HAURAKI DISTRICT COUNCIL

2015-25 LAND TRANSPORT ASSET MANAGEMENT PLAN

Contents

Appendices

1 Introduction

Purpose

This Asset Management Plan (AMP) describes how the Hauraki District Council (HDC) will deliver transportation services over the next 10 years; 2015-2025.

It sets out the Councils “business case” for why and how HDC propose to deliver services and provides details on the key programmes and funding required. It documents how the Council will manage the transportation assets in the most cost-effective and sustainable manner to meet the levels of service required from the network. The Plan describes the maintenance, renewal and improvement needs of the network assets for inclusion in the Hauraki Long Term Plan (HLTP).

This AMP is the primary source of input into and informs Council’s Long Term (10 Year) and Annual Plans and also provides a formal performance monitoring and reporting framework to demonstrate Council is meeting its statutory obligations under the Local Government Act 2002.

Background

The AMP has been prepared based on the Councils understanding of customer expectations, asset condition, forecast expenditure and future revenue projections. It also takes into consideration legislative requirements, future demand and risk.

The AMP is a living document. It sets out HDC’s objectives for the transportation activity, the services the Council plans to deliver and how they will deliver these services. It is subject to periodic updates and is influenced by wider regional and national strategic objectives and planning policies.

The AMP provides an overview of the infrastructure assets, their current condition, along the financial and operation needs.

Along with an overview of assets the AMP covers both District and Local transportation activities that the Council provides and those assets used to provide these services including carriageways, structures, drainage features, signs, footpaths, cycle-ways and other assets. It covers all forms of expenditure, beginning with capital investment and including the operation, maintenance, renewal and disposal of assets.

The transportation activity provides for safe, reliable and accessible transport routes around the District with consideration for the environment and walking and cycling facilities.

Finally, the AMP forecasts the Councils long-term capital and operational funding needs, enabling them to plan for adequate service provision. The plan provides a robust, 10-year forward works programme.

Development

Development of this Activity Management Plan has followed a specific process. It started with the services offered to customers using the road network, and considers the current and future demand on the network, its performance and the risks to those services, all of which inform how the Council prioritises their actions. This process is used to build maintenance and renewals,

operations, improvements and disposal plans, which make up the Hauraki Long Term Plan (HLTP). Then the Council considers how to ensure the programme is delivered and how they can improve the process before the next cycle begins.

Relationships

The Land Transport AMP has strong linkages with the HLTP. It also is informed and governed by legislation and wider regional and national strategic objectives and planning policies. The Land Transport AMP remains fluid in that any change in legislation, policy or regional planning strategies, can influence this document.

Structure

This Asset Management Plan (AMP) has been structured as follows:

Section 1: Introduction	Purpose of the AMP and its relevance to the management of the District Transportation Activity.
Section 2: Transportation Activity	Provides an overview of the services provided by the Council, what they aim to achieve and the infrastructure used.
Section 3: Levels of Service	Sets out the levels of service Council plan to deliver and how they will measure performance.
Section 4: Demand	Provides detail on how future growth and demand impacts the service the Council provides and how it manages these impacts. *Note; demand forecasting is still being processed and is therefore excluded from this draft document.*
Section 5: Risk	Describes the process of identifying, assessing and managing risks to customers, service and the infrastructure assets.
Section 6: Life Cycle Management	Outlines how the Council will manage the network assets so that the required levels of service are provided while minimising lifecycle costs.
Section 7: Financial Summary	Presents financial projections for expenditure, revenue and asset valuation based on delivering the required level of service, maintaining the asset, and meeting future demand.
Section 8: Asset Management Practices	Describes the processes and procedures used to manage the Transportation Activity.
Section 9: Plan Improvement and Monitoring	Describes how Council will monitor the performance of this Plan, undertake regular reviews and update where improvements can be made.

Each section is supported by and draws upon the information contained within the Appendices. The Appendices are standalone documents that provide a comprehensive account of the processes and procedures, source information and inputs, assumptions, working and findings that the Council have considered in determining what they plan to do.

2 Transportation Activity

Context

Transportation Activity means the planning, provision, development, operations and maintenance of transportation infrastructure and associated services for the local communities. It covers things such as roads, footpaths, service lanes, street lights, bridges, and car-parks owned by Council. By providing these services Council are able to ensure that the movement of people and goods around the district and within local communities is safe, efficient, convenient and pleasant.

Provision and maintenance of these facilities promotes a safer physical and more promising environment that enhances quality of life in local communities. It enables economic activity and growth by allowing for the efficient transport of goods and services and by promoting access into and across the Hauraki network.

Currently the transportation network and infrastructure serving the community is in reasonable condition. It provides satisfactory levels of service and is able to meet future demand. Service levels are forecast to remain the same and may slightly decrease as funding becomes more restricted.

The activity accounts for a significant proportion Council's annual budget and has a replacement value in excess of $302 million (Valuation 2014). Over the years HDC has made significant investments in the maintenance and improvement of the districts transportation services and will continue to do so in years to come.

What It Includes

This activity provides for people and goods to move safely around our district and within our communities. It includes the development and maintenance of roads, footpaths and cycle networks. As of RAMM data 2014 the road transportation network currently comprises 515km of sealed roads, 117km of unsealed roads, 112km of footpaths, approximately 142 bridges and many other assets such as signage, drainage, and minor structures.

What the Council Does

The Council is responsible for the care, control and management of all road corridors and associated land transport infrastructure within the District. To ensure they are meeting commitments HDC has dedicated teams of administration, management and operational personnel who provide key inputs such as planning and design, physical works and customer service. Activities and tasks the Council undertakes include:

- Planning and design of renewals and safety improvements
- Maintaining roads, both sealed and unsealed
- Maintaining bridges and street lights,
- Clearing roads after weather events, such as after slips and flooding
- Dust sealing unsealed road for safety and health purposes
- Promoting and supporting the Hauraki Rail Trail Cycleway
- Road safety co-ordination
- Public transport co-ordination

- Street cleaning
- Road legalisation

This activity does not cover the entire roading network within the District. State Highways are managed by the New Zealand Transport Agency (NZTA).

Challenges We Face

There are many challenges which must be overcome in order to deliver affordable, reliable and quality transportation services to customers. Finding the right balance between competing demands; wants and needs against available financial resources, extreme weather events and the Plains area where roads are built on peat (which is subject to constant wetting and drying leading to large tracts deformation are just some of the unique challenges that must be managed.

Levels of Service

Maintaining existing levels of services is becoming increasingly difficult. Inflation, rising costs and aging infrastructure are placing considerable strain on the limited financial resources available which in turn has a direct bearing on the level of service that is able to be provided. As funding becomes more restricted, there is likely to be a decline in services. Levels of service is also likely to be impacted by the One Network Road Classification (ONRC) structure which is being introduced nationwide over the next 12 months, with transition to the ONRC levels of service expected to be implemented as part of future maintenance and renewal programmes.

Customer Expectations

The network user's expectations is very important for the Council. However, finding a balance between customer 'wants' and 'needs' is critical in order to provide a service that is sustainable, now and in the future. Building bigger and better infrastructure or providing higher levels of service is not only unaffordable, but financially unsustainable. Therefore the Council must work hard with their customers and communities to seek a balance between what they actually need and what can be afforded. Education and sharing of information will allow more informed investment decisions to be made.

Protecting our Assets

The District's transportation assets represent a sizeable investment by past, present and future generations. Understanding the long-term implications of asset management decisions is vital to ensure that this investment is protected and future generations are not burdened with unreasonable maintenance and renewal costs. Continual investment in maintenance and renewal activities (reseals and pavement renewals for example) is extremely important so that the condition and integrity of the asset is maintained. Pressure to keep rates low, uncertainty around funding and increasing costs makes this a complex balancing act.

Asset Growth

The Councils asset base continues to grow every year. With every improvement project completed new assets are added; maybe a new culvert, footpath or sign installed where none existed previously. For every new asset that is added or created the incurred operational and maintenance expenditure required increases. As the asset base grows so does the cost to maintain those assets and HDC needs to be careful that they are not creating infrastructure that

cannot be afforded. Much of this asset growth is driven by Level of Service improvements being constructed within the communities.

Financial Constraints

Council has a focus on balancing desired level of service with keeping rates as low as possible. Rates levels are forecast to remain relatively consistent and in line with inflation, however there is some risk that funding from external sources will reduce

Whilst revenue derived from rates does cover some of the services provided to the public, the Council is still heavily reliant on funding and subsidies provided by the New Zealand Transport Agency (NZTA). Changes to how NZTA administers and appropriates these funds could have a significant impact on what they can do. Because of this the Council must be very prudent on how funding is spent.

Disaster Recovery

Extreme weather events continue to cause considerable damage and disruption to the Hauraki network, for example droughts in the low lying areas such as the Hauraki Plains where most roads are built on peat (which is subject to constant wetting and drying) leading to large tracts deformation. The repair and clean up needed to reinstate infrastructure places considerable financial strain on resources. Changes in the way in which the New Zealand Transport Agency funds emergency repairs may impact on the ability to fund the repair work associated with disaster events.

Managing Risk

There are many risks which must be understood and carefully managed. Lack of or deferred funding, damage caused by severe weather, catastrophic failure of a network structure, environmental pollution and poor planning are some the risks faced by the Council. How risks are identified, analysed and assessed is something that needs to be improved to ensure communities are better prepared and have the resources to manage them.

Finding a Balance

The Council's aim is to deliver quality yet affordable services to ratepayers, residents and visitors to the Hauraki network, whether staying or passing through. In doing so, the need to carefully balance existing commitments and the desire to deliver improved services is crucial. The Council will need to make hard decisions, which in some cases may involve reducing levels of service, deferring projects, bringing some projects forward, and increasing direct user charges.

To achieve this, a clear long-term financial plans for all aspects of our operations; from administration, planning and design through to maintenance, renewal and improvements is key. Each programme has a rigorous prioritisation process and long term view that achieves maximum value for money for the funding available. Key programmes that will continue to operate include:

- Maintenance and operation of the roading network
- Asset renewals across the network
- Bridge Replacement when required
- Footpath Construction
- Minor Improvement Works

- Specific level of service projects where required

Each programme provides support and input into the Council's Annual and Long Term (10 Year) Plans. As part of the annual planning process consultation on programme objectives, content and expected outcomes are undertaken. Feedback from customers, community groups, elected members and stakeholders plays an important part in ensuring the Council is achieving the right balance.

Knowledge of our Assets

The Council operates and maintains a large and complex transportation network that comprises of many individual assets. It is important to recognise that having a good level of understanding and knowledge of current assets is important if informed decisions are to be made on how best to operate and maintain them. Considerable investment has been made in collecting data and information on what is owned, where it is and what it comprises of. This information, commonly referred to as "Asset Inventory Data", is updated and maintained on a regular basis. The databases include:

- Road Assessment and Maintenance Management (RAMM)
- Geographic Information System (GIS)

This asset inventory data will continue to be maintained. Clear processes and procedures are in place and will ensure that adequate investment is available to not only continue current processes but also improve the system and ultimately the quality and accuracy of the data contained. The table below details the areas of improvement within the RAMM database.

Table 1: RAMM Database completion levels

RAMM Tables	Description	Completeness	Accuracy
Bridges*	Location, length etc.	50%	95%
Carriageway	Road section lengths	95%	95%
Drainage	Culvert location, type, size	95%	95%
Features	Location, length etc.	50%	50%
Footpath	Location, length etc.	95%	95%
Footpath Rating	Location, condition etc.	95%	95%
Loading	Vehicle mix percentages	95%	95%
Lighting Inventory in SLIM**	Location, type	95%	95%
Maintenance Costs (since 1999)	Quantities and costs	95%	95%
Markings	Location, type, length etc.	95%	95%
Minor Structures	Location, types, dates, etc.	95%	95%
Pavement Structure	Lengths, depths and dates	2%	95%
Pavement Surfacing	Lengths, types and dates	95%	95%
Railings	Location, length, types, etc.	95%	95%
Road Names	Road name and number	95%	95%
Road Rating	Location, condition etc.	95%	95%
Road Roughness	Location, dates, NAASRA	95%	95%
Signs	Location, type, dates etc.	95%	95%
Surface Water Channels	Lengths, types and dates	95%	95%
Traffic	Traffic counts and estimates	95%	95%
Pedestrian Ramps	Location	80%	80%

Health of District Assets

Overall the health of current assets is very good and improvement in the condition of infrastructure is continuing. This can be attributed to Council's commitment in ensuring that appropriate levels of investment are made for maintenance and renewal activities.

The Council will continue to regularly assess the condition of network assets through various field surveys and condition assessments. The data collected will be used to assess the overall health of the assets and prioritise maintenance and renewal works. In some cases where assets are performing well, maintenance and renewal works may be deferred. In other cases work may be brought forward in order to reduce whole of life costs.

The asset condition data is stored in RAMM and GIS databases, along with Excel Workbooks. We plan to continue with our current systems and, although condition data will be collected through a regional data collection contract rather than the HDC professional services contract, do not foresee any substantial changes in future. There are several known gaps in the data as shown in the table above and plans are being made to remedy this.

Legislative Requirements

What the Council does is governed by a range of legislation. There are certain things that must be done to ensure that they comply with statutory requirements and the strategic direction set by the government. We will continue reviewing our operations to ensure compliance is achieved. Any future significant changes in legislation that may occur which could have a direct impact on business is understood and planned for.

The Council complies with national statutory requirements such as the Local Government Act 2002, the Land Transport Management Act 2003, the Resource Management Act 1991, and the Government Roading Powers Act 1989.

HDC also set out to align activities with the requirements of the New Zealand Transport Strategy, The Government Policy Statement on Land Transport and Safer Journeys 2020. A detailed outline of the legislative framework that applies to the transportation activity can be found in the Appendices

.

3 Levels of Service

Customers

The Councils customer base comprises of a wide range of road users who have varying needs and expectations. They include motorists, commercial road users, tourists, motorcyclists, cyclists, pedestrians, utility providers and emergency services. We also work closely with adjoining land owners, residents, ratepayers, and external agencies that have an interest in changes in the transportation activity.

Customer Expectations

Customer needs and expectations vary widely, with the goal being to provide services that meet their needs. Results from a customer survey completed in 2014 showed that 72% of road users surveyed were more than happy with the level of road and footpath service being provided.

Customer surveys have been completed bi-annually and are planned to be continued into the future. The next surveys are scheduled for 2016, 2018, 2020 and so on. The results of these surveys will be used to monitor and review customer expectations, help prioritise work and ensure the Council are delivering services that are appropriate to customer needs.

Analysis of the feedback received from different customer and stakeholder groups allows monitoring of customer satisfaction trends and how the Council is currently performing. This in turn allows the Council to validate their planning system and gives insight into how to improve responses to customer feedback.

Customer Values

Customer values and expectations can be translated into:

Provide an effective and efficient transportation network linking communities

Customers are generally satisfied with the transportation network as discussed earlier. When feedback is provided, it usually relates to enquiries about weight restricted bridges, delays associated with storm events etc.

Ensure route security and reliability

Even with regular storm events, the transportation network is available close to 100% of the time. During events disruption is minimised by giving priority to re-establishing at least single lane access before proceeding with clean up and permanent reinstatement works.

Enhance comfort

The network comprises of sealed and unsealed roads can be steep, winding and low-speed or flat, straight and fast. As customers generally do not tolerate corrugated and potholed unsealed roads considerable effort has been invested in trialling locally won and blended aggregates and implementing proactive management practices to reduce the extent and frequency of these defects.

Maintain our environmental values

The community actively promotes sealing unsealed roads to address on-going dust and comfort issues and undertaking drainage improvement works as much of the network's drainage is provided by unlined channels. As such they are prone to blockages, general erosion and in certain conditions scour resulting in flooding and loss of property access.

Levels of Service

The levels of service that are provided are governed and influenced by many factors such as legislation and strategic objectives, Council Policy, the topography of the District, the built environment, design and maintenance standards, maintenance intervention criteria and the amount of funding available.

Service levels are forecast to remain the same with only slight increases and decreases as network demands change. In some instances where improvement projects are planned, such as traction seals, there will be a dramatic increase in the level of service and road user satisfaction.

Reviewing and adjusting of road maintenance intervention criteria and maintenance standards will continue annually to ensure that the maximum value for money spent whilst protecting the integrity of the asset and providing for safe, comfortable and pleasant journeys is achieved.

Customer-focused service targets that have been set and how they will be measured are outlined below.

Table 2: Customer Levels of Service 2012-22

The Council will provide access to all roads within the network	
How we'll measure our performance	**10 Year Targets**
Time for road access to be restored to communities following a 1 in 10 year climatic event.	100% of Arterial and Collector roads providing access to communities open within 24 hours, all other roads within 72 hours.

The Council will preserve the pavement life of sealed roads	
How we'll measure our performance	**10 Year Targets**
The Sealed Pavement Condition Index	Maintain a level of less than or equal to 7 (fair condition)
The percentage of the sealed local road network that is resurfaced	Target level for seal age: Arterial = 10 years Collector = 14 years Local = 18 years

Delivery of a roading network that addresses safety and amenity issues	
How we'll measure our performance	**10 Year Targets**
Percentage of customers satisfied with the quality of roads in the District (excluding State Highways)	Greater than or equal to 70% of customers satisfied
Traffic safety barriers are installed and maintained in effective condition in accordance with NZ Standards	100% of all traffic barriers meet NZ standards

Delivery of a roading network that addresses safety and amenity issues	
How we'll measure our performance	**10 Year Targets**
Damaged, missing or leaning signs are remedied on District roads	100% regulatory/ permanent/ warning signs within 7 days, safety connected signs within 2 days, all other signs within 6 weeks
All reported potholes are repaired on District roads	85% within 5 days for >100 vehicle per day (vpd) roads and within 14 days for <100 vpd roads
All programmed new footpaths are installed	100% of annually programmed footpaths installed in accordance with the agreed programme
Issues reported to the Council regarding State Highways are forwarded to the New Zealand Transport Agency	95% of all reported issues are forwarded within one working day

Mandatory Performance Measures	
How we'll measure our performance	**10 Year Targets**
The change from the previous financial year in the number of fatalities and serious injury crashes on the local road network, expressed as a number	A reduction over 3 years of one fatality and one serious injury crash
The average quality of ride on a sealed local road network, measured by smooth travel exposure	Smooth Travel Exposure is higher than 96%
The percentage of the sealed local road network that is resurfaced	Between 5% and 10% of the sealed District road network is resurfaced annually
The percentage of footpath that falls within LOS standard	100% of footpaths with defect rating 5 is isolated for safety and remedied within 7 days
% of customer service requests regarding HDC roads are responded to within specified time frame	100% of service requests are responded to within 10 working days

Strategic and Corporate Goals

Hauraki District Council's Mission

To ensure the successful provision of services and facilities, advocacy on behalf of the community and use and management of resources for all who live in or visit the Hauraki District.

Contributing to Our District

The Land Transport activity plays an important role in contributing to a prosperous district, a liveable district and a clean and green district by providing necessary infrastructure to make it easy and safe to get around. This is important in enabling our economy to grow, support a range of lifestyle opportunities, whilst balancing accessibility with the protection of our unique natural environment.

Activity Objective

Through the use of effective design and management practices provide a safe, efficient, reliable and sustainable network which provides all customers with:

- Ready access to the network
- Reliable access around the network
- Safe roads to drive on
- A reasonable level of comfort on unsealed roads

A well-maintained road network enables economic activity and growth by allowing for the efficient transport of goods and services and by promoting visitor access to the Coromandel. Road safety is also improved as part of proactive road maintenance.

The Council's transport management decisions are shaped by its Hauraki Long-Term Plan, for which the roading components are underpinned by the New Zealand Transport Strategy, the Waikato Regional Land Transport Strategy, the New Zealand Transport Act 2003 and the Local Government Act 2002.

Our role includes ensuring new roads constructed through land development projects, meet District Plan requirements. Council's local road network is maintained through multi-year maintenance contracts and is renewed and improved through annual resealing, pavement reconstruction, widening and minor improvement contracts.

4 Demand

In order to know what transportation services will be required in the future, the factors that affect transport demand and how they are likely to change must be understood. Shifts in demand tell us where increases or decreases in our levels of service should occur. The Council regularly and carefully monitor the current situation in order to forecast future demand. Demand forecasting is completed every six years when new census data is available.

Demand Drivers

Demand is influenced by factors such as oil prices, economic trends, population and demographic shifts, and climate change. These affect future demographics, growth trends and current backlogs and network pressure points. All of these issues influence the work of the council when there is insufficient capacity to accommodate the growth in traffic without further intervention.

Population

Based on statistics, the Hauraki Districts resident population is projected to remain reasonably static. It is expected that some areas may experience resident population growth, while others may experience population decline. For the purpose of forecasting it has been assumed that there will be negligible change to the district population, and will remain stable for the life of this Activity Management Plan.

An increasingly ageing population in the medium term will result in shifts in lifestyle and demands for facilities and services. Retirees with limited mobility will likely increase the demand for centralised and close services. People choosing to move to the area for lifestyle reasons result in high expectations around maintaining attractive areas and access to facilities.

Land Use

Over the next 10 years, there is expected to be an annual 0.4% growth in the number of rateable units within the Hauraki District. In general, rating growth is driven by changes in the economy, population growth, changes in demographics, and lifestyle patterns. As stated above the Council has assumed no changes to population in the network for the life of this Management Plan. However the other factors are all subject to change and are outside the control of the Council. These factors will be monitored and estimated changes in Land Use will be updated accordingly.

Commercial Growth

Forestry, aquaculture, farming and quarrying contribute significantly to the district's economy. These industries use heavy commercial vehicles to transport their produce. The biggest industry currently in the Hauraki district is farming, however vehicles from the forestry and agricultural industries rely on the Hauraki network to commute to and from the Coromandel, and between Auckland and Tauranga. As the industries grow it becomes more cost effective to transport goods using heavier and more powerful vehicles which increases the wear on the road network.

Tourism within the Waikato Region is increasing, with travel by rental cars and camper vans being popular. Most of the traffic is carried by state highways; however their use of a number of Hauraki District roads is increasing, particularly with those providing access to the Coromandel

Peninsula. Overseas travellers are guided through the District via the Pacific Coast Highway. The Hauraki District is centrally located between the popular tourist areas of Auckland, Tauranga/Bay of Plenty and the Coromandel Peninsula, and provides a common route south for visitors arriving at Auckland International Airport. The only road access to the Coromandel Peninsula is via the Hauraki District. The increasing tourism related traffic has repercussions not only for the road surface, but also the level of directional and informational signage required, and for the provision of rest areas.

Tourism is a particular area of growth within the New Zealand economy. The Ministry of Tourism have forecast that visitor numbers to the Coromandel are expected to grow at 0.5% p.a. in total. The growth of tourism in the region will have an increasing impact on the Hauraki road network. This is being managed and planned for by forecasting traffic growth and using this information within our financial forecasting model in Appendix E.

Vehicle Types and Usage

Increases to vehicle size and weight will cause additional damage on steep grades and at intersections where vehicles change gear, accelerate and decelerate. Changes to geometrics (namely wider roads), intersections and surface types will need to be undertaken to accommodate the turning circles and stresses associated with larger vehicles.

Customer Expectations

Customer expectations are increasing as standards and conditions improve as does their awareness of the availability of funding to address safety defects. Routine maintenance, annual resurfacing and construction projects will be driven by:

- Increasing lane and shoulder widths
- Improving the ride quality and reducing ongoing maintenance costs of unsealed roads
- Reducing crashes by completing intersection improvements and improving skid resistance
- Improving destination and associated signage
- Improving driver education and awareness

Policy

Policy and/or management changes are governed by National policies introduced by government agencies such as the NZTA and by Council introducing strategies such as Council's Economic Development Strategy.

Demand Forecasts

Demand forecasts are used to help plan for the future to ensure that the Council is able to make changes to the network or the services they provide in advance of there being a need. This information is used to help prioritise improvement programmes and capital expenditure. Analysis of population growth projections and forecast changes in land use, economic development and traffic patterns indicates that the network has sufficient capacity to cater for current and future traffic volumes and usage.

Over the next ten years, changes in demand are expected to be driven by some negligible growth, decreasing household sizes, aging population, and cost fluctuations associated with labour, plant, material and fuel increases. Commercial traffic predominately uses the state highway network although some Council roads such as Awaiti Road and Hauraki Road are used as alternative routes.

Demand for items such as new footpaths, cycle-ways, traction seals, and seal widening will continue to remain high and is driven more by the desire to improve the levels of service rather than a need to address issues associated with lack of capacity.

Demand Impact on Assets

The network has sufficient capacity to accommodate current traffic volumes now and into the future. Seasonable functions due to tourism and the holiday season places some strain on network capacity during peak periods however this only occurs over short periods of time, generally a few days or weeks. For the remainder of the year the transportation network provides a high level of service in terms of good travel times and no delays.

Heavy commercial vehicles used in the forestry, aquaculture, farming and quarrying industries have the most impact on the deterioration of our road pavements. However most of the commercial vehicles transporting produce from source to market use the State Highway Network and spend very little time on local roads. While economic growth in these sectors is forecast to increase it is not anticipated that there will be a significant impact on the network.

Demand for new footpaths, traction seals, minor safety improvement etc. will continue to increase the size of our asset base. As new assets are created and added to the network there is an associated cost to maintain these assets going forward. Maintenance and renewal expenditure are forecast to increase as a result of this.

Asset Programmes to Meet Demand

Currently the Council operates a number of specific programmes to meet demand and will continue to do so in the immediate future. Details on each of these programmes are as follows:

Minor Improvements

Minor Improvement projects provide an increased level of service and are developed from a deficiency database that is prioritised on a risk basis across the network. This list is supplemented by specific projects that meet community needs which may focus on safety, increased LOS or risk reduction.

Tractions Seals

A small program of sealing unsealed roads to provide lower maintenance costs, improve safety and increase the Level of Service will be undertaken during the first three years of the ten year programme. This program consists of approximately 800m of sealing per year and is largely a response to community needs.

Dust Suppression Seals

Some roads in the network are planned to have dust suppression seals completed in 2017 and 2020. Apart from this there is no programmed dust seals during the 10 year programme. As this activity is unsubsidised the individual projects are determined by community needs and available funding.

New Footpaths

Community committees from each of the wards (Paeroa, Waihi, Plains), provide the priorities for the construction of new footpaths within their areas. This priority is combined with a technical

priority based on factors such as traffic volumes and pedestrian flows. The final weightings are then used to determine which roads receive new footpath.

5 Risk

Managing risk is an important aspect of what the Council does. Risks occur at all levels of operation from strategic planning, policy and legislative compliance through to physical works and maintenance. As risks are identified they are analysed and assessed. An evaluation is made on whether it is possible to eliminate the risk completely, whether it can be mitigated, or if it is best to accept the full possible impact.

The Council has developed a specific risk management process that is used to periodically identify, assess and review risks associated with the transportation activity. Risks identified are recorded in a risk register that is used as a tool to help manage each risk. Some of the significant risks associated with the transportation activity are shown below.

Table 3: HDC Key Risks

Strategic Risks		
Risk	Control	Treatment
Ineffective management	▪ Professional services contract ▪ Maintenance contract	Specify suitable standards and enforce them rigorously.
Poor planning and governance	▪ Strategic plans – Hauraki Blueprint & Key Community Outcomes ▪ Long Term (10 year) Plan ▪ Annual Plan ▪ Asset Management Plan	Look to the future and plan for the long-term in consultation with communities and customers
Lack of funding	▪ Long Term (10) Year Plan ▪ Asset Management Plan ▪ Budget control processes	Anticipate what level of funding is needed for the next 10 years and review this annually.

Asset and Network Risks		
Risk	Control	Treatment
Catastrophic failure of a structure or asset	▪ Asset inspections ▪ Condition assessments ▪ Maintenance contract ▪ Professional services contract ▪ Maintenance standards	Ensure assets are inspected regularly and are fit for purpose
Damage to the asset	▪ Network inspections ▪ Emergency response procedure ▪ Maintenance contract ▪ Professional services contract	Ensure assets are fit for purpose
Unanticipated asset deterioration	▪ Network inspections ▪ Condition assessments ▪ Maintenance Contract ▪ Professional services contract	Regular monitor and inspect the assets. This allows understanding and tracking of asset deterioration and identifies assets with reduced life spans. These assets can then be renewed or replaced

Asset and Network Risks		
Risk	Control	Treatment
		at the most appropriate time.
Budget overspend	▪ Budget management process ▪ Project management manual ▪ Professional services contract ▪ Physical work contract	Allows for identifying any overspending early. Management teams balance available funding and project expenditure to ensure funding is not exceeded.
Environmental pollution or negative impact on flora and fauna	▪ Environmental policy ▪ Erosion and sediment control standards ▪ Storm water management	Minimise the effect of activities on the natural environment

Project and Operational Risks		
Risk	Control	Treatment
Availability of resources	▪ Buy-local policy ▪ Long-term contracts ▪ Publicly advertise tenders	Produce work packages that are attractive to the market
Project schedule slippage	▪ Project management manual ▪ Professional services contract ▪ Construction services contract	Identify slippages early and escalate alternatives to ensure delivery of funded programme outcomes.
Poor design and/or construction practices or materials	▪ Procurement policy ▪ Project management manual ▪ Professional services contract ▪ Construction services contract ▪ HDC design standards and guidelines ▪ NZTA material specifications	Specification of suitable standards and rigorous enforcement.
Poor contract execution and ensuring outcomes are fit for purpose	▪ Procurement policy ▪ Project management manual ▪ Professional services contract ▪ Supplier quality management	Specifying suitable standards. Should they not be met, contractual processes of correcting mistakes or omissions are in place.

Further detail on the specific processes used to identify, assess and control risk can be found in the Appendix D.

6 Lifecycle Management

Background Data

The transportation activity includes maintenance and renewal of the following assets on Council maintained roads:

- Sealed and unsealed roads
- Lined and unlined road surface water channels and drains
- Bridges and structures (incl. retaining walls)
- Signs and pavement markings
- Street lights (maintenance only)

The quantity of assets is provided in the following table.

Table 4: HDC Asset Summary

Asset Type	Component	Unit	2014 Quantity
Bridge	Bridge	m	2,024
Drainage	Culverts, Sub Soil & Side Drains	m	27,610
	Sumps, Catch &	ea	1,739
	Collection, Drop Chambers	ea	77
	Flumes	ea	4
	Manholes	ea	7
Footpath	Footpath	m^2	111,752
Minor Structure	Walls	m	724
Railing	Railing	m	12,520
SW Channel	SW Channel	m	135,995
Sign	Sign	ea	8,130
Street Light	SL Bracket	ea	1480
	SL Light	ea	1512
	SL Pole	ea	900
Treatment Length	Base course	m^2	4,372,789
	Formation Total	m^2	5,996,526
	Sub base (Pavement)	m^2	4,372,789
	Concrete	m^2	1,082
	Surface	m^2	3,276,931

There is a variety of assets managed through this activity. Condition assessment of transportation assets are completed either annually or biennially, depending on asset type and road hierarchy.

Routine maintenance takes place as a day-to-day activity and the Council has found that the most effective way of doing this is through contracting out this service. This means that the Council can look for the best prices to meet the standards required.

The current Roading Professional Services Contract is managed by Opus and sub-consultants until June 2016. The outsourcing of this contract is planned to continue

Road maintenance (incl. pavement, drainage, structures, footpaths, carparks, street cleaning and response to emergency events) is contracted to Downer NZ until June 2016.

Street lighting maintenance, renewals and upgrades is contracted to Northpower until June 2016.

Renewal of road pavements, surfacing, drainage and minor improvements are completed either as part of the term maintenance contracts (above) or as packages of work tendered annually.

Infrastructure Risk Management Plan

Transportation asset management is heavily dependent on a systematic approach. Sub-systems used for management of HDC transportation include:

- RAMM - Road Assessment and Maintenance Management software.
- dTIMS – Industry standard pavement modelling software.
- Transport Investment Online (TIO) - NZTA's online system used by approved organisations for managing subsidised roading programmes, including applications, reviews, claims, reports etc.
- Safety Deficiency database.

Routine Operations and Maintenance Plan

Lifecycle Management: Operations and Maintenance

Table 5: Lifecycle Management

Item	Commentary	How the costs are met
Operations	*Roads are vested in Council and assets related to the operation of the activity are owned by Council. Assets are currently managed by an external consultant under a term contract.*	*Costs associated with the management of the majority of the activity is funded by rates and subsidised by NZTA. Costs associated with creating new assets are borne by developers.*
Maintenance	*Maintenance is prioritised and completed in order to maintain defined levels of service. Three monthly rolling maintenance programmes are developed by the relevant maintenance contractor based on Council's Maintenance Intervention Strategy (MIS) and reviewed by our consultant to ensure compliance with the MIS and provide value.*	*Costs associated with the maintenance for the majority of the activity is funded by rates and subsidised by NZTA.*

Item	Commentary	How the costs are met
Processes, Procedures and Systems	*All road asset data is held in the RAMM database. Roads are divided into sections (treatment lengths). Condition information in RAMM is used to highlight assets requiring replacement or improvement works, which are managed using a three yearly rolling programme. The appropriate MIS is assigned to each treatment length to ensure alignment of improvement, renewal and maintenance programmes.*	*Costs associated with the maintenance and management of the RAMM system is funded by rates and subsidised by NZTA.*

Lifecycle Management: Asset condition

Scheme/Asset Descriptions

a) Age

The age of many roading assets is unknown, as created (constructed) prior to RAMM being established in the early 1990s. As such, where RAMM data is not available condition data is used to determine the residual life and therefore the depreciated replacement cost.

b) Value

Road assets are re-valued by our consultant annually using data from the RAMM database. The asset valuation as at 30 June 2014 is $302.1 million excluding land.

c) Ownership

Council owns the roading assets and sets the extent and level of service provided based on road hierarchy.

New developments such as sub-divisions require:

- Construction of new local transport assets inside the sub-division or development. These are generally constructed to Council's Sub-divisional Standards and funded by developers. On completion, and subject to compliance, ownership is vested with Council. As a result, Council becomes responsible for on-going maintenance and renewal costs
- Upgrading of local transport assets outside the sub-division to service the new demand. As the demand is developer driven Council is limited in what measures it can take to fund this change. The Local Government Act 2002 allows Council to introduce its Development Contributions Policy which:
  a. Allows Council to fund level of service improvements
  b. Requires developers to fund the added capital portion

d) Operations

Assets are currently administered for Council by an external consultant under a term contract. Our consultant's performance is managed by Council's District Engineer and Roading Manager.

In terms of the Local Transportation Activity, the consultants' key roles are to:

- Develop and update AMPs
- Develop and maintain renewal programmes based on current asset condition. Renewal programmes:
  - Rank the need for renewal of each section of footpath, car park and street light asset.
  - Is updated biennially to reflect budgetary constraints, what was completed in previous years and what is being proposed for the current and subsequent years.
  - Is used to support funding required to achieve levels of service
- Manage annual and term contracts under which local transportation works are delivered including:
  - The term routine maintenance contracts
  - The annual footpath construction contracts and local improvement contracts.
  - Respond to, and where possible, resolve customer queries

e) Maintenance plan

Local transportation activities such as footpath maintenance and renewals and car park maintenance are undertaken through the term Road Maintenance contract with the contractor.

The maintenance contractors' responsibilities include:

- Implementing routine inspections to identify programmable work and to complete cyclic maintenance activities
- Preparing and completing monthly programmes to remedy defects identified
- Responding to all routine requests for service relating to the activity

f) Processes, procedures and systems

Assets are created through land development projects and vested in Council ownership for future maintenance and renewals.

The RAMM database contains all road asset information including condition and maintenance cost data that enable future renewal requirements to be forecast.

Field verification of treatments enable a more detailed annual renewal programmes to be developed and indicative renewal programme for years two and three. This process is completed annually, allowing for work completed and any change in renewal priorities due to the reduction in residual life (based on condition).

Draft maintenance work programmes are developed monthly by maintenance contractors as a result of their routine inspections and requests for service. The consultant audits a sample (based on risk criteria) of the draft programme to ensure it delivers value for money and amends if required prior to approval. At the end of each month a sample of the work completed is audited by consultant to evaluate compliance with quality requirements and completion. Monthly payments are certified based on programmed work completed to the specified standard.

Renewal / Replacement Plan

Lifecycle Management: Renewals

Table 6: Renewal Plans

Item	Commentary	How the costs are met
Renewal	*Renewals expenditure covers the replacement of assets at the end of their lifecycle where this is more cost effective than maintaining.*	*Costs associated with the asset renewals is funded by local depreciation (rates), development contributions (for any additional capacity component) and subsidised by NZTA. With the exception of street lighting renewals and construction of safety footpaths that are subsidised by NZTA.*

Creation / Acquisition / Augmentation Plan

Lifecycle Management: Creation / Acquisition / Augmentation

Table 7: New Asset Plan

Item	Commentary	How the costs are met
New Assets	*The majority of new local transportation assets are created and funded as developments. Where Council is creating new or improved assets to address increased demand or levels of service, this work is prioritised and annual programmes are consulted with community boards to ensure priorities reflect local needs.*	*New assets are created to cater for ILOS or AC and funded accordingly.*

Disposal Plan

Table 8: Disposal Plan

Item	Commentary	How the costs are met
Disposal of Assets	*The majority of new local transportation assets are disposed when the existing asset has reached its functional life. The main asset type to fall in this category is the resurfacing asset.* *Other than this the causal factors leading to disposal of assets are road crashes, weather events and obsoleteness e.g. upgrade signs, decay.*	*Disposal of assets are due to replacement or obsoleteness. It needs to be accounted for in order to correctly track the inventory and their associated value.*

Lifecycle Management Plan Review 2015-2018

One Network Road Classification

The New Zealand Roading system is currently (2014) undergoing a major review which will result in roads being classified into a completely new classification system with associated levels of services. The estimate to implement the new level of service and the estimate for the annual expenditure to maintain the new level of service in a sustainable way will need to be developed during the 2015-18 period. The exercise of setting the classification standards is being led by the Roading Efficiency Group (REG) with Government led performance measures mandated through the Department of Internal Affairs. The Councils will need to undertake the detailed screening of the network and develop the asset management plans.

The final stage in the development of the ONRC Performance Measures currently underway with REG involves developing the guidance documentation for release to the Council in October 2014. The guidance will form the basis for the finer details of what "fit for purpose" is and how it is established. Road controlling authorities are being asked to report their current performance against the ONRC Customer Levels of Service Performance Measures and report back to REG using the methodology within the guidance.

Meanwhile, moderation of regional classifications will be undertaken to identify and resolve misalignment across the network. The NZTA have asked the council to classify their network using RAMM, finalise it after an initial conversation with Agency regional staff and then submit the final classified data by the 5th October. The moderation will take the form of regional workshops and is likely to take place in November 2014. The output of the workshops will be an agreed regional map.

In terms of implementation, the NZTA has advised that a factsheet for maintenance, operations and renewals programmes are currently being prepared which outlines what is expected of Councils for the 2015/18 National Land Transport Programme (NLTP). The fact sheet will be released soon as part of the next NTLP signals pack.

Introduction to Life Cycle Management Plans

This section of the AMP outlines the work planned to keep the assets operating at the current levels of service while optimising lifecycle costs. The overall objective of the Life Cycle Management Plan is:

To maintain pavement performance measures to ensure that the current strategies do not consume the asset leading to an unexpected increase in maintenance/renewal expenditure in the future.

The Lifecycle Management Plan is divided into elements:

- Sealed pavements
- Unsealed pavements
- Pavement drainage
- Bridges including guardrails
- Retaining structures
- Carriageway lighting
- Traffic facilities
- Vegetation and streetscapes
- Footpaths, pedestrian access-ways and cycle-ways
- Car parks

Public transport is provided and managed by the Waikato Regional Council and public transportation services are provided by commercial operators. HDC's public transport assets are limited and include bus shelters, bus stop signs, markings and the like.

Street furniture and bus shelters are managed and maintained through Council's other departments. At this stage these assets have not been included in the Life Cycle Management Plan.

Within each road element, the following issues are addressed:

- Physical parameters
- Asset capacity / performance
- Asset condition
- Routine maintenance plans
- Renewal / replacement plans
- Creation / acquisition / augmentation plans
- Disposal plans

The full Life Cycle Management Plan, which includes details on each of the above categories, is included in Appendix A of this AMP.

In preparing the Life Cycle Management Plans for the road network it has become evident that gaps exist in the base data. The gaps prevent full management of the issues identified. The improvements section will be used to identify any missing data that needs to be collected to more accurately represent the Council's roading assets.

The NZ Transport Agency Work Categories

The NZ Transport Agency's Work Categories (WCs) were reviewed and new categories established in 2007. These are outlined in the Programme and Funding Manual as shown in Table 10. This is the current extent of the WCs used for all financial reporting. This Life Cycle Management Plan reports on work within these WCs under each of the nine road elements included above. For clarity the WC numbers have been identified for the work within each section of the Life Cycle Management Plan. If the work was split out by WC, it would be difficult to incorporate the IIMM requirements for this section, such as background data, creation/acquisition/augmentation plan and disposal plan.

Table 9: Work Catagories

Activity Class 1 – Maintenance and operation of local roads		
Activity	**Work Category No.**	**Work Category Name**
Structural maintenance	111	Sealed pavement maintenance
	112	Unsealed pavement maintenance
	113	Routine drainage maintenance
	114	Structures maintenance
Corridor maintenance and operations	121	Environmental maintenance
	122	Traffic services maintenance

Activity Class 1 – Maintenance and operation of local roads		
Activity	**Work Category No.**	**Work Category Name**
	123	Operational traffic management
	124	Cycle path maintenance
Level crossing warning devices	131	Level crossing warning devices
Emergency reinstatement	141	Emergency reinstatement
Network and asset management	151	Network and asset management
Property management	161	Property management (state highways)
Financial grants	171	Financial grants

Activity class 3 – Renewal of local roads		
Activity	**Work Category No.**	**Work Category Name**
Structural renewals	211	Unsealed road metaling
	212	Sealed road resurfacing
	213	Drainage renewals
	214	Pavement rehabilitation
	215	Structures component replacements
Corridor renewals	221	Environmental renewals
	222	Traffic services renewals
Associated improvements	231	Associated improvements
Preventative maintenance	241	Preventive works

Activity class 5 – Improvement of local roads		
Activity	**Work Category No.**	**Work Category Name**
Road studies	311	Road studies
New road infrastructure	321	Traffic management
	322	Bridge renewals
	323	New roads and structures
	324	Road reconstruction
	325	Seal extension

Activity class 5 – Improvement of local roads		
Activity	**Work Category No.**	**Work Category Name**
Property	331	Property purchase (State highways)
	332	Property purchase (local roads)
	333	Advance property purchase
Minor improvements	341	Minor improvements

Forward Work Programming

A 10-year forward works programme has been in place for a number of years now and is based principally on visual inspections of the entire network by very experienced roading engineers that is then supported by historical records, recent work practices and analysis tools such as the Treatment Selection Algorithm (TSA) and dTIMs (pavement performance modelling). The programme incorporates road sections requiring Area Wide Pavement Treatment (AWPT), resealing, metaling of unsealed roads and drainage requirements one year in advance of the reseal programme.

Historical Data

Historical data is used to make an assessment of past performance, and to identify future trends which can be applied. These trends can help indicate if the condition of the network is deteriorating or improving. Current deterioration models used to predict the future condition of an asset are based on this historical data. The historical data collated and used along with its location are outlined in Table 11.

Table 10: Historical Data

Type	Location	Comment
Roughness	RAMM	Collected biennially in accordance with the NZ Transport Agency requirements.
Sealed Rating Data	RAMM	Faults are manually rated. Some interpretation discrepancy may exist between rating teams.
Carriageway surfacing data	RAMM	Holds surfacing history. Surfacing data must be maintained to obtain confident surfacing history.
Past Maintenance Costs	Certified Values and Quantity in RAMM	Programming approval and certifying of maintenance managed in Consultants Maintenance Management System. Location, value and quantity passed to RAMM quarterly.
Present Maintenance Costs	RAMM	Maintains location, quantity, cost, fault activity and cost group.
As Built Drawings	RAMM from As Built Plans each year	Collected at end of construction verified and entered into RAMM.

Type	Location	Comment
Pavement Structure	RAMM	All new pavement construction records include pavement composition details

Asset Valuations

A full valuation is undertaken every 3 years in order to assess the value of the network, the depreciated value and the annual depreciation. Details on Asset Valuation and Depreciation are held in Appendix C.

7 Financial Summary

How it will be Funded

Funding Changes

The bulk of transportation funding is provided by Council and NZTA working as partners under NZTA's Financial Assistance Rate (FAR) framework.

NZTA's subsidy rate is reviewed every three years. Changes to either the subsidy calculation and/or value will significantly affect Council's rate contribution. The overall rate of 56% achieved over the last 10 years is set to rise to 60 % over the next four years. This will have a positive effect on council's contribution to funding but may be offset by other changes introduced by NZTA such as the One Network Road Classification and Level of Service reviews. The detail of these changes will not be known until after the 2014-25 Long Term Plan has been finalised.

Development Contributions

Development contributions are another means of funding network, reserves or community infrastructure. Council's Development Contribution Policy sets out their methodology for calculating costs associated with development impacts on existing Council infrastructure including the transportation network. This ensures negative impacts are developer funded rather than solely Council funded.

District Transportation

Subsidies are applied to this activity as and when they are available. The balance is funded by district-wide rates recognising the widespread nature of the benefits of the roading network, which includes charges by land value and capital value which recognises affordability issues for some.

Local Transportation

The work associated with this activity is generally of a local nature, and therefore the benefits of this activity apply primarily to local communities. As such, we fund this activity through local targeted rates.

Financial Statement and Projections

Summary

The projected cost to provide transportation services outlined in this Activity Management Plan over the 10 year planning period (2014/15-2024/25) is $66.4 million dollars or $6.6 million per year. The Council's present funding levels are sufficient to maintain present levels of service in the medium term. The projected level of expenditure and level of funding available will ensure that we can achieve our goals, meet customer expectations and protect the integrity of our assets.

Protecting our investment

The infrastructure assets that underpin the service we provide have some of the highest values of all Council's assets, around $302.1 million dollars (Asset Valuation 2014). They represent a

significant investment by past, present and future generations. Our aim is to manage and maintain the transportation assets in a fair, equitable and sustainable manner and ensure even distribution of cost and service across all generations. The Roading Cost of Service statement for the 2015-2025 is shown below. The Annual Plan reviews may change parts of this Statement. These updates will be shown in Appendix E of this document.

Table 11: Roading Cost of Service Statement from 2015-25 Hauraki Long-Term Plan

	Budget 2015 $000	Forecast 2016 $000	Forecast 2017 $000	Forecast 2018 $000	Forecast 2019 $000	Forecast 2020 $000	Forecast 2021 $000	Forecast 2022 $000	Forecast 2023 $000	Forecast 2024 $000	Forecast 2025 $000
EXPENDITURE											
Pavement Maintenance	1,200	1,248	1,265	1,293	1,428	1,461	1,506	1,550	1,598	1,651	1,708
Amenity Maintenance	517	436	442	452	464	476	489	503	519	535	554
Professional Services	411	550	558	570	584	598	614	632	651	671	693
Other Subsidised	1,291	1,301	1,298	1,355	1,342	1,350	1,396	1,453	1,514	1,566	1,625
Administration	419	421	430	439	448	459	471	482	495	510	524
Non-Subsidised Works	372	410	418	447	436	447	481	470	483	522	512
Public Transport	20	20	21	21	22	22	23	24	24	25	26
Depreciation/Assets written off	3,192	2,970	2,973	3,066	3,070	3,074	3,301	3,305	3,310	3,600	3,605
Interest	807	827	881	917	957	982	1,005	1,009	993	963	909
	8,229	**8,183**	**8,286**	**8,560**	**8,751**	**8,869**	**9,286**	**9,428**	**9,587**	**10,043**	**10,156**
REVENUE											
Fees, Charges and Other Income	96	-	-	-	-	-	-	-	-	-	-
External Subsidies	3,327	3,275	3,314	3,614	3,663	3,723	3,873	3,950	4,094	4,240	4,355
Targeted Rates	481	3,945	4,263	4,571	4,900	5,309	5,771	6,151	6,555	7,005	7,468
General Rates	3,116	-	-	-	-	-	-	-	-	-	-
	7,020	**7,220**	**7,577**	**8,185**	**8,563**	**9,032**	**9,644**	**10,101**	**10,649**	**11,245**	**11,823**
OPERATING SURPLUS/(DEFICIT)	**(1,209)**	**(963)**	**(709)**	**(375)**	**(188)**	**163**	**358**	**673**	**1,062**	**1,202**	**1,667**

Funding Strategy

The focus of this AMP is to:

- Maintain the existing levels of service currently provided
- Protect the integrity of the asset and preserve the capital investment in infrastructure
- Enhance the level of service through capital investment where minor improvement works are warranted

The first priority is to operate, maintain and protect the existing network. In the three years from 2015/16 – 2017/18 approximately 85% of expenditure will be spent on this task with the remaining 15% spent on improvements to correct network deficiencies and provide additional capacity.

Funding for the management and maintenance of the roading network will be provided from the roading rate and subsidies received from the National Land Transport Fund. Funding for improvements is provided from NZ Transport Agency subsidies, financial contributions paid by developers and the roading rate. It is expected that the local share of funding will be met, however, this is very much determined as part of the Community Plan development process and is not assured.

In determining the improvement projects to be undertaken the benefit/cost ratio will be governing criteria used, with preference given to projects that can be shown to be economically justifiable and attract NZ Transport Agency subsidy. The funding subsidy rate for minor improvements is currently 56%.

Funding of Operation Expenditure

Operating expenditure will be funded from the Uniform Annual General Charge (UAGC), general rates and targeted rates.

Funding of Capital Expenditure

Capital expenditure will be funded from development contributions, borrowings, asset sales, UAGC, depreciation, general rates, targeted rates, grants and subsidy.

Valuation Forecasts

The valuation of asset components is a fundamental part of the asset management cycle. It provides the critical link between asset management and financial management. The valuation consists of an assessment of the replacement cost, depreciated replacement cost and the annual depreciation or decline in service potential of the network. Depreciation is provided on a straight-line basis on all physical assets at rates which write off the cost of the asset to the estimated residual value at the end of its service life.

Confidence Ratings

Table 112: HDC Confidence Ratings

Grade	Label	Description	Accuracy
A	Accurate	Data based on reliable documents	±5%
B	Minor inaccuracies	Data based on some supporting documentation	±15%
C	Significant data estimated	Data based on local knowledge	±30%
D	All data estimated	Data based on best guess of experienced person	±40%

Assessed Accuracy of 2014 Land Transport Asset Valuation

Table 123: Asset Valuation 2014

Asset Group	Asset Type	Quantity	Unit Costs	ORC	RUL	ODRC
Road	Pavement surface	A	B	B	B	B
	Pavement structure	C	B	C	C	C
	Pavement formation	C	B	C	N/A	C
	Footpaths	B	B	B	C	C
	Surface water channels	B	B	B	C	C
	Drainage	B	C	C	C	C
Structures	Bridges	A	B	B	B	B
	Major culverts	A	B	B	B	B
	Retaining walls	B	C	C	C	C
Traffic	Signs	B	B	B	B	B

Asset Group	Asset Type	Quantity	Unit Costs	ORC	RUL	ODRC
facilities	Railings	B	B	B	C	B
	Markings	B	B	B	B	B
Street lights	Street lights	A	B	B	C	C

The valuation was given a confidence rating of B-C (±20%), due to the quality of data available and methods used to derive unit rates and useful lives.

Key Assumptions Made in Financial Forecasts

The forecasts and their associated analyses are based upon the best available information as at 1 July 2014. The aim of the financial forecast is to demonstrate financial performance in the management of the roading assets to provide the target levels of service defined in this AMP. The structure of the financial forecasts has been developed to:

- Be consistent with annual plan budget headings where possible
- Demonstrate the balancing of income against expenditure
- Differentiate work that is subsidised and work that is not subsidised
- Demonstrate the effect the forecast works have on the overall value of the assets.

Forecast Reliability and Confidence

The financial forecasts and analyses included in this section provide an insight into the patterns of expenditure and funding modes associated with meeting the agreed transportation Levels of Service. The forward works programmes in this section are based on 2015/16 – 2024/2025 ten year forward works programme.

A 10 year period has been forecast with a varying degree of confidence. Financial projections for the first three years are supported by detailed studies.

The forecasts for the following seven years are supported by forward work programmes that align with life cycle management practice, required levels of service and demand issues. The forecasts and their associated analyses are based upon the best available information as at 1 July 2014. The aim of the financial forecast is to demonstrate financial prudence in the management of the roading assets to provide the target levels of service defined in this AMP.

Income and expenditure projections do not allow for inflation.

Table 14: 10 Year Forward Works Programme Summary

	Work Category Description	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
SUBSIDISED	**TRANSPORTATION PLANNING**										
	Studies and Strategies	$50,000	$0	$50,000	$0	$0	$0	$0	$0	$0	$0
	Activity Management Plans	$27,000	$51,000	$27,000	$35,000	$37,667	$36,222	$35,296	$35,396	$34,638	$35,110
	Road safety Prog High Priority	$28,935	$28,935	$28,935	$28,935	$28,935	$28,935	$28,935	$28,935	$28,935	$28,935
	Road safety Prog Medium Priority	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000
	Transportation Planning Sub-total	$110,935	$84,935	$110,935	$68,935	$71,602	$70,157	$69,231	$69,331	$68,573	$69,045
	MAINTENANCE AND OPERATIONS OF ROADS										
	Sealed Pavement Maintenance	$980,000	$980,000	$980,000	$986,000	$992,000	$998,000	$1,004,000	$1,010,000	$1,016,000	$1,022,000
	Unsealed Pavement Maintenance	$168,000	$168,000	$168,000	$163,746	$162,600	$161,462	$160,332	$159,120	$158,095	$156,998
	Routine Drainage Maintenance	$307,000	$307,000	$307,000	$308,721	$309,493	$310,267	$311,043	$311,820	$312,600	$313,381
	Structures Maintenance	$283,000	$283,000	$283,000	$275,000	$243,684	$252,700	$261,292	$270,437	$270,437	$270,437
	Environmental Maintenance	$436,000	$436,000	$436,000	$436,820	$437,257	$437,694	$438,132	$438,570	$439,009	$439,448
	Traffic Services Maintenance	$472,000	$472,000	$472,000	$475,286	$476,474	$477,665	$478,859	$480,056	$481,256	$482,460
	Operational Traffic Management	$8,000	$8,000	$8,000	$7,735	$7,735	$7,735	$7,735	$7,735	$7,735	$7,735
	Emergency Reinstatement	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000
	Network and Asset Management	$550,000	$550,000	$550,000	$550,000	$550,000	$550,000	$550,000	$550,000	$550,000	$550,000
	Maintenance and Operations Sub-total	$3,324,000	$3,324,000	$3,324,000	$3,323,308	$3,299,243	$3,315,523	$3,331,393	$3,347,738	$3,355,132	$3,362,459
	RENEWALS OF ROADS										
	Unsealed Road Metalling	$150,000	$150,000	$150,000	$245,767	$238,902	$238,307	$235,283	$231,911	$229,636	$226,835
	Sealed Road Resurfacing	$550,000	$600,000	$650,000	$700,000	$750,000	$800,000	$800,000	$800,000	$800,000	$800,000
	Drainage Renewals	$150,000	$168,000	$168,000	$137,458	$127,576	$129,215	$13,141	$129,402	$130,011	$130,276
	Pavement Rehabilitation	$800,000	$660,000	$600,000	$706,207	$674,984	$680,285	$687,159	$680,809	$682,751	$683,573
	Structures Component Replacement	$112,000	$112,000	$112,000	$111,627	$111,702	$111,690	$111,673	$111,689	$111,684	$111,682
	Traffic Services Renewals	$134,000	$134,000	$134,000	$134,790	$135,127	$135,465	$135,804	$136,143	$136,484	$136,825
	Renewals Sub-total	$1,896,000	$1,824,000	$1,814,000	$2,035,849	$2,038,291	$2,094,962	$1,983,060	$2,089,954	$2,090,566	$2,089,191
	IMPROVEMENT OF ROADS										
	Minor Improvements	$687,478	$690,300	$998,024	$791,934	$826,753	$872,237	$830,308	$843,099	$848,548	$840,652
	Improvements Sub-total	$687,478	$690,300	$998,024	$791,934	$826,753	$872,237	$830,308	$843,099	$848,548	$840,652
	TOTAL SUBSIDISED	**$6,018,413**	**$5,923,235**	**$6,246,959**	**$6,220,026**	**$6,235,889**	**$6,352,879**	**$6,213,992**	**$6,350,122**	**$6,362,819**	**$6,361,347**
NON SUBSIDISED	**NON SUBSIDISED**										
	New Dust Seals	$0	$0	$20,000	$0	$0	$20,000	$0	$0	$20,000	$0
	New Footpaths	$73,688	$88,862	$138,640	$84,114	$108,600	$103,500	$115,200	$125,000	$125,000	$125,000
	Footpath Renewals	$9,200	$14,400	$25,904	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000
	New Kerb And Channel	$110,000	$101,000	$115,000	$110,000	$110,000	$110,000	$110,000	$110,000	$110,000	$110,000
	Non-Subsidised Street Cleaning	$67,000	$67,000	$67,000	$67,000	$67,000	$67,000	$67,000	$67,000	$67,000	$67,000
	Footpath Maintenance	$70,000	$70,000	$70,000	$70,000	$70,000	$70,000	$70,000	$70,000	$70,000	$70,000
	New Underpasses	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000
	Public transport	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000
	TOTAL NON-SUBSIDISED	**$364,888**	**$376,262**	**$471,544**	**$381,114**	**$405,600**	**$420,500**	**$412,200**	**$422,000**	**$442,000**	**$422,000**
	TOTAL										
	TOTAL Subsidised + Non-subsidised	**$6,383,301**	**$6,299,497**	**$6,718,503**	**$6,601,140**	**$6,641,489**	**$6,773,379**	**$6,626,192**	**$6,772,122**	**$6,804,819**	**$6,783,347**

8 Asset Management Practices

Governance

In delivering transportation services we will:

- Ensure our legal obligations are met
- Represent the Community as the asset owner
- Ensure the services we provide meet the needs of the community
- Ensure the assets are maintained for present and future generations at an equitable cost.

Where required, we will engage appropriately qualified professional advisors who will provide technical and professional advice so that the Council and elected officials can make the best decisions on behalf of the Community and key Stakeholders.

As custodians of a community asset and as part of managing infrastructure, we will:

- Develop a financially sustainable asset management plan
- Maintain the asset so that it provides services that are appropriate, accessible, responsive and sustainable to the community
- Manage the infrastructure in a systematic and sustainable manner
- Involve and consult with the community and key stakeholders on service standards being provided
- Ensure asset information is accurate and up to date allowing for appropriate asset planning, both in the short and long term, and for informed decision making to occur
- Manage the infrastructure assets utilizing a team approach inclusive of a multi discipline cross-functional asset management group
- Allocate appropriate resources to ensure asset management practices can be undertaken and the timely maintenance and renewal of assets occurs so that the full life-cycle costs are optimised
- Prior to consideration of any major works/renewal or improvement, undertake a critical review of the need and the whole of life cost of that component including capital, maintenance, operating, renewal, refurbishment, and upgrade costs
- Ensure that the roles and responsibilities are well defined and understood
- Develop and implement a framework for the evaluation and prioritisation of Capital projects based on demonstrated need
- Incorporate risk management as part of the asset management process and demonstrate that procedures are in place to ensure key assets are safe, well maintained and fit for purpose.

Management Controls

There are a considerable number of controls in place that impact how we manage the transportation activity and services we provide. They include:

- Legislation and Regulations
- Planning and Strategic Documents
- Bylaws
- Policy Documents

- Resource Consents

For all activities, these controls will be considered as part of the management and planning processes.

Asset Planning

We will continue to develop, review and update this Land Transport Asset Management Plan which incorporates key elements of asset management. In particular, we will update and maintain the following:

- Asset Inventory
- Dossier of bridge inspections and maintenance records
- Long-term Expenditure Forecasts and Forward Work Programme
- Site Safety Plan, including hazard register
- Operations manual
- Risk Register

Asset management planning activities will comply with the International Infrastructure Management Manual (IIMM), Publicly Available Specification (PAS) 55 and industry best practice.

9 Plan Implementation

Planning

The timelines and processes for the planning of work is dependent on the activity.

Renewals and capital projects are developed during the Ten Year Planning cycle and updated annually. The Forward Works Programme is the base document for the planning process and details of this process are provided in the Process maps section of the AMP. This process is used to identify components of work and is moderated to smooth annual cash-flows.

Maintenance and operations delivery is planned between one and three months in advance depending on the priority of the work and available funding. The professional services component of this activity is planned at the outset of new contracts and typically the programme covers three years.

Prioritisation and Planning

Prioritisation of activities and the subsequent plan for the timing of projects requires input from a number of different processes and stakeholders. For all activities risk is one of the key inputs to the process and the details of how this guides the process are detailed in the risk section of the plan.

The Renewals FWP is reviewed annually and projects are prioritised based on asset need in conjunction with efficiency of delivery and community input. Condition rating of the assets is one of the key factors in developing priority as is risk.

Capital projects are delivered based on priority set by the community combined with the agreed Levels of Service. Renewals of structures is generally life cycle based with some moderation based on community input and funding.

Safety related improvement projects are prioritised according to a risk matrix covering all projects across the district combined with available funding.

Procurement

Procurement for each of the work streams is tailored to that activity under the Councils procurement strategy which is used as the guiding document.

For professional services and maintenance, term contracts are used to provide certainty and tenure for the providers which potentially enable cost savings as well as consistency in delivery. These contracts are open tendered with a term of three years and the option for council to extend up to an additional four years. (3+2+2)

Renewals are typically constructed under annual contracts as this is believed to deliver the program at ‘market rates’ each year. Contractors bid competitively in an open tender process for bundles of work. New infrastructure such as bridging and footpaths is procured in an open tender process to designs provided by Council.

Tender review and recommendations with the exception of the professional services contract is carried out by the professional services provider under the NZTA Procurement Manual 2009.

This ensures that processes comply with the requirements of NZTA who is a partner in the transportation activity.

Delivery

Delivery of the program is through an external provider model with contractors working to a number of performance measures depending on the contract scope and type.

Annual contracts for the delivery of renewals and capital projects are timeline and quality based with monitoring being carried out by the professional services provider. The seasonal nature of construction work dictates that optimum outcomes are predicated on the work taking place during summer and autumn.

Term contracts for the delivery of maintenance and operations are measure and value contracts with monthly cycles monitored by the professional services provider. Performance measures are used to determine compliance with the contract requirements and these are assessed monthly and reported.

10 Upkeep

This plan is a living document and we will continue to review and update the plan to maintain its usefulness and currency. The plan provides input into Council's Long Term Plan. Maintaining this plan involves the completion of routine and periodic tasks and activities; some are completed annually while others are planned to be completed less frequently, on three, four and six yearly cycles.

Plan Review

Table 14 summarises the key tasks and activities that we will complete, what is involved and how often these activities and tasks will be undertaken.

Table 135: AMP Review Schedule

Task	Frequency	Next Due Date	General Description
Inventory	Monthly	Month end	RAMM and inventory databases are updated monthly.
Asset Condition	Bi-Annual	December 2015	Completion of RAMM, footpath and bridge condition surveys.
Levels of Service	Yearly	March each year	Reviewed each year as part of the annual planning process. Includes annual review of the Maintenance Intervention Strategy and Maintenance Standards.
Demand	6 Yearly	In line with release of the next census data	Completed using latest census and traffic volume data according to the Demand Forecast process.
Risk Management	3 Yearly	December 2015	Comprehensive assessment of risk following specific risk management process developed.
Financial Forecasts	Annually	March each year	Completed each year in line with Council's budget and NZTA requirements.
Life Cycle Plans	3 Yearly	December 2017	Specific life-cycle plans are developed as part of the long-term financial forecast process.
AM Practices	Bi-annual	December 2015	Documented asset management processes and procedure are critical reviewed and amended as necessary.
Plan Up keep	Annually	March each year	Entire content to be reviewed and updated where necessary to maintain its currency and accuracy.

We have developed specific asset management processes and procedures that are unique to the way we do business. By having well defined processes and procedures we are able to critically review and analysis what we do and the results we are achieving. Adjustments to our processes are made when and where deficiencies or improvements are noted.

Improvement Programme

We are continuously identifying, prioritising and implementing asset management improvements in order to continue to reduce the cost of doing business and the cost of compliance. Some of the improvements we have identified and will work on include our risk management and demand forecasting processes and procedures along with life-cycle planning. Improvements will be actioned when spare capacity and resources allow.

We will continue to develop, review and update this Asset Management Plan along with our asset inventories, long-term expenditure forecasts, forward work programme, and risk register. We will ensure our asset management activities will align with good practice, in particular the International Infrastructure Management Manual (IIMM) and Publicly Available Specification (PAS) 55.

Status of AM Practices

We plan to assess the state of our transportation asset management practices on a bi-annual basis to ascertain whether we are achieving what we set out to achieve. In determining the relevance and appropriateness of our asset management practices we need to be mindful that we keeps things simple and fit for purpose. Some advance asset management techniques such as pavement performance modelling are deemed to be too expensive for the value obtained.