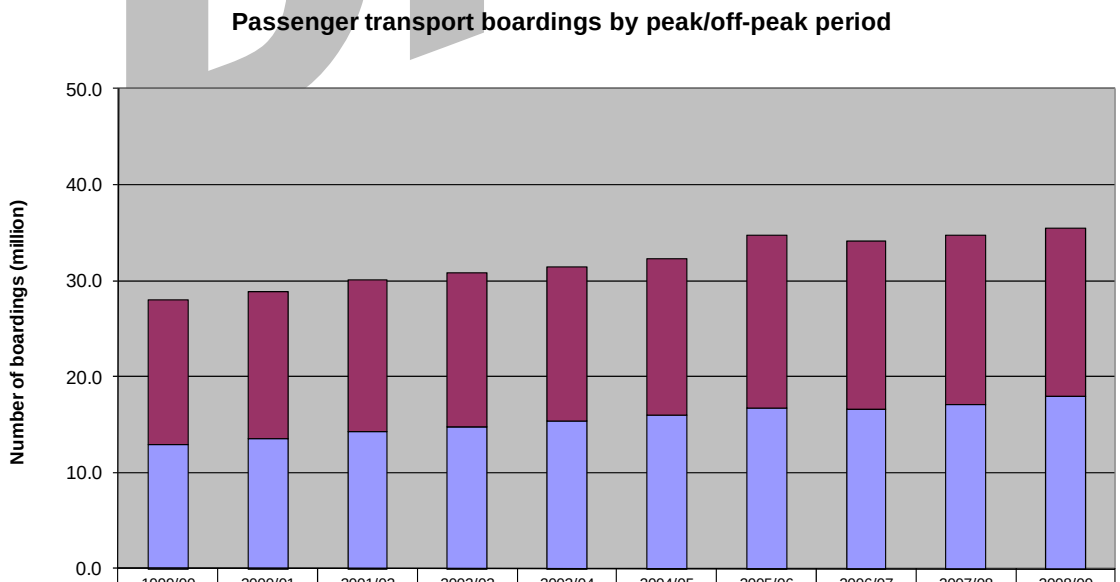


Figure 7 and Figure 8 shows peak and off-peak patronage has been generally increasing across all modes since 1999/2000, although there were small declines in boardings in peak times for bus (2.6%) and ferry services (4.1%).

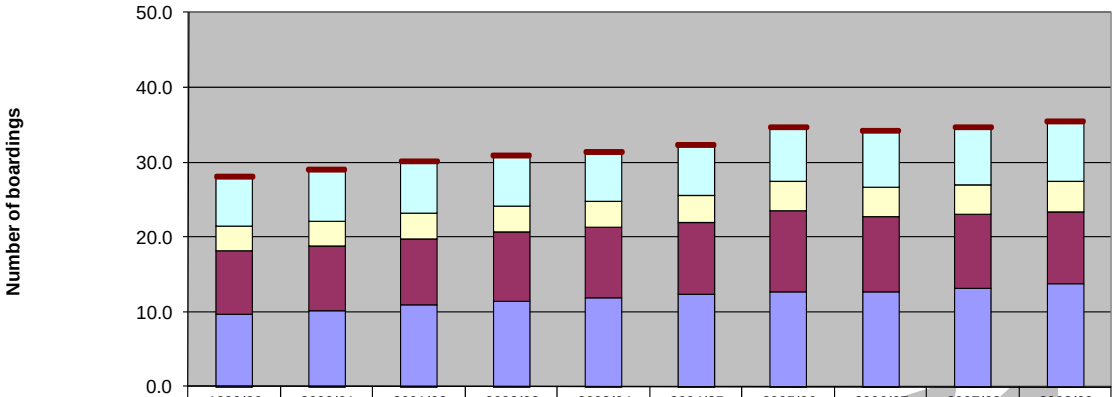
Figure 7 Passenger transport boarding's by Peak/off-Peak period



	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
Peak	15.1	15.3	15.8	16.0	16.1	16.3	18.1	17.5	17.6	17.5
Off peak	12.9	13.6	14.3	14.8	15.3	15.9	16.7	16.6	17.1	18.0
	28.0	28.9	30.1	30.8	31.4	32.3	34.7	34.1	34.7	35.4

Figure 8 Passenger transport boarding's by Mode and Peak/Off-Peak period

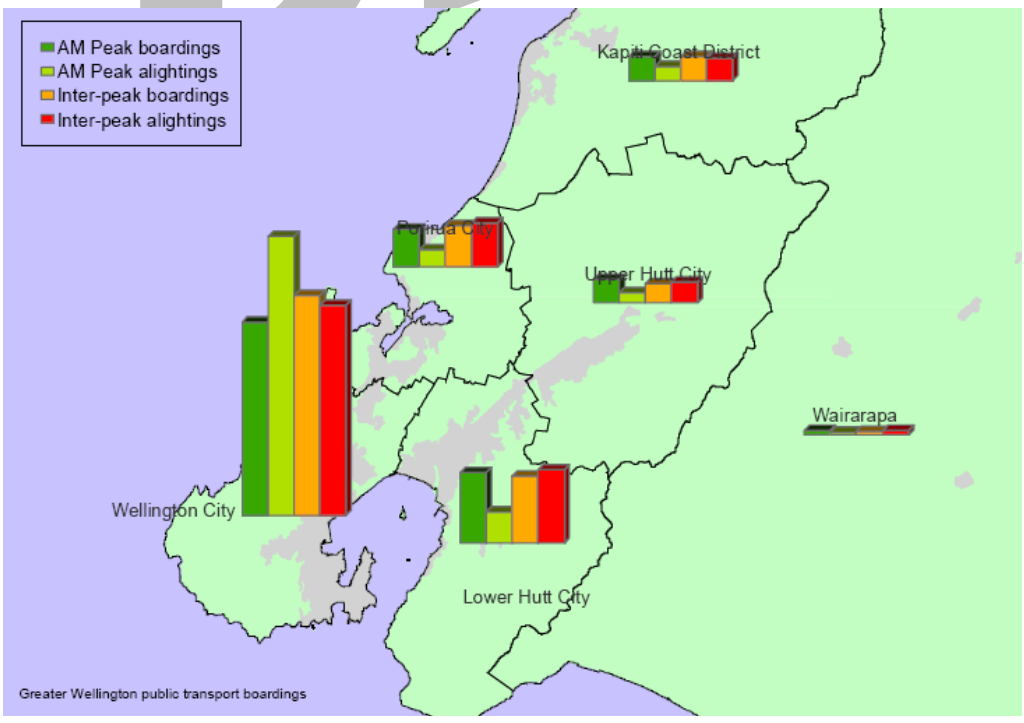
Passenger transport boardings by mode and period



	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
Peak Ferry PAX	0.04	0.04	0.05	0.06	0.06	0.07	0.08	0.08	0.09	0.09
Off peak Ferry PAX	0.06	0.06	0.06	0.06	0.06	0.07	0.08	0.07	0.08	0.09
Peak Rail PAX	6.5	6.7	6.8	6.6	6.6	6.7	7.2	7.3	7.6	7.8
Off peak Rail PAX	3.2	3.3	3.4	3.4	3.4	3.6	3.9	3.8	4.0	4.1
Peak Bus PAX	8.6	8.6	8.9	9.3	9.5	9.6	10.8	10.1	9.9	9.6
Off peak Bus PAX	9.6	10.2	10.9	11.4	11.9	12.3	12.7	12.7	13.1	13.8
Total PAX	28.0	28.9	30.1	30.8	31.4	32.3	34.7	34.1	34.7	35.4

Figure 9 shows how these trips are distributed across the region. Analysis indicates that trips per capita follow a similar profile indicating that people are most likely to use public transport in Wellington and the least likely to in the Wairarapa.

Figure 9 Passenger transport boarding's and Alightings across the Region (WTSM 2006)



3.3 Internal demand drivers

Internal demand influences are factors that can affect the growth and demand for passenger transport and which the region has some influence or control over. These include the transport network, infrastructure investments and the levels of service provided. Internal demand influences can be affected by regional polices and projects.

3.3.1 Quality, performance and service levels

Infrastructure investments and the levels of service provided influence demand and can be directly managed by the region through implementation of regional polices and projects.

Public transport policy drivers

The Regional Passenger Transport Plan identifies the following drivers for passenger transport in the region:

- Reduce congestion
- Ensure access and mobility
- Support environmental sustainability.

These are the main areas for policy intervention to achieve growth targets and can have the following effects on the growth and demand for passenger transport.

a) Reduce congestion

Traffic congestion is undesirable because it increases fuel use and vehicle emissions and has an economic cost in terms of wasted time and lost productivity caused by delays. Congestion also affects reliability and is a significant issue during peak times, particularly on the main routes to and from the Wellington CBD.

However, traffic congestion also has several positive aspects. It often influences trip timing and spreads demand. It affects mode choice and eventually influences land use decisions. Congestion can also be indicative of a strong economy and a level of congestion is required to encourage usage of passenger transport as a first choice of transport. Otherwise the convenience and travel times offered by the private car will outweigh any preference for passenger transport. A reduction in congestion could encourage people to leave passenger transport unless other incentives (such as high fuel prices) encourage them to stay.

Another important factor is the total economic cost of travel by passenger transport compared to the cost of travel by private car. These costs are not just affected by fares and fuel prices but by the generalised cost which incorporates all the economic costs of travel including travel time, waiting time, customer experience and other costs (usually expressed in minutes travel time).

b) Ensure access and mobility

The region's transport network enables people to access key goods and services, work, education and leisure opportunities. Access to passenger transport services is improving. However, while increasing vehicle ownership reflects increased mobility, this can have a negative impact on overall transport system accessibility, for example, the adverse impacts of severe congestion on travel by private car and other modes. To maintain a good level of access, there is a pressing need to limit the growth in car traffic and ensure viable alternatives to travel by private car are available.

The passenger transport system provides an essential transit system during peak hours. In addition, it also functions as an essential service for those people within the region that do not own a private vehicle for any number of reasons such as age, income, disability etc. A well functioning passenger transport system, which is accessible to as many residents and visitors as possible, increases participation in employment and the community. In this context accessibility is a fundamental element required for maintaining and improving mode share.

An accessible transport system will be safer, more comfortable and easier to recognise and use for all people, including those who have disabilities or who are travelling with young children, with bicycles or with luggage. An integrated network is one where transfers between services, including those between bus and train, are easily achieved in terms of timing and ticketing.

c) Support environmental sustainability

Passenger transport makes both direct and indirect contributions to environmental performance by using low emissions passenger transport vehicles and by reducing overall transport emissions through a reduction of private car trips[2].

Passenger transport policy targets

The Regional Land Transport Strategy (RLTS) and Regional Land Transport Programme (RLTP) set out a number of targets to be achieved by 2016. These targets signal the magnitude of the changes sought in relation to the strategy outcomes and provide a benchmark against which to measure progress. These targets enable the region to monitor whether the strategy is achieving progress in the general direction set by the outcomes, and also to measure whether progress has been made to the extent desired and the costs and benefits, both financial and non-financial, of that progress.

The targets for passenger transport include:

- "Key outcome" targets for 2016:
  - Passenger transport accounts for at least 25 million peak period trips per annum (18.3 million in 2005/06)
  - Passenger transport accounts for at least 21% of all region wide journey to work trips (17% in 2005/06)
- "Related outcome" targets for 2016:
  - Passenger transport accounts for at least 25 million off peak period trips per annum (16.7 million in 2005/06)

The RLTS acknowledges that achieving these targets will be very challenging, although it was considered at the time that there is potential to achieve them if they are given adequate emphasis and all potential measures are implemented. To achieve these targets it will be necessary to ensure that all currently planned passenger transport improvements are funded and implemented, and also that additional means of increasing passenger transport capacity and use are actively investigated and given high priority.

Figure 15 shows current growth trends extrapolated and compared to the peak and off peak targets which combine to 50 million passenger transport trips by 2016/17. The extrapolated linear growth trend from 2007/08 patronage appears to be tracking short of the growth targets indicating that further interventions would be required to achieve the targets by 2016. The growth and demand forecasts section provides more information on expected growth and demand trends.

Quality, performance and service levels provided

The implementation of the policies is directly linked to quality, performance and service levels provided. Annual survey information has identified that key features of a good public transport system, and therefore features which would be expected to influence patronage, are reliability, frequency, low cost and convenient service times. Sixty percent of Greater Wellington residents believe Greater Wellington has an excellent or very good public transport system, particularly with regards to accessibility (including timetable information), ease of use and cleanliness of the vehicles. Although overall service levels have been progressively improving, the quality of the vehicles and services and thorough route coverage of the Wellington region remain the least well regarded aspects.

The surveys indicate that improvements to the following key areas would be most likely to increase patronage:

- Providing more frequent services
- Providing more reliable services
- Improving availability, such as providing services closer to where residents work/live, increasing the capacity of park and ride facilities, catering for cyclists on train services, and extending the service hours of operation
- Providing faster services. Many survey respondents noted that perceived long travel times remained a barrier to using public transport

[2] Reference from the Regional Passenger Transport Plan 2007-2016.

- Providing cheaper services
- Improving the quality and personal safety perceptions at train stations.

Other key aspects which have been identified with potential to affect patronage are:

- Convenient and thorough coverage of the Wellington region. While much of the peak time use focuses on travel from the suburbs into the city centre, convenience of travel across the region remains a factor. This is progressively being addressed through network and route design, integration of services and convenient interchanges, and integrated ticketing, although integration is still in the early stages.
- Access to information. Although access to timetable information is considered good, uncertainties with actual service arrival and departure times can lead to perceptions of unreliability and discourage use. Greater Wellington is planning to implement a real-time information system, commencing 2010.
- Quality of vehicles and infrastructure. While the cleanliness of the vehicles was generally considered good, improving the quality of them can encourage greater use. New rail rolling stock was progressively introduced to the Wairarapa line in 2007, and a contract has been awarded to supply 96 new electric multiple unit (EMU) trains for the Kapiti, Hutt and Johnsonville Lines from 2010. Similarly, improving the weather protection and personal safety provisions at boarding points can increase patronage.
- Service capacity. Sufficient capacity must be provided to enable people to use passenger transport but also to encourage use. People prefer not to use crowded public transport services in the same way they prefer not to use congested roads. This is a particular challenge of rail capacity due to the large capital costs and long lead in times. It is therefore important to plan well ahead of time to ensure sufficient capacity is provided.

Key service level aspects influencing demand covered within the scope of this plan are summarised in Table 13.

Table 13 Key service level aspects affecting demand

Service Level Aspect	Of Direct Relevance to This Plan
Improving availability	Increasing the capacity of park and ride facilities Catering for cyclists on train services (e.g. cycle lockers)
Improving the quality and personal safety perceptions at train stations.	Improving lighting and CCTV networks
Convenient and thorough coverage of the Wellington region	Provision of convenient interchanges
Access to information	Implementation of the real-time information system
Quality of vehicles and infrastructure	Improving the weather protection and personal safety provisions at boarding points
Service capacity	Increasing the capacity of park and ride facilities

3.4 External demand drivers

External demand influences are factors that the region has limited control or influence over. These include demographic changes, climate change and influences by other organisations such as central government and territorial local authorities.

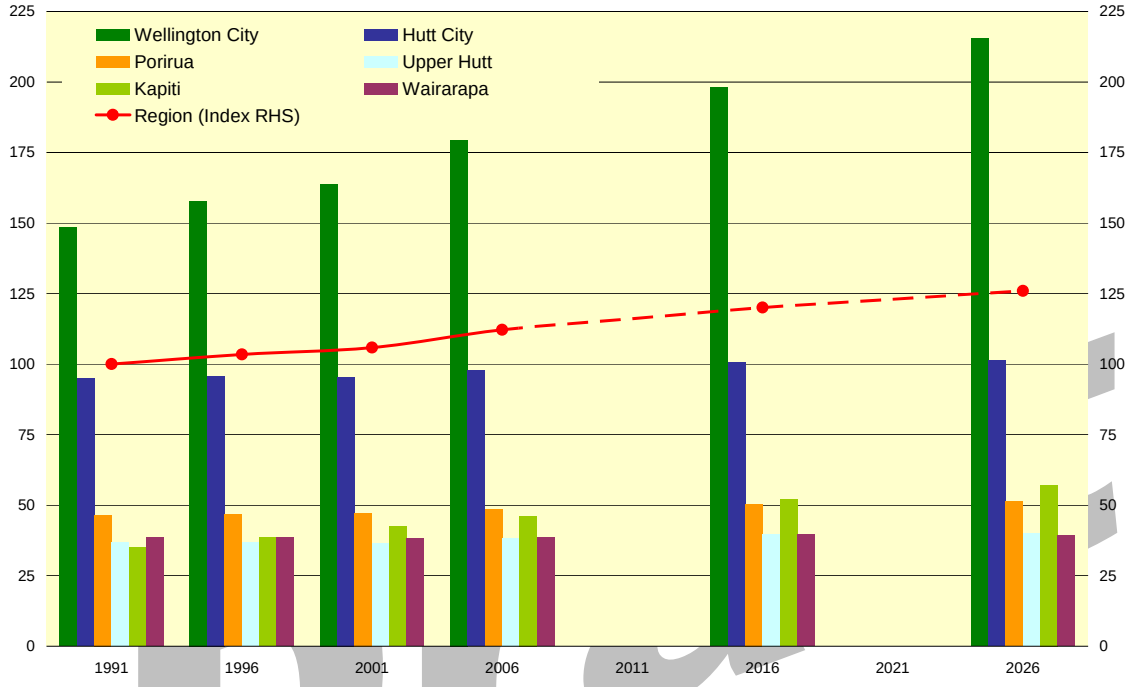
3.4.1 Population and demographic change

a) Population

Between 2001 and 2006 the region as a whole experienced population growth of 6.0%. The region is forecast to experience moderate population growth over the next 10 years, with around an extra 32,000 people expected to live in Greater Wellington by 2016, which represents a 7% increase from 2006 (Statistics NZ, 2005). It is expected that the total number of trips would grow in line with the population growth, with a growing proportion of this

increase in passenger transport journeys with increasing congestion driving people to seek alternative methods of transport.

Figure 10 Usually resident population (WTSM 2006)



The rate of growth varies widely between the districts. The projections developed by Statistics NZ indicate that Wellington City and the Kapiti Coast (people relocating out from the central areas) are likely to experience the largest percentage population growth, while populations will remain stable or increase comparatively slowly in other areas as shown in Table 14

Table 14 Population growth rates (WTSM 2006)

District	1991 to 1996		1996 to 2001		2001 to 2006	
	Actual growth	% growth	Actual growth	% growth	Actual growth	% growth
Wellington City	9,279	6.3%	6,105	3.9%	15,642	9.5%
Kapiti District	3,645	10.4%	3,861	10.0%	3,759	8.9%
Upper Hutt City	-168	-0.5%	-345	-0.9%	2,046	5.6%
Porirua City	81	0.2%	744	1.6%	1,167	2.5%
Hutt City	990	1.0%	-393	-0.4%	2,232	2.3%
Wairarapa	-84	-0.2%	-300	-0.8%	402	1.1%
Wellington Region	**13,743**	**3.4%**	**9,672**	**2.3%**	**25,248**	**6.0%**

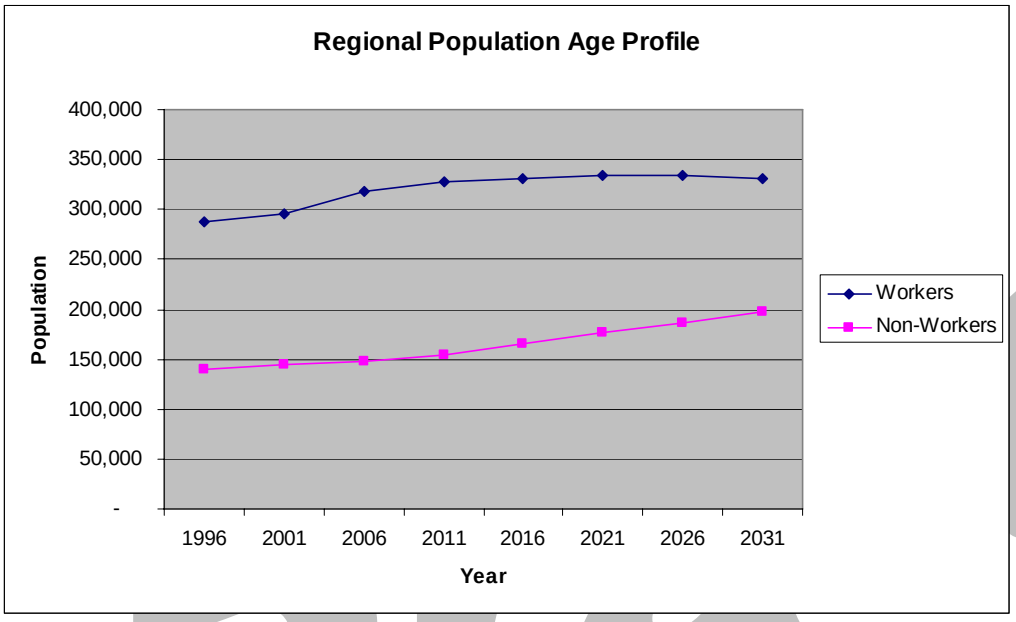
b) Dwelling choices

Wellington City's population growth is largely due to increased housing density in the central city. This is expected to lead to increased use of sustainable transport modes, including public transport, and less use of the private car.

c) Age and employment

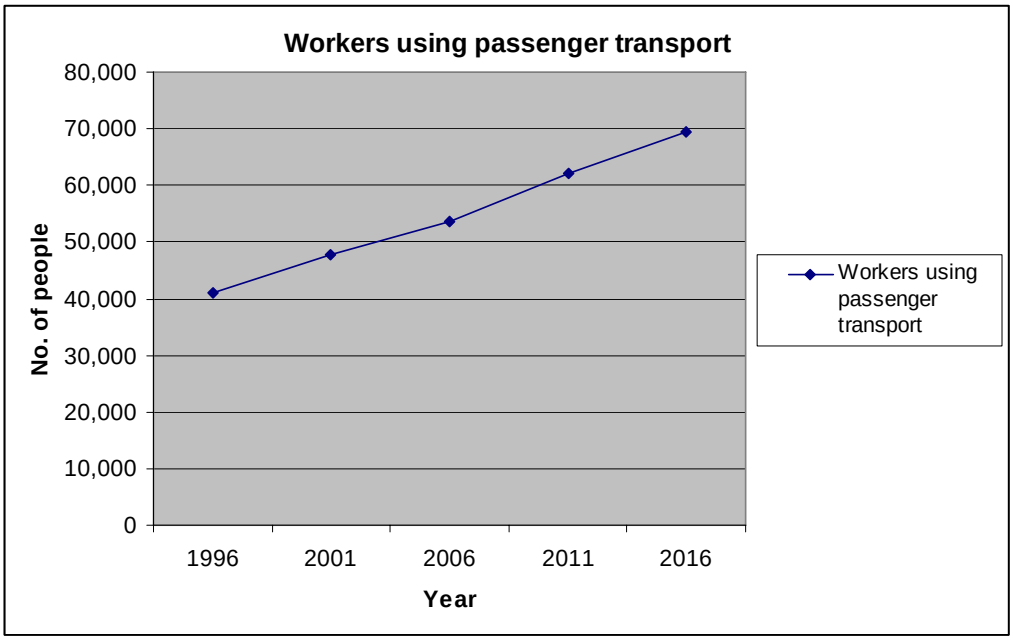
Figure 11 below, shows the projected changes to the Region's population by age band. Those in the typical working age group (15 – 64) are forecast to increase slowly from 318,000 to 334,000 in 2026, after which this population group could decline.

Figure 11 Regional population age profile



Although the predicted population in the typical working age group is expected to increase by only 4%, the RLTS targets indicate the total number of people using passenger transport to travel to work should increase by 21% from 2006 to 2016 as shown in Figure 12. This implies that the growing number of people who would be expected to travel to work is not sufficient to achieve the growth targets and that additional initiatives will need to be implemented.

Figure 12 Workers using passenger transport



Wellington & Kapiti Coast are forecast to continue to see an increase in the population in the typical working age group beyond 2016. All other districts are forecast to see a peak in this number by 2016 with a subsequent decline.

The forecast increase in the non-working population of the Region shown in Figure 11 presents further opportunities to increase patronage of passenger transport by "light users" particularly outside of peak hours.

3.4.2 Economic growth

a) Economic growth and building activity

From an economic development perspective, passenger transport is part of Greater Wellington's competitive advantage for attracting and retaining business. Passenger transport is an important component of the sense of place that drives business retention in an economy that is expected to become increasingly dependent upon creative industries[3] (RPTP).

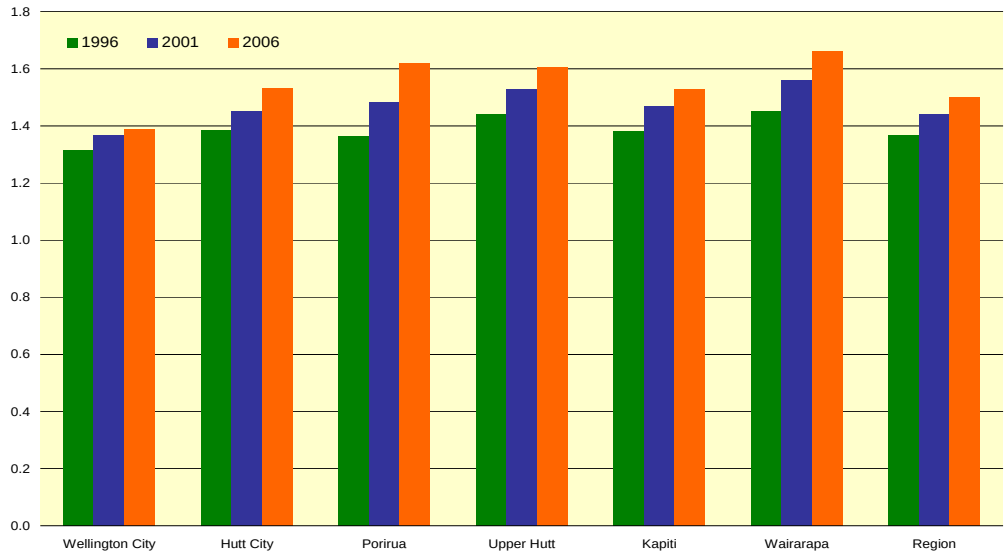
Economic activity within the Region remains strong, but there has been little growth since 2005. This would be expected to limit the demand for movement of people and freight. Building activity has shown a healthy increase with the number of building consents issued to March 2008 increasing by almost 14% and a 34% rise in the 'value of construction' index, although the recent economic recession is likely to have affected this growth profile since March 2008. Any increase in building activity generates demand for transport, which in turn is positively correlated with regional economic activity.

Continued effects of the global 'credit crunch' economic slowdown are expected to limit growth in building activity over the coming 12 – 18 months. Whilst this may lead to limited growth in demand for all types of transport, it may see an increased uptake of passenger transport as people attempt to cut their living costs.

b) Vehicle ownership

Predicted increase in car ownership, and therefore predicted increase in trip numbers, is expected to lead to further road congestion which may, in turn, drive demand for public transport. The total number of cars registered in the region rose by 15% between 2000 and 2008, although declined by 0.7% in 2008, due mainly to a decline in Wellington city. This drop has been attributed to a combination of factors including inner city living choices reducing the need for private vehicle ownership, and rising oil prices.

Figure 13 Average car ownership by household



[3] Reference from the Regional Passenger Transport Plan 2007-2016.

Rising oil prices have implications as the cost of transportation becomes increasingly higher. While petrol and diesel are recognised as being relatively inelastic commodities, there is anecdotal evidence that suggests that public behaviour is already influenced by fluctuating fuel prices. This suggests that more people may be willing to consider alternatives to private car travel and this will have flow on effects on the public transport system[4].

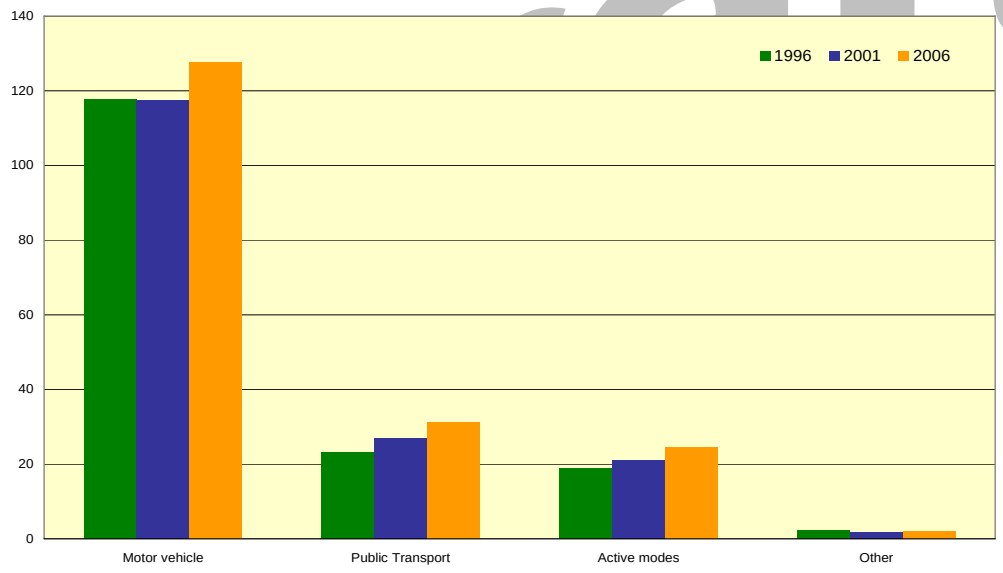
As fuel prices have decreased again, public concern has subsided, making this less of a driver. Possible technological advances including electric cars etc. would also be expected to lessen effects of fuel prices. However, public awareness has been raised and it appears that smaller more efficient cars and passenger transport are now being considered preferentially.

Continued effects of the global 'credit crunch' economic slowdown are expected to reduce the rate of growth in vehicle ownership as people defer decisions to buy more vehicles and rationalise vehicle ownership. This may see an increased uptake of alternative transportation modes, including active modes, motorcycles and passenger transport, as people attempt to cut their living costs.

c) Total regional travel demand

The 2006 census showed an increase in the total number of journeys to work with an increase shown for all modes of transport. This is to be expected with the increased regional population. Private transport is the dominant travel mode of choice with an increasing number of total trips made, but the share of journeys made by passenger transport has increased as indicated in Figure 14.

Figure 14 Journey to work mode share



d) Inner city parking

Since 2004 almost two thirds of those questioned in annual surveys believe that the Wellington inner city has insufficient parking available. In 2008, 79% of people also thought that the cost to park in the Wellington inner city was too expensive. The availability and cost of parking is a method of deterring people from using private transport to travel to the city centre, and is currently focussed at commuter travel.

e) Work from home

Technological advances allow more people to work from home. Although the 2006 census showed a drop in the percentage of people working from home in all districts, we expect that future uptake of technology will lead to more people working from home for at least 1 day per week. This increase is likely to decrease the peak demand for public transport services.

[4] Reference from the Wellington Regional Land Transport Strategy 2007-2016.

3.4.3 Climate change and environmental sustainability

Growing awareness of the effects of global warming and climate change has led to increasing pressure for the provision and use of passenger transport nationwide. A number of groups advocate the use of passenger transport as being the socially responsible option. It can be expected that continued media attention and political pressure will ensure this issue remains in the public's thoughts.

3.5 Impacts of demand drivers

The following table summarises the effects the demand drivers will have on demand for public transport.

Table 15 Demand impact summary

	Growth/Demand Trend	Impact on public transport	
Internal demand drivers	**Service levels**		
	Overall levels of service provided are progressively improving	Encourages the use of public transport. Key areas to further assess for improvement are: • Increased Carparking facilities • Increased quality of infrastructure and safety/security provision • Travel convenience including interchange facilities and cyclist provisions • Real time information • Service capacity • Integrated ticketing	
	Fare increases above the rate of inflation	Fare increases have the effect of damping demand	
External demand drivers	**Population and demographics**		
	Increasing population, particularly in Wellington City and the Kapiti Coast.	Increases demand for public transport, especially with associated increasing congestion.	
	Increasing inner-city dwellings.	Offsets private vehicular ownership growth trend with greater reliance placed on public transport and other modes of travel.	
	Aging population.	Limits peak-time travel growth but with free off-peak travel has the potential to increase off-peak use.	
	Economic growth		
	Modest economic growth in Wellington.	Some additional pressure for moving people and goods.	
	Increasing car ownership levels.	A recent decline is forecast to be temporary. Overall this decreases demand for public transport and other modes of travel.	
	Increasing fuel prices and innovation.	Although fuel prices have reduced recently, increases result in increased use of public transport and other modes of travel. This may be offset with the introduction of technological advances, such as electric vehicles and ability to work from home.	
	Inner city parking	Continued perception that inner city parking is difficult to find and expensive will continue to encourage use of public transport.	

	Growth/Demand Trend	Impact on public transport	
	Service levels		
	Road congestion	In recent years road congestion levels have remand fairly static. Increased travel demand growth is expected to be offset by planned roading improvements resulting in little impact on PT demand.	
	Environmental sustainability		
	Increasing awareness of the importance of environmental sustainability	Increased willingness to use public transport and other modes of travel.	

3.6 Growth and demand forecasts

The Wellington Transport Strategy Model (WTSM) has been used to provide growth and demand forecasts for passenger transport in the region. WTSM is a strategic multimodal model used to forecast changes in the transport system given certain changes in demographics, employment, transport costs, infrastructure, and the transport network. The model has recently been updated using the latest Census 2006 data and the revised future year demographic and employment forecasts from Statistics New Zealand.

The model is a policy tool used to provide strategic information and to provide a basis for more detailed analysis. The model can identify the potential impacts of strategic decisions and projects on passenger transport patronage, but it only provides a guideline based on assumptions.

3.6.1 Model Forecasts

Figure 15 shows three forecast scenarios which differ on growth, fuel price and transport project assumptions. The forecasts indicate that further interventions (than those modelled) would be required or the demand influences would need to change to achieve the growth targets set for 2016. Projections show a mix of low/high fuel prices, low/high population/employment and GDP growth. All forecasts include a mix of roading, public transport and active transport improvements.

The lowest projection only includes transport projects currently committed. The highest and central projections include the Regional Transport Programme (RTP) projects.

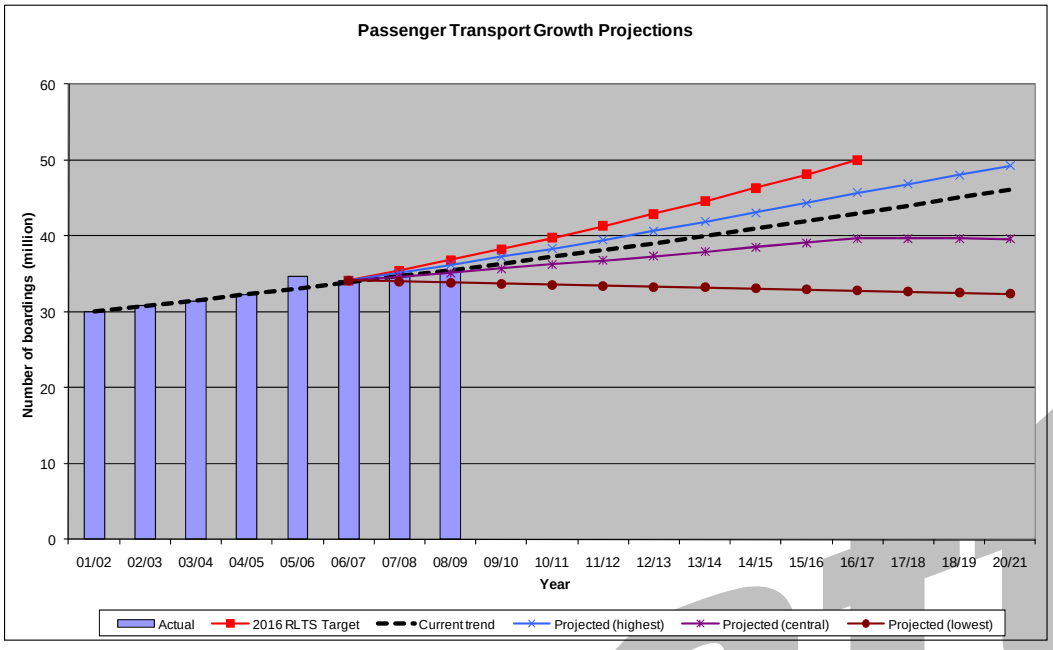
The RTP is a package of roading, passenger transport and active transport improvements. The RTP modelled scenarios include road improvements, some rail infrastructure/frequency improvements, some bus priority measures, real time information and integrated ticketing. The model scenarios do not include the impacts of reliability/crowding issues, bus renewals, or future changes to fares (assumed to grow in line with inflation).

a) Lowest projection

The lowest projection assumes low population and employment growth, low fuel price and little change to the transport network. Committed road and passenger transport improvement projects only are included. These projects are:

- Electrified rail extension to Waikanae
- Introduction of new rolling stock from 2010
- State Highway 2 Petone-Dowse upgrade including alterations to the Petone station platforms 2009/10.

Figure 15 Demand projections (WTSM)2



b) Central projection

The central projection assumes medium population and employment growth, medium fuel price and upgrades to the regional transport network in line with the RTP.

The central projection is similar to the extrapolated trend from recent growth and indicates “business as usual”.

c) Highest projection

The highest projection assumes high population and employment growth, high fuel price and upgrades to the regional transport network in line with the RTP.

The ability to achieve the demand growth and other targets identified in the RLTS depends heavily on a number of influences, some of which Greater Wellington can directly manage, such as quality and levels of service provided, as well as many over which Greater Wellington has limited control, such as population and economic growth, and fuel prices.

Apart from 2006/07 where growth in public transport use was unprecedented in recent years, growth is forecast to continue at or around 2% per year over the next twenty year period with an additional 1% increase when new rolling stock is introduced in 2010. This assumes the above key improvements projects are undertaken to encourage use of the public transport network.

3.7 Growth and demand conclusions

Public transport usage is planned to increase over time. In respect to the assets covered by this plan, the following developments are needed to facilitate patronage growth:

- Extend CCTV coverage
- Provide additional bus shelters
- Introduce real time information system
- Provide additional Park and ride space.

These are also reflected in the service level targets, and Greater Wellington has commenced programmes in order to achieve these targets.

Table 16 Projects linked to demand that are planned for the next three years

Element	Project	LOS %	Growth %	GW Asset	Other Asset	Project Cost		
						2010/11	2011/12	2012/13
Carparks	On street car park development	50	50		✓		$425,000	$425,000
	Off street car park development	50	50	✓			$390,000	$390,000
	Land purchase	50	50	✓			$280,000	$280,000
CCTV installation	Silverstream park & ride	60	40	✓		$35,000		
	Redwood park and ride	60	40	✓			$40,000	
	Redwood north park and ride	60	40	✓				$15,000
	Taita East park and ride	60	40	✓				$15,000
Shelters	15 New bus shelters to be erected through the region	60	40	✓		$250,000	$250,000	$250,000

4.0 Risk management

This section covers the strategic risk management implemented by Greater Wellington and how these apply to the current and proposed public transport activities.

The objective of risk management is to identify the specific business risks, together with any possible risks to the health and safety of employees, other contractors and the travelling and general public, associated with the ownership and management of the public transport assets, to determine the direct and indirect costs associated with these risks, and form a priority-based action plan to address these.

4.1 Putting the risks into perspective

Greater Wellington policy and operation cannot influence all the factors contributing to these events, nor is Greater Wellington responsible for the entire rail network, e.g. the track and infrastructure condition and suitability. Greater Wellington has a responsibility to assess the risks in order to best manage the public transport within the resources available to avoid and mitigate the effects of any event. This Plan considers only those risks associated with some of the enabling infrastructure as detailed in Section 1.10.

Greater Wellington has highlighted a number of key risk areas across the activity including:

- Death and or major injuries to staff or contractors
- External economic factors (funding, inflation, increasing power prices and intermittent supply, fuel prices, etc)
- Knowledge management, resources and funding
- Weather related hazards (flooding, slips, climate change)
- Catastrophic natural event: earthquake

These are discussed in further detail in the Risk Register contained in Section 4.6.

4.2 Level of risk

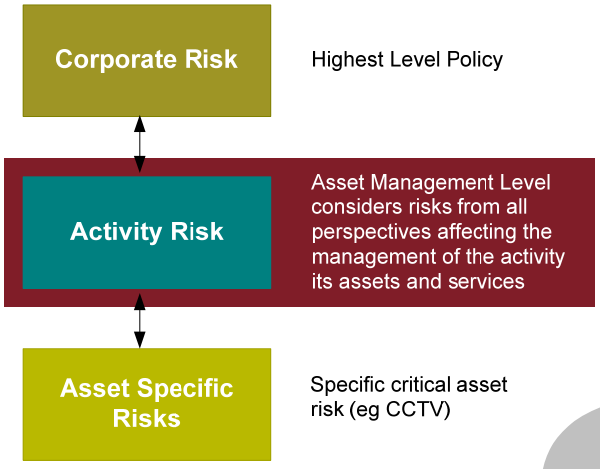
The purpose of this risk plan is to identify the risks associated with the public transport assets and services they enable.

This requires approaching the risks from many perspectives including financial, operational, organisational and public health and safety.

These risks are pertinent to both a higher, corporate level, and to a more detailed asset –specific level, but do not substitute for more specific risk analysis at those levels (see the diagram following).

The next step beyond this risk analysis would be to develop more detailed risk plans considering the criticality of specific assets.

Figure 16 Hierarchy of Risk



4.3 Current situation

4.3.1 Corporate policy

The corporate policy for Risk Management is currently under development and not yet available for inclusion in this section.

4.3.2 Public transport activities

This section of the Asset Management Plan is the first passenger transport asset specific risk management planning to have been carried out. It is anticipated that this will provide the basis for future risk analysis and improvement plans.

4.4 Critical assets

Although a formal criticality assessment has not been undertaken, Greater Wellington recognises the Petone and Waterloo rail station and bus interchange facilities as being of particular significance as key facilities to the passenger transport network. Changing usage patterns indicate that Petone Station has lost some of its importance, particularly with regards to assets included within this Plan. Greater Wellington plans to review the need for a formal criticality assessment.

4.5 Risk severity

Table 17 summarises the risk severity rating scale adopted by Greater Wellington for its Passenger Transport assets covered by this plan.

Table 17 Comparative levels of risk

15 - 25	Extreme Risk	Requires immediate remedial action
8 - 12	High Risk	Requires remedial planning and action via the AMP
4 - 6	Moderate Risk	Address via new procedures and/or modification of existing practices and training
1 - 3	Low Risk	No formal requirement for further action, unless escalation of risk is possible

4.6 Risk register

The risk registers provided in the following table for the current and proposed future public transport activities of Greater Wellington and have been developed in consultation with key Greater Wellington staff. Greater Wellington has commenced the implementation of additional controls for all risks assessed to be 8 or higher.

Table 18 Risk Register

Risk Descriptor – details the main component and provides an example of a risk(s) that may be attributable	Risk Type	Gross Risk (No effective measures in place)			Current Practice/Strategy (Avoidance and mitigation measures)		Net Risk (Considering measures in place)			Management Options
		Consequence	Likelihood	Factor	Description	Effectiveness	Consequence	Likelihood	Factor	
LoS aren't fully understood- current LoS and targets not defined, funding adequacy risk	Organisational	3	3	9	Service level framework developed but unpopulated	Poor	3	3	**9**	Develop a data collection process to enable reporting within the LoS frame work Examine service levels to extend to assets not currently owned and/or directly managed by Greater Wellington, but which attract significant funding
Service Delivery/Customer Interface - inability to meet demand for parking	Operational	3	4	12	There are 31 commuter Park and Ride facilities across the region and over 4000 parking spaces. The land these Park and Ride facilities occupy is owned by a number of organisations.	Fair	3	3	**9**	Regular counts are carried out, and Carparking is reviewed regularly. It is GWRC's intention to pursue opportunities to rationalise and secure ownership (or long term lease) rights in order to continue the development and funding of future projects to increase capacity and improve facility amenities.

Risk Descriptor – details the main component and provides an example of a risk(s) that may be attributable	Risk Type	Gross Risk (No effective measures in place)			Current Practice/Strategy (Avoidance and mitigation measures)		Net Risk (Considering measures in place)			Management Options
		Consequence	Likelihood	Factor	Description	Effectiveness	Consequence	Likelihood	Factor	
Service Delivery – Unsuccessful communication of information to the customer	Operational	3	4	12	Posters, timetables plus services such as SMS and online information. Station upgrade and signage programmes.	Fair	3	3	**9**	Councils Policy is to ensure that all customers have access to information. Stations will be upgraded to reflect this policy. *Communication regarding rail service faults has been poor* although is currently under the rail operator's responsibility. Greater Wellington's role is currently being examined.
New Asset Development Planning and Funding Applications – Needs for new assets are not identified and funding applications are not submitted at the appropriate times	Organisational	3	2	6	Experienced service planning and funding case preparation resources are available	Fair	3	2	6	AMIS currently under development Regular service planning and asset planning programs to be developed and reviewed by management
Knowledge Management – Inability to retain knowledge or have sufficient systems in place to manage data/information	Organisational	3	3	9	Updating asset register, succession planning, Review processes and practices. There has been a culture shift, which new staff have bought into.	Fair	2	3	6	Council has procured an asset management system. Review processes and practices routinely

Risk Descriptor – details the main component and provides an example of a risk(s) that may be attributable	Risk Type	Gross Risk (No effective measures in place)			Current Practice/Strategy (Avoidance and mitigation measures)		Net Risk (Considering measures in place)			Management Options
		Consequence	Likelihood	Factor	Description	Effectiveness	Consequence	Likelihood	Factor	
Diminishing Funding Allocation – subsidy rate, tax, government change	Financial	3	4	12	Applications are made with NZTA but funding is not guaranteed	Good	3	2	6	Maintain and manage clear lines of communication with key agencies. Forecast likely scenarios. Council's Rail Business Plan should continually re-emphasize the need to upgrade and expand the rail infrastructure network to meet growing passenger demand.
Economic Impacts - Inflation, increasing power and fuel prices	Financial	3	3	9	Regular reviews carried out to assess impacts	Good	3	2	6	Increase fares to enable NZTA subsidies and rates to be set aside for future improvement to the service. Review funding regularly, review economic position regularly, review LTCCP.
Service Delivery - Deterioration of Council owned rail property, e.g. Carparks, station buildings and shelters (currently Waterloo and Petone Stations)	Operational/ Health and Safety	3	4	12	Council maintains its known assets to a suitable standard.	Good	2	3	6	Council has procured an asset management system and a safety management system to be implemented in relation to Council's current and future ownership of its rail passenger facilities.
Natural Disaster – e.g. earthquake, leading to structure collapse and loss of service	Operational	5	1	5	Design, contingency plans and insurance	Fair	5	1	5	Review seismic capability of key structures

Risk Descriptor – details the main component and provides an example of a risk(s) that may be attributable	Risk Type	Gross Risk (No effective measures in place)			Current Practice/Strategy (Avoidance and mitigation measures)		Net Risk (Considering measures in place)			Management Options
		Consequence	Likelihood	Factor	Description	Effectiveness	Consequence	Likelihood	Factor	
Asset condition / performance monitoring Monitoring – Assets not enabling delivery of adequate service levels	Organisational	2	4	8	Experience asset/facilities management staff are in position	Good	2	2	4	To be administered through the contract, KPI's reporting on the service requirements
Services Planning / Asset Renewal Planning - Not planning for the future community service needs and ensuring the effective timing of asset renewals for the ongoing service levels and presentation	Organisational	2	4	8	Experienced service planning and asset management resources are available	Good	2	2	4	AMIS currently under development (SAP currently in use). Regular service planning and asset planning programs to be developed and reviewed by management
Lack of Resources – Inability to attract key staff and or retain skilled staff	Organisational	3	3	9	Recruitment standards, career development, work environment, District promotion (lifestyle)	Good	2	2	4	Council to continue to recruit and retain a suitable and sufficient team of rail industry professionals, as well as developing established relationships with other industry participants and rail specialist consultants. Review recruitment policy/framework, investigate flexibility within individual contracts.
Project Management – Projects inadequately scoped, budgeted, managed and documented	Operational	3	3	9	There is a confirmed process for training including the use of external resources to facilitate training.	Good	2	2	4	Ensure adequate (quality) training for staff and maintain a register of training that identifies timeliness for upgrades of skills.

Risk Descriptor – details the main component and provides an example of a risk(s) that may be attributable	Risk Type	Gross Risk (No effective measures in place)			Current Practice/Strategy (Avoidance and mitigation measures)		Net Risk (Considering measures in place)			Management Options
		Consequence	Likelihood	Factor	Description	Effectiveness	Consequence	Likelihood	Factor	
Natural Event – e.g. flooding, leading to loss of service	Operational	3	1	3	Design, contingency plans and insurance	Fair	3	1	3	Review flood incident reports (if any)
External Economic Influences (Cost Escalations) – terrorism, pandemic (e.g. bird flu), rising costs (e.g. fuel)	Financial	3	3	9	Monitoring world events and reacting accordingly e.g. budget adjustments.	Good	3	1	3	Track national and global trends. Monitor key economic developments and liaise with central government. Greater Wellington has a Pandemic Policy.
Resource Consents – time and budget constraints impacting on project delivery (internal and external)	Legislative	4	4	16	Planning involvement at initial stage. Monitoring of Consent requirements.	Good	3	1	3	Council will continue to utilise third parties to manage consenting process and compliance
Public Health and Safety – accidents causing injury and or damage to residents/visitors/or property resulting in claims and or negative publicity	Public Health & Safety	5	4	20	Programmes in place to identify areas, issues, risks that may impact on assets and remedial action taken as appropriate.	Good	1	1	1	Based on the current ownership of assets, Councils liability is low. Review corporate risk policy.

5.0 Life Cycle Management

5.1 Introduction

This Lifecycle Management (LCM) section provides the broad strategies and work programmes required to achieve the goals and objectives set out in Section 2.0 to 4.0 of this plan.

This section covers the following assets:

- Rail station assets, including buildings and structures , carparking, CCTV and miscellaneous facilities such as cycle lockers, cycle stands, rubbish bins and seats
- Bus shelters
- Wayfinder and Metlink display signage
- Bus stop signage

This plan covers the lifecycle management activities associated with the public transport service including:

- Operations: The active process of utilising an asset, which will consume resources such as manpower, energy and materials. Operations include asset management planning activities, routine inspections and testing to monitor asset condition and identify the need for maintenance and repair work, and customer service activities.
- Maintenance: Routine maintenance is the regular ongoing day-to-day work that is necessary to keep assets operating, including instances where portions of the asset fail and need immediate repair to make the asset operational again. This work falls into two broad categories as follows:
  - Planned - Proactive inspection and maintenance works planned to prevent asset failure.
  - Reactive - Reactive action to correct asset malfunctions and failures on an as required basis.
- Renewal: Renewal is work that restores an existing asset to its original level of service, i.e. capacity or the required condition. These broadly fit into the following work categories as follows:
  - Rehabilitation - Involves the repair of an existing asset, or asset component. Rehabilitation doesn't provide for a planned increase in the operating capacity or design loading. It is intended to enable the assets to continue to be operated to meet the current levels of service.
  - Replacement - Doesn't provide for a planned increase to the operating capacity or design loading. Some minor increase in capacity may result from the process of replacement, but a substantial improvement is needed before asset development is considered to have occurred.
- Capital development (growth, or levels of service/regulatory improvements): New works are the creation of new assets or works, which upgrade or improve an existing asset beyond its existing capacity or performance in response to changes in usage or customer expectations. Greater Wellington recognises that asset development and asset renewal can occur simultaneously. New works fall into separate categories as follows:
  - Growth - Any asset development (council funded or externally funded) that is required as a result of growth.
  - Levels of Service - Any asset development that is required as a result of an increase in levels of service.
  - Legislative - Any asset developed to meet legislative requirements
  - Vested - Any assets vested with Greater Wellington.
  - Asset Disposals: Disposal is the retirement or sale of assets whether surplus or superseded by new or improved systems.

5.2 General lifecycle strategies

5.2.1 Overview

Greater Wellington maintains ownership and responsibility for managing aspects of the Public Transport activity and the associated infrastructure, and provides funding for others as detailed in Sections 1.5 and 1.9. Consultants are used to provide specific expertise and assistance as required. Council engages a network consultant to provide the day to day management of the network, including asset information capture, recommendations for strategies, programmes, projects and expenditure, and management of maintenance and capital development contracts.

All work (subsidised and unsubsidised) is carried out using contracts let in accordance with competitive pricing procedures (CPP), on a performance basis wherever possible. Contractors are required to programme and report comprehensively on the execution of the works. The contract documents specify technical standards required and defines response times and cyclic inspection periods.

All renewals and capital works are implemented through individual project contracts.

5.2.2 Operations and maintenance

Operations and maintenance strategies cover the policies that will determine how the public transport network will be operated and maintained on a day-to-day basis to consistently achieve the optimum use of the asset.

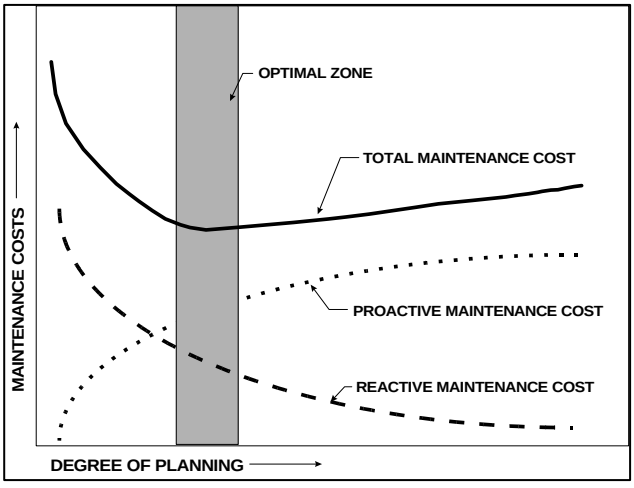
Greater Wellington will manage the assets in a manner that minimises the long term overall total cost. Scheduled inspections and monitoring will be undertaken as justified by the consequences of failure on levels of service, costs, public health, safety or corporate image. The inspection programme will be modified as appropriate in response to unplanned maintenance trends. Competitive pricing will be ensured by using CPP contract structures and performance based term contracts where applicable.

Greater Wellington will maintain assets in a manner that minimises the long term overall total cost. Competitive pricing will be ensured by using CPP contract structures and term contracts.

- Unplanned maintenance: A suitable level of preparedness for prompt and effective response to asset failures will be maintained by ensuring suitably trained and equipped staff and contractors to allow prompt repair of key assets and mitigation of any hazards. Term contracts specify response times.
- Planned maintenance: A programme of planned asset maintenance will be undertaken to minimise the risk of key asset failure, or where justified when considering financial, safety and social impacts. Major maintenance needs will be identified through the scheduled asset condition inspections and those generated from the investigation of customer complaints.

A key element of asset management planning is determining the most cost-effective blend of planned and unplanned maintenance as illustrated in Figure 17 .

Figure 17 Balancing Proactive and Reactive Maintenance



The short-term maintenance strategy is intended to maintain the current levels of service standards. The long-term maintenance strategy will be reviewed against the following factors:

- Risk of failure -The risk associated with failure of assets
- Levels of service - Changes in the current or agreed level of service
- Economic efficiency – supported through asset performance and condition assessment
- Asset improvements and development programme
- Legislative compliance – e.g. requirements of, LGA 2002, NZTA.

The current term operations and maintenance key contractors engaged by Greater Wellington relevant to this Plan are outlined in Table 19 below:

Table 19 Maintenance contracts

Asset	Contract Held By	Comments
Rail stations (except Waterloo)	KiwiRail	Complete turn-key service delivery, including maintenance of train stations around the region with the exception of Waterloo.
Waterloo Station	Transpacific industrial solutions	Provision of general cleaning services. Any works required outside of this contract such as lighting renewals, painting, plumbing, glass repair are provided by additional contractors on a casual basis.
Upper Hutt Shelters		
Bus stop signage maintenance		

Customer service requests and enquiries are recorded on the Metlink help desk database and by KiwiRail, summarising data on the date, time, details, responsibility, response time and action taken. These requests are prioritised and actioned in conjunction with the programmed maintenance works.

Contractors are encouraged to identify and programme maintenance work. Audits are currently sporadic and have been identified as an area requiring improvement.

5.2.3 Renewals

Renewal strategies provide for the progressive replacement or re-manufacture of individual assets that have reached the end of their useful life. This is managed at a rate that maintains the standard and value of the assets as a whole. This programme is maintained at adequate levels to maintain current levels of service and the overall quality of assets.

The general renewal strategy is to rehabilitate or replace assets when justified by:-

- Asset Performance - Assets are renewed where it fails to meet the required level of service. The monitoring of asset reliability, capacity and efficiency during planned maintenance inspections and operational activity identifies non-performing assets. Indicators of non-performing assets include:
  - Structural failure
  - Repeated asset failure
  - Ineffective and/or uneconomic operation
  - Unsafe conditions for public

- Economics - When it is no longer economic to continue repairing the asset (i.e. the annual cost of repairs exceeds the annualised cost of its renewal). An economic consideration is the co-ordination of renewal works with other planned works such as road reconstruction. Greater Wellington will actively research the effectiveness of new technology, which may reduce the direct and social costs of repair works.

- Risk - The risk of failure and associated environmental, public health, financial or social impact justifies proactive action (e.g. probable extent of property damage, health and safety risk). Where such assets are identified (critical assets), proactive inspection is undertaken to determine asset condition at a frequency appropriate to the risk and rate of asset decay.

  While many of the smaller replacement (renewal) items are undertaken within maintenance, all major works are programmed as replacement items and are managed in a similar way to new capital works.

  Greater Wellington considers the financial and customer risks of deferring renewals recognising budget constraints, uncertainty in condition data and increasing maintenance and operational requirements associated with the growing asset base.

5.2.4 Capital development

The selection criteria for the prioritising and programming of asset development projects are a function of Council preference, consideration of risk, costs and benefits, affordability and ranking with other projects.

Works are costed and benefits assessed in terms of the following criteria: -

- NZTA Criteria
- Demand
- Aesthetic or Amenity value, Health and Safety consideration, Cultural issues, etc.
- Strategic issues in alignment with Community Outcomes.

Greater Wellington carries out a prioritisation process of all necessary development works. The priority list is used to assign funds when preparing the financial plans. The process is regularly reviewed and that the cost estimates would need to be reviewed at detailed design stage and/or purchase.

5.2.5 Disposals

Assets may become surplus to requirements for any of the following reasons:

- Under utilisation
- Obsolescence
- Provision exceeds required level of service
- Assets replaced before its predicted economic life
- Life expired rolling stock will be retired if remanufacture is considered not to be economically viable.
- Uneconomic to upgrade or operate
- Policy changes
- Service provided by other means (e.g. private sector involvement)
- Potential risk of ownership (financial, environmental, legal, social).

At this time Greater Wellington has no plans to dispose of any of its public transport assets.

5.3 Key issues

The key issues relating to the management of the public transport activities are as follows:

Table 20 Public transport key issues and strategies

Asset Type	Key Issue	Specific Strategies to Address Key Issues

Asset Type	Key Issue	Specific Strategies to Address Key Issues
Carparks	Insufficient number of carparks are available Lease agreements with external parties	Monitor demand and availability during peak periods and propose development programme through committee and LTCCP processes. Continue to search for land to lease or own Negotiate lease agreements with external parties
Rail Buildings	Many of the rail networks Stations require upgrading to reflect increasing customer expectations and technological change	Funding is budgeted to undertake development in 2010/11
Facilities	Demand for cycle facilities exceeds supply	Investigate additional space for more cycle facilities
CCTV	Insufficient camera numbers No browser link to enable remote access to the Porirua CCTV	New cameras will be installed in carparks around the region Upgrade of equipment budgeted for in the next 24 months
Lighting	The need to continue to provide adequate lighting within buildings, carparks and subways	Compliance with lighting standards, and maintenance of existing assets
Subway	External fittings are deteriorating, i.e. tiles, lighting	Ensure adequate maintenance budget for both planned and reactive maintenance
Wayfinder Signage	Sign graphics are susceptible to UV light	Investigate location of signs Ensure graphic renewals is budgeted for based on useful life of 3 – 5 years

5.4 Asset summary

A summary of the assets currently owned by Greater Wellington are shown below as at June 2008.

5.4.1 Asset inventory

Table 21 Greater Wellington's asset inventory and replacement costs (30 June 2008)

Asset	Location/Type	Quantity	Replacement Cost $
Buildings & Structures	Petone and Waterloo	4	4,058,061
Carparks	Paraparaumu	1	105,406
CCTV Systems		11	467,027
Facilities	Rubbish Bins	24	8,988
	Cycle lockers	51	88,771
	Seats	46	47,354
Bus Shelters		10	133,471
Signage	Wayfinder	7	57,514
	Metlink Display	4	96,560
	Metlink Bus	3,567	181,591
	Platform/Other	30	27,691
	Parts/Various	10515	132,899
Total			**5,405,333**

5.4.2 Data confidence and reliability

Greater Wellington assesses the confidence grade in the asset data used in this Plan as B "Reliable" using the confidence framework presented in Table 22, as shown in Table 23.

Table 22 Confidence grade definitions

Grade	General meaning
A	**Highly reliable -** Data based on sound records, procedures, investigations and analysis which is properly documented and recognised as the best method of assessment
B	**Reliable -** Data based on sound records, procedures, investigations, and analysis which is properly documented but has minor shortcomings, for example the data is old, some documentation is missing and reliance is placed on unconfirmed reports or some extrapolation
C	**Uncertain -** Data based on sound records, procedures, investigations or analysis which is incomplete or unsupported, or extrapolation from a limited sample for which grade A or B data is available
D	**Very uncertain -** Data is based on unconfirmed verbal reports and/or cursory inspection and analysis

Table 23 Data confidence

Attribute	A Highly Reliable	B Reliable	C Uncertain	D Very Uncertain
Condition/ remaining life				✓
Asset type	✓			
Date of construction			✓	
Location		✓		
Quantity		✓		
Asset performance			✓	

Section 7.0 discusses projects planned by Greater Wellington to improve the confidence in this data, particularly regarding asset condition and performance.

5.4.3 Asset condition

It is critical that Greater Wellington has clear knowledge of the condition of our assets and how they are performing. An asset register including condition was compiled in late 2006 and updated in 2008 to enable Greater Wellington to understand future expenditure patterns and management decisions regarding maintenance, replacement and renewals.

The development and continued use of condition assessment data will allow preparation of verifiable predictive decay curves to assist with the assessment of total and remaining asset economic lives.

5.4.4 Condition Assessment & Results

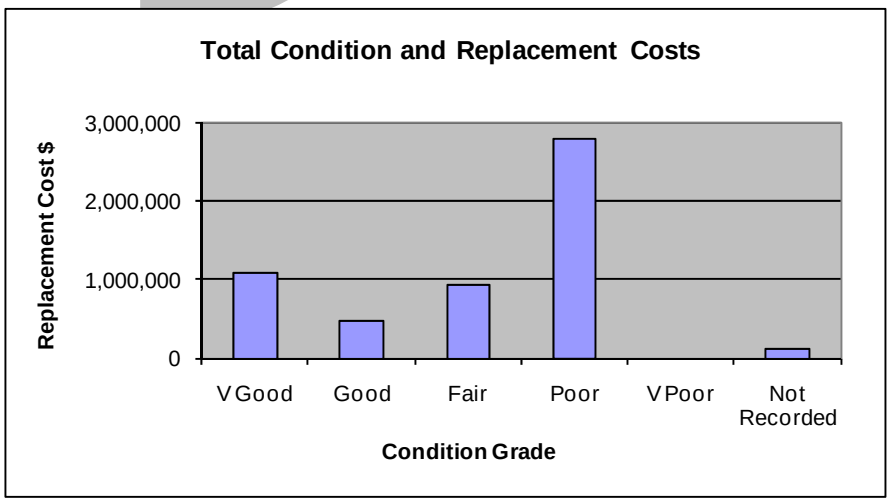
The condition assessment model in Table 24 is the basis of assessing the asset condition of Greater Wellingtons passenger transport assets.

Table 24 Typical condition rating model

Grade	Condition	Description of Condition
1	Very Good	Sound physical condition. Asset likely to perform adequately without major work for 25 years or more.
2	Good	Acceptable physical condition; minimal short-term failure risk but potential for deterioration in long-term (15 years plus). Minor work required
3	Fair	Significant deterioration evident; failure likely within the next 5 years but further deterioration likely and major replacement likely within next 15 years, Minor components or isolated sections of the asset need replacement or repair now but asset still functions safely at adequate level of service.
4	Poor	Failure likely in short-term. Likely need to replace most or all of assets within 5 years. No immediate risk to health or safety but works required within 3 years ensuring asset remains safe. Substantial work required in short-term, asset barely serviceable
5	Very Poor	Failed or failure imminent. Immediate need to replace most or all of asset. Health and safety hazards exist which present a possible risk to public safety or asset cannot be serviced/operated without risk to personnel. Major work or replacement required urgently.

The overall condition profile for assets owned by Greater Wellington is presented in Figure 18 below. While 20% of the assets by value have been assessed to be in good or very good condition, and relate generally to CCTV assets, 54% of the assets are rated as being in poor condition. This relates to the building assets and implies substantial work/expenditure is required over the short term to ensure levels of service can be maintained. Greater Wellington has not included these works in the financial forecasts. However, Greater Wellington plans to review these condition assessments and will include work as appropriate in the next update of this Plan.

Figure 18 Overall asset condition profile



5.5 Building and Structure Assets

5.5.1 Asset purpose

Greater Wellington aims to provide quality rail building assets that include sufficient seating, hard standing areas and ease of accessibility for disabled or elderly customers.

Greater Wellington only owns buildings and associated structures on the public transport network at Waterloo and Petone station and will be taking over the ownership of the Paraparaumu station building in mid 2010 once the upgrading work has been undertaken. Only condition information was available for Waterloo and Petone station buildings at the time this Plan was written.

5.5.2 Asset description

a) Waterloo station building

Waterloo Station is located on the Hutt Valley Line in Hutt City. The station was built in 1988/89 and is one of the busiest stations within the rail network. During the peak morning hours approximately 2,000 people are utilising the rail service at this facility, making the consequences of asset failure at this station high.

b) Petone station building

Petone Station is located on the Hutt Valley Line and physically adjacent to Hutt Road, Petone.

The station is the eighth busiest in the Wellington network with approximately 1,200 people using it at the peak morning times between 6.30 and 7.00 am. The station was significantly upgraded and officially (re) opened in March 2004.

The rail buildings comprise:

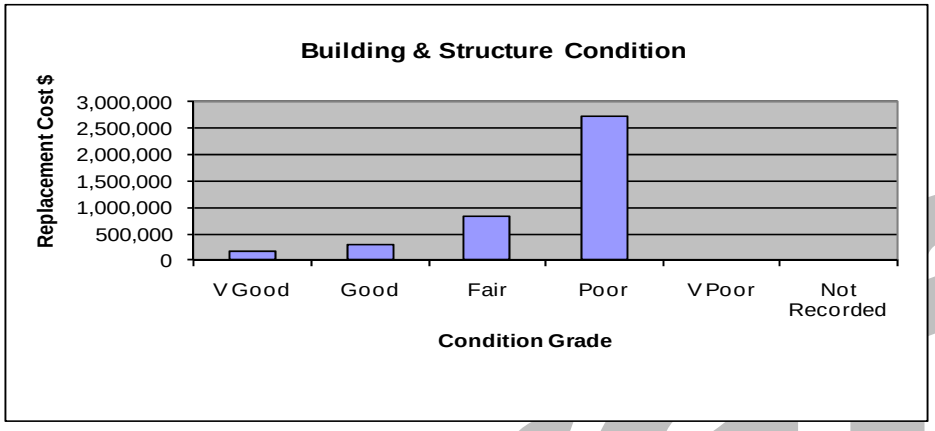
- A weatherboard clad building housing a ticket office, public transport information services and 4 cycle lockers.
- Composite steel and timber canopy structures on each of the two platforms

5.5.3 Asset performance

Asset performance relates to capacity, utilisation and occupancy. The buildings are of adequate size to cater for current and foreseeable future passenger numbers. The Waterloo station building is manned from 6.30am – 1.30pm Monday to Friday and during special events.

5.5.4 Asset age and condition

Figure 19 Greater Wellington condition grade for buildings and structures



The Waterloo buildings are in poor condition. The main building roof structure, cladding and kiosk will need significant work in the short term so the assets remain serviceable. The toilet building that shows up as in poor condition from the assessment undertaken in 2007 will be replaced this year (2010).

Greater Wellington is looking to reassess the condition of Waterloo station buildings and structures to confirm the renewals and maintenance needs, and will update this Plan accordingly.

The Petone rail building is approximately 4 years old. All of the assets associated with the building are in moderate to very good condition.

The following upgrades were recently undertaken for the Petone station:

- New station building, including the provision of a ticketing office, additional seating and other related facilities such as cycle lockers and rubbish bins.
- Improved bus access including kerb and channel, drainage works, traffic island construction, retaining walls and asphalting, and large covered bus shelter area.
- Total upgrade of the existing rail platform canopy.
- A reseal of the entire Eastern platform following relocation of cabling and re-securing of veranda foundations.
- Miscellaneous amenities including shelter screens for the southern end of the veranda exposed by the removal of the old building, seating, and ground lighting for the historic flagpole.

5.5.5 Operations & maintenance plan

Waterloo station

Greater Wellington has a cleaning contract in place with Transpacific industrial solutions for with an approximate value of $80K per year. Maintenance is carried out in accordance with the service levels stipulated in the contract. Greater Wellington undertakes periodic audits and condition assessments. Reactive maintenance is undertaken in response to vandalism, or aspects that are reported on through external sources, following approval from Greater Wellington.

Contractors are generally called in for electrical, glass, and tile repairs and general maintenance projects outside of the Transpacific industrial solutions contract.

Petone station

Cleaning and light maintenance is undertaken through KiwiRail NZ Ltd. All maintenance must conform to the agreed service standards outlined in the Operations Agreement between Greater Wellington and KiwiRail. Although most aspects of maintenance are planned such as daily cleaning, there is an element of reactive maintenance that includes:

- Responding to public inquires
- Maintenance to asset that are damaged externally such as vandalism.

Contractors are generally called for electrical, glass repairs and general maintenance projects.

5.5.6 Renewal plan

There are no renewals planned for the Rail Building assets at this stage, with minor replacements managed as maintenance items. Renewals needs will be confirmed in the next version of this Plan following a condition assessment review.

5.5.7 Development plan

There are no future development plans for the Rail Building assets at this stage, although Greater Wellington will assume ownership of the new Southbound Paraparaumu rail station and the new Waikanae rail station in 2010.

5.5.8 Disposal plan

Greater Wellington has no plans to dispose of the Rail Building assets at this time.

5.5.9 Other Building and Structure assets not owned by Greater Wellington

The table below shows the planned developments of buildings or structures which are not owned by Greater Wellington, but which Greater Wellington funds the management of them.

Table 25 Assets that Greater Wellington are funding the development of.

Element	Project	Renewal	Development		Project Cost		
			LOS %	Growth %	10/11	11/12	12/13
Platform	Johnsonville station development			100	$1,8112,000		
Pedestrian facilities	Johnsonville line pedestrian facilities upgrade			100	$563,000		
Platform	Kapiti station platform/stabling			100	$7,555,000		
Platform	Kiwi Rail-station platform upgrades		100		$4,666,000		
Platform	Rail station platform upgrades across the rail network	✓	100			$5,000,000	$5,000,000

5.5.10 Summary of financial requirements

Section 6.3 provides a summary of expenditure planned

5.6 Small Facility Assets

5.6.1 Asset purpose

Greater Wellington aims to provide quality rail building assets that include sufficient seating, hard standing areas and ease of accessibility for disabled or elderly customers. Sufficient lighting also increases safety during after hour's operation. Cycle lockers are provided to increase accessibility and promote integrated travel usage. Seats and rubbish bins (staffed rail stations only) are provided to improve comfort and cleanliness.

5.6.2 Asset description

Facilities comprise a number of small assets such as cycle lockers, rubbish bins and seats. Future electronic ticketing is also included within this asset group for the purposes of this Plan, but may be separately described in the next version once commissioned.

Each cycle locker unit can store two bikes. They are DWT type units that have a separate locker at each end separated by a diagonal divider. They use an alloy key controlled hasp locking system, which are manufactured by McColl Engineering in Upper Hutt.

Rubbish bins are standard units with approximately 55 litres capacity.

Seats are bench seats of either steel or timber construction.

Table 26 Assets that make up Greater Wellington facilities

Asset	Number	Replacement cost
Rubbish Bins	24	$8,988
Cycle lockers	51	$88,771
Seats	46	$47,354
Platform lighting	3	$58,256

5.6.3 Asset performance

Asset performance relates to capacity, utilisation and occupancy. Cycle lockers are fully utilised and there is additional demand for the assets to be placed at some stations. However, there is limited available space for the number of units that can be made available. Paraparaumu has the highest number of cycle lockers with 22 in one location.

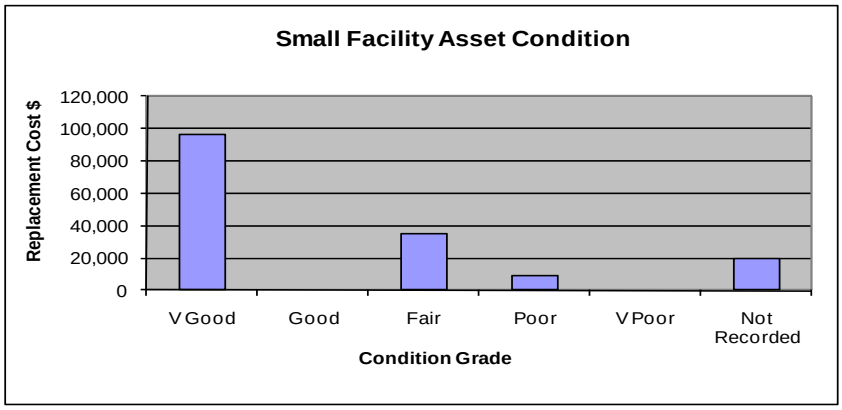
There have been some issues regarding lack of maintenance and administrative responses by TLAs managing these lockers.

The rubbish bins and seats are fully utilised and help to make the locations clean and comfortable.

5.6.4 Asset age & condition

Most of the facility assets are in very good condition with the exception of the cycle lockers at Paremata, installed in 2003 and the rubbish bins and seats at Waterloo installed in 1989; these have a condition rating of Moderate to Poor as shown in Figure 20.

Figure 20 Greater Wellington condition grade for small facilities



5.6.5 Operations & maintenance plan

Maintenance of rubbish bins and seats is undertaken through KiwiRail NZ Ltd.

Maintenance of the cycle lockers is administered though the appropriate local authority on behalf of Greater Wellington. Keys and rental of the units are also administered through local authorities. Any repairs or maintenance of the units is funded by Greater Wellington and is essentially reactive.

5.6.6 Renewal plan

There are no renewals planned at this time, with minor replacements managed as maintenance items.

5.6.7 Development plan

Greater Wellington has included over $14.5 million over the 2012/13 and 2013/14 period for the development of electronic ticketing.

Greater Wellington is also providing new cycle racks at station platforms as required by demand, although funding for this is currently provided from the maintenance budget.

Table 27 shows the development over the next three years for electronic ticketing by Greater Wellington.

Table 27 Development plan – facilities owned by Greater Wellington

Element	Project	Renewal	Development		Project Cost		
			LOS %	Growth %	10/11	11/12	12/13
Facility*	Electronic ticketing		100				$6,200,000

Note*: the Electronic ticketing facility will be place in its own lifecycle section in this plan once the asset has been established.

5.6.8 Disposal plan

Greater Wellington has no plans to dispose of any facility assets at this time.

5.6.9 Small facility assets not owned by Greater Wellington

Assets which are not owned by Greater Wellington, but which Greater Wellington either manages or funds aspects of the management of them, are limited (refer Table 26). The next version of this Plan will look to detail, forecast and justify expenditure needs for these assets as appropriate.

Table 28 Assets that are not owned by Greater Wellington

Asset	Number	Owner
Oxford Terrace Covered walkway	1	Hutt City Council
Cycle lockers	11	Hutt City Council
Cycle stands	3	Hutt City Council
Seats	3	Hutt City Council
Subway structure (Waterloo)	1	Hutt City Council & Kiwi Rail.

5.6.10 Summary of financial requirements

Section 6.3 provides a summary of expenditure planned

5.7 Carparks

5.7.1 Asset purpose

Park and ride carparks are a vital part of an integrated public transport system, where residents and visitors can leave vehicles in a secure environment and utilise the public transport system e.g. trains and buses.

5.7.2 Asset description

Greater Wellington owns approximately 61 carparking spaces of a total of 521 provided for Paraparaumu Station users. Greater Wellington owns the sub-base formation, base-course, kerbing and surfacing with a replacement cost of $105,406

5.7.3 Asset performance

Asset performance relates to utilisation and occupancy. Occupancy in the Paraparaumu station carpark is typically at full capacity during weekdays from approximately 8.30am to 7.30 pm. Anecdotal evidence confirms that weekend numbers are significantly reduced compared to weekday (no statistics or counts are available at this time).

5.7.4 Asset age & condition

These carparks were constructed in 2007. The condition grade of these carparks is far condition.

5.7.5 Operations & maintenance plan

Maintenance of the carparks is administered though Kapiti Coast District Council on behalf of Greater Wellington.

5.7.6 Renewal plan

There are no renewals planned at this time.

5.7.7 Development plan

Greater Wellington has included over $1.3 million over the 2010/11- 12/13 period for new carpark development sites. (Sites to be determined).

Table 29 shows the development over the next three years of car parks owned by Greater Wellington.

Table 29 Development plan – carparks owned by Greater Wellington

Element	Project	Development		Project Cost		
		LOS %	Growth %	10/11	11/12	12/13
Car Parks	Off street car park development	50	50		$390,000	$390,000
Car Parks	Land purchase	50	50		$280,000	

5.7.8 Disposal plan

Greater Wellington has no plans to dispose of any carpark assets at this time.

5.7.9 Carpark assets not owned by Greater Wellington

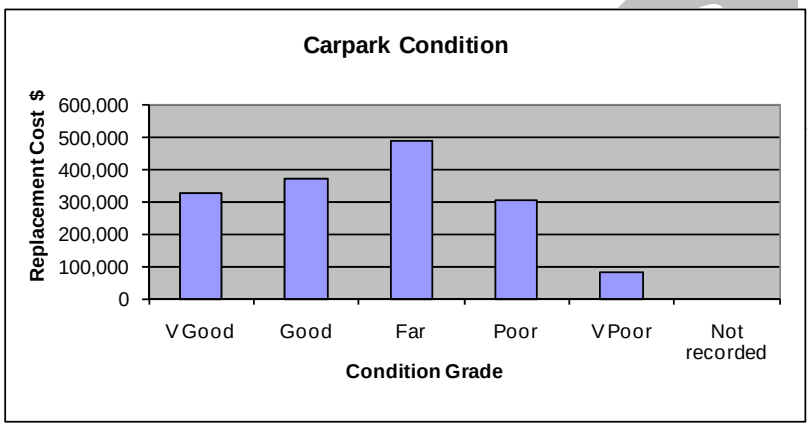
Approximately 4,400 car parking spaces are provided throughout the Wellington region by Greater Wellington, by leasing land and facilities from KiwiRail, Territorial Authorities, NZTA and other agencies. Greater Wellington provides funding for the maintenance and up keep of these facilities to the local authorities. These carparks are located at:

Waterloo	Porirua
Takapu Rd	Redwood
Tawa	Paremata
Linden	Plimmerton
Paekakariki	Waikanae
Otaki	Mana

Occupancy of these carparks is typically full capacity during weekdays from approximately 8.30am to 7.30 pm. Anecdotal evidence confirms that weekend numbers are significantly reduced compared to weekday (no statistics or counts are available at this time).

The majority of carparks are in fair to good condition as shown in Figure 21, noting that replacement cost has been estimated from resurfacing and remarking cost estimates.

Figure 21 Condition grade for carparks not owned by Greater Wellington



Maintenance of the carparks is administered though the relevant local authority on behalf of Greater Wellington. Greater Wellington contributes to the upkeep of these carparks.

There are no renewals planned at this time, with resurfacing needs being met from the maintenance budget.

Greater Wellington has included $850,000 over the 2010/11- 12/13 period for new carpark development sites. (Sites to be determined).

Table 30 shows the development over the next three years of carparks not owned by Greater Wellington.

Table 30 Development plan - car parks not owned by Greater Wellington

Element	Project	Development		Project Cost		
		LOS %	Growth %	10/11	11/12	12/13
Car Parks	On street car park development	50	50		$425,000	$425,000

5.7.10 Summary of financial requirements

Section 6.3 provides a summary of expenditure planned.

5.8 CCTV Systems (Closed Circuit Television)

5.8.1 Asset purpose

CCTV assets are provided to increase safety for customers who use the services. It is imperative that commuters feel safe while using the services provided by Greater Wellington and in the knowledge that their vehicle is safe in the carpark.

5.8.2 Asset description

There are a total of 11 CCTV systems throughout the network of stations, all owned by Greater Wellington. CCTV assets include recording equipment (DVR), cameras (fixed and Pivot Tilt Zoom (PTZ), power supply units and PC equipment. In addition some cameras are protected with vandal proof domes.

Table 31 Shows CCTV systems Greater Wellington own

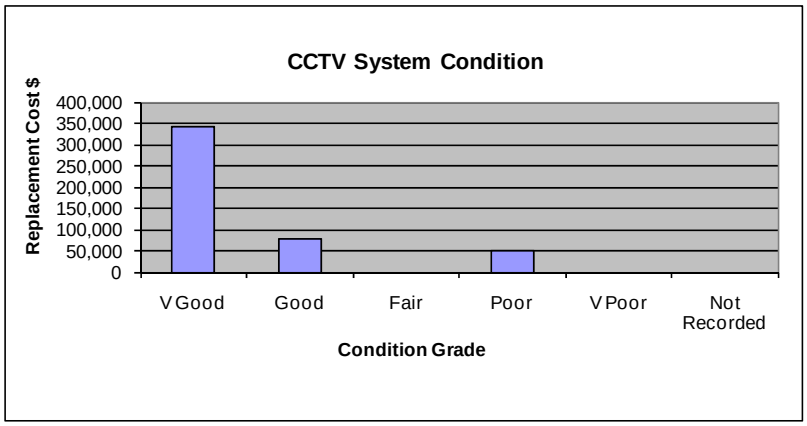
Asset	Number	Replacement cost
Waterloo Rail Station CCTV system	1	$129,000
Woburn Station CCTV system	1	$46,000
Petone Rail Station CCTV system	1	$40,000
Porirua Rail Station CCTV system	1	$37,000
Paremata Rail Station CCTV system	1	$29,000
Takapu Road Station CCTV system	1	$20,000
Wellington Rail Yard CCTV system	1	$20,000
Featherston Rail Station CCTV system	1	$30,000
Carterton Rail Station CCTV system	1	$41,000
Renall Street Station CCTV system	1	$13,000
Masterton Rail Station CCTV system	1	$60,000

5.8.3 Asset performance

Asset performance relates to security and coverage. CCTV systems cover the whole area with no known blind spots. They are able to record and are able to be remotely controlled if needed, with the exception of Porirua.

5.8.4 Asset age & condition

Figure 22 CCTV condition grade for Greater Wellington



The CCTV systems were installed from 2001 to 2007. All of the assets are in good to very good condition with the exception of the systems at Takapu Road and Paremata which have been assessed to be in Poor condition

5.8.5 Operations & maintenance plan

Greater Wellington currently has a contract in place with iSEE Technology Ltd, which is renewable on an annual basis. Appendix A of the iSEE Technology Ltd/Greater Wellington contract contains the preventative maintenance schedule, which includes the servicing of the following CCTV assets on a three monthly basis:

- CCTV:
  - Check all connections
  - Check all voltages
  - Software diagnostics
  - Clean Lenses & Domes
  - Check camera mounting, alignment and focus
- DVR/Software
  - Run test diskette
  - DVR health check
  - DVR network connectivity
  - Check operation with client
- Power Supplies/UPS
  - Verify voltages
  - Check connections
  - Simulate VAU alarm

Any reactive maintenance is agreed to with Greater Wellington prior to any works being carried out.

5.8.6 Renewal plan

There are no renewals shown at this time, however Greater Wellington has planned renewal projects for CCTV including addressing the poor condition assets and installing a web browser for the Porirua system. Funding these projects ($84,000) is listed under maintenance costs in the financials. Greater Wellington considers the cost of renewals for CCTV too small to fund as capital at this time but will be reviewing this approach in the future.

5.8.7 Development plan

The installation of a new Closed Circuit TV System within the commuter carpark and rail station facilities at Silverstream and Redwood is planned to help with the prevention of damage to vehicles and property, and to aid personal security for passenger transport users.

Table 32 shows development projects over the next three years for CCTV but which are funded as maintenance

Table 32 Development plan - CCTV

Element	Project	Development		Project Cost		
		LOS %	Growth %	10/11	11/12	12/13
CCTV	CCTV installation Silverstream park & ride	60	40	$35,000		
CCTV	CCTV installation Redwood park and ride	60	40		$40,000	
CCTV	CCTV installation Redwood North park and ride	60	40			$14,000

5.8.8 Disposal plan

Greater Wellington has no plans to dispose of any CCTV assets at this time.

5.8.9 Summary of financial requirements

Section 6.3 provides a summary of expenditure planned.

5.9 Rail Shelters

5.9.1 Asset purpose

Greater Wellington aims to provide quality rail shelter assets that include sufficient shelter, seating and hard standing areas.

5.9.2 Asset description

There are a total of 11 shelters at a five rail stations, owned by Greater Wellington. Renall Street, Woodside and Solway have purpose built rail platform shelters manufactured by Community Asset Ltd. The shelters are made from galvanised perforated steel and glass, and include platform signage, seats internal and external to the shelter.

Table 33 Number of shelters Greater Wellington own and replacement cost

Asset	Number	Replacement cost
Renall Street Shelter	1	$22,000
Petone Shelter	1*	$36,900
Woodside Shelter	1	$17,000
Solway Shelters	2	$34,000
Waterloo Shelters	5	$23,000

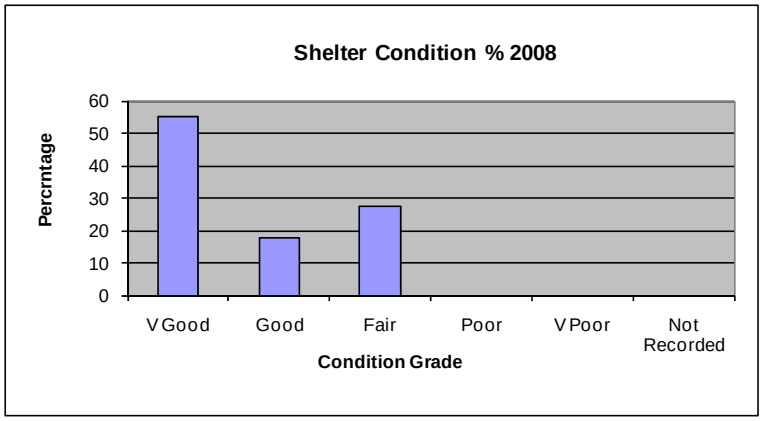
*To be determined

5.9.3 Asset performance

Asset performance relates to utilisation and occupancy. All shelters are well used particularly when the weather is wet and cold (no statistics or counts are available at this time).

5.9.4 Asset age & condition

Figure 23 Shelter condition grade



The shelters were installed from 1989 to 2007. All of the assets are in good – very good condition. However, the Petone shelters have not had their condition recorded.

5.9.5 Operations & maintenance plan

Maintenance of the shelters is administered though the relevant local authority on behalf of Greater Wellington. Greater Wellington pay the full cost of required maintenance.

5.9.6 Renewal plan

There are no renewals planned at this time.

5.9.7 Development plan

New rail shelters will be installed in various locations around the region over the next two years, as budget allows, during the platform upgrade works programme required for the new Matangi electric multiple units.

5.9.8 Disposal plan

Greater Wellington has no plans to dispose of any shelter assets at this time.

5.10 Bus Shelters

5.10.1 Asset purpose

Greater Wellington aims to provide quality bus shelter assets that include sufficient shelter, seating and hard standing areas.

5.10.2 Asset description

Table 34 Number of shelters Greater Wellington own and replacement cost

Asset	Number	Replacement cost
Wellington	5	$62,500
Porirua City		
Kapiti Caost	6	$67,500
Hutt City	5	$62,500
Upper Hutt	4	$50,000
South Wairarapa	2	$25,000
Carterton	2	$25,000
Masterton	1	$12,500

5.10.3 Asset performance

Asset performance relates to utilisation and occupancy. All shelters are well used particularly when the weather is wet and cold (no statistics or counts are available at this time).

5.10.4 Asset age & condition

Figure 24 Shelter condition grade

5.10.5 Operations & maintenance plan

Maintenance of the shelters is administered though the relevant local authority on behalf of Greater Wellington. Greater Wellington pay the full cost of required maintenance, excluding shelters in Upper Hutt which Greater Wellington administers.

5.10.6 Renewal plan

There are no renewals planned at this time.

5.10.7 Development plan

45 new bus shelters will be installed in various locations around the region over the next three years in response to demand.

Error! Reference source not found.35 shows the development projects planned for the next three years

Table 35 Development plan - shelters

Element	Project	Development		Project Cost		
		LOS %	Growth %	10/11	11/12	12/13
Shelter	15 New bus shelters to be erected through the region per annum	40	60	$250,000	$250,000	$250,000

5.10.8 Disposal plan

Greater Wellington has no plans to dispose of any shelter assets at this time.

5.10.9 Shelters assets not owned by Greater Wellington

458 shelters are provided by TAs in the region which Greater Wellington funds aspects of their management (refer also Section 1.10).

The shelters are well used particularly when the weather is wet and cold. (No statistics or counts are available at this time).

There is no record of age or condition of the shelters not owned by Greater Wellington.

Shelter maintenance is administered though the relevant local authorities on behalf of Greater Wellington. Shelter maintenance for the Upper Hutt City Council area is contracted through Greater Wellington.

There are no renewals planned at this time.

There are no development plans at this time, other than as described in Section 5.9.7.

5.10.10 Summary of financial requirements

Section 6.3 provides a summary of expenditure planned

5.11 Signage

5.11.1 Asset purpose

Metlink branded signage provides directional information, bus information, and timetable information.

5.11.2 Asset description

At present there are seven large Wayfinder signs installed around the region. The signs are aluminium that has a graphic transferred to the outward surface.

There are currently four large Metlink display signs which are constructed of heavy gauge steel and glass, they are backlit to illuminate information after daylight hours.

Other signs are relatively small, low cost platform or bus stop signs.

- There are currently 3,259 public transport bus stops throughout the Wellington region. Each stop is identified by a legal bus stop sign known as an RP5. The introduction of the Metlink branding in 2005 saw the introduction of additional signs identifying the location and routes serving each stop. Bus stop assets include legal RP5 signs, Metlink signs of varying sizes dependant on the number of routes serving the stop, poles, ground sockets and brackets. Each sign has a life expectancy of between 5 and 7 years dependant on weather conditions and in some cases UV light exposure. Hardware such as poles and ground sockets should have a useful life of 10 years or more.
- Platform signs
- Carpark location signs

Table 36 Asset information

Wayfinder Signs	Quantity	Replacement Cost
Petone		
Info Sign	1	7,222
Info Sign Graphics	1	1,002
Paraparaumu		
Aluminium	1	7,222
Graphics	1	1,002
Silverstream		
Aluminium	1	7,222
Graphics	1	1,002
Taita		
Aluminium	1	7,222
Graphics	1	1,002
Waterloo		
Aluminium	2	14,443
Graphics	2	2,004
Westfield Queensgate		
Aluminium	1	7,162
Graphics	1	1,010
TOTAL		**57,515**

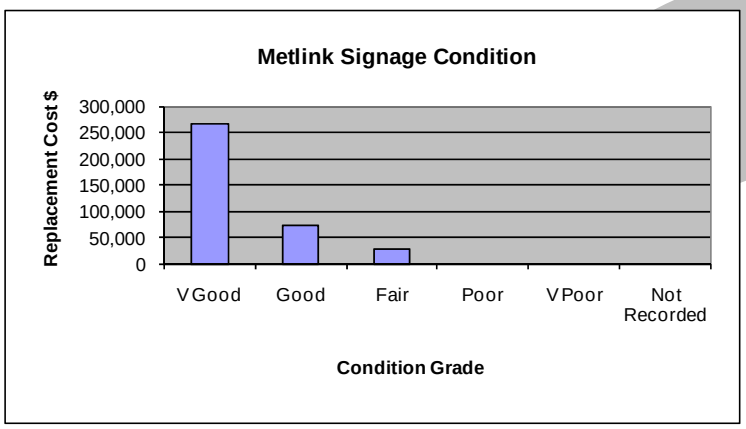
Metlink Display Signs	Quantity	Replacement Cost
Lambton Quay	1	24,173
Courtenay Place (Reading)	1	24,129
Blair Street	1	24,129
St James Theatre	1	24,129
TOTAL		**96,560**

5.11.3 Asset performance

Asset performance relates to quality and readability. There is no information on performance of these signs at this time, although the graphics tend to be affected by UV light, which can significantly reduce the useful life of the asset at sites with high UV light exposure.

5.11.4 Asset age & condition

Figure 25 Show the condition of Metlink signage of Greater Wellington



These assets were installed from 1989 to 2007. The majority of these assets have a condition grading of being Very good to good with only two as fair, these are at Waterloo and Lambton Quay.

A replacement programme of the regions bus stops commenced in late 2005 with the completion of 2,590 stops being upgraded in 2007. The assets are relatively new which is reflected in the condition grading.

5.11.5 Operations & maintenance plan

The cleaning and maintenance of these signs are covered by a number of different organisations depending on the sign.

- Cleaning of the Wayfinder Signage is by Transpacific Industrial Solutions. The maintenance is reactive and is organised by Greater Wellington staff.
- Cleaning and maintenance of the Metlink display signs are contracted through Transpacific Industrial Solutions.
- Maintenance and cleaning of bus stops is by Directions NZ Ltd (this excludes the road legal bus stop within Wellington City and is the responsibility of Wellington City Council for this particular signage).
- Platform signs are cleaned and maintained by KiwiRail
- Commuter carpark signs are maintained by the relevant local authority or Greater Wellington
- QED timetable holders at bus stops are maintained by Directions NZ Ltd.

5.11.6 Renewal plan

Given the relatively short life expectancy for the signage graphics, it is important the location be taken into account when installing noting that UV light is very destructive. Greater Wellington has planned renewal projects for signs. However these renewals are managed as maintenance costs in the financials. Greater Wellington considers the cost of renewals for signs too small to fund as capital at this time but will be reviewing this approach in the future. In the financial year 2009/10 the Hutt City bus stop signs are due to be renewed as the existing signs have been installed for seven years..

As part of the rail upgrade programme for the new Matangi electric multiple units platform signage has been renewed at a number of rail stations.

5.11.7 Development plan

Greater Wellington has provided $6 million for the Development of a real time information system for Bus & Rail information. This includes a trial real time information system within the Wellington CBD.

Table 37 shows the development project for the next three years on signage.

Table 37 Development plan - signage

Element	Project	Development		Project Cost		
		LOS %	Growth %	10/11	11/12	12/13
Sign	Real time project General	100		$295,000	$311,000	
Sign	Real time information installation and acceptance			$5,000,000	$400,000	

5.11.8 Disposal plan

Greater Wellington has no plans to dispose of any signage assets at this time.

5.11.9 Summary of financial requirements

Section 6.3 provides a summary of expenditure planned.

5.12 Trolley Bus Cables

The Trolley cable system provides electricity from overhead wires to the trolleybus.

The Trolley bus cable system in Wellington forms part of the Wellington public transport system, with the current system having operated since 1949. The cables are owned by Wellington Cable Car Co. Ltd with some funding provided by Greater Wellington. Wellington's trolleybus system is the only one still operating in Oceania.

There is no information currently available on performance. Further, there is no record of age or condition of the Trolley Bus cables. Work is currently underway by NZ Bus, Wellington Cable Car Co. and WEL (Wgtn Electricity Ltd) to undertake condition and performance assessments of the network as part of the preparatory work for establishing a separate Plan for the infrastructure. This initial "technical review" report is due for completion in March 2010. The contents of this report will be summarised and inserted as appropriate into this Plan as part of the next update

5.12.1 Operations and maintenance plan

Trolley cables are currently inspected by the contractor on behalf of Wellington Cable Car Ltd, and a 10 year plan of maintenance and renewals is prepared by them for Greater Wellington approval.

5.12.2 Renewal plan

Table 38 shows the renewals projects for the next three years for trolley bus cables.

Table 38 Renewals plan – trolley bus cables

Element	Project	Project Cost		
		10/11	11/12	12/13
Trolley bus cables	Infrastructure renewals	$4,490,000	$2,583,000	$2,567,000

5.12.3 Development plan

There are no development plans at this time.

5.12.4 Summary of financial requirements

Section 6.3 provides a summary of expenditure planned.

6.0 Financial Requirements

6.1 Overview

In order to have a sustainable, long-term approach to asset management, it is essential to prepare long-term financial forecasts. This allows a long term view of how the asset will be managed, how much this will cost and when additional funding may be required to meet expected service levels. These financial forecasts are a culmination of the previously discussed aspects of the Plan.

6.2 Key Assumptions

The following general assumptions have been made in preparing the 10-year expenditure forecasts:

- Greater Wellington is committed to implementing the public transport and non-roading elements of the Regional Land Transport Strategy.
- The funding provided by the New Zealand Transport Agency will be as follows:
  - Public transport assets will remain in Greater Wellington's ownership throughout the planning period.
  - Passenger rail services will be funded at a rate of 60%.
  - Rail rolling stock and passenger transport infrastructure will be funded at rates of 60%.
  - New public transport capital projects may obtain a combination of Crown allocations and local contributions.
- All expenditure is stated in dollar values as at July 2008 with allowance made for inflation based on the BERL adjustment factors over the 10-year planning period.
- Operational costs are based on historical expenditure.
- It is assumed that regulations relating to rail will remain essentially the same over the planning period.
- Maintenance and operations allocations are largely based on maintaining current service levels.
- The determination of asset replacement value, depreciated value, and renewal projections are based on the valuation data as at 1 July 2008.
- The depreciation has been calculated on a simple straight-line basis.
- Confidence in the data used to produce the 10-year forecasts for this Plan has been assessed at 75- 80%.

6.3 Summary Financial Forecast

Table 39 presents the 10-year financial forecasts for the Public Transport activity. The forecast is shown graphically in Figure 26.

The key provisions and trends in the 10-year financial forecast are:

- Operations – increases from $1.6 million to $8.9 million over the ten year planning period. This reflects introduction of electronic ticketing capability, including the associated depreciation.
- Maintenance – increases from $3.9 million to $4.8 million, largely due to increased trolley bus cable maintenance. Note that there is a reduction in trolley bus renewals over this period to offset this increase. There is also a marginal increase in shelter maintenance costs reflecting growth in the asset base.
- Renewals – Renewals are currently limited to trolley bus cable renewals, with all other replacements and rehabilitations being managed as maintenance items. Renewals reduce from $4.5 million to $2.6 million in 2011/12, with an increase in maintenance costs to partly offset this reduction.
- Capital development for growth – $10 million has been planned for 2010/11, thereafter reducing to approximately $0.6 million for the remainder of the planning period. The initial expenditure is targeted at specific rail upgrades.
- Capital development for level of service – $92.7 million is planned for over the 10 year planning period, fluctuating from an average of around $11 million per year for the first four years, reducing to around $5.6

million for the following three years. Of this $92.7 million, $66 million is associated with rail station upgrades, 14.5 million with electronic ticketing and $6 million with real time information displays.

Figure 26 Consolidated financial forecast – Total Expenditure

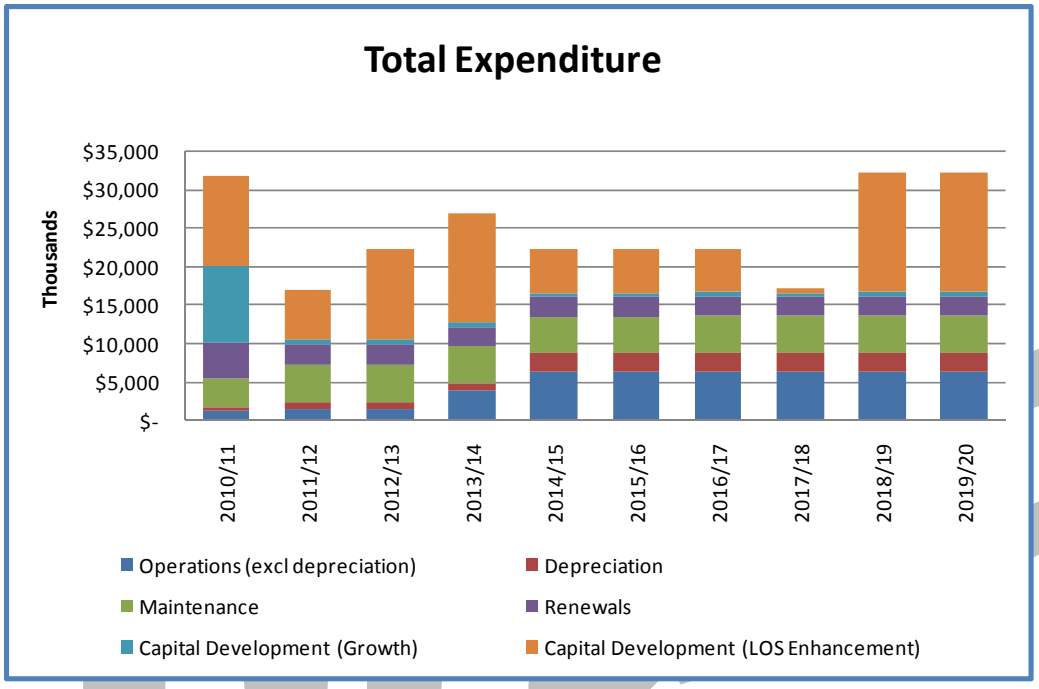


Table 39 Public Transport expenditure forecasts

Expenditure Category	WBS Code	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Total Operating Expenditure		**$ 5,553,842**	**$ 7,268,905**	**$ 7,276,601**	**$ 9,684,272**	**$ 13,465,032**	**$ 13,506,973**	**$ 13,596,255**	**$ 13,625,537**	**$ 13,645,357**	**$ 13,645,359**
Total Capital Expenditure		**$ 26,233,236**	**$ 9,639,087**	**$ 15,111,552**	**$ 17,173,392**	**$ 8,798,392**	**$ 8,773,392**	**$ 8,643,392**	**$ 3,593,392**	**$ 18,593,392**	**$ 18,593,393**
Operations		**$ 1,670,184**	**$ 2,421,440**	**$ 2,496,451**	**$ 4,890,889**	**$ 8,809,824**	**$ 8,828,940**	**$ 8,862,047**	**$ 8,897,554**	**$ 8,886,449**	**$ 8,886,449**
Overheads		792,647	786,403	794,124	795,692	800,565	797,314	799,194	799,898	804,903	804,903
Carpark Leases & Rates	W.560/2300/90	351,131	351,131	351,131	351,131	351,131	351,131	351,131	351,131	351,131	351,131
PT Infra Admin CC	CC.56020-01	145,972	145,972	145,972	145,972	145,972	145,972	145,972	145,972	145,972	145,972
Infra Admin - Office	W.560/2000/1	5,450	5,450	5,450	5,450	5,450	5,450	5,450	5,450	5,450	5,450
Infra Admin - O/heads	W.560/2000/99	290,094	283,850	291,571	293,139	298,012	294,761	296,641	297,345	302,350	302,350
Operating Expenses		355,000	575,000	575,000	3,025,000	5,475,000	5,475,000	5,475,000	5,475,000	5,475,000	5,475,000
Security-Patrols	W.560/2400/1	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Real Time Info Operations - Bus&Rail	W.560/2700/90	255,000	475,000	475,000	475,000	475,000	475,000	475,000	475,000	475,000	475,000
Rail Electronic Ticketing Operations	W.560/2710/90	-	-	-	2,450,000	4,900,000	4,900,000	4,900,000	4,900,000	4,900,000	4,900,000
Planning and Investigation		72,000	80,000	72,000	72,000	80,000	72,000	72,000	80,000	72,000	72,000
Infra Studies/Investigation	W.560/2900/90	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000
AMP Updates	W.560/2910/90	2,000	10,000	2,000	2,000	10,000	2,000	2,000	10,000	2,000	2,000
Depreciation		450,537	980,037	1,055,327	998,196	2,454,259	2,484,626	2,515,853	2,542,656	2,534,546	2,534,546
Buildings and structures		73,038	73,038	99,318	125,598	151,878	182,245	213,471	240,275	267,078	267,078
CCTV		103,627	103,627	103,627	20,217	-	-	-	-	-	-
Signage		209,280	738,780	787,789	787,789	787,789	787,789	787,789	787,789	760,000	760,000
Electronic Ticketing		-	-	-	-	1,450,000	1,450,000	1,450,000	1,450,000	1,450,000	1,450,000
Facilities/Other		64,592	64,592	64,592	64,592	64,592	64,592	64,592	64,592	57,468	57,468
Maintenance		**$ 3,883,658**	**$ 4,847,465**	**$ 4,780,150**	**$ 4,793,383**	**$ 4,655,208**	**$ 4,678,033**	**$ 4,734,208**	**$ 4,727,983**	**$ 4,758,908**	**$ 4,758,910**
Station Maintenance		505,700	594,800	514,625	614,350	468,375	501,400	542,775	525,750	544,875	544,875
Station Maintenance	W.560/2150/90	170,000	170,000	170,000	170,000	170,000	170,000	170,000	170,000	170,000	170,000
Car park Maintenance & Resurfacing		335,700	424,800	344,625	444,350	298,375	331,400	372,775	355,750	374,875	374,875
Shelter Maintenance		693,000	701,600	709,200	716,800	724,400	731,000	740,600	748,200	754,800	754,800
Wellington Interchange Maintenance	W.560/2100/1/1	165,000	165,000	165,000	165,000	165,000	165,000	165,000	165,000	165,000	165,000
WCC Shelter Maintenance	W.560/2100/1/2	157,000	159,000	160,000	162,000	163,000	165,000	167,000	168,000	170,000	170,000
PCC Shelter Maintenance	W.560/2100/2	65,000	67,000	69,000	70,000	72,000	73,000	75,000	77,000	78,000	78,000
KCDC Shelter Maintenance	W.560/2100/3	61,000	62,000	64,000	65,000	66,000	67,000	69,000	70,000	71,000	71,000
HCC Shelter Maintenance	W.560/2100/4	115,000	117,000	118,000	120,000	122,000	123,000	125,000	127,000	128,000	128,000
UHCC Shelter Maintenance	W.560/2100/5	91,000	92,000	93,000	94,000	95,000	96,000	97,000	98,000	99,000	99,000
SWDC Shelter Maintenance	W.560/2100/6	4,200	4,400	4,600	4,800	5,000	5,200	5,400	5,600	5,800	5,800
CDC Shelter Maintenance	W.560/2100/7	2,400	2,600	2,800	3,000	3,200	3,400	3,600	3,800	4,000	4,000
MDC Shelter Maintenance	W.560/2100/8	2,400	2,600	2,800	3,000	3,200	3,400	3,600	3,800	4,000	4,000
Bus Shelter Retrofit	W.560/2100/9	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000
CCTV and Security Maintenance		84,700	84,940	85,000	84,700	84,700	84,700	84,700	84,700	84,700	84,701
CCTV Maintenance		84,700	84,940	85,000	84,700	84,700	84,700	84,700	84,700	84,700	84,701

Expenditure Category	WBS Code	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Signage Maintenance		411,992	411,992	411,992	315,000	310,000	290,000	290,000	290,000	290,000	290,000
Signage Maint	W.560/2160/90	290,000	290,000	290,000	290,000	290,000	290,000	290,000	290,000	290,000	290,000
Metlink Signage Renew al		121,992	121,992	121,992	25,000	20,000	-	-	-	-	-
Other Maintenance		2,188,266	3,054,133	3,059,333	3,062,533	3,067,733	3,070,933	3,076,133	3,079,333	3,084,533	3,084,534
Trolley Bus - Infrastructure Contract (WCCL)	W.560/2200/1	2,188,266	3,054,133	3,059,333	3,062,533	3,067,733	3,070,933	3,076,133	3,079,333	3,084,533	3,084,534
Renewals		**$ 4,489,990**	**$ 2,582,712**	**$ 2,566,552**	**$ 2,528,392**	**$ 2,528,392**	**$ 2,503,392**	**$ 2,528,392**	**$ 2,478,392**	**$ 2,478,392**	**$ 2,478,393**
Station Renewals											
Shelter Renewals											
Signage Renewals											
Carparking Renewals											
Special Projects		-	-	-	-	-	-	-	-	-	-
Waterloo Main Station New Kiosk & Toilet Block			-								
Other Renewals		4,489,990	2,582,712	2,566,552	2,528,392	2,528,392	2,503,392	2,528,392	2,478,392	2,478,392	2,478,393
Trolley Bus - Infrastructure Renew als	W.560/2880/90	4,489,990	2,582,712	2,566,552	2,528,392	2,528,392	2,503,392	2,528,392	2,478,392	2,478,392	2,478,393
Capital Development (Growth)		**$ 10,030,003**	**$ 647,500**	**$ 647,500**	**$ 647,500**	**$ 610,000**	**$ 610,000**	**$ 532,500**	**$ 532,500**	**$ 532,500**	**$ 532,500**
RS1 Car Park Development - On Street	W.560/2530/90	-	212,500	212,500	212,500	-	-	-	-	-	-
Capex - RS1 Car Park Development - Off Street	W.560/2535/90	-	195,000	195,000	195,000	230,000	230,000	197,500	197,500	197,500	197,500
Capex - RS1 Carpark Development - Land Purchase	W.560/2540/90	-	140,000	140,000	140,000	280,000	280,000	235,000	235,000	235,000	235,000
Capex - Bus Shelters	W.560/2810/90	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Ontrack-J'ville Stations / Platforms	W.560/8410/2	1,811,964	-	-	-	-	-	-	-	-	-
Revenue - J'ville Line Pedestrian Facilities Upgrade	W.560/8410/3	562,914	-	-	-	-	-	-	-	-	-
Kapiti Stations - Platform/Stabling & PM	W.560/8425/90	7,555,125	-	-	-	-	-	-	-	-	-
Capital Development (LOS Enhancement)		**$ 11,713,243**	**$ 6,408,875**	**$ 11,897,500**	**$ 13,997,500**	**$ 5,660,000**	**$ 5,660,000**	**$ 5,582,500**	**$ 582,500**	**$ 15,582,500**	**$ 15,582,500**
RS1 Car Park Development - On Street	W.560/2530/90	-	212,500	212,500	212,500	-	-	-	-	-	-
Capex - RS1 Car Park Development - Off Street	W.560/2535/90	-	195,000	195,000	195,000	230,000	230,000	197,500	197,500	197,500	197,500
Capex - RS1 Carpark Development - Land Purchase	W.560/2540/90	-	140,000	140,000	140,000	280,000	280,000	235,000	235,000	235,000	235,000
Capex - Bus Shelters	W.560/2810/90	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000
Capex - Real Time Info - General	W.560/2870/01	295,000	311,375	-	-	-	-	-	-	-	-
Capex - Real Time Info - Supply Contract	W.560/2870/02	5,000,000	400,000	-	-	-	-	-	-	-	-
RS1 Station Major Redevelopments	W.560/8445/90	-	-	-	-	-	-	5,000,000	-	15,000,000	15,000,000
RS1 Station Upgrades	W.560/8450/90	-	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	-	-	-	-
Revenue - Capex Station/Car Park Upgrades	W.560/8455/90	1,602,100	-	-	-	-	-	-	-	-	-
Ontrack - Station Platform Upgrades	W.560/8460/90	4,666,143	-	-	-	-	-	-	-	-	-
Capex - Electronic Ticketing	W.560/8490/90	-	-	6,200,000	8,300,000	-	-	-	-	-	-

6.4 Confidence levels

The confidence in data used as a basis for the financial forecasts has been assessed using the grading system from the NZWWA NZ Guidelines for Infrastructure Asset Grading Standards, as summarised in Table 40.

Confidence grades have been assessed as:

- Demand forecasts B - Reliable
- Service gap interpretation C - Uncertain
- Asset data B - Reliable
- Unit rates B – Reliable
- Base lives B - Reliable
- Remaining lives D – Very uncertain
- Valuation and depreciation B - Reliable
- Financial forecasts C - Uncertain

Forecasts will be improved with more sophisticated analysis and improved knowledge of the assets as discussed in Section 7.0

Table 40 Confidence grade definitions

Grade	General meaning
A	**Highly reliable** Data based on sound records, procedures, investigations and analysis which is properly documented and recognised as the best method of assessment
B	**Reliable** Data based on sound records, procedures, investigations, and analysis which is properly documented but has minor shortcomings, for example the data is old, some documentation is missing and reliance is placed on unconfirmed reports or some extrapolation
C	**Uncertain** Data based on sound records, procedures, investigations or analysis which is incomplete or unsupported, or extrapolation from a limited sample for which grade A or B data is available
D	**Very uncertain** Data is based on unconfirmed verbal reports and/or cursory inspection and analysis

6.5 Transport funding

The LTCCP identifies how Greater Wellington plans to fund the operating and capital costs of its public transport activities. The LTCCP includes a ten-year financial forecast of proposed expenditure, which is updated yearly through the Annual Plan process and is driven by the information within this Plan. The LTCCP also includes Greater Wellingtons revenue and financing policy, which identifies how this expenditure will be funded.

Transport, including public transport, represents the largest investment in any of Greater Wellington's activity areas. Greater Wellington's main funding sources for transport are rates, user charges (fares) and government subsidies .

Greater Wellington uses the following funding allocations in respect of expenditure for providing public transport services other than Total Mobility:

- A target of 45-50% user charges
- The remainder from a community contribution (national and regional).

This community contribution is funded as follows:

- The maximum contribution is from New Zealand Transport Agency transport grants, reflecting the benefits to transport users and social services (ranges from 50-100%, depending on the type of service)
- The balance is from a Greater Wellington contribution funded via a targeted rate set as follows (with a discount of 75% for rural capital values)
    - Congestion relief and concessionary, 95%; of this 20-25% of the inter-district costs are borne by the Wellington CBD and the remainder equally by ratepayers in the district of origin and the district of destination. Within districts, costs are allocated on rateable capital values.

- Social, 5%; from ratepayers across the region with a reduction of 50% for Kapiti and 75% for Wairarapa.

6.6 Asset Valuation

6.6.1 Introduction

Financial reporting standards require Greater Wellington to revalue its fixed assets at least every five years. An asset valuation is to be used for asset management (calculating long-term asset renewal projections), identifying loss of service potential (depreciation) and for financial reporting purposes.

Accounting Standards

New Zealand International Financial Reporting Standard (NZIAS16) applies to all rail transportation infrastructure assets considered in the scope of this valuation for the general purpose of financial reports.

Industry Guidelines

All infrastructure assets valued have been done in accordance with the methodology prescribed in the New Zealand Infrastructure Asset Valuation & Depreciation Guidelines Manual Edition 1.2 February 2004.

The assets have generally been valued on the basis of Depreciated Replacement Cost (DRC)/Optimised Depreciation Replacement Cost (ODRC) approach for the depreciable assets in accordance with NZIAS16 Requirements.

Table 41 Valuation type meaning

Valuation Type	General Meaning
Replacement cost (RC)	The cost of constructing a new infrastructure asset using the present day technology, and maintaining the original service potential
Optimised Replacement cost (RC)	The cost of the modern equivalent asset that would be used to replicated the existing asset. The asset cost is 'optimised' down to allow for surplus capacity or technical obsolescence
Optimised Depreciation Replacement Cost (ODRC)	is the optimised replacement cost after deducting the wear of an asset to reflect the remaining useful life of the asset. Calculated on the gross replacement cost of modern equivalent assets (MEA).

6.6.2 Valuation Process & Methodology

Duffill Watts & Tse Ltd (DWT) valued the Petone and Waterloo Station infrastructure assets as at 01 July 2008 in conjunction with cycle locker and CCTV assets at an additional seven sites. This has been based on an optimised replacement cost in accordance with the NZIAS16.

The assessment of replacement cost and optimised replacement cost (ORC) was established using Audit New Zealand's recommended procedures. Once the replacement cost has been established following data capture, the asset is then optimised to factor out over design, over capacity and redundant assets. The accumulated depreciation (calculated on a straight line basis) is then deducted.

Asset Register

Greater Wellington has established a spreadsheet, which contains a full description of all assets at the component level. The unit rates and life information has been provided to match the component data.

Spreadsheets developed by DWT (all assets captures by field inspection) have been used as the basis upon which current replacement values and depreciation allowances have been assessed for each asset. The information is considered as accurate and complete for the valuation and has a high degree of confidence.

Valuation Assumptions

The assumptions that have been used in the valuation of Greater Wellington's transport assets are as follows:

- Depreciation is by the straight-line method

- Asset Base Life or Total Useful Life have been used as detailed in Table 42. Deterioration curves for asset (with known condition) were developed based on the NAMS guidelines and remaining useful lives were modified accordingly
- Asset age: actual construction dates were used where available. However where these were not available default values have been used
- The valuations are all reported in a Microsoft Excel format. All assets are valued and depreciated within the Valuation Module developed in Excel.

Additional Assumptions

- The replacement costs for rail asset are based on rates from the Rawlinson 2006 standard
- Assets have been assumed to have zero residual value at the end of their effective useful life
- Minimum remaining useful life (RUL) has been assumed as 3 years
- Asset information is as complete as possible at 01 July 2008. This is based on the asset data collected for each asset class by field inspection and in addition the Duffill Watts Data Capture Report.
- Asset condition is used where available to modify the base lives of the asset. This information was collected by visual inspection as part of the data capture
- Existing and public assets have only been valued.

6.6.3 Valuation summary

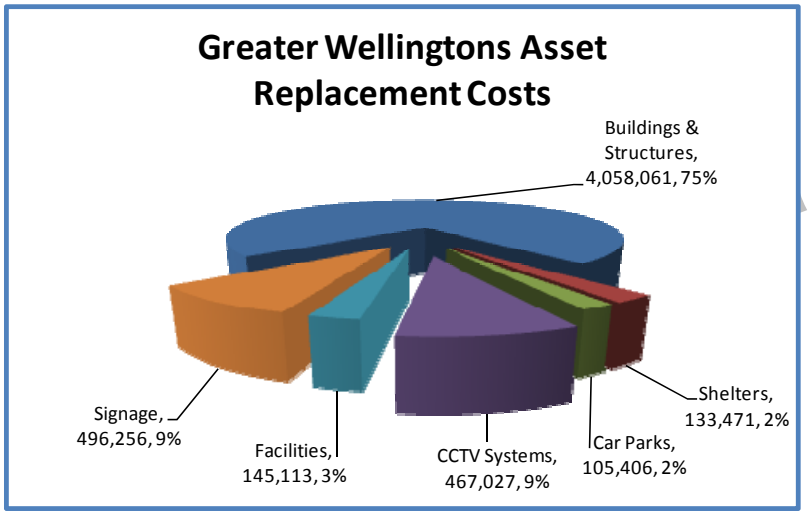
Table 42 Current infrastructure asset base lives

Asset	Base Lives	Asset	Base Lives	Asset	Base Lives
Buildings	25 - 80	Handrail	60	Shelters	25 - 80
Base course - AP40	35	Information Sign - Steel	50	Rail Shelter -Timber	40
2 Level Building - Concrete	100	Information Sign - Timber	15	Roof - Corrugated Iron	20
Ticket Building - Concrete	100	Kerb Concrete	60	Roof Support - Concrete	100
Ticket Building - Timber	50	Lighting Bracket -Steel	40	Roof Support -Steel	50
Bus Shelter -Steel	50	Lighting Lamp - HPS100	25	Rubbish Bin - Steel	40
Carpark Basecourse, Kerbing	100	Lighting Lamp - HPS150	25	Rubbish Bin - Timber	25
Carpark Marking- Paint	1	Lighting Pole -Concrete	60	Seat - Steel	40
Carpark Surface - AC	25	Lighting Pole -Steel	40	Seat - Timber	25
Ceiling Colour Steel	50	Lighting Square -36W Diffused	25	Subway Light – Bulkhead Fluorescent	25
Cycle Locker	50	Long Fluorescent Diffused	25	Subway Wall Painted	15
Cycle Stand -Galv	50	Small Fluorescent Diffused	25	Subway Wall Tiled Ceramic	40
Building Toilet -Timber	50				

Table 43 Greater Wellington's asset inventory and replacement costs (30 June 2008)

Asset	Location/Type	Quantity	Replacement Cost $
Buildings & Structures	Petone and Waterloo	4	4,058,061
Carparks	Paraparaumu	1	105,406
CCTV Systems		11	467,027
Facilities	Rubbish Bins	24	8,988
	Cycle lockers	51	88,771
	Seats	46	47,354
Bus Shelters		10	133,471
Signage	Wayfinder	7	57,514
	Metlink Display	4	96,560
	Metlink Bus	3,567	181,591
	Platform/Other	30	27,691
	Parts/Various	10515	132,899
total			**5,405,333**

Figure 27 Replacement value of public transport network assets



6.7 Risk to Significant Forecasting Assumptions

The table below outlines the risks to significant forecasting assumptions. Should these assumptions prove to be incorrect there could be a significant effect on the level of rates to be collected from the community. If this were to occur, Greater Wellington would re-evaluate the works programmes to determine if the expenditure is appropriate and rates altered accordingly or whether the scope of the proposed works could be scaled down.

Table 44 Risks to significant forecasting assumptions

Risk	Risk Level	Likely Financial Effect	Consequence/ Mitigation Strategy
Inflation is lower or higher than anticipated	Med	Med	Changes the level of rates and debts
Interest rates are higher or lower	Med	Med	Changes the level of rates and debts/offset by hedging strategies
Funding from NZTA is higher or lower	Med	High	Changes the levels of rates and debts. Review LOS and work programmes, adjust as required

Risk	Risk Level	Likely Financial Effect	Consequence/ Mitigation Strategy
Exchange rate is higher or lower affecting the purchase price of passenger rolling stock	High	High	Changes levels of rates and debts/hedging of known liabilities and seek more funding from the Crown
Western corridor projects are not 100% funded by the Crown	High	High	Re-examine the extent of the programme and determine which projects (if any) proceed
Natural disaster/flood event damages Greater Wellington's property, plant and equipment	Med	Low-high	Call on insurance and self-insurance funds, adjust operating programmes and change the level of rates and debt if necessary

7.0 Asset Management Improvement

7.1 Overview

Greater Wellington has adopted a strategic management approach to improvement planning, continually developing Asset Management plans, and implementing improvement processes & practices. This improvement plan is integral to that approach, quantifying current business practice and measuring progress toward an identified future position.

This is the first update of the Public Transport Asset Management Plan for Greater Wellington, initially developed in draft for 2009/10. It has been developed from a number of, plans, including, LTCCP, Wellington Regional Land Transport Strategy 2007-16, Regional Passenger Transport Plan 2007-16 and other Regional Council information.

The following key attributes have been included within this document:

- Executive Summary. An executive summary has been developed.
- Levels of service. Levels of service have been fundamentally redeveloped.
- Demand. The demand section has been updated with the latest information available from Greater Wellington.
- Risk Management. The risk register has been reviewed and amended in accordance with the scope of the assets and services covered by this Plan.
- Lifecycle Management. The lifecycle plans were updated to reflect the latest projects and associated expenditure needs. Trolley bus cables were added as an asset group.
- Financial Summaries. Financial projections have been updated.
- Improvement Planning. Greater Wellington reviewed its gap analysis and this update has been included.

The purpose of the improvement plan is to Identify and develop implementation of Asset Management planning processes. This includes

- The cycle of asset management plan monitoring, review, revision and audit to improve the effectiveness of asset management plan outputs and compliance with audit criteria, legislative requirements and best appropriate practice
- The definition of service standards reflecting community outcomes through public consultation. The asset management plan is used to identify service level options and costs, and the delivery of services is a key objective of asset management planning.
- The formation of a corporate asset management co-ordination role by the asset management team, which guides and audits the development of asset management plans within the framework of Greater Wellington's strategic direction.
- Identifying and prioritise ways to cost-effectively improve the quality of the Plan, and therefore decision making.

The development of this Plan is based on existing levels of service, the best available current information and the knowledge of Greater Wellington staff. It is intended that the development of this plan is part of an ongoing process and that the document will be reviewed and updated regularly. This review process involves using improved knowledge of customer expectations (community consultation) and information from Asset Management Systems and databases. This will enable Greater Wellington to optimise decision-making, review outputs, develop strategies, improve risk management and more clearly forecast works activities required and associated expenditure needs.

7.2 What is the "Gap Analysis"?

The gap analysis allows Greater Wellington to understand "where it is relative to where it wants to be" in terms of asset management practices, within a specified period of time. The gap is the distance between the current and desired future status.

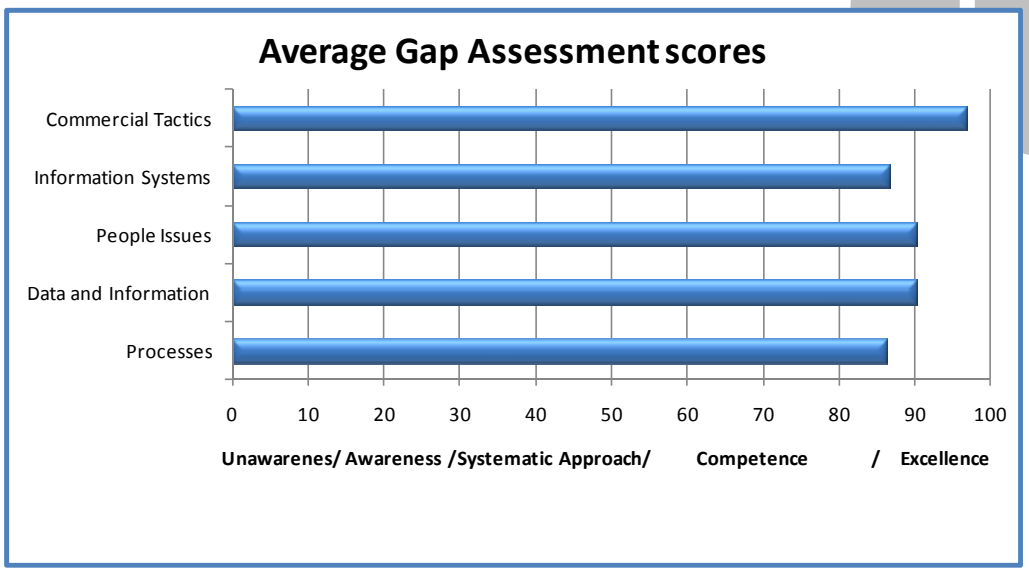
The gap analysis allows Greater Wellington to compare itself to those asset management practices that are considered reasonable and relevant. This is not necessarily 'World's Best Practice', which may not be appropriate for the specific organisation due to factors such as its commercial objectives, its geographic spread, its asset profile, its regulatory environment and/or its urban or rural base. The important issue is to identify 'Best Appropriate Practices' (BAP) - those practices that fit Greater Wellington needs in the most effective and efficient way.

The gap analysis serves three fundamental functions that match this review's objectives:

- To assess asset management processes, practices and systems against Best Appropriate Practice for the organisation,
- To identify processes where the organisation has achieved excellence i.e. Best Appropriate Practice, and
- To identify processes where the organisation requires improvement, guiding future action toward and measuring progress against Best Appropriate Practice.

The following graph summarises the Gap Analysis undertaken and reviewed by Greater Wellington, a more detailed presentation is attached as Appendix 8.5d

Figure 28 The average gap assessment scores by Greater Wellington



7.3 Current Activity

There are a number of initiatives that Greater Wellington currently has underway that have also been highlighted through the Gap Analysis. These include:

- Review of ownership, management and funding roles for public transport assets.
- Review of service levels to include assets not owned or directly managed by Greater Wellington, but which Greater Wellington provides significant funding for.
- Development of processes to capture data to enable routine monitoring and reporting against target service levels.
- Development of processes to ensure appropriate management of assets not owned or directly managed by Greater Wellington, and to establish sound and transparent information and data transfer to justify funding.
- Review condition assessments for some assets.
- Strengthen links between condition, performance, service levels, demand, risk and programmes/projects.
- Review expenditure categorisation for some activities currently managed as maintenance items.
- Implementation of the Asset Management Information System (AMIS). Greater Wellington will be implementing an AMIS over the next twelve months. Greater Wellington currently utilises SAP for calculating depreciation at a summary level. The implementation of the AMIS will bring about significant

changes as to how assets are managed over their total life cycles. The integration/interface requirements required by Greater Wellington are as follows:

System	Function	Comment
GIS	Esri ArcGIS including ArcIMS	Provide linkages with AMIS
Financial accounting system	SAP	Link to AMIS asset accounting functionality
Document management system	Hummingbird	Link to various AMIS functionality to deliver photos, as-built plans, manuals, reports and other documentation
Transport management system	Link to AMIS	Asset register
In-house work request/ notification system	Link to AMIS	Maintenance management functionality

8.0 Processes and Practices

The provision of infrastructure to support the regions public transport network is the means by which Greater Wellington meets customer demands. The following Gap Analysis and improvement plan that was undertaken and reviewed by Greater Wellington shows that overall Greater Wellington's asset management practices are appropriate for the investment in, and risk associated with the assets and services enabled by them. However, there is room for improvement. The biggest gaps are in maintenance planning and lifecycle optimisation. Implementing identified improvements are top priorities for 2010.

The introduction of a new asset management information system will allow improvements to be made to future targets in relation to data capture and planning of maintenance.

8.1 Processes

Table 45 Processes

Gap Analysis			Process	Current Practice	Improvement Target Practice (3 year Focus)	AMP Section	Resources (Who)	Dependencies (IT Funding)	Years
Current Status	Target Status (1yr)	Target Status (3yr)							
85	100	100	Levels of Service Review	Annual review of maintenance contracts Annual TNS Customer Satisfaction Survey Levels of Service developed in this AMP	Review Levels of Service with LTCCP, RLTS and PTP Put monitoring processes in place for car parks.	Levels of Service	GWRC-Asset manager & External	Funding, data availability	Annual

Gap Analysis			Process	Current Practice	Improvement Target Practice (3 year Focus)	AMP Section	Resources (Who)	Dependencies (IT Funding)	Years
Current Status	Target Status (1yr)	Target Status (3yr)							
95	100	100	Knowledge of Assets	Asset register set up as part of the AMP process has defined components such as station buildings, station car-parks, lighting, signage etc in spreadsheets	Component defined at Maintenance Managed Item (MMI) level for all asset categories Integrate with AMIS once established A unique ID number will be assigned to each asset. SAP to be updated to reflect the spreadsheet registers	Life Cycle Management	GWRC-Asset manager & External	Funding, IT, AMIS	2010/ 2011/2012
95	100	100	Condition Assessments	Recent condition assessment on all assets Historical data not recorded	Document data management process for AMIS. Document condition assessment and monitoring processes for all assets. Implement data capture programme (as required) to collect condition and other core information. To be reviewed once AMIS is established	Life Cycle Management	GWRC-Asset manager & External	Funding, IT, AMIS	2010/ 2011/2012
90	95	100	Asset utilisation / rationalisation	Recent performance assessment on assets Historical data not recorded	Document data management process for AMIS. Document performance assessment and monitoring processes for all assets.	Life Cycle Management	GWRC-Asset manager & External	Funding, IT, AMIS	2010/ 2011/2012

Gap Analysis			Process	Current Practice	Improvement Target Practice (3 year Focus)	AMP Section	Resources (Who)	Dependencies (IT Funding)	Years
Current Status	Target Status (1yr)	Target Status (3yr)							
					Implement data capture programme (as required) to collect performance and other core information. To be reviewed once AMIS is established				
87	98	100	Operations and Maintenance	Maintenance reporting requirements are documented in contracts (monthly requirement) Physical maintenance is not recorded in a Register Asset maintenance sheets are currently utilised.	Develop and implement process to enter maintenance history into maintenance management system/AMIS. Auditing of maintenance contracts to be implemented	Life Cycle Management	GWRC-Asset manager & External	Resources	2010/11 & As required
70	80	100	Optimisation lifecycle strategy	Renewals prediction is based on valuation analysis, knowledge of staff and limited condition information for the majority of assets	Develop optimising decision making strategies, documenting key failure modes, intervention criteria and lowest long term cost solutions (asset level).	Life Cycle Management	GWRC-Asset manager & External	Funding, Resources	2010/11 2010/11 & As required
70	80	100	Life cycle Cost Data	Job costing for non-routine maintenance and capital works. Exists in spreadsheets for stations (valuation data)	Enhance and document process for capturing, analysing and auditing asset life cycle costs. To be reviewed once AMIS is established	Life Cycle Management	GWRC-Asset manager & External	Funding, Resources	2010/11 & As required

Gap Analysis			Process	Current Practice	Improvement Target Practice (3 year Focus)	AMP Section	Resources (Who)	Dependencies (IT Funding)	Years
Current Status	Target Status (1yr)	Target Status (3yr)							
78	93	100	Design standards / project	Engineering design and construction standards are in place and used for all projects.	Review, update and implement asset engineering design standards to ensure that all assets are designed and constructed in accordance with the standards.	Processes & Practices	GWRC-Asset manager	Resources Funding	2010/11/12
73	81	83	QA Processes	QA typically follows “chain of command” QA processes currently being reviewed.	Formalise the QA process, action plan to develop further.	Processes & Practices	GWRC-Asset manager	Resources	2010/11/12
100	100	100	Audit & Review	Internal review of AMP with external peer review.	Continue with internal and external audits of AMP.	Processes & Practices	GWRC - Asset manager External	Funding	2010/11/12

8.2

Data and Information

This element assesses Greater Wellington's processes and practices relating to the methods used to maintain data and information.

Table 46 Data and information

Gap Analysis			Process	Current Practice	Improvement Target Practice (3 year Focus)	AMP Section	Resources (Who)	Dependencies (IT Funding)	Years
Current Status	Target Status (1yr)	Target Status (3yr)							
95	100	100	Asset Attributes	Current asset register has been set up to record suitable level of asset attribute data. Process for updating asset data to be incorporated into AMIS. As-Built drawings provided from contractors	Document asset data capture and handover process for capital and maintenance of all assets Review level of routine capture of attribute and location data by contractor Undertake a quality audit sample of data on a yearly basis and report on results	Life Cycle Maintenance	GWRC-Asset manager & External	Funding, IT, AMIS	2010/11/12
100	100	100	Plans and Records	Hummingbird used for electronic document management. GW Library used to store hard copies. Hard of copy as built plans are kept on project folders.	Rationalise plans, and scan where appropriate. Review Software as appropriate. Review with implementation of AMIS.	Processes & Practices	GWRC – IT manager	Funding IT Resources	2010/11/12
98	100	100	Maintenance data and historic condition.	Reactive based on site inspections or calls from contractors/public. No formal system in place	Maintenance & condition data including costs allocated against individual assets in new AMIS. Review with implementation of AMIS.	Life Cycle Maintenance	GWRC – Asset manager	Funding IT Resources	2010/11 2011/12
95	98	100	Condition	Currently condition is	Review with implementation of AMIS	Life Cycle	GWRC–	Funding	2010/11/12

Gap Analysis			Process	Current Practice	Improvement Target Practice (3 year Focus)	AMP Section	Resources (Who)	Dependencies (IT Funding)	Years
Current Status	Target Status (1yr)	Target Status (3yr)							
			Assessment & Record system	evaluated from field assessments. Condition data is stored on register.		Maintenance	Asset manager & External	IT Resources	
93	100	100	Life Cycle cost data	Job costing for non routine maintenance and capital works. Exists in project files, spreadsheets (valuation data)	Develop and implement database to record unit rates from contractors. Enhance and document process for capturing, analysing and auditing asset life cycle costs. To be reviewed once AMIS is established.	Life Cycle Maintenance	GWRC – Finance manager & External	Funding IT Resources	2010/11/12 As required
75	90	100	Benchmarking & Auditing	Formal process for benchmarking under development. Audits both internal and external	Develop process for benchmarking and audit activities. Continue with external audits	Processes & Practices	GWRC-Asset manager & External	Funding	2010/11/12

8.3

People Issues

This element looks at the organizations commitment and the investment in its staff.

Table 47 People issues

Gap Analysis			Process	Current Practice	Improvement Target Practice (3 year Focus)	AMP Section	Resources (Who)	Dependencies (IT Funding)	Years
Current Status	Target Status (1yr)	Target Status (3 yr)							
95	95	100	Corporate Commitment	Greater Wellington is committed to the AM process, and funding allocations are sufficient to meet current business plan objectives.	Review funds available for AM improvement against targets in this report and align for future years.	Processes & Practices	GWRC Finance manager & External	Funding Resources	2010/11 2011/12
100	100	100	Roles & Responsibilities	Asset Management and Operational responsibilities shared between staff. Indications that staff may get overloaded with number of projects as well as core roles.	Carry out annual review of job responsibilities and adequate resourcing. Outsource identified projects.	Process & Practices	GWRC Asset manager	Resources	Annual
93	99	100	Skills & Knowledge	Work environment/corporate culture ensures skilled staff are valued and retained Specific knowledge about assets is adequately documented to minimise the risk of losing critical institutional expertise	Develop a skills matrix of the group	Process & Practices	GWRC – Asset manager	Resources	Annual
90	95	100	Training Programme	Strong Commitment to staff training.	Review individual staff competencies and training needs against job. Review roles and responsibilities annually. Attend NAMS training.	Process & Practices	GWRC – Asset manager	Resources	Annual

8.4 Information Systems

This quality element assesses the processes and systems used by Greater Wellington to complete their long term strategic planning.

Table 48 Information systems

Gap Analysis			Process	Current Practice	Improvement Target Practice (3 year Focus)	AMP Section	Resources (Who)	Dependencies (IT Funding)	Years
Current Status	Target Status (1yr)	Target Status (3 Yr)							
90	100	100	Asset Register	A new AMIS implementation programme will begin late April 2010 The current register is in excel format and held in GWRC's financial system SAP The existing register supports the hierarchical definition of assets and has defined components.	AMIS to be in place within the next twelve months. All relevant AM staff have training and access to the register/GIS system. Develop and document processes for updating asset register Review with implementation of AMIS.	Life Cycle Management	GWRC IT manager & External	Funding IT Resources	2010/11/12
90	100	100	Financial System	SAP records financial data Excel utilised.	Integrate financial system with Asset register to project depreciation at MMI level. Review with implementation of AMIS	Life Cycle Management	GWRC – Finance manager & External	Funding IT Resources	2010/11/12
80	100	100	Maintenance Management	Reactive based on site inspection or calls from contractors/public.	Maintenance & condition data including costs. Allocation against individual assets in new AMIS Review with implementation of AMIS	Life Cycle Management	GWRC – Asset manager & External	Funding IT Resources	2010/11/12

Gap Analysis			Process	Current Practice	Improvement Target Practice (3 year Focus)	AMP Section	Resources (Who)	Dependencies (IT Funding)	Years
Current Status	Target Status (1yr)	Target Status (3 Yr)							
88	95	100	Condition Monitoring	Current conditions evaluated from field assessments. Reviewed annually against previous condition ratings.	Continue current evaluations Review with implementation of AMIS	Life Cycle Management	GWRC Asset manager & External	Funding IT Resources	2010/11/12
100	100	100	Customer inquiries	Paper based system The Journey planning software has a component for customer feedback and complaints. Codes can be linked into the system for ease of management reporting.	Review customer service systems against business needs/drivers (levels of service) Continue to build relationships with contractors Utilise data to assist in development and reviewing of customer and technical levels of service. Review with complaints procedure.	Community Consultation & Feedback	GWRC Asset manager & External	Funding IT Resources	2010/11/12

Gap Analysis			Process	Current Practice	Improvement Target Practice (3 year Focus)	AMP Section	Resources (Who)	Dependencies (IT Funding)	Years
Current Status	Target Status (1yr)	Target Status (3 Yr)							
73	94	100	Risk Assessment	A suitable risk framework and high level risks has been developed and in included in the AMP. Project risk is assessed case by case (not formalised process).	Develop and implement a detailed risk register for each asset, depending on criticality. Focus further analysis on highest risk (critical) assets as they are taken over. Review and update the risk register and management options that are implemented and risks mitigated. Incorporate risk into asset management decision making. Identify critical hazards. Review risk compatibility with AMIS once established.	Risk	GWRC Asset manager & External	Funding	2010/11 2011/12
88	95	100	Optimised Renewal	Renewals prediction is based on valuation analysis, knowledge of staff and condition of the assets.	Develop optimising decision making strategies, documenting key failure models, intervention criteria and lowest long term cost solutions.	Life Cycle Management	GWRC Asset manager & External	Funding Resources	2010/11 2011/12 As required
75	100	100	Forward work Programme	Forward work programme in place. General works carried out on a reactive basis Renewal programme being developed.	Develop detailed work programme to coincide with long and short term maintenance. Develop procedures for reactive maintenance to particular assets. Incorporate renewals and replacement with implementation of AMIS	Life cycle Management	GWRC Asset manager	Funding & Resources	2010/11/12

Gap Analysis			Process	Current Practice	Improvement Target Practice (3 year Focus)	AMP Section	Resources (Who)	Dependencies (IT Funding)	Years
Current Status	Target Status (1yr)	Target Status (3 Yr)							
93	95	100	Plans and Records	Electronic document management (Hummingbird) Hard copy files kept in the GW library. Hard copy on project files	Develop process for storing as built plans into one data base. Review with implementation of AMIS	Processes & Practices	GWRC IT manager	Funding IT Resources	2010/11/12
98	99	100	Emergency Planning	Rail Operators safety case covers emergency Planning. Bus service operators provide emergency planning as part of their contract with GW. Contractors to comply with incident reporting requirements. Emergency and disaster recovery plan is developed at a corporate level (Business Continuity)	Agreed processes to be continually reviewed.	Risk	GWRC Asset manager & External	Resources	2010/11/12
60	90	100	Maintenance Planning	In accordance with contracts	To develop and document, annual maintenance programme for each asset or asset group. Estimate resource requirements with service providers.	Life Cycle Management	GWRC Asset manager & External	Funding & Resources	2010/11/12

Gap Analysis			Process	Current Practice	Improvement Target Practice (3 year Focus)	AMP Section	Resources (Who)	Dependencies (IT Funding)	Years
Current Status	Target Status (1yr)	Target Status (3 Yr)							
95	100	100	Failure Prediction	Manufacturers design and specifications are referred to for newly purchased assets. Condition monitoring (1 – 5 basis) is undertaken on all assets	Develop process for predicting failure modes based on asset condition, performance and historical maintenance records. To be reviewed with implementation of AMIS	Risk	GWRC Asset manager & External	Funding	2010/11/12 & as required.
95	100	100	Asset Management plan improvement programme (AMIP) review	AMIP produced as part of the AMP	Review to be carried out after AMIS implementation.	ALL	GWRC Asset manager	Funding	Annually

8.5 Commercial Tactics

The process used by Greater Wellington to develop business cases for capital investment and assesses the quality of that evaluation process with respect to different sized investments and the risks involved for projects.

Table 49 Commercial tactics

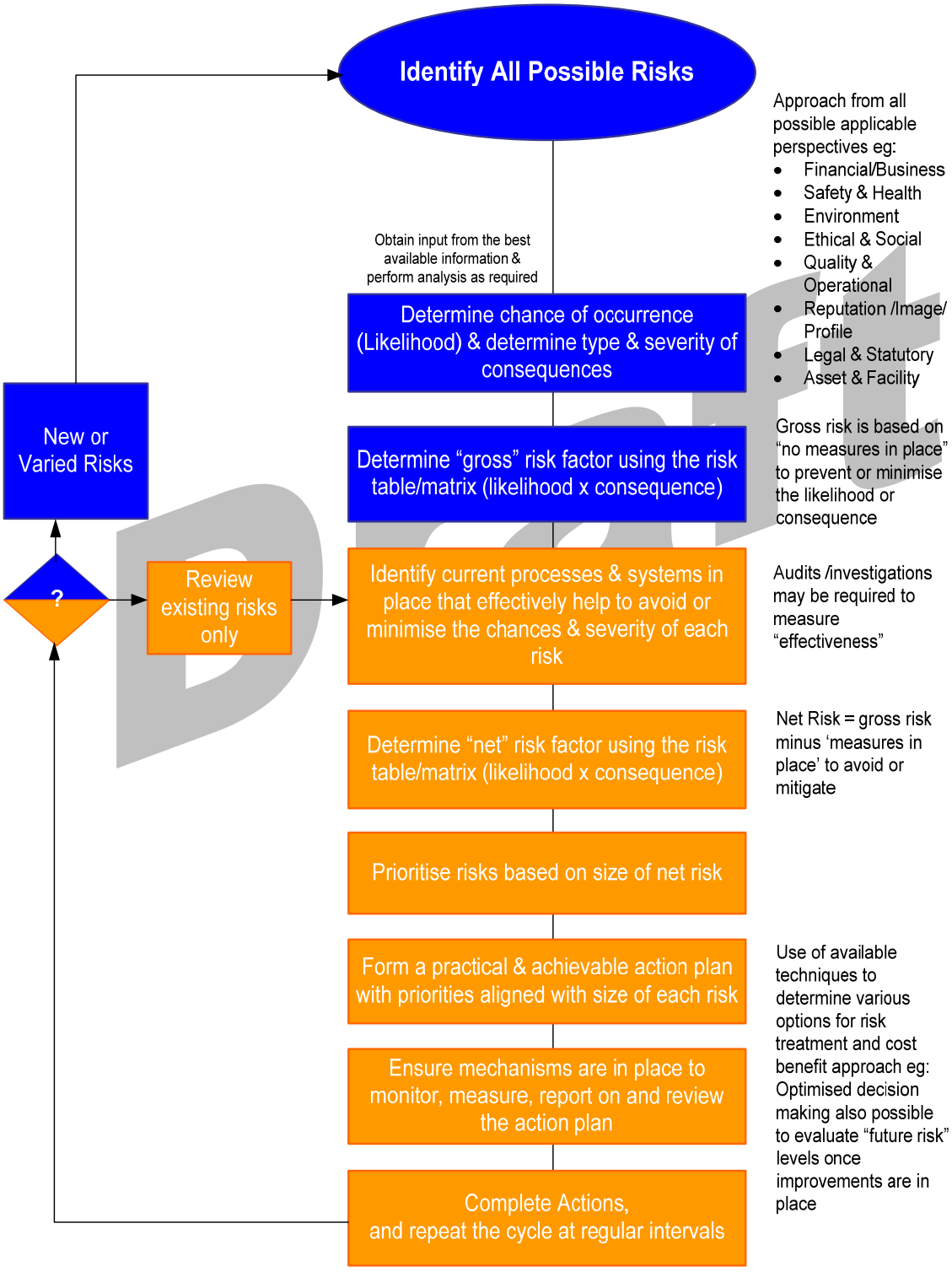
Gap Analysis			Process	Current Practice	Improvement Target Practice (3 year Focus)	AMP Section	Resources (Who)	Dependencies (IT Funding)	Years
Current Status	Target Status (1yr)	Target Status (3 Yr)							
95	100	100	Specification Quality	Formalised specifications are referred to, such as AS/NZ, KiwiRail, MOTSAM, or Territorial Authorities. GW developed standard specifications Passenger transport infrastructure guidelines.	Develop a GW engineering standard manual.	Processes & Practices	GWRC Asset manager & External	Resource Funding	Ongoing
98	100	100	Contract monitoring & control	Consultants carry out design and construction supervision for major projects. Contract monitoring is currently managed by council staff. Contracts are evaluated as per CPP Manual (NZTA)	Continue to monitor and review contract monitoring procedures. Formalise lease agreements with KiwiRail Formalise agreements with Territorial Authorities Formalise ownership of rail station assets	Processes & Practices Levels of Service	GWRC Asset manager	Resource	Ongoing
95	100	100	System Integration	Integration between systems i.e. SAP / AMIS / Hummingbird	Systems are not currently integrated Review in line with AMIS implementation	Processes & Practices	GWRC Asset manager	Resource	Ongoing

Appendix A

Risk Management Process

Appendix A Risk Management Process

The following flowchart and text details the key elements of the Risk Management Process.



Risk management process

1) Identify all possible risks

As detailed in the flow diagram previously, it is the identification of all possible risks including financial, environmental, social, operational, and health and safety. Once compiled, risks are entered into the risk register. The register is used to record and summarise each risk through to eventual management options.

Table 50 Likelihood of occurrence

Likelihood	Descriptor	Probability
Frequent	Continuous or will happen frequently.	5
Often	5 – 12 times per year	4
Likely	1 – 5 times per year	3
Possible	Once every 2 to 5 years	2
Rare	Less than once every five years	1

Table 51 Consequence rating

Consequence	Descriptor	Score
Catastrophic	Loss of life, major financial loss	5
Major	Major financial impact, widespread damage, serious harm	4
Moderate	Moderate financial impact, potential litigation, loss of image	3
Minor	Minor financial impact, involves management time	2
Insignificant	Negligible effects	1

The level of risk is calculated by multiplying the Likelihood of Occurrence and Consequence Rating together.

Risk = the likelihood of an event occurring X the consequence of such an event

The final outcome is in relative point scores. The risk score enables definition between those risks that are significant and those that are of a lesser nature. Having established the comparative risk level applicable to individual impacts, it is possible to rank those risks. Four risk categories have been used: Extreme, High, Moderate, and Low. Once the impact has been ranked according to the relative risk level it poses, then it is possible to target the treatment of the risk exposure, beginning with the highest risks.

2) Determine likelihood and consequence for gross risk factor

In determining the likelihood of occurrence and severity of consequences, it is important to base this on as much real data as possible and some analysis may be required for verification.

For example, 1 and Table 2 demonstrate the scales used to determine the consequence and likelihood level for input into the risk calculation when considering the effect of a risk event.

Table 52 Risk assessment matrix

	Consequence				
Likelihood	**Insignificant (1)**	**Minor (2)**	**Moderate (3)**	**Major (4)**	**Catastrophic (5)**
Rare (1)	1	2	3	4	5
Possible (2)	2	4	6	8	10
Likely (3)	3	6	9	12	15
Often (4)	4	8	12	16	20
Frequent (5)	5	10	15	20	25

Table 53 Comparative levels of risk

15 - 25	Extreme Risk	Requires immediate remedial action
8 - 12	High Risk	Requires remedial planning and action via the AMP
4 - 6	Moderate Risk	Address via new procedures and/or modification of existing practices and training
1 - 3	Low Risk	No formal requirement for further action, unless escalation of risk is possible

Initially, gross risk needs to be calculated, so likelihood and consequences need to be considered as if there were no measures in place to prevent or mitigate the risk occurrence. Essentially gross risk is an exercise to determine "What is the worst that could happen?"

The Gross Risk Factor is determined with the use of the Risk Assessment Matrix above, which is based on AS/NZ 4360:2004 Risk Management (Superseding AS/NZ 4360:1999), SNZ HB 4360:2000 Risk Management for Local Government and National Rail System Standard / 4: Risk Management. Other matrices can also be considered for use such as those provided in the International Infrastructure Management Manual (used for Greater Wellington's Loss Prevention and Disaster Recovery Plan)

1) Identify current systems and processes, and their effectiveness

Identifying current systems and processes are identified, and as far as resources allow, their effectiveness measured. It is often practical to identify these processes and systems initially, and rank the effectiveness conservatively until the audits and actual practice proves otherwise. Audits can be identified as part of the improvement process

Effectiveness of existing systems and processes is expressed in the following categories:

Excellent	Fulfils requirements thoroughly, very robust and positive measurable effects
Good	Fulfils requirements, effects hard to measure (or haven't been audited or measured)
Fair	Barely fulfils requirements, effects hard to measure (or haven't been audited or measured)
Poor	Not fulfilling requirements, little measurement or effect on overall risk
Very Poor	Totally ineffective in avoiding or mitigating associated risk events.

2) Determine net risk

The net risk is the actual risk that exists considering the effective measures implemented. The measures in place reduce either, or both, the consequence and the likelihood of a risk occurrence. The revised factors are input into the same risk matrix to obtain the Net Risk Factor.

3) Prioritise net risks and formulate action plan for risk management

A priority order of issues to be addressed is obtained by sorting Net Risk Factors by risk level. The most suitable actions are determined considering available options and resources. The costs and benefits of these actions need to be analysed. The best available techniques are required to analyse the options e.g. optimised decision-making (ODM).

Application of ODM applies a 'value chain' to the proposed actions rather than just working from the highest risk down regardless of cost, for example:

- A high risk may have to remain due to the inhibitive costs associated with avoidance or mitigation
- A medium risk event could be cost-effectively avoided easily within resources available

From an Asset Management perspective, the options for mitigating risks considered to reduce the cause, probability or impact of failure, are typically:

Do nothing	Accept the Risk
Management Strategies	Actions to reduce peak demand or stresses on the asset, operator training, documentation of operational procedures, etc
Maintenance Strategies	Modify the maintenance regime to make the asset more reliable or to extend its life
Asset Renewal Strategies	Rehabilitation or replace assets to maintain service levels
Development Strategies	Investment to create a new asset or augment an existing asset
Asset Disposal/Rationalisation	Divestment of assets surplus to needs because a service is determined to be a non-core activity or assets can be reconfigured to better meet needs

4) Monitor and review

The management structure needs to be in place to ensure that actions are monitored, reported on and reviewed regularly. It is important to identify and constantly review the following:

Responsibility	Nominated person responsible for ensuring the risks are managed and improvements carried out in accordance with the programme
Best Appropriate Practice	The practices that should ideally be carried out to manage risks to an acceptable level
Audit Trail	Date of entries and revisions, target date for actions to be taken and actual task completion dates

In addition, management options should be ranked via benefit / cost analysis using Net Present Value (NPV) calculations. The inputs considered in the NPV calculation are;

- Capital investment costs.
- Changes in operating and maintenance costs.
- Reduction in business risk exposure (BRE).
- Increase in effective asset life / value.
- Increase in level of service.

All capital development projects should be ranked corporately for inclusion in the LTCCP/ Annual Plan consultation process using benefit / cost analysis plus the following additional criteria;

- Contribution to Greater Wellington's Strategic Plan objectives.
- Contribution to Greater Wellington's business objectives.
- Level of project commitment (contractual and legal issues).

The resulting action plan for risk treatment needs to be practical and achievable such that the necessary resources and time frames are realistically met. The actions also need to be able to be monitored and measured. Table 6 provides more detail with regard to future actions/tasks required for future stages of Risk Management, which include the ranking outlined above.

5) Review risks

Most of the time, the risks identified will remain the same and reviews will occur in the context of these risks. However, it will be important to recognise when a new risk arises, or an existing risk changes in nature. In the latter case, the gross risk also needs to be re-evaluated.

Appendix B

Asset Management Planning Process

Appendix B Asset Management Planning Process

1) Purpose and objectives

The purpose of this Asset Management Plan (Plan) is to set out a systematic approach for the long-term management of the region's public transport assets, in a manner consistent with industry best practice.

Greater Wellington's overall Plan objective is to ensure the region's public transport assets are managed to provide a level of service that meets the needs and expectations of the community now and in the future in a sustainable way.

2) Assumptions and limitations

This is an Intermediate Plan. For further information on the Plan development stages refer to The Plan development model section.

The following limitations are noted:

- Currently available information and data;
- Existing levels of service;
- Demand forecasts are for the next 10 years
- Finance forecasts completed for 10 years (LTCCP) and
- Limited community consultation.

The following assumptions have been made:

- Existing levels of service have been established using current available information and the knowledge of Greater Wellington.
- An improved programme for asset management will be undertaken to make better informed decision making, to increase the knowledge of assets status to better understand and improve the accuracy of the financial projections.
- The funding provided by NZTA will be as follows:
- Bus, Ferry and Trolley bus services will be funded at the rate of 50% of cost for year 2006/07 and onwards.
- Passenger rail services will be funded at a rate of 60%.
- Rail rolling stock and passenger transport infrastructure will be funded at rates of 50-60%, plus a combination of Crown allocations and local contributions.
- Total Mobility will be funded at the rate of 60% of cost for year 2006/07 onwards
- Greater Wellington will not rate the community to fund the depreciation and impairment of the new transport infrastructure and passenger rail rolling stock. Rates will only fund the debt repayment on Greater Wellington's share of the capital expenditure. Greater Wellington's view is that it is unfair to charge current ratepayers for assets that have already been fully funded. At the end of the design life of the transport infrastructure and passenger rail rolling stock, Greater Wellington will seek government funding to replace these assets, if appropriate or necessary to do so.
- Expenditure for the Total Mobility scheme will increase by approximately $100,000 per annum due to an increased user base as a result of the ageing society and inclusion of mental health clients to the scheme. Any additional expenditure resulting from government initiatives to standardise and expand the scheme (estimated to cost an additional $17 million over ten years) is assumed to be funded by government.
- •A 10 year contract with KiwiRail Ltd for Tranz Metro Wellington urban rail services commenced 1 July 2006. In signing this contract, Greater Wellington will incur costs from Kiwi Rail for renewals of the rail network. This cost may be significant over the term of this plan if there is no additional contribution from the Crown.
- The 2006-16 LTCCP is aligned with the public transport capital projects contained within the Western Corridor Plan, with the exception of funding. It has been assumed that Western Corridor Plan public transport capital projects will not receive any funding from rates or fares.
- The impact of population growth in itself is not a significant assumption for forecasting patronage growth on public transport services.

3) Levels of service

Asset management planning enables the relationship between levels of service and the cost of the service (the price/quality relationship) to be determined. This relationship is then evaluated in consultation with the community to determine the levels of service they are prepared to pay for.

Some standards are defined by statutory requirements, others in conjunction with the community, and some with key stakeholders. These standards (or levels of service) provide a basis for determining whether assets need to be constructed, replaced, remanufactured, or maintained.

Defined Levels of Service can then be used to:

- Inform customers of the proposed service levels
- Develop asset management strategies to deliver service levels
- Measure performance against defined service levels
- Identify the costs and benefits of services offered
- Enable customers to assess reliability, simplicity, quality, friendliness, and convenience.
- In this context Levels of Service define the quality of delivery for a particular activity or service against which service performance can be measured.

4) Current Plan status

Greater Wellington is committed to the preparation and implementation of sound asset management plans for passenger transport infrastructure. The magnitude of this investment necessitates careful asset management.

This Plan covers a 10-year timeframe. The plan assumes that the transport assets as a whole have an indefinite life and the main focus of the plan is determining the strategies required maintaining, rehabilitating and replacing components over the next 10 years. It is intended that this plan be reviewed every year with a major update every three years prior to the LTCCP process.

Greater Wellington intends to review and refine the asset management plan every year taking into account any changes to business drivers.

The public transport Plan is currently moving towards an intermediate- advanced Plan. A summary of current status of the public transport Plan is summarised in Figure 1, this is covered in more detail in the Business Processes section.

1. The Plan development model

a) Core Plan

Core asset management functions are those which produce a Plan based on:

- Current levels of service and identify associated costs based on depreciation principles.
- Meeting minimum legislative requirements by supporting a long-term cash flow forecast planning for assets and accounting for changes in the service potential of assets.
- Current demand and supply.
- Identification of critical assets and high level business risk.
- Current asset data and knowledge, information systems and practices.

b) Intermediate Plan

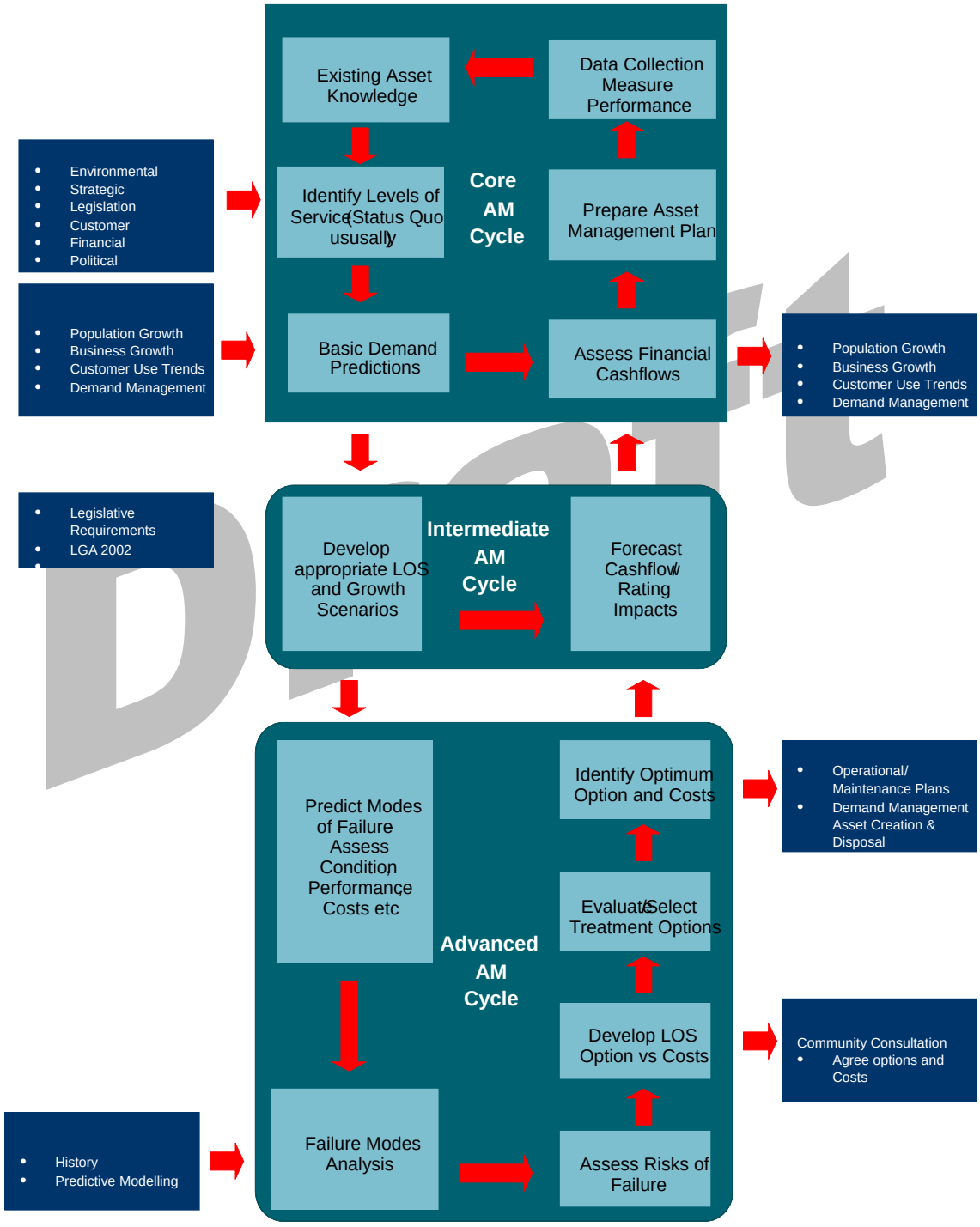
- Minimum levels of service and associated costs identified (do minimum option).
- Meet minimum legislative requirements (e.g. NZTA).
- Current demand and supply based on recent study.
- Current asset data and knowledge-limited tertiary data and knowledge, and information systems
- Commercial practices-network management and maintenance services.

c) Advanced Plan

Key features of advanced PLANs are:

- Processes to optimise lifecycle asset management strategies
- Development of management tactics
- Accurate cash flow predictions
- Risk management register,
- Optimised decision-making (ODM); and
- Service level reviews and strategy (LoS options v costs).

Figure 2: Plan Development Model illustrates the typical steps involved in preparing an advanced Plan. Whilst a thorough approach involving advanced management techniques as illustrated, is the ideal approach, for the purposes of this first plan an intermediate approach has been used.


Existing Asset Knowledge
Data Collection Measure Performance
Environmental
Strategic
Legislation
Customer
Financial
Political
Identify Levels of Service (Status Quo usually)
Core AM Cycle
Prepare Asset Management Plan
Population Growth
Business Growth
Customer Use Trends
Demand Management
Basic Demand Predictions
Assess Financial Cashflows
Population Growth
Business Growth
Customer Use Trends
Demand Management
Legislative Requirements
LGA 2002
Develop appropriate LOS and Growth Scenarios
Intermediate AM Cycle
Forecast Cashflow/ Rating Impacts
Predict Modes of Failure Assess Condition, Performance Costs etc
Identify Optimum Option and Costs
Operational/ Maintenance Plans
Demand Management
Asset Creation & Disposal
Evaluate/Select Treatment Options
Advanced AM Cycle
Develop LOS Option vs Costs
Community Consultation
Agree options and Costs
History
Predictive Modelling
Failure Modes Analysis
Assess Risks of Failure

Appendix C

Asset Category and Grading

Appendix C Asset Category and Grading

Cleanliness	Grade	
Very Good	1	Asset looks like new with no sign of graffiti/tagging, litter or damage, all surfaces are clean, floor area is clean and tidy. No unpleasant smells.
Good	2	Between 1 & 3
Moderate	3	Asset has signs of deterioration, numerous graffiti/tagging been removed and/or some damage, all surfaces are clean; floor area is clean and tidy with no litter. No unpleasant smells
Poor	4	Between 3 & 5
Very Poor	5	Asset has significant graffiti/tagging, signs of damage, organic matter, dirty floor area and /or untidy with litter. Unpleasant smell detected.

Station Name	Grouping
Waterloo	A
Upper Hutt	A
Petone	A
Paraparaumu	A
Porirua	A
Masterton	A
Featherston	A
Trentham	B
Silverstream	B
Woburn	B
Ava	B
Heretaunga	B
Taita	B
Naenae	B
Epuni	B
Johnsonville	B
Raroa	B
Melling	B
Paekakariki	B
Plimmerton	B
Paremata	B
Linden	B
Tawa	B
Redwood	B
Wallaceville	C

Station Name	Grouping
Manor Park	C
Pomare	C
Wingate	C
Khandallah	C
Ngaio	C
Crofton Downs	C
Box Hill	C
Simla Crescent	C
Awarua Street	C
Western Hutt	C
Ngauranga	C
Kenepuru	C
Takapu Rd	C
Muri	C
Pukerua Bay	C
Mana	C
Kaiwharawhara	C
Carterton	C
Woodside	C
Renall Street	C
Solway	C
Matarawa	C
Maymorn	C

Grouping category

a) High number of patronage from a main town, and on a main exchange point
b) Average number of patronage from a secondary stop
c) Low number of patronage from a secondary stop

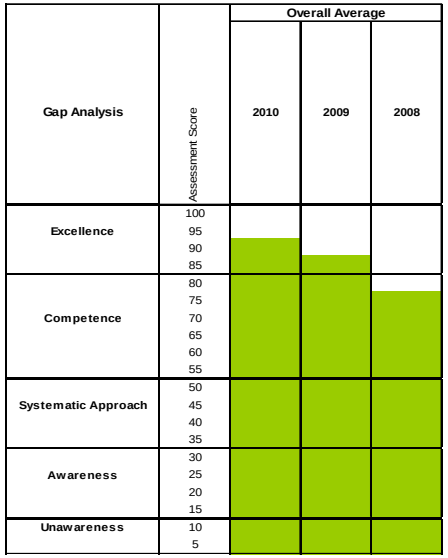
Monitoring Key Failure Modes												
Asset	Key failure mode	Rail Station	Bus Stops, shelters, signs	Car Parks	Monitoring system in place	Cleaning Contract in place	Maintenance Contract in place	Risk Management Plan for Asset	Renewal Plan for Asset	Audit Procedure Weekly/Monthly/Annual or Inspection.	Customer response / operator complaint	Plans and records database
Bus Shelters	Structural		✓		✓	✓	✓	□	□	□	✓	✓
	Graffiti		✓		✓	✓	✓	□		IW/AQ	✓	✓
	Vandalism		✓		✓	✓	✓	□		IW/AQ	✓	✓
	Cleanliness		✓		✓	✓	✓	□		IW/AQ	✓	✓
	Capacity		✓		×			×	×	×		×
	Signage		✓		✓	✓	✓	×	×	AM	✓	✓
Park & Ride Car Parks	Structural	✓		✓	□	□	□	×	□	□	✓	□
	Pavement failure	✓		✓	□	□	□	×	□	□	✓	□
	Lighting	✓		✓	□	□	□	×	□	□	✓	□
	Fences / boundaries	✓		✓	□	□	□	×	□	□	✓	□
	Gardening	✓		✓	□	□	□	×	□	□	✓	□
	Cleanliness	✓		✓	□	□	□	×	□	□	✓	□
	Sump pump failure	✓		✓	□	□	□	×	□	□	✓	□
	Capacity	✓		✓	□	□	□	×	□	□	✓	□
Waterloo Rail Station	Structural	✓			×		×	×	×	×		×
	Lighting	✓			✓	✓	✓	×	✓	✓	✓	✓
	Cleanliness	✓			✓	✓	✓	×	✓	✓	✓	✓
	Graffiti	✓			✓	✓	✓	×	✓	✓	✓	✓
	Vandalism	✓			✓	✓	✓	×	✓	✓	✓	✓
	Signage	✓			✓	✓	✓	×	✓	✓	✓	✓
	Timetable information	✓			✓	✓	✓	×	✓	✓	✓	✓
	Toilet Facilities	✓			✓	✓	✓	×	✓	✓	✓	✓
	Occupancy	✓			✓	✓	✓	×				
Petone Rail Station	Structural	✓			✪	✪	✪	×	✪	×		✓
	Lighting	✓			✪	✪	✪	×	✪	×	✓	✓
	Cleanliness	✓			✪	✪	✪	×	✪	×	✓	✓
	Graffiti	✓			✪	✪	✪	×	✪	×	✓	✓
	Vandalism	✓			✪	✪	✪	×	✪	×	✓	✓
	Signage	✓			✪	✪	✪	×	✪	×	✓	✓
	Timetable information	✓			✪	✪	✪	×	✪	×	✓	✓
	Toilet Facilities	✓			✪	✪	✪	×	✪	×	✓	✓
	Occupancy	✓			✪	✪	✪	×	✪	×		
Bus Stop signage Metlink and Legal RP5	Structural		✓		✓	✓	✓	×	✓	AQ	✓	✓
	Vandalism		✓		✓	✓	✓	×	✓	AQ	✓	✓
	Graffiti		✓		✓	✓	✓	×	✓	AQ	✓	✓
	Location		✓		✓	✓	✓	×	✓	AQ	✓	✓
	Legibility		✓		✓	✓	✓	×	✓	AQ	✓	✓
	Timetable relevance		✓		✓	✓	✓	×	✓	AQ	✓	✓
Closed Circuit Television	Condition	✓		✓	✓	✓	✓	×	✓	AQ	✓	✓
	Technical	✓		✓	✓	✓	✓	×	✓	AQ	✓	✓
	Coverage	✓		✓	✓	✓	✓	×	✓	AQ	✓	✓
	Monitoring					✓	✓	×	✓	AQ	✓	✓
Metlink Way finding signs	Structural	✓			×		×	×				
	Graffiti	✓			✓	✓		×				
	Vandalism	✓			✓	✓		×				
	Relevance	✓			✓	✓		×				
Bus Stop	Relevance		✓			✓	✓	×	×	✓	✓	✓

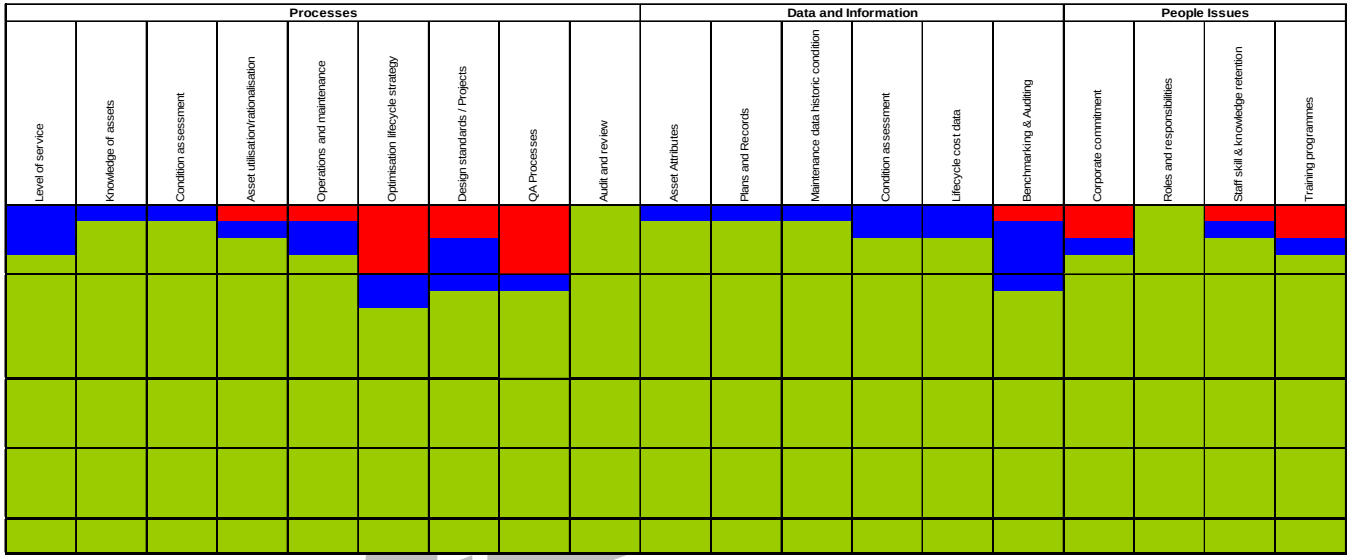
Chart Key	
✓	Yes
×	No
□	Under development
✪	Other Operator
IW	Inspection Weekly
AM	Monthly Audit
AQ	Quarterly Audit
AA	Annual Audit

Appendix D

Gap Analysis

Appendix D Gap Analysis





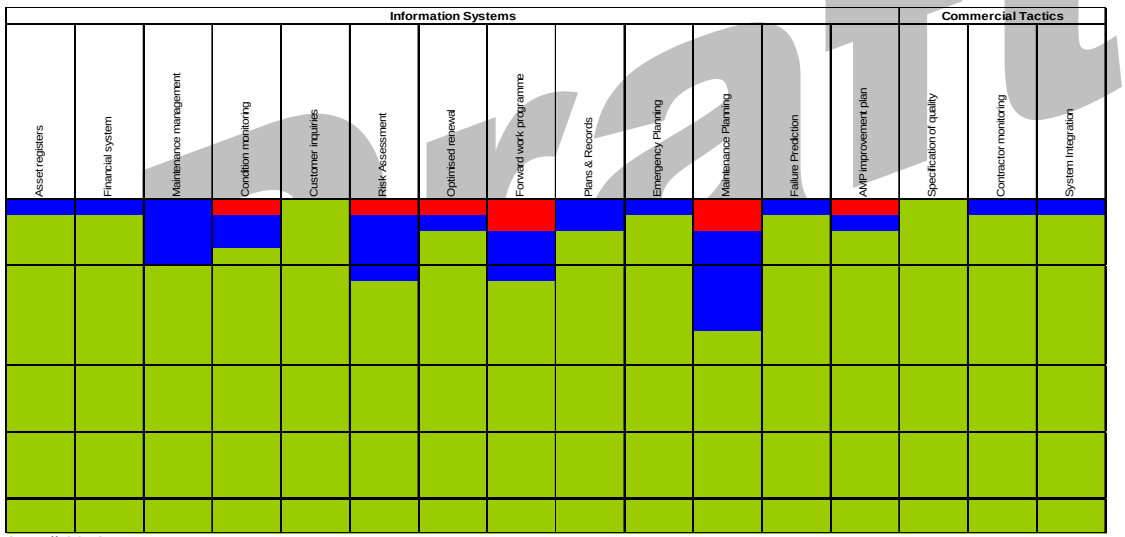


Chart Legend	
3 year target (July2013)	
1 year target (July 2011)	
Current score	

Assessment Score	Percentage Effectiveness	Description
Excellence	81 - 100	Best Practice
Competence: High	71 - 80	Good
Average	61 - 70	Average
Low	51 - 60	Low
Systematic Approach	31 - 50	Poor
Awareness	11 - 30	Unsatisfactory
Unawareness	0 - 10	Unsatisfactory