
PALMY
PAPAIOEA
PALMERSTON
NORTH
CITY
STRATEGIC ASSET
MANAGEMENT PLAN

Produced by
Palmerston North City Council

OVERVIEW

STRATEGIC ASSET MANAGEMENT PLAN EXECUTIVE SUMMARY

Manaaki whenua, manaaki tangata, haere whakamua.

Tihei mauri ora!

No reira, e te haukainga Rangitāne, nei rā te mihi nui ki a koutou e pupuri nei i te mauri o te whenua me ngā wai e rere atu e rere mai.

Tēnā koutou, tēnā koutou, tēnā tātou katoa.

Why Is Asset Management Important?

We manage a wide range of assets on behalf of our community. These assets are essential to the delivery of services that support the social, economic, environmental and cultural wellbeing of our community. Our community expect us to extract the maximum value out of our assets for the lowest possible cost from the time the asset is created to the end of the asset's life. This approach forms the basis of our Asset Management (AM) practice.

What is the purpose of the Strategic Asset Management Plan?

The Strategic Asset Management Plan (SAMP) describes how we plan to manage and make decisions about our assets in a way that achieves the Council's strategic direction for the city. Every asset based service we deliver to our community should contribute to achieving the Vision, Goals and Strategies that form the strategic direction our Councillors have set for the city.

The SAMP sets out our plan to manage our assets in a way that achieves our strategic direction for the city. Our strategic direction is as follows:

Our vision:
Small City Benefits, Big City Ambition.

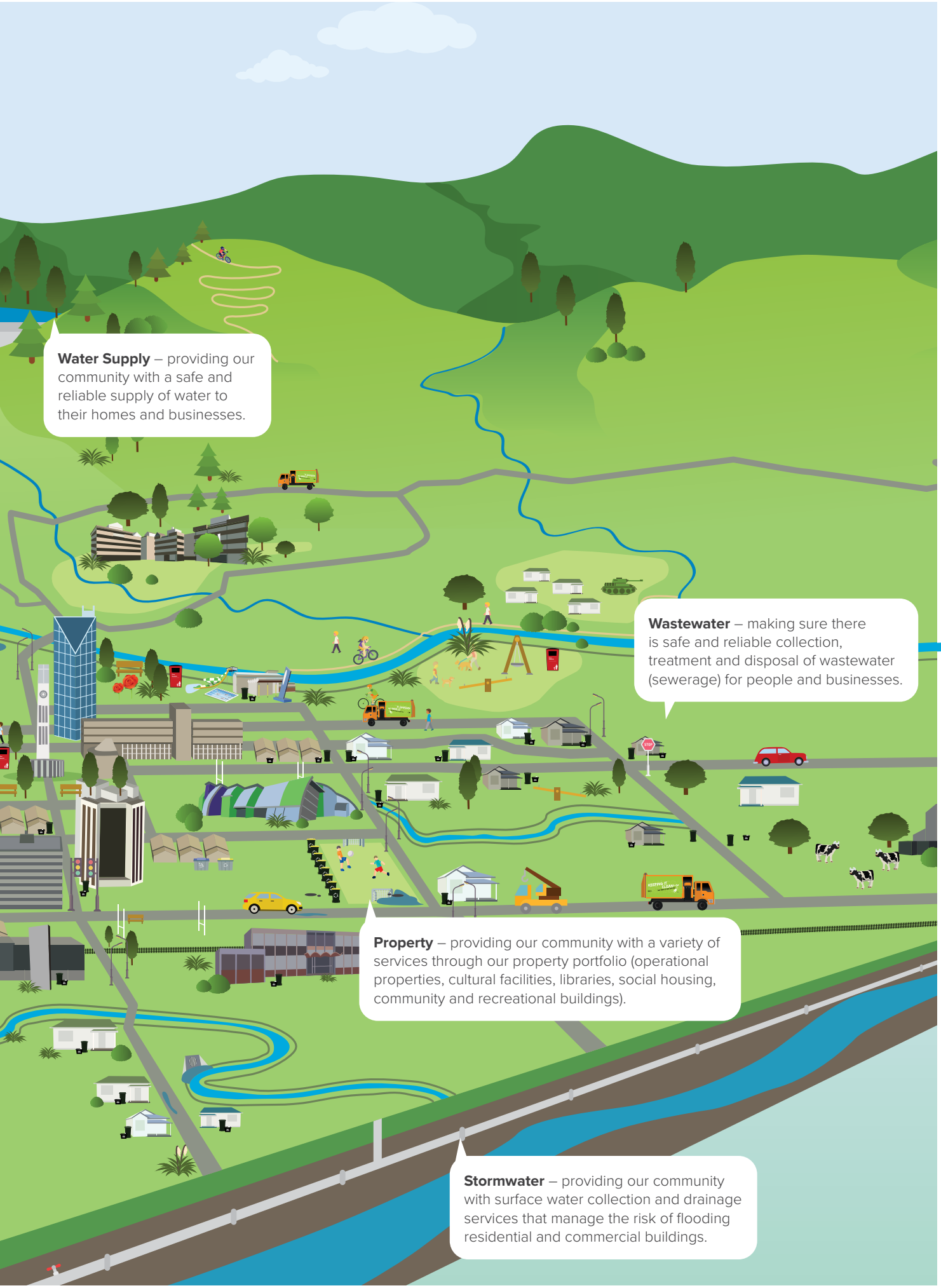
Goals:

- An innovative and growing city
- A creative and exciting city
- A connected and safe community
- An eco-city
- A driven and enabling Council

Strategies:

- Innovative and Growing City Strategy
- Creative and Liveable Strategy
- Connected Communities Strategy
- Eco City Strategy
- Driven and Enabling Strategy

WHAT WE PROVIDE


Water Supply – providing our community with a safe and reliable supply of water to their homes and businesses.
Wastewater – making sure there is safe and reliable collection, treatment and disposal of wastewater (sewerage) for people and businesses.
Property – providing our community with a variety of services through our property portfolio (operational properties, cultural facilities, libraries, social housing, community and recreational buildings).
Stormwater – providing our community with surface water collection and drainage services that manage the risk of flooding residential and commercial buildings.

WE HAVE SOME CHALLENGES + RISKS

The maturity of our asset management approach

An independent review of the maturity of our AM approach was undertaken in 2019.

Given the size of our organisation, the complexity of our assets and the level of risk we manage our overall AM maturity level should be at the high end of "Intermediate", a score of 80. The asset management maturity assessment placed us at "Core" level of asset management, with a score of 51. While we have made progress since our 2019 review, we still have significant improvements to make in the way we manage our assets. Some of our challenges and risks include:

Audit and improvement

It is important that we audit and plan to improve our approach to AM. In the past we have developed an AM Improvement Plan, but it was not budgeted for or actioned. For this reason, we have not been progressing our AM Improvement Plan and improving AM practice across the organisation.

Managing risk

Risk management is our weakest area of AM practice. We do not have a whole of organisation approach to managing risk and tend to manage our risks as they arise – dealing with issues and developing short-term responses to risk. We don't currently understand where we face the greatest risk to service delivery if a particular asset fails (asset criticality). For example, what is the criticality of our wastewater treatment plant assets and how does this influence how we maintain and renew these assets.

Procurement

Our procurement processes are generally informal and inconsistently applied across our asset areas. We have a contract register which focuses mainly on recording key dates, but we have no procurement or contract management system in place. We carry risk when we don't have robust processes in place to manage conflicts of interest, use purchase order systems incorrectly, or don't have formal contracts in place where appropriate.

Life cycle decision making

We do not have a formalised decision-making process in place when making decisions about prioritising the maintenance and renewal of existing assets or investment in new assets. For this reason, we have found it difficult to assess relative priority of investment across our asset areas. The increased frequency of break downs at our wastewater treatment plant and the associated increase in our renewals programme are symptoms of not having robust decision-making processes in place in the past.

Operational planning

Our current approach to operational planning deals with individual issues as they arise rather than a planned approach guided by policies, processes and procedures. While our Parks and Reserves team have well documented operational procedures for their work practices not all asset areas do. In many cases we do not have maintenance plans in place which means our approach to maintenance is often reactive and unbudgeted costs occur. The recent $400k of unbudgeted maintence at Arena is an example of this reactive approach to the maintenance of our assets.

Asset performance and condition

We have significant gaps across our asset areas in terms of condition and performance data. We don't understand where we face the greatest risk to service delivery because we are not collecting condition data on our critical assets. Although some work has been done in the past to assess asset criticality, we are not using it well. For example, our wastewater pipes have good CCTV data, but is not always reliably loaded into our asset data base.

AM systems

If we follow formalised processes we can improve effectiveness and efficiency, increase community satisfaction and better manage risks associated with our assets. We do not have a robust suite of AM policies, processes or procedures being used by our staff. We have relied heavily on experienced staff in the past. Because we have little AM process documentation, we have been vulnerable when experienced staff and institutional knowledge has left the Council.

Policy and strategy

We need to manage our assets in a way that contributes towards achieving our strategic direction. Our long-term strategic direction is clear and settled. However, in the past our AMPs and AM Policy have not had a good understanding of our strategic direction and for this reason our AM decisions have not always given effect to the strategic direction our Councillors have set for the city.

Asset management plans (AMPs)

AMPs provide transparency about how we plan to manage and invest in our assets. Our 2017 AMPs were comprehensive but long documents that struggled to provide operational value. They were prepared with limited interaction with other parts of Council and in trying to be comprehensive were too long to be usable. In the past, our AMPs have struggled to align with our strategic direction and to effectively support our 10 Year Plan and Infrastructure Strategy.

Forecasting future demand

Forecasting future demand is important because it considers how future changes may impact on the demand for an asset and the service(s) it provides. The projected increase in investment in the region over the next 10 years means there is a need for robust demand forecasting. If we don't understand future demand and its impact on our asset based services, we run the risk of not having enough system capacity available at the right time to meet future growth.

WHAT'S OUR PLAN?

Audit and improvement

We will be developing an organisation wide AM Improvement Plan based on the recommendations of our AM Maturity Assessment and the AM improvement tasks contained in our 2020 AMPs. We are developing an interactive dashboard that shows our prioritised improvement plan tasks so that we can monitor and report on our progress. We plan to form an Asset Management Steering Group that will provide governance and oversight to our AM practice and monitor how we progress our improvement plan tasks.

Managing risk

We currently have a review of risk management underway. We have set up a Risk and Resilience team, adopted a Risk Policy and are in the process of developing a Risk Management Framework. Subject to resourcing, we plan to have in place AM Improvement Plan tasks that focus on assessing the resilience of our assets. Improvement tasks will also focus on process documentation to address the risks posed by the loss of experienced staff. The creation of our Project Management Office (PMO) in 2020 will support our Asset Managers to better manage project risk.

Procurement

Our newly established Procurement Team are in the process of developing better contract management capabilities across the Council. This includes work developing pre-approved procurement panels and formalising contracts which more clearly define expected contractor performance measurement and monitoring. Our Procurement Team are also working with our PMO to implement new tendering thresholds and new procurement processes. We expect to have an improved contract management system in place in 2021.

Life cycle decision making

We will have in place AM improvement tasks that look to create formal decision-making processes to better prioritise the maintenance, renewal and creation of new assets. It is important this approach will be supported by reliable asset condition data. We will also work to bed-in improved business case development to better justify our projects and ensure we are aligning with our strategic direction.

Operational planning

We need to better prepare and plan for how we keep our critical assets delivering services to our community. To do this we need to review our approach to operational planning. We will take a structured approach to our lifecycle planning outputs (particularly renewals and maintenance budgets), and continually collect and update data to better understand the performance of our assets and our approach to operational planning. We want to develop strategies that better balance renewals and / or other proactive maintenance and the potential impacts on operational costs and LoS. We need to develop clear renewal and maintenance plans and communicate these with key staff and broader stakeholders (e.g. Rangitāne o Manawatū and Waka Kotahi / NZTA).

Asset performance and condition

We will be reviewing our policy governing our asset condition and performance assessment in terms of content and frequency. Once we have defined and identified our critical assets, we will need to complete condition surveys and schedule regular inspections with the frequency based on asset criticality. While unexpected failure of our water assets in the past has prompted a programme to increase the collection of condition data through physical surveys, we will need to develop a comprehensive condition assessment programme across all our assets. In our Property and Transport areas we have started working towards developing processes for contractors and in-house staff to collect condition information using real time mobile data applications to increase efficiency in this area.

AM systems

We plan to undertake a review of our AM Systems and develop policies, processes, and procedures. We have developed a draft AM Policy and SAMP which form the first steps towards building our formal AM System. We have invested in web-based software to map business process and will focus on a more comprehensive approach to mapping all our AM processes.

Policy and strategy

We have confirmed with Councillors and other stakeholders the Vision, Goals, Strategies and Plans that will inform our 10 Year Plan decision-making. We have completed our SAMP and draft AM Policy, which both align with the strategic direction set to guide the city forward. Our AMPs have been informed by the SAMP which sets out the overall strategic approach to managing council assets and overarching issues, practices, and systems.

Asset Management Plans (AMPs)

We have developed our 2020 Asset Management Plans in two parts. Part A is our SAMP. This document sets out the overall strategic approach to managing our assets. Part B includes our AMPs for each asset group, detailing optimal management requirements and how the practices in Part A are applied.

We have set up an Asset Planning Division with one of its functions to develop AMP documents in a way that draws on the collaborative input of staff across the whole organisation. We have completed a review of our AMP templates and formatted our approach to better align with our needs and the operational areas of the organisation.

We need to better prepare and plan for how we keep our critical assets delivering services to our community.

Forecasting Demand

In preparing for the 10 Year Plan we have reviewed both our growth projections for the city and our Growth Plan. Our AMPs explain how each of our asset areas (transport, water, wastewater, stormwater, parks and reserves and rubbish and recycling) contribute towards achieving our Growth Plan. However, as part of our AM Improvement Plan, we need to carry out a more detailed review of how infrastructure capacity will be planned and rolled out to support the city's growth needs over the next 30 years. This work will feed into more fully fleshed out lifecycle plans in our AMPs that focus on how each asset area needs to respond to growth and ensure ongoing asset operation over the lifecycle of these assets.

Welcome to the Palmerston North City Council's first Strategic Asset Management Plan. This document reflects Council's aspiration to lift the standard of asset management planning throughout the organisation. It is one of several improvements that represent the beginning of a new, more strategic approach to managing the City's assets. It is intended that this Strategic Asset Management Plan will evolve over the next ten years as Council's Asset Management practices continue to develop and mature.

Palmerston North City Council's vision for Palmerston North is *"Small City Benefits, Big City Ambition- He iti rā, he iti pounamu"* where every resident enjoys the benefits of living in a small city yet has the advantages of a big city. Council is committed to making the vision a reality and uses all available resources to ensure the aspirations for the city are achieved. The city is fortunate to have a range of quality assets that are managed in a way that support the city vision and provide the community with essential services. Services such as safe drinking water and a city that is easy to move around in, contribute positively towards the city vision.

Council is aiming for good quality asset management practice across the range of asset groups that ensure levels of service align with Council's Strategic Direction. For this reason, Council has developed the Asset Management Plans in two parts.

Part A: The Strategic Asset Management Plan that provides an overview of Council's Asset Management practices.

Part B: Asset Management Plans for each asset group, detailing optimal management requirements and how the practices in Part A are applied.

The aim is to ensure well considered and consistent long-term management of assets and services across all asset groups.

1. Introduction and Organisational Context

Figure 1: Palmerston North City Council Administration Building. Photo Credit: Palmerston North City Council.

1.1 Introduction

1.1.1 Purpose

The purpose of the Strategic Asset Management Plan is to:

- Document information about the role of assets, asset management, and the asset management system in supporting the achievement of the organisational objectives, providing clarity for everyone in the organisation

- Translate organisational objectives into strategic asset management objectives and reconcile with other strategic objectives that can impact on the assets and asset management
- Guide the approach for developing asset management plans and the asset management system
- Establishing decision-making criteria that represents value for the organisation and its stakeholders and the approach to performance evaluation
- Present a consolidated plan at the asset portfolio level for achieving strategic asset management objectives and linking these to the organisational financial plans
- Present the plan for creating or improving the asset management system to ensure the required capabilities and resources are available to achieve the asset management objectives

1.1.2 Document Structure

Part A - Strategic Asset Management Plan

- Part A1: Introduction and Organisational Context
- Part A2: Asset Management System
- Part A3: Asset Management Practices
- Part A4: Strategic Issues and Impacts

Part B – Asset Management Plans

- Part B1: Transport
- Part B2: Water Supply
- Part B3: Wastewater
- Part B4: Stormwater
- Part B5: Rubbish and Recycling
- Part B6: Parks and Reserves
- Part B7: Property

1.2 Organisational Context

Asset Management is strongly influenced by the wider organisational context. The following section outlines the Council's key influences, documents, relationships and partnership relevant to Asset Management.

1.2.1 Council's Asset Management Practice

Asset Management is defined as the management of assets in a way that ensures value from assets is realised. Value from assets is provided to the community through the provision of services, in the most cost-effective and efficient manner. Asset management provides Council with an assurance that assets will fulfil their required purpose. Council recognises Asset Management is a dynamic practice that involves the balancing of costs, risks, opportunities and, performance to achieve organisational objectives. Long term management decisions aim to take account of the present and future needs of the community at the lowest cost. To assist Council with its Asset Management over the long term it applies a lifecycle approach to asset management which involves managing an asset, or asset network, through different stages of its useful life.

Council's Asset Management practice is evolving and is currently in the process of aligning with the International Standard ISO 55000. The Standard provides guidance to ensure that optimal value is realised from the asset base. Application of ISO55000 will assist Council achieve it organisational objectives through the effective and efficient management of assets. One of the key fundamentals of this practice is an integrated whole of council approach to Asset Management as shown in figure 2 below.

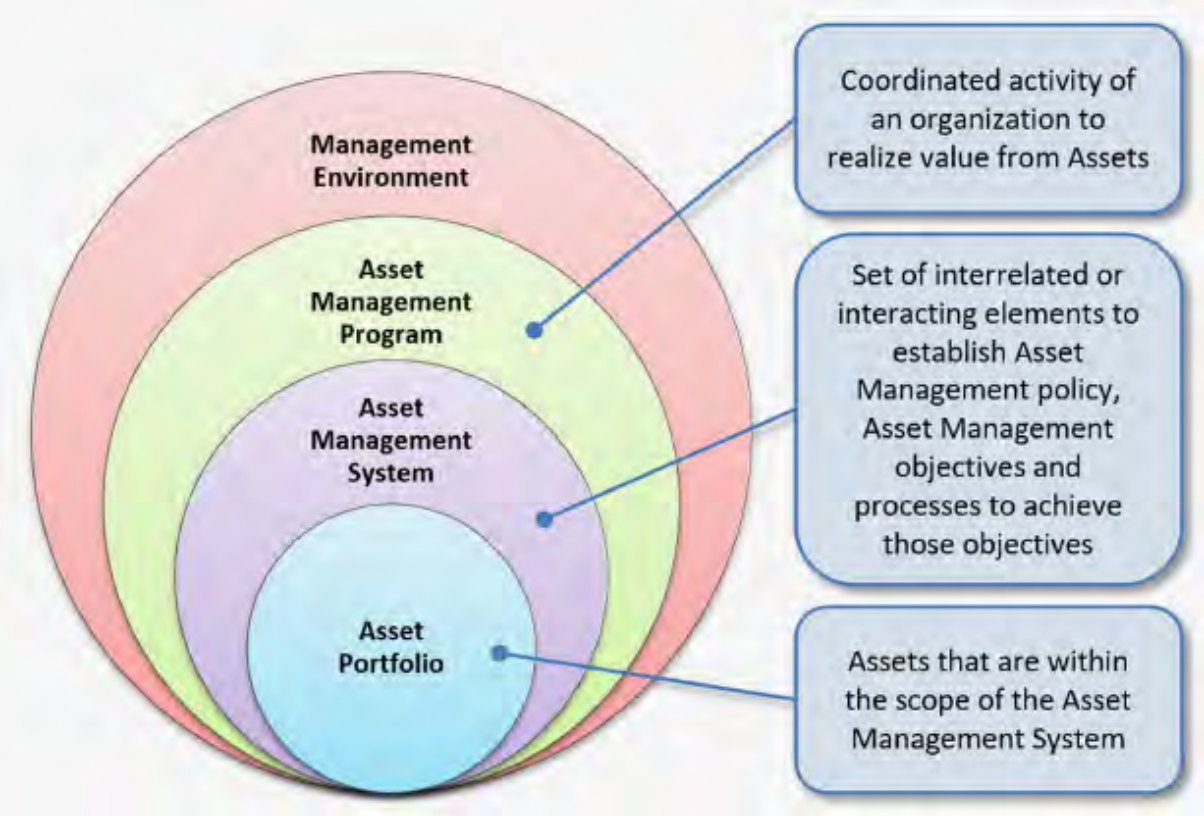


Figure 2 Council approach to Asset Management.

1.2.2 Asset Management Principles and Objectives

Council has developed a set of principles and objectives that guide its Asset Management practices. The principles and objectives reflect the Council's aspirations regarding Asset Management practices and its contribution to the city vision.

Table 1: AM principles and corresponding objectives

Principle	Objective
Asset management outcomes align with Council's Strategic Direction	1.1 Our staff understand the link between asset management and Council's Strategic Direction including vision, goals, strategies, and plans
	1.2 We manage our asset-based services to achieve Council's Strategic Direction including vision, goals, strategies, and plans
	1.3 We follow a structured process for developing the foundational asset management inputs into the Infrastructure Strategy and Long Term Plan
	1.4 We strive to give the right priority to investment in infrastructure across all asset types
Asset management is an organisational wide practice	2.1 Our Asset Planning Division and Asset Management Steering Group provides leadership and coordination of asset management practice across the Council
	2.2 We use consistent asset management processes across Council
	2.3 Our asset management practices meet our statutory obligations
	2.4 Our staff know how their roles relate to asset management
	2.5 The executive leadership team recognises the importance of asset management and adequately resources the asset management system subject to budgetary, resource and systems constraints of the organisation
	2.6 We seek cross-discipline and collaborative input into our asset management planning
	2.7 We lead an organisational culture of continuous improvement in asset management
Decisions about assets are based on well managed, quality information	3.1 We understand the performance and condition of our assets
	3.2 We store all asset data in formalised systems
	3.3 We store all information about an asset in a single location
	3.4 We maintain our data, so we can rely on it (appropriate quality, completeness, provenance)
	3.5 Our systems enable us to analyse our data
	3.6 We use our systems to create understanding of our assets

	3.7 We continually improve our understanding of our assets
Asset management maturity levels are appropriate to the assets, services and risks we manage	4.1 We ensure that appropriate levels of asset management maturity are defined
	4.2 We match the level of asset management practice to the criticality of the asset
	4.3 We strive to close identified asset management maturity gaps over time
	4.4 We make sure that the asset management capability of our people matches the needs of the organization
	4.5 We gain recognition for our evolving asset management practice
Asset management decisions made on a life cycle approach	5.1 We consider the trade-off between risk, cost, and service levels
	5.2 Our asset owners and managers make decisions based on evaluation of all viable options
	5.3 We take a whole of life approach for asset management decisions
	5.4 Our Asset Management Plans include life cycle strategies
Asset Management Plans are continually fit for purpose	6.1 Asset Management Plans are complete and at the agreed level of maturity
	6.2 Our Asset Management Plans are regularly reviewed to respond to changing circumstances
	6.3 Our staff use the Asset Management Plans
	6.4 Our Asset Management Plans accurately reflect the current practices for the asset type
	6.5 We develop and deliver improvement programmes in our asset management plans that address prioritised maturity gaps

1.2.3 Asset Management Policy

The purpose of the Asset Management Policy is to provide guidance for the management of Palmerston North City Council's assets, to ensure that assets can provide services that support the social, economic, environmental and cultural wellbeing of the community. This policy articulates the principles, objectives and application for the strategic management of council assets, which is aligned to, and supports Council's Strategic Direction.

1.2.4 Asset Management Framework

Council has a range of strategic and technical documents that together form the Asset Management Framework. There may be other relevant technical documents not shown on this diagram. This will largely depend on the requirements of the asset being considered e.g. Waka Kotahi New Zealand Transport Authority requirements will be a significant consideration when preparing the Transport Asset Management Plan.

Figure 3: How the AM framework links to other strategic documents.

1.2.5 Council's Strategic Direction

Council's Strategic Direction is comprised of Vision, Goals and Strategies. To assist with implementation Council has also identified a range of Priorities and these influence Asset Management Planning. Shown in Table **2** below

Table 2: Strategic Directions and Priorities

Vision	Small City Benefits, Big City Ambition- He iti rā, he iti pounamu	
Goals	Strategies	Priorities
An innovative and growing city	Innovative and Growing City Strategy	Create and enable opportunities for employment and growth Provide infrastructure to enable growth and a transport system that links people and opportunities Support the development of more housing that meets community needs Support the diversification of the economy to reduce reliance on traditional industries Support an 'innovative economy' to underpin growth into the future Transform the economy to a low carbon economy
A creative and exciting city	Creative and Liveable City Strategy	Create a city that has great places for all people Celebrate the city's history and diversity, and build on the strength of being a city of many cultures and languages Be a creative city that nurtures and celebrates the arts Develop a national reputation as an exciting city with plenty of things to do at night and on weekends Be one of the most active communities in New Zealand
Connected and safe communities	Connected Communities Strategy	Develop, provide, support or advocate for services, facilities and events that create connected, welcoming and inclusive communities Ensure the city has a healthy community where everyone has access to healthy, safe and affordable housing and neighbourhoods Support communities to achieve their aspirations Be a city where people feel safe and are safe
An eco-city	Eco City Strategy	Respect and enhance the mauri of the Manawatū River Work with the community to reduce carbon emissions Regenerate native biodiversity

		Invest in infrastructure that serves to protect, enhance and preserve our environment Use Council's legislative powers and policies to ensure that urban development is sustainable now and into the future Educate the community, in particular property owners, on the benefits of investing in sustainable building design and green buildings Demonstrate leadership and best practice by developing and implementing an environmental sustainability plan for the Council, Council run events, and facilities
A driven and enabling council	Driven and Enabling Strategy	We will work as one team with our community to be a catalyst and enabler of change in the city. Our goal is to do things in a simpler, faster, and better way for the overall benefit of our community

1.2.6 Iwi Partnership

Rangitāne o Manawatū are acknowledged as having a significant and special relationship with the Council by virtue of them being Tangata Whenua. Council values the partnership it has with Rangitāne o Manawatū.

Council's commitment to its partnership with Rangitāne o Manawatū is articulated in several key strategic documents including:

Goal 1 An Innovative and Growing City

Innovative and Growing City Strategy

- Collaborate with Rangitāne o Manawatū on post-settlement property development opportunities
- Involve early in major city developments
- Mana Whakahono a Rohe to provide a mechanism for Council and iwi to come to an agreement on ways Rangitāne o Manawatū may participate in RMA decision-making
- Work with regional iwi to identify opportunities to unlock the potential of local iwi businesses, workforce and investment

Goal 2 A Creative and Growing city

Creative and Liveable Strategy

- Incorporate Rangitāne o Manawatū's history and aspirations in modern-day Palmerston North
- Collaborate with Rangitāne o Manawatū on major Council projects, particularly in the city centre and at the Manawatū River Park.

Goal 3 Connected and Safe Communities

Connected Communities Strategy

- Develop collaborative agreements with Rangitāne o Manawatū in response to social and community issues
- Work closely with Rangitāne o Manawatū to improve Māori community well-being
- Work with signatories to the Kotahitanga Alliance partnership agreement to promote a set of regional Whānau Ora outcomes to provide excellence in service delivery for Māori whānau.

Goal 4 An Eco-City

Eco City Strategy

- Council acknowledges the special relationship Māori have with the land, forests, rivers and sea
- Working together in partnership with Rangitāne o Manawatū to restore the mauri of the waterways and forests
- Engaging proactively and collaboratively to ensure positive outcomes where Rangitāne values are embodied.

1.2.7 Council Planning Cycle and Asset Management Planning Timeframes

The Asset Management Planning timeframes are driven by the wider Local Government planning cycle as shown in the table below.

Table 3: AM Timeframe and Milestones

Year	Quarter	Milestones	Outputs
2018/19	Apr-June	Prepare Annual Plan	2019/20 Annual Plan (Budget) adopted
	July-Sept	2018/19 Levels of Service performance reviewed and supplied for Annual Report	2018/19 Annual Report published
	Oct-Dec	Elected Member Workshop – confirming/adjusting 10-Year Plan Strategic Direction Strategic Asset Management Plan preparation underway Asset Management Plan preparation begins Annual Plan budget workshop with Elected Members Customer satisfaction survey reported to staff	Strategic direction confirmed by Elected Members.
	Jan-Mar	Draft Asset Management Plan preparation completed	
2019/20	Apr-June	Prepare Annual Plan	2020/21 Annual Plan adopted
	July-Sept	2019/20 Levels of Service performance reviewed and supplied for Annual Report Officers prepare a Council report on any significant changes to Levels of Service	2019/20 Annual Report published
	Oct-Dec	Asset Management Plans presented to Council 10-Year Plan story presented to Council (main themes)[1] Preparation of draft 10-Year Plan consultation material for Elected Members	Draft 10-Year Plan consultation material developed Asset Management Plans
2020/21	Jan-April	Consultation on the 10-Year Plan (Mar- April)	
	June	10-Year Plan adopted by Council	
	July-Sept	2020/21 Levels of Service performance reviewed and supplied for Annual Report	2020/21 Annual Report published

[1] *The Palmerston North City Council's Long Term Plan is referred to as the 10-Year Plan.*

2. Asset Management System

2.1 Asset Management System

2.1.1 What is the Asset Management System?

Helps to improve effectiveness & efficiency of assets The System includes policies, plans, business processes and information systems that together are used to direct, coordinate, and control asset management activities. The System assists Council to improve the effectiveness and efficiency of assets, increase customer satisfaction and better manage risk.

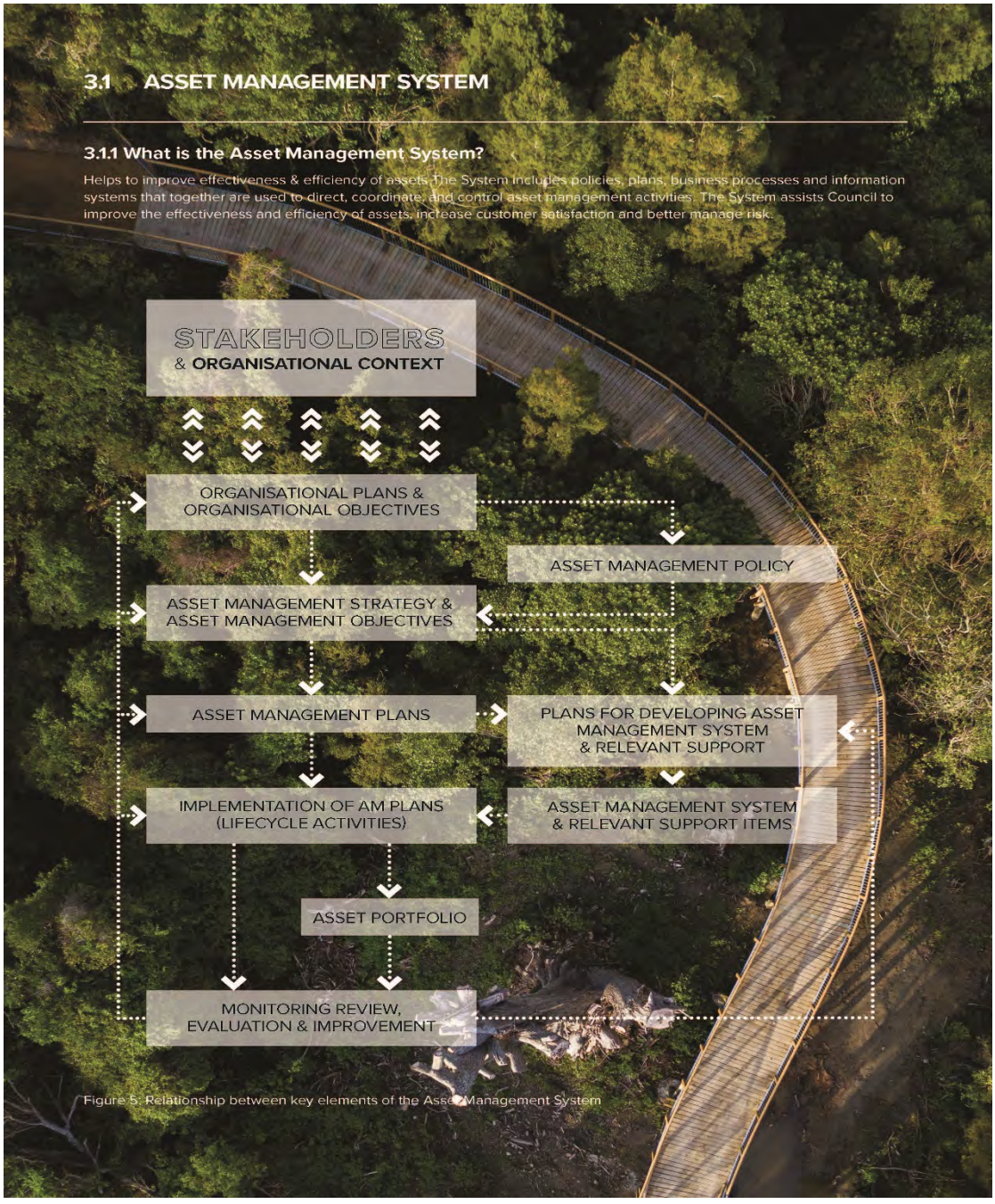


Figure 4: Relationship between key elements of the Asset Management System

2.1.2 Boundaries of the Asset Management System

As outlined in ISO 55000 'not all asset management activities can be formalised through an Asset Management System'. The scope of the system includes the delivery of all the lifecycle activities described in Part 3. Aspects such as leadership, culture, motivation, and behaviour, which can have a considerable influence on the achievement of asset management objectives, are managed by the organisation through arrangements outside the Asset Management System.

Due to the nature and special management requirements of some assets it is appropriate that they are excluded from the Asset Management System. Council has decided to exclude the following assets:

- Council owned furniture
- Information and communication technology
- Mobile plant and equipment
- Library and art collections
- Leases and assets owned by third parties.

2.1.3 Leadership and Governance of the Asset Management System

The following groups demonstrate leadership and commitment by taking an active role in engaging, promoting, directing and supporting, communicating and monitoring and improving elements in the Asset Management System.

Elected Members

- Represents the interests of the community, both current and future, to the rest of the organisation. For asset management, this has a focus on levels of service and affordability.
- Sets the Council's Strategic Direction which includes the vision, goals, strategies and plans
- Ensures that council assets are carefully and responsibly managed on behalf of the community
- Provides direction, review and accountability through the Finance and Audit Committee

Executive Leadership Team

- Demonstrates commitment to asset management and create a work culture that is successful and motivated
- Provides appropriate direction for asset management ensuring alignment to organisational outcomes and whole of Council commitment resourcing
- Mandates and supports the Asset Management Steering Group
- Sets the organisational structure and oversight of the asset management roles and responsibilities.

Asset Management Steering Group

- Oversees development of asset management documentation (Asset Management Policy, Strategies, and Plans)
- Advocates for improvements to the adequacy of the Asset Management System
- Drives continual improvement
- Provides governance and oversight of the asset management function.

Asset Planning Division

- Coordinates asset management planning across the Organisation
- Ensures the alignment between Council's Strategic Direction and asset management planning

- Responsible development of the Strategic Asset Management Plan, Asset Management Plans and the Asset Management Improvement Plan
- Assists with the development of the Infrastructure Strategy

Council staff

- Council staff are an important component of the Asset Management System.
- Responsible for the day to day management of assets and the supporting asset management systems
- Asset management responsibilities across the organisation are shown in Table 4

Table 4: AM Responsibilities Across Council

	Councillors	Executive Leadership Team	Chief Infrastructure Officer	Activity Groups	Activity Operations staff	Asset information team	Asset Management Steering Group	Asset Planning Division	Strategy and Planning	Finance Team	Marketing and Communications	Community Services Unit
Asset Management Policy and Strategy development,	I	A		I	I	I	C	R	C	I		I
Levels of Service and performance management development and reporting	I			A	S	S	C	R				C
Demand forecasting and management				A			I	R	S		I	
Asset attribute data capture and maintenance				A	S	R	I					
Asset performance and condition data capture and understanding				A	S	R	I	R				
Decision-making	I	A						R				C
Risk management	I	A	I					R		S		
Operational planning				A	C	S		R		I		
Operational delivery				A	R	I		I		I		
Capital works planning				A	C	S		R		I		
Capital works delivery		A	I	R	I	I		I		I	I	
Financial planning	C	A			S	S		R		S		
Asset management leadership and staffing		A			C		R	S				
Asset Management Plan writing	C	A			S	S		R		S		C

	Councillors	Executive Leadership Team	Chief Infrastructure Officer	Activity Groups	Activity Operations staff	Asset information team	Asset Management Steering Group	Asset Planning Division	Strategy and Planning	Finance Team	Marketing and Communications	Community Services Unit
Management systems development and review		A					C	R				
Asset management information systems selection and operation		A				R	I	S				
Service delivery mechanism selection and review	C	A	C	R				I			I	
Audit and improvement identification and implementation			A	S	S	S	C	R				

Legend:

Responsible	R	Those who do the work to complete the task.
Approver	A	The one who approves the outputs on completion
Supporter	S	Those who help complete the task
Consulted	C	Those whose opinions are sought, there is two-way communication.
Informed	I	Those who are kept up to date on progress, one-way communication.

2.1.4 Achieving Asset Management Objectives

Key Performance Indicators (KPIs) are an important component of our Asset Management System. They are a tool for measuring performance against the asset management objectives and are designed to:

- Highlight the most important underlying issues relating to Council's asset management
- Explain Council expectations against those issues
- Demonstrate progress against those expectations
- Support conversations about cost, risk, and quality for asset management improvement projects, both at the individual level and the programme level

When used this way, Key Performance Indicators form an important part of the assurance process sought by the Executive Leadership Team and Elected Members.

2.1.5 Reporting

Council has developed a Draft Asset Management Performance Framework (Table 5). The Framework is based on the asset management principles contained within the Asset Management Policy, and a selection of the key objectives. Council recognises that in areas where increased performance is required these changes will occur over time. Changes in performance are primarily supported through planned improvement projects. This is discussed at the programme level in Part B, section 11.

Table 5: Draft Asset Management Performance Framework – Key Performance Indicators

Principle	Objective	Measure	Target 2019/20	Target 2020/21	Target 2021/22	Target 2022/23
1. Asset management outcomes align with Council's Strategic Direction	1.2 We manage our asset-based services to achieve Council's Strategic Direction.	A yearly survey assessing the extent to which asset-based services are achieving Council's strategic direction.	0	Achieved	Achieved	Achieved
2. Asset management is an organisational wide practice	2.7 We lead an organisational culture of continuous improvement in asset management.	The percentage of asset management improvement plan tasks programmed for each year that are completed.	0	70%	80%	95%
3. Decisions about assets are based on well managed, quality information	3.1 We understand the performance and condition of our assets.	The rolling 3 year average of the percentage of the programme of asset condition surveys completed each year.	0	80%	100%	100%
4. Asset management maturity levels are appropriate to the assets, services and risks we manage	4.3 We strive to close identified asset management maturity gaps over time.	The change (reduction) in the overall gap of asset management maturity across all activities over a 3 year timeframe.	0	0	0	Maturity gap <15
5. Asset management decisions made on a life cycle approach	5.1 We consider the tradeoff between risk, cost, and service levels.	The number of infrastructure activities with asset renewal strategies endorsed by the Infrastructure Leadership Team.	0	1	3	7
6. Asset management plans are continually fit for purpose	6.3 Our staff use our Asset Management Plans.	The percentage of programmed actions undertaken from the biannual review of Asset Management Plans.	0	80%	90%	100%

Principle	Objective	Measure	Target 2019/20	Target 2020/21	Target 2021/22	Target 2022/23
		The change (reduction) in the overall gap of the Asset Management Plan score in the 3 yearly organisational asset management maturity assessment.	0	0	0	Maturity gap <15

2.1.6 Asset Management Maturity

Asset Management Maturity describes the level of asset management practice and is an important part of the Asset Management System. Maturity is assessed against each attribute (component) of the asset management process. An organisation's maturity reflects the extent to which it has achieved a level of asset management appropriate to the organisation, given the assets, complexity and risks being managed. The results of an asset management maturity assessment are usually presented alongside the assessed 'appropriate level' of practice to highlight any maturity 'gaps'. A mature organisation may be one that has well established 'core' asset management processes.

Council will use a NZ Treasury framework to undertake annual assessments of asset management maturity, with every third assessment being undertaken by an external reviewer. Robust process documentation will be developed that to improve the consistency and transparency of the assessment process and make it clear how identified improvement projects contribute to improving Asset Management Maturity.

2.1.7 Asset Management Maturity Assessment Results

An external review of Council's asset management practice was undertaken in July 2019 by Infrastructure Associates Ltd using the New Zealand Treasury framework. Findings are presented at two levels including overall and for each activity.

Overall Results

- The overall maturity target score is 80 – at the high end of "Intermediate" level of asset management maturity.
- Council achieved a total overall maturity score of 51, which places it in the "Core" level of asset management maturity. This leads to an overall maturity gap of 29 points.

Maturity targets for practice elements vary between 65 and 85. Council does not have any practice elements at, or above the target level of maturity.

- The practice elements that have the most opportunity for improvement are Managing Risk and Audit and Improvement. These practices have the greatest maturity gaps of 55 and 50 points respectively.
- An area of strength is Council's Asset Management Information Systems noting just 5 points difference between the current maturity score and the maturity target. Systems are considered generally fit for purpose, although require further documentation and to be used more often.

Activity Results

- The Property activity has the most opportunity for improvement with a gap of 37 points between the current maturity score and the target. Practice elements needing most improvement include decision making, managing risk and service delivery.
- The stormwater activity has the second greatest opportunity for improvement with a gap of 31 points between current maturity score and the target. Practice elements needing most improvement include managing risk and audit and improvement.
- The Parks and Reserves activity is best performing activity with a total of 23points between the current maturity score and the target. Strengths include asset information systems, asset management plan and operational planning.
- The remaining activities range between 27 to 28 points difference between the current maturity score and the maturity targets. Areas for improvement across all activities include managing risk, and audit and improvement.

All results are shown in the Table 6.

The figures and colours shown in the table represent the amount of improvement required to reduce the "gap" between the current maturity score and the maturity target. Green shades indicate small gaps between the current maturity score and target score while red indicates where larger gaps exist, and improvement is a greater priority.

Table 6: Traffic Light Indicator Table

	Overall *	Roading and Parking	Water Supply	Wastewater	Stormwater	Parks and Reserves	Property	Rubbish and Recycling
Policy and Strategy	30	30	25	30	30	20	30	30
Levels of Service	35	35	35	35	35	15	45	35
Forecasting Demand	25	25	25	25	35	20	35	15
Asset Register Data	20	15	15	15	30	15	20	20
Asset Performance / Condition	30	25	25	30	40	35	40	35
Decision Making	40	40	40	40	40	30	55	40
Managing Risk	55	55	55	55	55	55	55	55
Operational Planning	15	15	15	15	15	10	40	5
Capital Works Planning	25	20	20	20	20	20	40	20
Financial Planning	20	20	20	20	20	20	20	20
Asset Management Leadership and Teams	20	10	10	10	15	15	40	20
Asset Management Plans	25	25	25	25	25	10	35	25
Asset Management Systems	40	40	40	40	40	30	30	40
Asset Management Information Systems	5	5	5	5	5	5	5	5
Service Delivery	40	40	40	40	40	30	55	40
Audit and Improvement	50	50	50	50	50	50	50	50

*Numbers have been rounded

•

Table Legend – Points between current maturity scores and maturity targets.

5	10	15	20	25	30	35	40	50	55

2.1.8 Responding to the maturity assessment findings

Council has developed an Asset Management Improvement Programme to address the gaps between the current maturity scores and the maturity targets. More information about this programme is included in each activity Asset Management Plan in section 11.

3. Asset Management Practices

Figure 5: Developing the Victoria Esplanade Road Safety Park. Photo Credit: Warwick Smith.

3.1 Asset Management Practices

3.1.1 What are Asset Management Practices?

Asset Management Practices describe the range of processes and techniques that an organisation undertakes to manage its assets. Depending on the size and scale of assets involved asset management can involve a range of complex and integrated tasks. The International Infrastructure Management Manual provides a detailed framework (see Figure 6) to promote good asset management practice throughout the world. The step by step guidance describes how to implement good Asset Management practice, relative to the maturity level of practice sought, and achieve an organisation's asset management objectives.

The structure of the 'Asset Management Practices' section is based on the 16 Asset Management Practices outlined below[2]. Each Asset Management Practice is outlined including a description of the practice and relative corporate knowledge at Palmerston North City Council, results of the Asset Management Maturity Assessment and future improvement items.

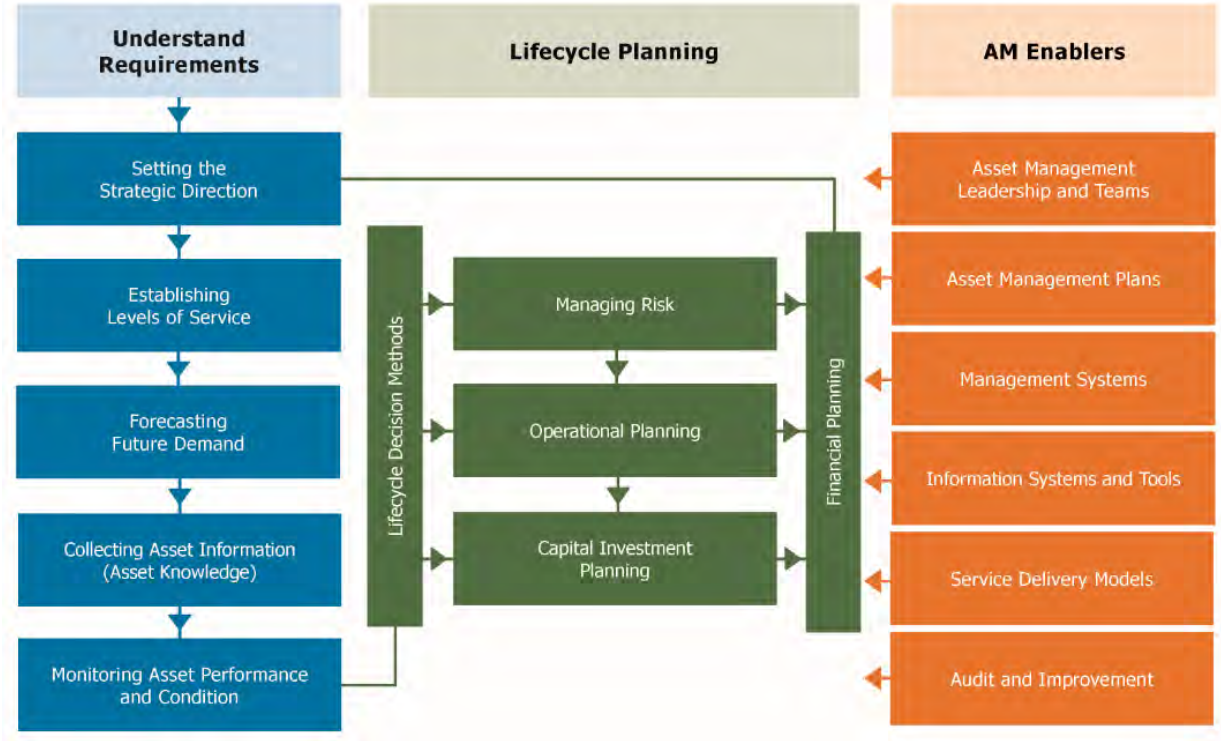


Figure 6: 16 AM practices and how they are related to each other

[2] *Based on the diagram from the International Infrastructure Management Manual 2015*

3.2 Understand Requirements

Understanding and defining the what services assets are required to deliver to the community is the first consideration in Asset Management Planning. A thorough understanding of service requirements enables Council to plan, develop and maintain an appropriate portfolio of assets. In this section the following practices are explained:

- Setting the Strategic Direction
- Establishing Levels of Service
- Forecasting Future Demand
- Collecting Asset Information (Asset Knowledge)
- Monitoring Asset Performance and Condition

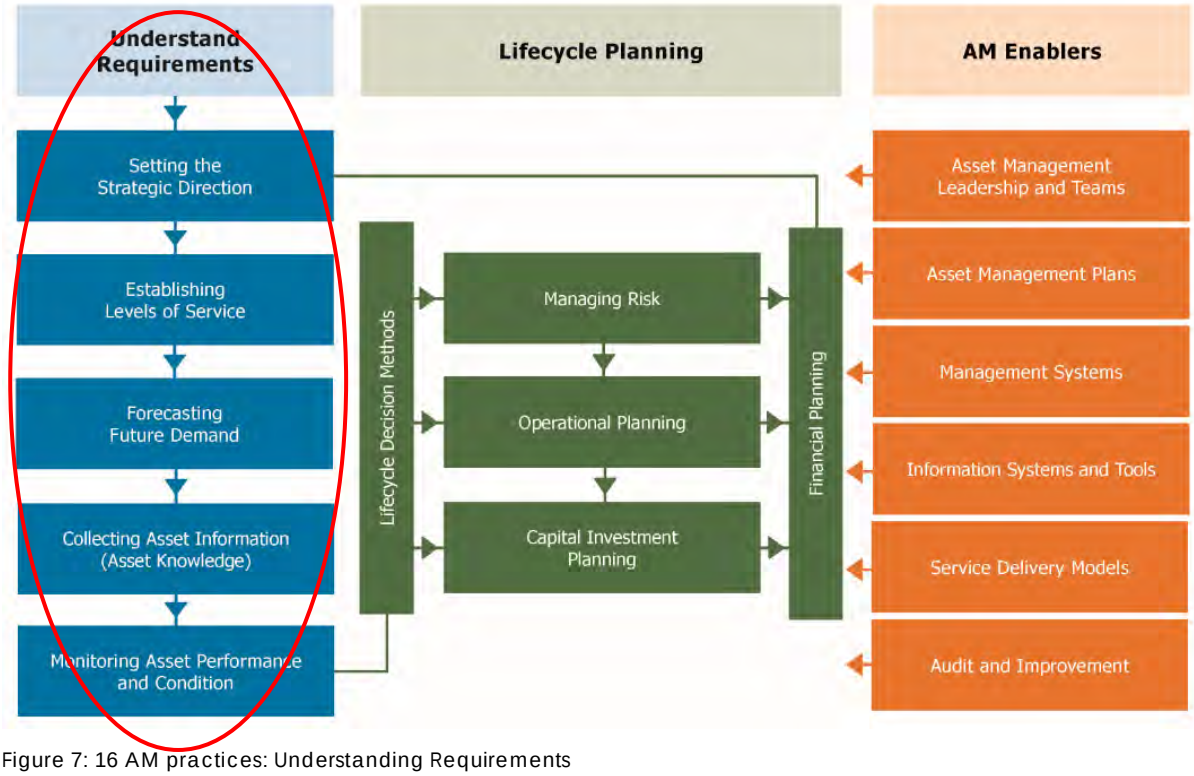


Figure 7: 16 AM practices: Understanding Requirements

In this section Asset Managers aim to answer key questions i.e.

- What are the required levels of service and performance delivery to meet customer and stakeholder requirements?
- How will demand for these services change over time?
- What is the current state of our assets?
- Are the assets capable of meeting these demands now and, in the future?3

[3] *International Infrastructure Management Manual 2015*

3.3 Setting the Strategic Direction

3.3.1 Introduction

The first asset management practice involves establishing a clear long-term direction for managing assets. Direction setting involves high level considerations about aspirations for the future, strategic business objectives and desired community outcomes. Strategies and policies are developed to articulate and communicate an organisation's strategic direction, explaining at a high level the linkages between strategic direction and implementation. In asset management planning this is particularly about how assets can be developed and managed in ways that contribute towards achieving Council's Strategic Direction. It is important that clear alignment between all levels of the policy-implementation framework exist to ensure that scarce resources are allocated towards achieving outcomes desired.

Table 7 below outlines the relationship between Setting the Strategic Direction and Asset Management Objectives.

Table 7: How Setting the Strategic Direction Supports our Asset Management Objectives

Asset Management Objective	Setting the Strategic Direction
1.2 We manage our asset-based services to achieve Council's Strategic Direction	Asset Management Plans and the Asset Management Policy are reviewed and developed to give effect to Council's Strategic Direction including the vision, goals, strategies, and plans.
2.3 Our asset management practices meet our statutory obligations	We manage our assets to ensure the services we provide support our strategic direction while also complying with all legislative requirements.

INSIGHT - PALMERSTON NORTH CITY COUNCIL POLICY AND STRATEGY

Council's Strategic Direction

Council's vision for Palmerston North is "Small city benefits, big city ambition- He iti rā, he iti pounamu". We want every resident to be able to enjoy the benefits of living in a small city, with the advantages of a big city. Council has five goals and five strategies and a range of plans that show how the Council will achieve this vision. Together the vision, goals, strategies and plans form Council's Strategic Direction. Our Asset Management Objectives, Plans, Policy and Practices are aligned to Council's Strategic Direction to ensure we are working in ways that support Council's aspirations for the city.

Asset Management Policy

Council is currently in the process finalising its Asset Management Policy. The purpose of the Asset Management Policy is to provide guidance for the management of Palmerston North City Council's assets. Council recognises that assets are critically important to its ability to provide services that support the wellbeing of the community. The policy provides asset management guidance to ensure that assets are developed and managed effectively; assisting Council to achieve the vision, goals and strategies that form the Strategic Direction. This policy articulates the principles, objectives and application for the strategic management of Council assets. Implementation features of the policy include the establishment of the Asset Management Planning Steering Group. This group will be drawn from across Council and assist with prioritising and resourcing asset management initiatives to ensure successful implementation.

Asset Management Plans

Council's Asset Management Plans outline the asset activities and programmes for each of Council's asset areas. The Plans include work programmes, timescales and resources required to meet the asset management objectives. The Asset Management Plans are currently being reviewed and Council recognise the need to have a better understanding of Council's strategies and reflect this in the Asset Management Plans. Asset Management Planning decisions are made

within the Council's strategic context and are intended to demonstrate how the City's infrastructure assets are being developed and managed in ways that help Council achieve the Strategic Direction.

3.4 Asset Management Maturity Results – Policy and Strategy

The Asset Management Maturity Assessment results indicate that Council has some improvements to make regarding its Policy and Strategy practices. The current score is 46 against a target of 75. This is generally due to a lack of implementation of the Asset Management Policy and the need for better alignment between organisational policies and strategies.

Table 8: Maturity Rating for Policy and Strategy Overall

Policy and Strategy	Current Maturity		Target Maturity
	Score	Reasoning	Score
	46	Palmerston North City Council has had an Asset Management Policy for a number of years. However, it has had little impact and was redrafted in 2019 and is intended to be approved. There is some uncertainty about asset ownership which should be clarified in the policy. There is poor alignment between organisational policies, strategies and Asset Management Plans. There does not appear to be a good understanding of Council's strategies in the asset management plans, and not all decisions are being made within a strategic context. A new Asset Management Policy is in the process of being developed and Council's key strategies: City Development, Economic Development, Creative and Liveable, Eco City, Connected Communities are well written and provide a clear view of the Council's Strategic Direction.	75

Table 8 shows the Policy and Strategy maturity score by asset activity. The highest performing activity with a 20-point difference is the Water Supply activity with a current score of 55 against a target score of 75. All other activities have a 30-point difference with a current score of 45 against a target score of 75.

Table 9: Maturity Rating for Policy and Strategy by Activity

Activity	Current Maturity		Target Maturity
	Score	Reasoning	Score
Roading and Parking	45	Developing a Streets and Roads Framework based on an approach used by other large cities e.g. Auckland, London. Asset Management Policy had little effect on the activity.	75
Water Supply	55	The Asset Management Policy has had little effect on the three waters activities. A Water Supply Development Plan has been developed, which includes growth scenarios and some resilience planning. There is no equivalent wastewater or stormwater strategy, but the Asset Management Plans contain part of the story.	
Wastewater	45		
Stormwater	45		
Parks and Reserves	45	The Asset Management Policy had little effect on the activity. There are a series of strategy documents which align with strategic outcomes e.g. Creative and Liveable Plan. Poor linkage currently between strategies, plans and Asset Management Plans.	
Property	45	The Property activity needs to take a more strategic view. Activity has been under resourced and reacting to operational issues without much communication with other activities.	
Rubbish and Recycling	45	Waste Management and Minimisation Plan is a key document. Responds to a legislative requirement. Misaligned between Council strategies and Long Term Plan, WMMP, Asset Management Plan. Need to sequence the WMMP, Asset Management Plan and Long Term Plan strategic activities. Asset Management Policy had little effect on the activity.	

3.5 Improvement items – Policy and Strategy

The following improvement projects have been identified to address the gap between the current Council average maturity score (46) and the target maturity assessment score (75).

Table 10: Improvement Items Policy and Strategy

Improvement Item	Priority and Timeframe	Role Responsible
Complete development of the Strategic Asset Management Plan to bring all Council wide activities together.	High Year 1	Manager – Asset and Planning
Undertake a review of the strategic and policy document hierarchy and interdependency.	Medium Year 1	Manager – Asset and Planning

Ensure that the Asset Management Policy and the strategies clarify strategic alignment and reflect stakeholder engagement.	Medium Year 1	Manager – Asset and Planning
Ensure the Asset Management Policy clearly articulates asset ownership between Council groups and the associated areas of responsibilities, including management and funding.	Medium Year 1	Manager – Asset and Planning

The formation of the new Asset and Planning Division, alongside the development of the Asset Management Policy and Strategic Asset Management Plan are recent improvements designed to improve the Maturity Score.

3.6 Establishing Levels of Service

3.6.1 Introduction

Levels of Service (LOS) are statements that describe the services Council intends to deliver to its customers. Levels of service are used to:

- Inform customers of the level of service they can expect
- Enable customers to assess suitability and affordability of the services offered
- Assist Council to develop asset management strategies to deliver the required level of service
- Measure performance against defined targets
- Identify costs and benefits of the services provided
- Supports Council's Asset Management Objectives as shown in Table 11

Table 11: How LOS Planning Supports our Asset Management Objectives

Asset Management Objective	LOS Planning
1.2 We manage our asset-based services to achieve Council's Strategic Direction	The LOS performance targets are a key way of determining if Council is managing its asset-based services appropriately. These service levels provide an opportunity for Council and the community to provide feedback on whether we are headed in the right direction.
2.3 Our asset management practices meet our statutory obligations	This section shows how we meet our legislative requirements for consultation and reporting on LOS.
2.7 We lead an organisational culture of continuous improvement in asset management planning	Measuring LOS helps to identify gaps, and to develop and deliver improvements to close these gaps over time.
5.1 We consider the trade-off between risk, cost, and service levels	Defining and reporting on LOS is a key element of understanding the risk, cost, and LOS relationship.
5.2 Our asset owners and managers make decisions based on evaluation of all viable options	When LOS targets are clearly defined, options to deliver the desired LOS, including non-asset-based options, can then be clearly identified and evaluated.

3.6.2 Developing LOS

When developing LOS key considerations include:

- Council Outcomes – As outlined in Part A
- Statutory requirements – As outlined in Part B
- Community expectations.

The general process for developing LOS can be summarised as follows:

- Identify Council customers
- Engage stakeholders – undertake consultation to define the desired service level with consideration of the trade-offs between the desired LOS and cost
- Develop LOS statements, including service targets and meaningful performance measures
- Monitor and report on LOS
- Review LOS- with stakeholders at regular intervals to check desirability and affordability of level of service provided.

For more specific information on the LOS relevant for each asset activity please refer to Part B Asset Management Plans.

3.6.3 Identifying and Engaging with Council Customers

Key to understanding what LOS Council's customers desire and are willing to pay for, is to first understand who Council's customers are, including external and internal stakeholders. Stakeholders can be found in Appendix One.

INSIGHT: PALMERSTON NORTH CITY COUNCIL STAKEHOLDER ENGAGEMENT METHODS

Direct engagement

Council undertakes community engagement on a range of significant proposals and plans. Some plans required by legislation have prescribed consultation processes i.e. the Long Term Plan, Annual Plan and District Plan. Although in most cases Councils are still provided with the flexibility to shape engagements in ways that best suit the community. Council has free choice to determine what engagement processes are suitable for other plans and policies not required by legislation i.e. Innovative and Growing City Strategy, Eco City Strategy. Direct engagement methods may include round table discussions, stalls, information expos etc.

Up until 2016 Council used an external contractor (Communitrak) to undertake resident surveys. A telephone survey of 400 Palmerston North residents was executed between 2000 and 2011 and then in 2013 and 2016. The overall key trends of the results of these surveys for each individual service are summarised in Summary of Communitrak results. Due to target audience constraints, from 2019 the residents survey will be carried out by research company, Key Research. While the questions in the two surveys are similar their results cannot be put into a single trend series.

An all-inclusive range of 55 Palmerston North residents were surveyed in 2016 as part of a focus group (Focus Group Report 2016). Discussions in the survey broadly covered topics including residents' involvement in decision-making and the democratic process in the city as well as the residents' perception of Council's service delivery.

Other engagement channels

Council uses a wide range of communication tools to inform, engage and interact with the public. Campaigns may blend online and offline approaches for the biggest reach or be targeted through a single medium, depending on outcomes sought. The methods which will be the most effective are determined by Council's communications and content specialists in collaboration with asset owners.

Social media: Council uses multiple social media platforms, each with a different strategic approach. The biggest audience is on Facebook, but Council also use Instagram, YouTube and LinkedIn. Other platforms are sometimes used on a case-by-case basis, such as WeChat for international relations. The broad mix of channels enables Council to speak to our many different communities and stakeholders and – crucially – for them to be able to easily contact Council with feedback and questions. Digital campaigns typically include a range of activities, including stories, video, polls and so on. Council also posts on community pages for direct communication with special interest groups and may comment on other organisations' Facebook pages to respond to queries.

Press and publicity: The Communications Team works with journalists to promote Council work and respond to questions. These interactions include media releases, interviews and story pitches. Channels include newspapers, magazines, radio and television. Media also report on Council meetings. Council pays to publish columns and public notices in local newspapers. From time-to-time we may also run paid advertising in national newspapers.

Print publications and marketing material: Council produces a free quarterly magazine, *PalmyProud*. Other materials produced in-house include letters, leaflets and flyers, posters, and both print and digital signs and billboards.

Digital tools (excluding social media): Council's corporate website is the main channel for publishing a large range of information to the public. This includes information about events, services, GIS maps of infrastructure, consultation documentation, activity plans and strategies, project updates, public notices, and meeting agendas and minutes. Council is constantly expanding the number of inquiries and activities residents can do online. These include but are not limited to making formal submissions, giving feedback, reporting issues and requesting service, applying for building consents, paying parking fines, and registering dogs. Council also use other digital tools, including Social Pinpoint, Survey Monkey, and email marketing software to gather feedback from residents on issues.

Reporting tools/Apps: Facebook Messenger is a key reporting tool which is primarily used by the public to report issues and request service. Other reporting tools include the Snap, Send, Solve app and various online forms and web chat available through Council's website.

Newsletters/Letters: Residents receive letters and newsletters throughout the year to inform them on a number of issues. These include changes of service, a consultation, changes to things affecting them or updates on Council operations and projects.

Direct Communication: When requests for service are logged, staff are alerted through software and often call, email or arrange to meet members of the public to resolve queries.

Contact Centre: The Council runs a 24 hour/week contact centre telephone service. The Contact Centre provides the public with information and advice via phone, email, webchat and Facebook Messenger, and logs service requests.

Customer Service Centre: The Customer Service Centre provides a space for members of the public to approach the Council building to register animals, pay bills, obtain information and make Council aware of issues. If a service response service is required, the Customer Team will a create request for service.

3.6.4 Defining LOS

The process of defining LOS begins with Council staff working with Councillors to make initial high-level decisions about the LOS provided to the community and whether any changes are required[4]. Consideration must also be given to the trade-offs between the desired LOS and cost. Generally higher LOS come with a greater cost.

For some aspects of Council services, there are external requirements that set mandatory minimum performance measures for LOS. These include:

- Waka Kotahi New Zealand Transport Agency design guidelines
- Drinking water standards
- Consent conditions
- Legislative requirements
- Horizons One Plan.

3.6.5 Developing LOS Statements

Council officers take care to create and write LOS statements in clear and simple terms. It is common for LOS to have a hierarchy that moves from high level outcomes, which may be easily understood by the customer but quite difficult to measure, to supporting technical aspects of the service that are described using performance measures and targets that are specific, measurable, achievable, relevant, time-bound (SMART). An example of this is:

- High level LOS statement: We will provide safe, reliable, pleasant drinking water.
- Technical aspect of LOS statement: Compliance with the national drinking water standards
- SMART performance measure for this LOS: The number of samples that do not meet minimum free available chlorine levels.

3.6.6 Developing LOS Measures and Targets

The LOS measures and targets allow Council to demonstrate to the community how well it is delivering the agreed levels of service. Council aims to set measures and targets that:

- Are easy to understand
- Capture the aspects of the service that have high public interest
- Are good indicators of the service the customer will receive
- Enable reporting on past and future levels of service

[4] *Described in more detail Section 3.1.2.1 Lifecycle Decision Making.*

In addition to the measures that have public interest, Council also develops measures and targets to capture important technical issues for internal reporting. These measures help us understand the performance of Council over time and are therefore an important management tool.

Council is also required to report against compulsory measures, which came into effect through the Non-Financial Performance Measures Rules of the Local Government Act in 2014. Reporting relates to the Three Waters, Roading and Footpath activities. While the measures are compulsory, Council determines its own targets for each of the activities.

3.6.7 Monitoring and Reporting on LOS

Council publishes a key selection of LOS in the Long Term Plan. These LOS form the basis of subsequent Quarterly and Annual Reports and are published. Any other remaining LOS not included in the Long -Term Plan and/or Technical LOS measures are monitored and used by asset managers in lifecycle decision making. These LOS are reported in the Part B asset management plans and to relevant staff or Council committees as appropriate.

3.6.8 Review LOS

LOS are reviewed every three years as part of the Long Term Plan process.

Asset Management Maturity Assessment Results – LOS

The Asset Management Maturity Assessment results indicate that Council has some improvements to make to LOS. The current score is 51 against a target of 85 is generally due to limited LOS consultation and the need for greater alignment.

Table 12: Maturity Rating for LOS Overall

Levels of Service	Current Maturity		Target Maturity
	Score	Reasoning	Score
	51	Since 2005, LOS consultation has been limited to Councillors in Long Term Plan workshops and has been more focussed on issues to be addressed in the Asset Management Plans rather than service level options and implications. The LOS need simplifying and need to align with organisational strategies.	85

Table 13 shows the LOS maturity score by asset activity. The highest performing activity with a 15-point difference is the Parks and Reserves activity with a current score of 70 against a target score of 85. While the lowest performing activity with a 45-point difference is the Property activity with a current score of 40 against a target score of 85.

Table 13: Maturity Rating for LOS by Activity

Activity	Current Maturity		Target Maturity
	Score	Reasoning	Score
Roading and Parking	50	Mandatory measures used. Relationship between measures and delivery not understood. Impact of changing LOS not analysed.	85

Water Supply	50	Using mandatory measures (DIA and drinking water standard) and some additional technical measures.	
Wastewater	50	Using mandatory measures (DIA) and some additional technical measures.	
Stormwater	50	Using mandatory measures (DIA) and some additional technical measures.	
Parks and Reserves	70	Regular surveys and user forums undertaken. Future LOS changes linked to costed projects.	
Property	40	Looking to increase stakeholder engagement as current approach failing.	
Rubbish and Recycling	50	The Waste Minimisation Management Plan provides specific measures and targets, with associated actions to deliver. Consultation on LOS undertaken every six years as part of the Plan.	

3.6.9 Improvement items - LOS

The following improvement projects have been identified to address the gap between the current maturity score (51) and the target maturity assessment score (85).

Table 14: Levels of service improvement items

Improvement Item	Priority and Timeframe	Person Responsible
Review LOS for each activity through customer engagement	High Year 1	Manager – Asset and Planning
Articulate the LOS for each activity clearly and simply in the Strategic Asset Management Plan document	High Year 1	Manager – Asset and Planning
Conduct informed LOS workshops with councillors (as part of Long Term Plan programme). The workshops should present options for changes to LOS aligned with organisational strategies and include discussion of costs and risks against different service levels.	High Year 2	Manager – Asset and Planning
Develop the non-infrastructure (community/customer) LOS and then review the infrastructure (technical) LOS.	Medium Year 1	Manager – Asset and Planning
Consider undertaking a formal stakeholder engagement with the community to explore potential service level and funding trade-offs, e.g. higher rates to provide a higher level of resilience and service. (As part of Long Term Plan programme)	High Year 2	Manager – Asset and Planning

3.7 Forecasting Future Demand

3.7.1 Introduction

Forecasting future demand considers how future changes may impact on the demand for an asset and the services it provides. Once the implications of future changes are understood a plan about how best to meet the level of demand, or not, can be made. The level of demand on assets can change over time and can be created by number of different variables. The large combination of factors that influence future demand and the level of uncertainty can make forecasting future demand challenging.

Understanding the key drivers of demand is the first step in forecasting future demand. The main issues Council consider are:

- Council Strategy
- Population Growth
- Household Growth
- City Growth – Residential, Commercial and Industrial
- Economic Growth
- Legislation, Policy and Guidelines
- Technology Advances
- Customer expectations
- Iwi Partnerships
- Sustainability and the effects of climate change
- Natural hazards and adverse weather events.

These issues are discussed in further detail in Part A4 Strategic Issues and Implications.

Table 15: How Forecasting Demand Supports our Asset Management Objectives

Asset Management Objective	Forecasting Future Demand
1.2 We manage our asset-based services to achieve Council's Strategic Direction	Having enough system capacity available at the right time to meet future demand is an important part of delivering Council's Strategic Direction.
1.3 We follow a structured process for developing the foundational AM inputs into the Infrastructure Strategy and Long Term Plan	When we take a structured approach to demand forecasting, we give effect to this objective.
1.4 We strive to give the right priority to investment in infrastructure across all asset types	When all activities have a strong understanding of system capacity and the impact of demand on future costs, this supports a balanced approach to prioritising investment across all activities.
2.3 Our asset management practices meet our statutory obligations	Forecasting changes in demand for services and how this demand will be addressed, including changes to operating and capital expenditure, is a key requirement of developing and consulting on the Long-Term Plan and the Infrastructure Strategy.
2.6 We seek cross-discipline and collaborative input into our asset management planning	We collaborate across Council to prepare growth forecasts, capital works programme and in development of spatial growth plans.
3.1 We understand the performance and condition of our assets	We must understand asset performance to analyse the capacity and capability

	of assets and the impact of future demand on asset-based services.
3.6 We use our systems to create understanding of our assets	We use our asset information systems, network models, and GIS to understand the impact of demand on our assets.
5.3 We take a whole of life approach for asset management decisions	We consider the future scenarios that are relevant to an asset's life cycle when making asset decisions today.

INSIGHT- PALMERSTON CITY COUNCIL DEMAND MANAGEMENT

Forecasting Demand Information and Planning Processes

The Strategy and Planning Unit prepares Council's forecast information. Appointing a single unit with this responsibility ensures a consistent corporate approach across Council's growth-related planning areas. The information includes a wide range of topics: population changes, industry trends, regional drivers, legislation, policy and guidelines. A smaller range of key information is published on the "City Dashboard" portal on the Council's website and accessible by Council staff and the community.

The Asset Planning Division utilises the future forecast information to determine implications on assets. The range of considerations are specific to each asset activity and may include:

- Ongoing trends e.g. population changes
- Changes in customer expectations e.g. internet book loans vs physical libraries
- Changes in usage patterns e.g. heavier trucks using roads
- Seasonal and cyclical variations e.g. increase in park usage due to seasonal sports.

The process used to determine forecasts involves various qualitative and quantitative techniques including scenario and mathematical modelling, and market research. With an understanding of future forecasts and the impacts on services, decisions on how best to address deficiencies or shortfalls can be made. Council aims to stay informed of growth and demand issues that may impact on assets. Advice and information are gathered from a range of sources including industry groups, activity managers and subject matter experts. Depending on the magnitude and uncertainty of the issue Council's Executive Leadership Team may choose to escalate the issue to the Corporate Risk Register for ongoing monitoring and/or mitigation. Several changes currently being monitored include the Resource Management Act 1991 reforms, Taumata Arowai—the Water Services Regulator Bill, Climate Change Response (Zero Carbon) Amendment Act, and various government policy statements. These are discussed in Part A4 Strategic Issues and Impacts.

Developing Demand Management Strategies

The aim of demand management is to alter demand for a service, rather than just meeting forecast demand. Typically demand management techniques are applied to increase utilisation of existing networks and assets to reduce or delay the need for investment in new assets. There are two general categories of demand management techniques – Supply-side and customer-side.

Supply-side - seeking to improve asset utilisation:

- Asset solutions to optimise asset utilisation and balance peak and non-peak demand – e.g. scheduling
- Operational asset solutions to improve overall asset capacity e.g. cleaning water pipes to increase water flow
- Operational asset solutions to reduce consumption – e.g. leakage detection
- Asset substitution – providing other services and assets to meet demand – e.g. public transport, cycle ways

- Upgrading – improving the service capacity of an asset through capital expenditure e.g. widening roads

Customer-side – reducing (or increase) peak and/or average demand for services. Reducing average demand seeks to modify both the peak and base demand. This is applicable where there are constraints in resources, financial gains to be made or there is an adverse environmental impact to be addressed.

- Regulation – restricting time and type of use e.g. implementing handheld hosing on alternative days
- Incentives – pricing structures and subsidies to alter peak demand and total demand e.g. off-peak prices for entry to public swimming pools
- Education – initiatives that aim to change customer behaviour through increased knowledge e.g. water use initiatives
- Demand substitution – promoting alternatives – e.g. digital books
- Reducing LOS - Accepting a lower level of service provision e.g. reducing number of opening hours for a library.

The interactive nature of such initiatives, when promoted as package rather than in isolation, can significantly alter the demand on the asset network involved. The demand management programme is documented in a strategy or plan, with objectives, initiatives, cost-benefit analysis and a prioritised programme including timeframes. In combination with the demand forecasts, the demand management programme is used to inform the programme of works found in each Asset Management Plan.

Demand Management

There has been little demand pressure on many Council services and assets to date. For example, Council is aware that many of the current property assets are reaching the end of their useful lives, either due to age or because they are no longer fit for purpose. The renewal and/or replacement of all these assets is likely to be unaffordable for the community. One demand management option available to Council is to reduce the total number of facilities and/or sites provided e.g. community centres, and to provide a higher level of service at those that remain. This is likely to lead to a shift in demand and may also lead to the need to employ further demand management techniques to alter demand, particularly during peak periods.

The Council currently has the following activity demand management strategies in place:

- Water: Education, flow restriction, pressure reduction, and metering
- Wastewater: Education, trade waste charges, peak discharge restrictions
- Stormwater: Education re illegal discharges to drain, attenuation and detention requirements for new development
- Solid Waste: Education, waste fees
- Parks and Property: User fees, charges and rentals, sports field scheduling

Educating the community to achieve greater efficiency of use is one of Council's preferred demand management techniques. For example, Council funds and supports the 'Enviroschools' programme, an environmental action-based programme where young people are empowered to design and lead sustainability projects. One of the key learning outcomes is how to reduce waste.

3.7.2 Asset Management Maturity Results - Forecasting Demand

The Asset Management Maturity Assessment results indicate that Council has some improvements to make regarding Forecasting Demand practices. The current score overall is 59 against a target of 85 is generally due to the need to undertake robust and accurate forecasting and update the Council's Growth Infrastructure Plan (now incorporated into the City Growth Plan).

Table 16: Maturity Rating for Forecasting Demand Overall

Forecasting Demand	Current Maturity		Target Maturity
	Score	Reasoning	Score
	59	There are several developments that have the potential to drive significant growth in the region over the next 10-15 years. As a result of this there is an urgency for accurate and robust demand forecasting. The Council has a well-articulated Growth Infrastructure Plan (now incorporated into the City Growth Plan). The next Asset Management Plans will need to explain how the activities contribute towards the Plan. The Growth Infrastructure Plan needs updating to latest population statistics.	85

Table 17 shows the Forecasting Demand maturity score by asset activity. The highest performing activity with a 15-point difference is the Rubbish and Recycling activity with a current score of 70 against a target score of 85. While the lowest performing activities with a 35-point difference are the Property and Stormwater activities with a current score of 50 against a target score of 85.

Table 157: Maturity Rating for Forecasting Demand by Maturity

Activity	Current Maturity		Target Maturity
	Score	Reasoning	Score
Roading and Parking	60	Forecast model not used in the last Asset Management Plans, little or no cycling/pedestrian demand information.	85
Water Supply	60	A water supply development plan is produced every 5-6 years.	
Wastewater	60	The Waste Water Treatment Plant is a significant issue.	
Stormwater	50	The impacts of infill development are not being adequately understood, especially considering climate change.	
Parks and Reserves	65	Timing of demand for new open spaces is limited by the uncertainty surrounding urban growth patterns.	
Property	50	Population and demographic change are the only demand drivers considered. Legislative impacts (seismic, insulation, etc.) not considered.	
Rubbish and Recycling	70	Robust forecast of rubbish and recycling demand.	

Improving maturity is a priority for the Roading and Parking, Water Supply, Wastewater, and Stormwater activities. This is due to the complexity and risk associated with these activities; a change in demand affects the whole network and therefore need to be modelled. Whilst not an immediate priority, additional resources will also be allocated to Parks and Reserves, Property, and

Rubbish and Recycling activities. The aim is to achieve the target maturity levels for these activities over the longer term.

3.7.3 Improvement items – Forecasting Demand

The following improvement projects have been identified to address the gap between the current maturity score (59) and the target maturity assessment score (85).

Table 168: Forecasting Demand Improvement Items

Improvement Item	Priority and Timeframe	Person Responsible
Refresh the Growth Infrastructure Plan (now incorporated into the City Growth Plan) using latest Statistics NZ data	Medium Yr1	City Planning Manager
Explain how the Growth Infrastructure Plan will be achieved for each of the asset activities and be included in lifecycle plans that focus on the maintenance, renewal and development needed for each activity.	High Yr1	Manager – Asset and Planning

3.8 Collecting Asset Information (Asset Knowledge)

3.8.1 Introduction

Information is key to understanding and managing the Council's assets. Key information such as asset value, age and condition are basic information requirements that enable Council to undertake Asset Management planning. Information requirements for each asset activity vary depending on the asset components and the level of management required. Elements for consideration include the hierarchy, structure and universal numbering systems required for tracking. Data confidence and completeness levels are also basic information requirements enabling Asset Managers to understand the accuracy of outcomes that can be achieved when using data.

Table 19: How Collecting Asset Information Supports our Asset Management Objectives

Asset Management Objective	Collecting Asset Information
3.1 We understand the performance and condition of our assets	Quality asset attribute data either directly describes observed asset performance and condition or is foundational to the modelling of those.
3.4 We maintain our data so we can rely on it (appropriate quality, completeness, provenance)	When we proactively maintain the quality of our asset attribute data, we are directly supporting this objective.
3.7 We continually improve our understanding of our assets	We identify gaps in our understanding of our assets and collect additional data to develop quality information to support improved understanding.

INSIGHT - PALMERSTON NORTH CITY COUNCIL ASSET INFORMATION

The Council approach to collecting and managing asset data developed over many years and has been relatively consistent for some time. The way things are done currently reflects the experience of the staff who maintain the data and the operational needs of the staff who rely on the data.

Basic data

Generally, the basic attribute information for Council assets (type, location, quantity, size, age) is of good quality. The assets that live outside of buildings (roads, pipes, playgrounds, etc) are defined spatially and can be mapped. Buildings and the assets inside them, including treatment assets, are not defined spatially. The Roading Team have completed an improvement programme increasing the quality of spatial information.

Maintenance Data

Council collects maintenance data against assets where this is available. The Three Waters, Transport activities have mobile apps as part of asset data management system IPS and RAMM, respectively. The other activities generally use paper-based systems to capture work in the field and communicate it back to the Council office. The Property activity record maintenance data using a separate database (Work Track) from the asset register (SPM).

As Built Information

The requirements for as-built information for new assets is generally understood across the relevant parts of Council (development engineers, project delivery, operations) but information supply is variable in all respects (format, quality, timeliness).

Criticality

Criticality relates to the importance of the asset or asset component in relation to the delivery of the service. Some work has been done to define asset criticality for Three Waters, but this has yet to be applied. Other than this, Council has not yet developed an approach for defining and

recording asset criticality information. For roading, Waka Kotahi's One Network Road Classification can be used as a proxy for criticality.

Metadata
Currently, Council is awaiting on decisions regarding national metadata standards for infrastructure asset data. Council anticipates being a slow follower, adopting the standards as they become common practice.

3.8.2 Asset Management Maturity Results – Asset Information

The Asset Management Maturity Assessment results indicate that Council still has some improvements to make regarding its Asset Information practices. Despite this, asset information is noted as an area of strength for the Council with a current score overall of 66 against a target of 85. The assessment notes that asset data is reasonably complete across all activities but there are some gaps in data confidence and condition. Also, that data could be used more effectively to inform lifecycle planning and decision making.

Table 20: AM Information Maturity

Asset Information	Current Maturity		Target Maturity
	Score	Reasoning	Score
	66	Overall, data is reasonably complete across activities with improvements required to data condition information. The data is not used to drive key decisions, and this has resulted in unexpected asset failures. There is little as-built information stored. More work is required to determine the assets level of criticality and the how this can be used in decision making.	85

Table 21 shows the Asset Information maturity score by asset activity. The highest performing activities with 15-point differences are Roading and Parking, Wastewater, and Water Supply activities with a current score of 70 against a target score of 85. The lowest performing activities with a 20-point difference are the Rubbish and Recycling and Property activities with a current score of 65 against a target score of 85.

Table 217: AM maturity by Asset Activity

Activity	Current Maturity		Target Maturity
	Score	Reasoning	Score
Roading and Parking	70	High level of confidence in asset data although uncertain if data for deterioration modelling is of sufficient quality.	85
Wastewater	70	High level of confidence in asset data.	
Water supply	70	High level of confidence in asset data.	
Stormwater	55	Asset data has lower confidence	
Rubbish and Recycling	65	Uncertainty over asset data quality. Asset lifecycle information is missing.	

Property	65	Good data but not maintained currently. Also, some asset data not held in formal systems. Services information not well documented.	
Parks and Reserves	70	Assets available spatially. Data processes not documented. Criticality and performance not captured formally. Asset lives to be reviewed.	

3.8.3 Improvement items - Asset Information

The following improvement projects have been identified to address the gap between the current maturity score (66) and the target maturity assessment score (85).

Table 22: Asset Information Improvement Items

Improvement Item	Priority and Timeframe	Person Responsible
Review the asset data hierarchies against industry standards.	Medium Year 1	Manager – Asset and Planning
Review asset information needs, conducting a gap analysis, and implementing a data improvement project. Recognise the approach may be different for each of the activities/portfolios.	High Year 1	Manager – Asset and Planning
Review the critical assets for each activity by assessing the consequences of failure and use to prioritise inspection, renewal and maintenance activities.	High Year 1	Manager – Asset and Planning

3.9 Monitoring Asset Performance and Condition

3.9.1 Introduction

The performance of an asset relates to its ability to support the delivery of the agreed level of service. The condition of an asset is one aspect of performance and it relates to the physical integrity of the asset. Monitoring the performance of assets provide asset managers with several benefits:

- Enables Council to determine actual delivery of service against agreed LOS,
- Identifies areas for improvement
- Provides evidence to support management decisions
- Used to predict future maintenance and renewal requirements
- Enables corrective and timely action to be taken where necessary.

Condition information provides insight into where an asset is in its overall lifecycle, from when it was first acquired and in excellent condition through to when it reaches a very poor condition and needs urgent replacement. Understanding where an asset is in its lifecycle enables assets managers to identify the actions that need to be taken to maximise the value obtained from assets. This enables the delivery of agreed levels of service for the least long-term cost. Condition assessments based on standardised frameworks (typically a 1-5 scale) also enable comparisons to be made against similar asset types. Council carefully considers the number of assessments performed and their frequency, alongside the criticality of the service, the value and risks associated with the asset, the asset position in its lifecycle, and the time and resources required to collect data.

Table 23: How Monitoring Asset Performance and Condition and supports our Asset Management Objectives

Asset Management Objective	Monitoring Asset Performance and Condition
3.1 We understand the performance and condition of our assets	We measure or estimate the current and future performance and condition of our assets.
3.4 We maintain our data so we can rely on it (appropriate quality, completeness, provenance)	Condition and performance data is collected and reviewed on an ongoing basis.
3.6 We use our systems to create understanding of our assets	We provide staff, councillors or the public with information about asset condition or performance in a way that they can understand.
3.7 We continually improve our understanding of our assets	We undertake improved analysis or repeat previous analysis to identify trends over time to develop increased understanding of asset performance.

3.9.2 Performance

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Modelling is one of the key tools used by Council to determine the performance of the Three Waters assets. Models enable Council to understand the potential impacts of growth on the water and wastewater network performance. Council has recently completed a city-wide stormwater model to understand the flooding risk associated with increasingly intense rainfall events.

The Roading Team monitors current road performance through traffic surveys. Accident data is also used as an empirical indicator of safety performance. The Roading Team have recently adopted new analysis functionality that allows changes in traffic count information for a road to be interpolated to adjacent roads, improving the value derived from each survey. Future performance is forecast using models, primarily driven by spatial growth planning.

In the Parks, and Solid Waste activities, performance tends to be considered operationally, for example when setting frequency of mowing for playing fields or against the reported number of missed rubbish bags. In 2019, Parks adopted the NZRA performance outcomes for parks management, which provides a formal framework to relate operational decisions to the quality of customer experience (i.e. performance).

For the Property activity, asset condition was relied on as an indicator of asset performance. The condition of assets impacts on the experience of the facility users, which is a key part of whether a building is performing. The seismic rating and presence of asbestos are recent performance measures which have been applied to council properties. Utilisation is another part of defining the performance of buildings, but this isn't recorded centrally.

Key challenges in understanding asset performance data arises from the difficulty of recording the service in action at key moments (typically under stress), the complexity of modelling performance when it cannot be observed, and the variety of factors that come together to create the service performance as experienced by the customer.

3.9.3 Condition

Palmerston North City Council collects condition information on Three Waters assets via CCTV data, and Roading assets via condition surveys. Once collected, the data is transferred to the asset register for modelling of future condition. The future condition of these assets is sometimes estimated as an adjustment to the standard base-lives.

Condition data for horizontal assets i.e. pipes and roads is collected on a rolling inspection programme. At this stage Council has only developed a limited application of criticality information to guide the inspection programme, relying instead on proxy measures such as Waka Kotahi's One Network Road Classification or numbers of customers or connections serviced for Three Waters.

For site-based assets (treatment plants, bridges), Council's approach to asset condition is currently more ad-hoc but plans are in place to ensure these critical assets undergo regular condition inspection.

For Parks, activity condition is formally assessed for playgrounds, bridges, heritage structures and buildings. This information is used to forecast renewals. For Property and the Solid Waste activities condition information is often considered daily. However, consideration tends to be given in an ad-hoc way based on staff observations about assets and dealt with at an operational level as maintenance.

Generating condition data involves observation of physical features and the interpretation of that into a condition score. Wherever possible Council utilises industry developed condition assessment tables. The primary challenges around condition data are consistent, standardised approaches to data collection and interpretation, and the transfer of field observations into asset information systems.

3.9.4 Asset Management Maturity Results - Monitoring Asset Performance and Condition

The Asset Management Maturity Assessment results indicate that Council has some improvements to make regarding its Monitoring Asset Performance and Condition practices. The current score overall is 52 against a target of 80. This is generally due to significant gaps noted in performance and condition data in assets networks, underutilisation of criticality data and the need to provide quality condition data to maintenance and renewal teams and external contractors.

Table 184: Overall results Monitoring Asset Performance and Condition

Monitoring Asset Performance and Condition	Current Maturity		Target Maturity
	Score	Reasoning	Score
	52	Significant gaps noted in the condition and performance data across the assets network. The unexpected failure of water and property assets has promoted a programme to increase the collection of condition data through physical surveys. Collection of condition information should be focused on assets that are critical in terms of the consequence of failure. Although some work has been done in the past to assist asset criticality, there is little evidence to suggest it was being well used. Maintenance and renewal teams and external contractors need good quality condition data that can be readily incorporated into Council's asset data bases.	80

Table 25 shows the Monitoring Asset Performance and Condition score by asset activity. The highest performing activities with a 25-point difference are the Roading and Parking, and Water Supply activities with current scores of 60 against a target score of 85. While the lowest performing activities with a 40-point difference are the Stormwater and Property activities.

Table 25: Activity results Monitoring Asset Performance and Condition

Activity	Current Maturity		Target Maturity
	Score	Reasoning	Score
Roading and Parking	60	Risk surrounding insufficient condition data. Some condition data collected but critical assets not prioritised. Inferences from data may not be well supported. Timing of data collection not aligned with Long Term Plan requirements.	85
Water Supply	60	Pipe break history used to estimate condition and likelihood of failure. Concern over longer	

		term trunk pipe renewal requirements. Good information collected on flows and consents.	
Wastewater	55	Good data obtained through CCTV inspections although data not always loaded into asset data base. Conversion of CCTV footage into data is an issue.	
Stormwater	45	Some stormwater CCTV has been completed but little information on state of critical assets. Pump station needs condition survey.	
Parks and Reserves	50	Condition data has been collected regularly in the past, although the frequency has now been reduced. Some performance aspects recorded though not in a central system.	
Property	45	Some data has been collected during three yearly inspections, but this is dating. Performance not determined. Lack of information about assets end of life. No asset performance assessments carried out. Some condition data with staff but not collated.	
Rubbish and Recycling	50	Contractor is required to collect condition information, although unexpected failures have still occurred. Condition inspection is for defects only needs lifecycle information to anticipate longer term renewals.	

3.9.5 Improvement items- Monitoring Asset Performance and Condition

The following improvement projects have been identified to address the gap between the current maturity score (52) and the target maturity assessment score (85).

Table 26: Monitoring improvement items

Improvement Item	Priority and Timeframe	Person Responsible
Review the policy governing asset condition and performance assessment in terms of content and frequency.	High Year 1	Manager – Asset and Planning
Complete condition surveys on all critical assets, and schedule regular inspections with the frequency based on criticality.	High Year 1	Manager – Asset and Planning
Develop processes for contractors and inhouse staff to collect condition information, using mobile data applications.	High Year 2	Manager – Asset and Planning

3.10 Lifecycle Planning

The second part of the Asset Management Process is deciding the most cost-effective lifecycle strategies to deliver the defined requirements.

In this section the following practices are explained:

- Lifecycle Decision Methods
- Managing Risk
- Operational Planning
- Capital Investment Planning
- Financial Planning.

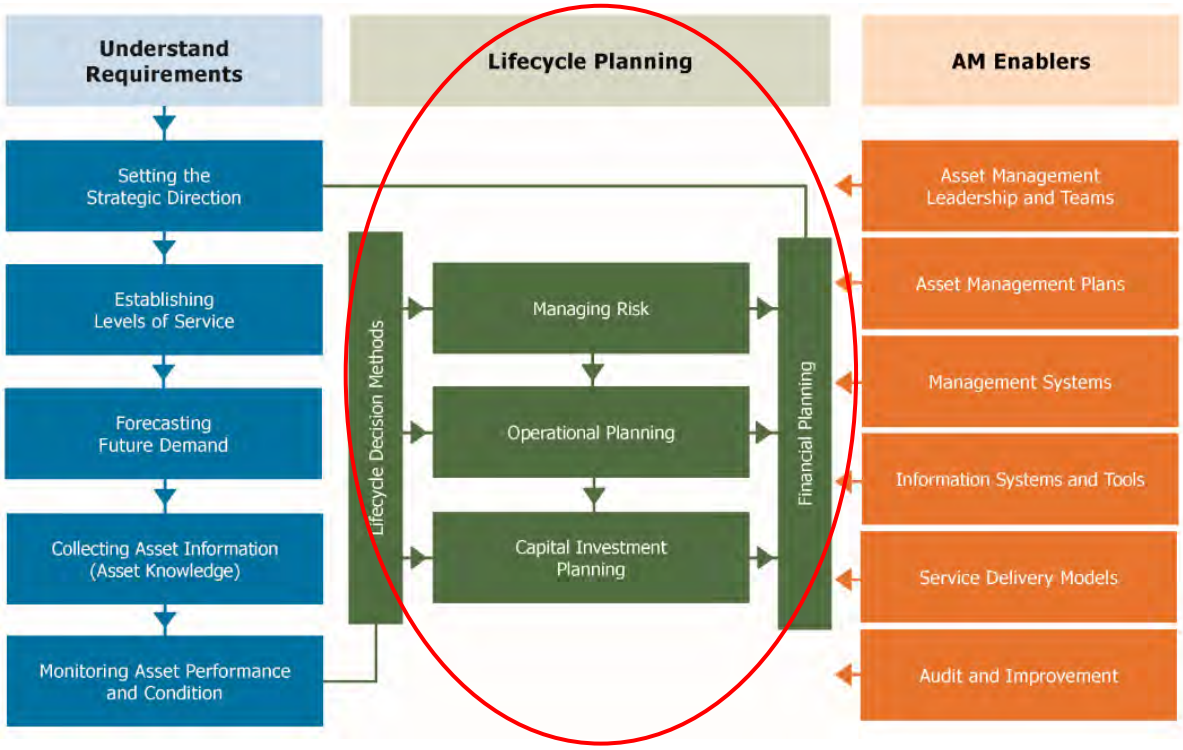


Figure 8: AM practices: lifecycle planning

In this section Asset Managers aim to answer key questions:

- What are the best strategies for operating, maintaining, replacing and improving assets?
- How much will it cost to provide the service over the long-term?
- What is the best long-term funding strategy[5]?

[5] *International Infrastructure Management Model 2015*

3.10.1 Lifecycle Decision Methods

Introduction

The lifecycle of an asset starts when a need is identified. Options to address the need are evaluated, considering all the costs and benefits associated with each option. For assets, costs and benefits are incurred from the time planning for the asset begins, through the design, creation, operation and rehabilitation of the asset and finally its disposal when it has reached the end of its useful life and is no longer able to meet the organisation's needs. It is important that asset managers make appropriate decisions at each stage of an asset's lifecycle to ensure the asset is appropriately managed, and that organisational benefits can be realised. Asset Managers draw on a range of decision-making techniques to make decisions throughout the lifecycle, such as determining the best time and option to replace or rehabilitate an asset to minimise costs. It is important that the decision technique chosen is appropriate for the decision being made, and that provides the most effective solution to deliver the objective sought.

Table 27: How **Lifecycle Decision Methods** support our Asset Management Objectives

Asset Management Objective	Lifecycle Decision Methods
1.3 We follow a structured process for developing the foundational Asset Management inputs into the Infrastructure Strategy and Long Term Plan	We apply structured decision-making processes to the development of budgets and other foundational inputs.
1.4 We strive to give the right priority to investment in infrastructure across all asset types	Structured decision-making processes allow the evaluation of options and the comparison of priorities across infrastructure types.
2.1 Our Asset Planning Division and Asset Management Steering Group provides leadership and coordination of asset management practice across the Council	We lead our staff in understanding how the decisions they make fit into our asset management practice.
2.2 We use consistent asset management processes across the Council	We are mapping our Asset Management decision-making processes to ensure they are consistent across Council.
2.3 Our asset management practices meet our statutory obligations	We follow legislatively required decision-making processes.
2.4 Our people know how their roles relate to Asset Management	We help our staff understand how the decisions they make fit into our asset management approach.
2.6 We seek cross-discipline and collaborative input into our asset management planning	We support this objective by developing cross disciplinary project teams.
5.1 We consider the trade-off between risk, cost, and service levels	We evaluate risk, cost, and service levels at an appropriate level in our decision-making.
5.2 Our asset owners and managers make decisions based on evaluation of all viable options	Our decision-making approach ensures that the full range of viable options, to address the problem or opportunity, are evaluated against each other using an appropriate decision-making technique in order to identify the preferred option.
5.3 We take a whole of life approach for asset management decisions	We consider the full stream of costs and benefits, over the period the service is required, when evaluating options.

Lifecycle Decision-Making Processes

Councils undertake asset lifecycle decision-making at different levels and frequencies. Decisions are made at the Governance, Project and Operational levels and can range in frequency from being made on a 3-yearly basis to daily decision-making.

For most Councils significant decisions are made at the Governance level. Many of these decisions are made on a three-yearly cycle as part of a local authority's Long Term Plan. Significant decision-making is guided by requirements of the Local Government Act and involves formal iterative decision-making steps. Decision processes include consideration of context, risk and uncertainty, stakeholder engagement, decision criteria options, decision outcomes and evaluation.

At the Project level decisions are usually made by Elected Members and/or delegated to senior staff. The choice of decision-making body will often depend on the scale and significance of the project. The range of decision-making is diverse and will vary according to the nature of the decision being considered. Options may include decisions to confirm preferred solutions from a range of options, trade-offs value, affordability, reliability, and performance.

Operational level decisions are made regularly by staff on both a formal and an informal basis. Decision makers vary from suitably qualified technical staff through to operations and maintenance crews.

INSIGHT - PALMERSTON NORTH CITY COUNCIL LIFECYCLE DECISION METHODS

Decisions Methods at the Governance Level

Council has a range of regulations and processes that guide its formal decision-making at the governance level. These processes are standardised and applicable to all proposals requiring a Council decision. The process starts when proposals are initially presented to Elected Members at a workshop with additional supporting information provided in a briefing paper. The proposal is then further refined, and a report is prepared. Depending on the nature of the proposal the report may be tabled at a Committee or go directly to Council. Those proposals tabled at Committee will be considered and a recommendation put forward to the full Council to consider. Decision made is by majority voting.

Obtaining Council approval to include capital projects in the Long Term Plan is of key importance to Asset Managers. The process to consider capital projects includes the standard decision-making process and an additional step where Elected Members undertake a ranking exercise to rate the relative importance of all projects. This ensures that they get an affordable, strategic and achievable list of projects in the Plan. Staff assess the impact of any unfunded projects on Council's ability to achieve its strategic direction and report major implications back to Elected Members as a "double-checking" process. After the ranking process is completed staff are informed of the initial outcomes. There is an opportunity for staff to provide advice to Elected Members on the impacts of unfunded programmes before the prioritisation is finalised.

Decision Methods at the Project Level

Council does not have a standard decision-making process for significant projects or complex problems. Rather than a set of prescribed processes Council allows staff to use professional judgement to define the general methodology that will be used to understand the problem and define the preferred way forward. Methodology must however meet the Council's Significance and Engagement Policy requirements and Consultation Guidelines.

Decision Methods at the Operational Level

Palmerston North City Council staff make operational level decisions on a frequent basis. This might include a simple decision such as whether to repair a damaged litter bin or to replace it, or decisions requiring more analysis such as the development of a programmed work schedule, or the scheduling of labour and plant.

Asset Management Maturity Results - Lifecycle Decision Methods

The Asset Management Maturity Assessment results indicate that Council has some improvements to make regarding Lifecycle Decision Methods. The current score overall is 39 against a target of

80, leading to a large maturity gap of 51 points. It is noted that is an area currently under improvement at Palmerston North City Council.

Table 28: Overall Results Lifecycle Decision Methods

Lifecycle Decision Methods	Current Maturity		Target Maturity
	Score	Reasoning	Score
	39	The assessment notes that Business Case development is in its infancy and while there is a review of annual projects, but this is not systematic or embedded. Staff report that some Council decisions are not always made within a strategic context and there is little formalised options analysis. A prioritised list of projects also needs to align with strategic outcomes.	80

Table 29 shows the Lifecycle Decision Method maturity score by asset activity. The highest performing activity with a 35-point difference is the Parks and Reserves activity with a current score of 50 against a target score of 80. The lowest performing activity with a 55-point maturity gap difference is the Property activity with a current score of 25 against a target score of 80.

Table 29: Activity results Lifecycle Decision Methods

Activity	Current Maturity		Target Maturity
	Score	Reasoning	Score
Roading and Parking	40	No formalised decision-making. Decisions made internally but limited transparency	80
Water Supply	40	Some data driven decision-making.	
Wastewater	40	There are substantial deferred treatment plant renewals	
Stormwater	40	Some data collection underway, with plans to be data driven	
Parks and Reserves	50	Little process around prioritisation and has been difficult to assess relative priority against other activities	
Property	25	Lack of collaboration with key stakeholders (e.g. Community) in decision-making	
Rubbish and Recycling	40	Little process around prioritisation and has been difficult to assess relative priority against other activities	

Improving maturity is a priority for the Roading and Parking, and the Three Waters activities, due to the additional complexity and risk associated with failure of these activities. Whilst not an immediate priority, additional resources will also be allocated to Parks and Reserves, Property, and

Rubbish and Recycling. The aim is to achieve the target maturity levels for these activities over the longer term.

Improvement items - Lifecycle Decision Methods

The following improvement projects have been identified to address the gap between the current maturity score (39) and the target maturity assessment score (80).

Table 30: Lifecycle Improvement Items

Improvement Item	Priority and Timeframe	Person Responsible
Establish a formalised decision-making process to prioritise projects and programmes across Council that aligns with strategies and is supported by reliable data.	High Year 1	Manager – Asset and Planning
Before the next Long Term Plan, assess the key risks and challenges facing the delivery of services and develop high level options. Data collection and analysis needs to focus on supporting these options.	High Year 1	Manager – Asset and Planning
Bed in the business case development to align with the strategic options.	Medium Year 2	Manager – Asset and Planning

3.11 Managing Risk

3.11.1 Introduction

Risk is the impact of uncertainty upon things that we value. We seek to better understand risk to inform the decisions that we make in order to protect and develop that value.

Risk is managed through a coordinated set of knowledge, behaviours, and practices used to reduce threats and maximise opportunities ('the risk management system'). Local authorities are concerned about risk management because it assists to reduce threats and maximise opportunities that can impact on achieving organisational objectives.

Table 31: How Risk Management supports our Asset Management Objectives

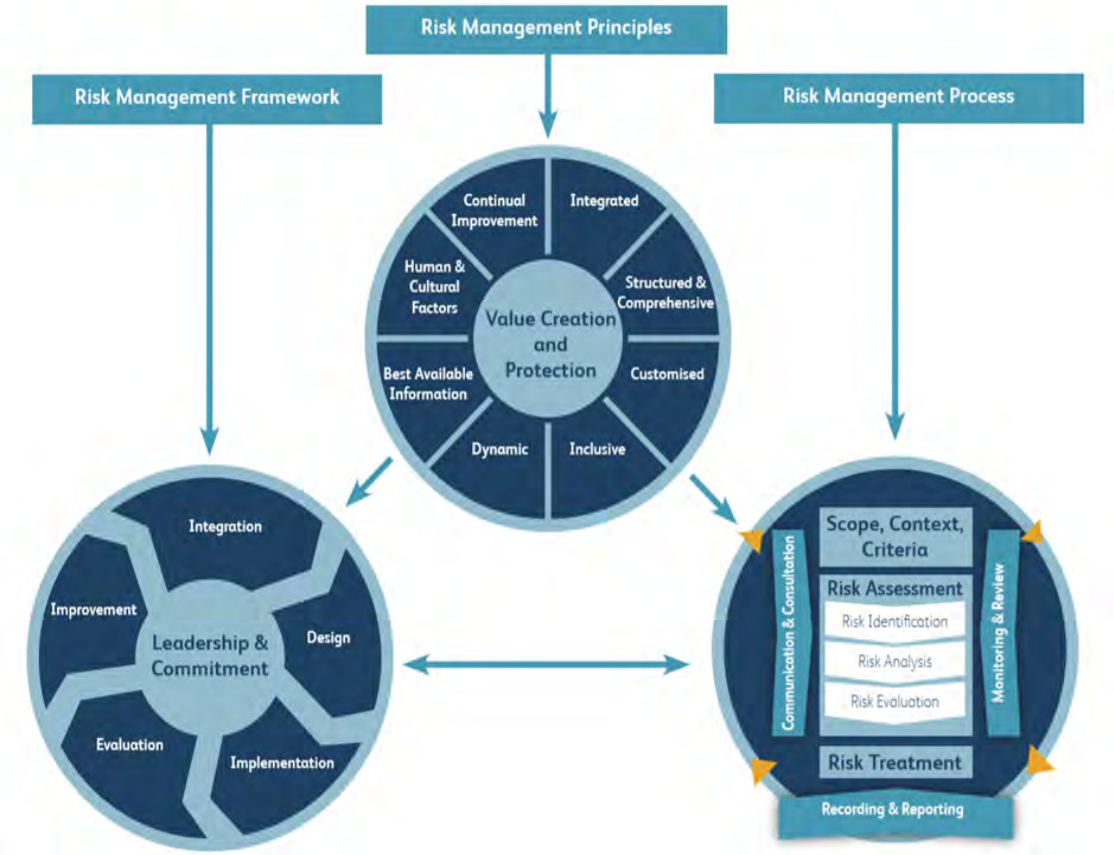
Asset Management Objective	Risk Management
1.3 We follow a structured process for developing the foundational Asset Management inputs into the Infrastructure Strategy and Long Term Plan	Risk is a key consideration in the development and analysis of all options, work programmes and budgets.
1.4 We strive to give the right priority to investment in infrastructure across all asset types	Risk mitigation is one of the benefits considered when evaluating and prioritising investments.
2.1 The Asset Planning Division provides leadership and coordination of asset management practice across the Council	Risk management is an integral part of all Council activities and a risk-based approach is embedded in all Asset Management processes.
2.2 We use consistent asset management processes across Council	Risk management follows a structured, comprehensive and effective approach.
2.3 Our asset management practices meet our statutory obligations	Legislative compliance is a key risk managed through asset management.
2.5 The executive leadership team recognises the importance of Asset Management and adequately resources the Asset Management system subject to budgetary, capacity and systems constraints of the organisation	The Executive Leadership Team support the use of risk management as a key management tool and expect risk management to be an integral part of decision making.
2.7 We lead an organisational culture of continuous improvement in asset management	We continually improve risk management through learning, experience and review.
3.2 We store all of our asset data in formalised systems	Known risks associated with assets are held as asset attributes in the asset register.
3.4 We maintain our data so we can rely on it (appropriate quality, completeness, provenance)	Risk management is based on the best available information.
3.5 Our systems enable us to analyse our data	Risks are held in databases at the asset, activity, project and business level – depending on the risk.
3.7 We continually improve our understanding of our assets	We continually improve risk management through learning, experience and review.
4.2 We match the level of Asset Management practice to the criticality of the assets	Risk management is customised to the types and levels of risk faced across Council.
4.3 We strive to close identified asset management maturity gaps over time	We continually improve risk management through learning, experience and review.

5.1 We consider the trade-off between risk, cost, and service levels	Risk management is the process through which we identify, evaluate and manage risk.
5.3 We take a whole of life approach for asset management decisions	Risk management is an integral part of lifecycle planning.
5.4 Our Asset Management Plans include life cycle strategies	Understanding risk is an integral part of developing lifecycle strategies.

3.11.2 Risk Management Standards

Palmerston North City Council follows the ISO 31000 process for risk management, which is supported through a Risk Management Policy, and the Risk Management Framework. Collectively they make up the risk management system.

Figure 9: Principles, Framework and Risk Management process from ISO 31000 – Risk Management Standard



The risk management system is separate to, but linked to, the asset management system described in Section 2.1 of this SAMP. Managing risk through a corporate risk management system, rather than embedding the processes within the asset management system itself, ensures that risk is managed consistently across Council, regardless of its source.

The benefits of an effective risk-based approach are:

- Increased oversight of uncertainties which can impact on achieving objectives
- Greater assurance for decision making
- More robust processes
- Trouble areas are more easily identified
- Escalations are clearer and straightforward
- Surprises and incidents are reduced
- Costs or other losses are reduced
- Reduced liability.

INSIGHT - PALMERSTON NORTH CITY COUNCIL RISK MANAGEMENT

Our approach to Managing Risk

Taking a risk-based approach is an integral part of all Council activities and involves all Council Officers. We are working to ensure that risk management is embedded in our workplace culture. Council has ambitious goals and are driven and enabling in how we achieve them. We have a strong risk awareness and take risk in a considered way based on the best available information. This approach enables the Council to control organisational threats and optimise opportunities. In doing this, we apply sound risk management practices, are careful to comply with legislative requirements and are committed to providing a safe and healthy work environment.

Guided by ISO 31000 we manage risk through coordination of the Risk Management Policy, Risk Management Framework and activities used to identify, assess and control risk. Council's Risk Management Division works to support all activities across the Council and collaborates with the Business Assurance Division and the Health and Safety function to review and control risks.

Risk Management Policy

The purpose of the Risk Management Policy is to articulate the objectives and behaviours required to achieve effective risk management across all parts of the organisation. Approaches for implementing risk management are detailed in the Risk Management Framework.
The Policy states that Palmerston North City Council is committed to proactively and consistently managing risk to:

- Support the achievement of the Vision and Goals of the 10 Year Plan;
- Control organisational threats and opportunities as aligned with the Council's risk attitude; and
- Provide a safe and secure environment for PNCC officers, contractors and users.

The policy has risk management principles which are listed as objectives. These are that risk management in Palmerston North City Council will:

- Develop risk management to be an integral part of all Council activities.
- Involve all Council Officers in embedding a risk-based approach to achieving their work.
- Align risk management with all other activities across the organisation.
- Customise risk management to the types and levels of risk faced across Council.
- Ensure a structured, comprehensive and effective approach.
- Be agile and responsive to emerging and changing risks.
- Incorporate human and social factors into how risk is perceived and managed.
- Continually improve risk management through learning, experience and review.
- Meet or exceed international best practice standards.

Risk Management in relation to Asset Management Practice

The mandate for risk management comes from the Council's Finance and Audit Committee. The Committee provides general oversight of the organisation's Asset Management practice and specific oversight of strategic risks. We will reduce risk over time through the implementation of the Asset Management Improvement Programme and report progress to the Committee.

Council has existing technical documents that cover some operational risk, such as Water Safety Plans for Palmerston North, Bunnythorpe, and Ashurst. These are referenced in the relevant individual Asset Management Plans. When those technical documents reach their review dates, they will be updated to incorporate our risk framework.

Support for Asset Managers managing project risk is provided by the Project Management Office.

Risk Management Challenges

We intend to address the following challenges through an improvement programme:

- Identifying assets and asset components that are considered critical to delivery of essential services. This information will be used in a risk-based approach to project prioritisation.
- Some of our risk information may be held informally, siloed in teams, or sometimes relying on staff knowledge rather than documentation.

- When we provide information on risk or risk reduction to our senior leadership during the Long Term Plan process, the organisation doesn't have a way to consider this comparatively in the context of other projects or issues.
- Some of our infrastructure is not fit for purpose and is therefore at increased risk of failing to deliver agreed levels of service.

3.11.3 Asset Management Maturity Results - Risk Management

The Asset Management Maturity results indicate that Council has significant improvements to make regarding Risk Management practices. As shown in table 32 the current overall score is 25 against a target of 80. Risk Management is Council's lowest score across all elements and is noted as the Council's major area of weakness. Risk management has the largest gap out of all practice areas; 55 points between the current and target maturity score.

The assessment is based on the extent of risk management and resilience planning that is integrated into the asset management decision making.

Table 32: Maturity Rating for Risk Management Overall

Risk Management	Current Maturity		Target Maturity
	Score	Reasoning	Score
	25	Council manages operational risks as they arise- dealing with issues and developing localised short-term responses to identified risks. There is no mechanism to escalate and consolidate risk. The culture and process of risk management is immature and without an organisational approach. The recently appointed Risk Manager has developed a draft Risk Management Policy and is currently developing a framework. An organisational approach to identifying, assessing, and managing risk across all activities and assets is required. Further resilience testing and planning is required across the activities, especially in wastewater where the consequences of failure are high.	80

Table 33 shows the Risk Management maturity score by asset activity. All activities have a current score of 25 against a target score of 80.

Table 33: Maturity Rating for Risk Management by Activity

Activity	Current Maturity		Target Maturity
	Score	Reasoning	Score
Roading and Parking	25	No assessment of criticality (noting that network has high levels of redundancy).	80
Water Supply		Some resilience planning but Drinking Water Standards not planned for.	
Wastewater		Haven't had a good picture of wastewater treatment plant asset life. The	

		consequences of wastewater plant failure are discharge of untreated wastewater into the river and into roads and property.	
Stormwater		No comment provided.	
Parks and Reserves		Operational risk managed but not systematically.	
Property		No criticality assessment and poor risk management processes.	
Rubbish and Recycling		No asset criticality undertaken. Effective operational risk management within activity but no organisational approach. No critical asset assessment undertaken.	

Risk Management has been identified as a priority improvement area. Council is committed to significantly improving risk management over the next 3 years.

3.11.4 Improvement items - Managing Risk

The following improvement projects have been identified to address the gap between the current maturity score (25) and the target maturity assessment score (80).

Table 34: Improvement Items for Managing Risk

Improvement Item	Priority and Timeframe	Person Responsible
Adopt the draft Risk Management Policy	High Year 1	Risk Manager
Establish a Risk Management framework based on good practice	High Year 1	Risk Manager
Develop standard operating policies, processes, and procedures for risk management	High Year 1	Risk Manager
Develop and implement a corporate risk management information system	High Year 1	Risk Manager
Ensure that newly entered risks are approved by a line manager, or where there is a conflict of interest by the Risk Manager	Medium Year 1	Risk Manager
Assess the resilience of the network across all the activities	High Year 1	Manager - Asset and Planning
Implement asset management improvement actions to reduce the risk posed by the loss of experienced staff	Medium Year 3	Manager – Asset and Planning

3.12 Operational Planning

3.12.1 Introduction

Operational planning involves the preparation undertaken to keep existing assets operational. Planning ensures that assets can deliver the appropriate level of service to the community and meet asset management objectives. Two broad categories of operational planning include:

- Asset operational – work or expenditure having no effect on asset condition, but which is necessary to keep the asset functioning such as the provision of energy, staff, consumable materials, monitoring and investigation.
- Asset maintenance – is work that is undertaken on an asset to ensure that it remains in functional condition throughout its expected life. This can be planned maintenance e.g. example servicing pumps or unplanned/reactive maintenance e.g. remedying blockages or repairing third-party damage.

The high-level elements that make up comprehensive operational planning include:

- Translating asset management objectives into operational objectives
- Developing plans to deliver operational objectives (e.g. being intentional about planned and unplanned maintenance)
- Documenting operating procedures and processes
- Planning for disruption, including incidents and emergencies
- Understanding the organisational requirements to support the above
- Incorporating operational learnings.

Table 35: How Operational Planning supports our Asset Management Objectives

Asset Management Objective	Operational Planning
1.2 We manage our asset-based services to support Council's Strategic Direction	Sound operational activity management that keeps critical assets functioning to enable asset-based services to support Council's Strategic Direction including vision, goals, strategies and plans.
1.3 We follow a structured process for developing the foundational AM inputs into the Infrastructure Strategy and Long Term Plan	We use a structured approach for developing our life cycle planning outputs (particularly renewals and maintenance budgets).
3.6 We use our systems to create understanding of our assets	We collect data and use our systems to gain insights into the performance of our assets and our approach to operational planning.
3.7 We continually improve our understanding of our assets	As part of our work in the field, we continually collect and update information on our assets, to ensure that our operational decisions are based on the best available information.
5.1 We consider the trade-off between risk, cost, and service levels	We develop strategies that balance renewals and/or proactive maintenance with reactive maintenance and the potential impacts on cost and levels of service.
5.2 Our asset owners and managers make decisions based on evaluation of all viable options	Our operating strategies consider all options to keep our assets operational for the lowest lifecycle cost, including things that we may not have tried in the past – e.g. new technologies.
5.3 We take a whole of life approach for asset management decisions	We consider the full stream of costs and benefits, over the period the service is required, when evaluating options for the operation and maintenance of our assets.

5.4 Our Asset Management Plans include life cycle strategies	When we have well developed operational plans then we are supporting this objective.
6.3 Our staff use our Asset Management Plans	Our Asset Management Plans contain clear, well developed life cycle strategies that are useful to our operational staff.

INSIGHT - PALMERSTON NORTH CITY COUNCIL OPERATIONAL PLANNING

Palmerston North City Council has a range of key positions involved in operational planning (Refer Appendix Two). Council recognises the inherent risk when assets are operated without a plan including business continuity, cost management, service level delivery and reliability.

Developing plans to deliver operational objectives

The amount of operational planning undertaken throughout the range of asset activities is variable. In some cases, the operational objectives only exist within the Asset Management Plan. Insights into each activity are provided below:

Roading Team - Historically, the Roading Team has developed maintenance programmes that focused on contiguous sections of network. Focusing the work into a smaller number of sites simplifies programming and creates efficiencies for delivery. However, from 2018/19-year, staff undertook data collection on trip hazards and use this as the basis for taking a risk-based approach to the footpath repair programme. This meant slightly less work was done at each hazard site, but that work had a greater impact on reducing trip hazards for pedestrians overall.

Parks and Reserves Team - is evolving its approach to operational planning. Historically they focused on specific performance measures (e.g. grass length) to drive maintenance activities. However, for the 2019/20 year, a different approach based on the NZRA Parks Outcomes Framework was implemented. This framework is outcomes focused and works at the level of the overall user experience (e.g. the sports fields are suitable for play), rather than individual components of the experience in isolation (e.g. grass length). Three team leaders are each responsible for planning different portfolios of responsibility, with the specific works programmes developed to achieve outcomes based on staff judgement.

Three Waters Team - operational planning is split between planning for the plant and reticulation. Plant assets are more likely to have inspection routines that have developed over time, to the level required to ensure adequate process performance. Reticulation is operated and maintained with some planning (e.g. valve exercising, flushing, selected inspections). However, it is largely operated on a reactive basis, with maintenance carried out when issues (e.g. breaks or blockages) occur. Decisions about repair or replacement of broken pipes is determined based on staff judgement, considering factors such as the number of recent breakages, the reason for failure reason, the material type and age, and an informal consideration of pipe criticality.

Rubbish and Recycling Team have existing maintenance plans for the plant at the Awapuni Materials Recovery Facility and maintenance schedules for the collection trucks.

Property Team are largely reactive in their approach to maintenance planning. Some of this is deliberate, such as waiting for tenants to vacate their social housing unit before undertaking works. But some of it is also related to resourcing constraints. We are investigating ways of tracking the time that field crews spend on reactive and planned maintenance activities. Tracking time spent will be important when considering the need to increase planned maintenance and reducing reactive maintenance work.

Translating asset management objectives into operational objectives

It is important that Asset Managers formally define the line-of-sight connection between Asset Management objectives and operational objectives. This is an area of improvement we plan to initially outline as part of preparing our 2021 Asset Management Plans, and then

develop more fully in operational plans. The first step involves formalising our operational objectives and ensuring they are understood consistently throughout the organisation.

Documenting procedures and processes

We use Promapp to document our procedures and processes. We are yet to develop a systematic approach to provide oversight of the level of documentation we have achieved. As reported in the last maturity assessment, the anecdotal evidence is that we generally have a low level of process documentation across the activities, excepting Parks and Reserves.

Planning for disruption, including incidents and emergencies

The Emergency Management team are responsible for our Civil Defence Emergency Management planning at an organisational level.

Individual activities are responsible for their own Business Continuity Plans. The key areas where we need to ensure continuity of our services are:

- The road networks
- Water treatment and supply
- Wastewater collection and treatment
- Stormwater drainage
- Crematorium and burial facilities
- Refuse collection
- The Arena, as an emergency shelter in a Civil Defence Emergency Management event.

Understanding the organisational requirements

Council undertook a restructuring exercise in 2018-19 that resulted in the consolidation of Asset Management planning into the Asset Planning Division. This is an initial step by the organisation to recognise the level of support required for all aspects of Asset Management.

Incorporating operational learnings

The primary way we incorporate learnings about operational planning is through staff building experience over time. Where we have documented processes, these can be updated as improvements are identified. More documentation would assist this process.

3.12.2 Asset Management Maturity Results – Operational Planning

The Asset Management Maturity Assessment results indicate that Council has some improvements to make regarding Operational Planning. The current score overall is 49 against a target of 65. The assessment notes that Council's current approach is predominantly about dealing with issues rather than a planned and coordinated approach guided by policies, processes and procedures.

Table 36: Maturity Rating for Operational Planning Overall

Operational Planning	Current Maturity		Target Maturity
	Score	Reasoning	Score
	49	Operational level planning is relatively localised and reactionary. There needs to be better split between proactive and reactionary maintenance. Heavily reliant on key people.	65

		Maintenance plans are not well communicated with other activity owners or within groups.	

Table 37 shows the Operational Planning maturity score by asset activity. The highest performing activity with a 5-point difference is the Rubbish and Recycling Activity with a current score of 60 against a target score of 65. While the lowest performing activity is the Property Activity with a current score of 25 against a target score of 65, leading to a with a 40-point maturity gap.

Table 37: Maturity Rating for Operational Planning by Activity

Activity	Current Maturity		Target Maturity
	Score	Reasoning	Score
Roading and Parking	50	Relationship with service provider is very transactional.	65
Water Supply	50	Have good business continuity plan, which was tested recently with a failed telemetry scenario.	
Wastewater	50	No comment	
Stormwater	50	No comment	
Parks and Reserves	55	Operational procedures are documented for most work practices. Backup systems are in place for all parks management processes.	
Property	25	Maintenance is largely reactive; a maintenance planner is needed.	
Rubbish and Recycling	60	Looking to develop more comprehensive preventative maintenance plan.	

Compared to other Asset Management practices the Operational Planning practices require the least amount of improvement. Improvement efforts will primarily be targeted to the Property Activity to improve the maturity score.

3.12.3 Improvement items - Operational Planning

The following improvement projects have been identified to address the gap between the current maturity score (49) and the target maturity assessment score (65).

Table 38: Improvement Items Operational Planning

Improvement Item	Priority and Timeframe	Person Responsible
Review the approach to operational planning as part of the broader Asset Management review, i.e. start with the policies and strategies, develop asset management plans, and implement strategic, tactical, and operational plans that are all aligned and integrated	Medium Year 1	Manager – Asset and Planning

Ensure that clear renewal and maintenance plans are developed and communicated with key staff and broader stakeholders.	High Year 1	Asset and Planning Manager

3.13 Capital Investment Planning

3.13.1 Introduction

Planning for this investment involves considering growth impacts that may require new assets, changes in existing assets or new assets due to changing levels of service requirements (e.g. legislation or other performance changes), and replacement or renewal of assets due to actual or anticipated failure of aged assets to deliver services.

Table 39: How Capital Investment Planning supports our Asset Management Objectives

Asset Management Objective	Capital Investment Planning
1.2 We manage our asset-based services to achieve Council's Strategic Direction	Capital Investment Planning is an important part of the way we manage our asset-based services.
1.3 We follow a structured process for developing the foundational Asset Management inputs into the Infrastructure Strategy and Long Term Plan	Capital Investment Planning directly supports this objective by using a structured process to provide foundational inputs to the Infrastructure Strategy and Long Term Plan.
1.4 We strive to give the right priority to investment in infrastructure across all asset types	We support this objective when we use robust processes to prioritise projects across activities.
2.6 We seek cross-discipline and collaborative input into our asset management planning	We support this objective when we get cross discipline input into works programmes. This is particularly true for projects driven by growth planning.
3.6 We use our systems to create understanding of our assets	We use our systems to develop the evidence base for forward works programmes.
5.1 We consider the trade-off between risk, cost, and service levels	We consider risk, cost, and service level impacts during our scoping and prioritisation work.
5.2 Our asset owners and managers make decisions based on evaluation of all viable options	We consider all the viable options in preparing our Capital Investment Plans.
5.3 We take a whole of life approach for asset management decisions	We use: whole of life evaluation for new assets; and a renewals strategy to identify optimum remaining useful life of existing assets
5.4 Our Asset Management Plans include life cycle strategies	Asset Management Plans include information on the life cycle considerations used in that activity's Capital Investment Planning.

INSIGHT – PALMERSTON NORTH CITY COUNCIL CAPITAL INVESTMENT PLANNING

The way we identify and develop programmes in our capital investment plan depends on what is driving the need for the investment. The driver for asset investment could be due to growth requiring additional asset capacity, changes in levels of service, or when an asset is aged and requires renewal. Sometimes investments are due to more than one investment driver e.g. the City's wastewater treatment plant upgrade is due to growth, regulatory, and the need for renewal.

Capital Investment Planning for Growth

Investment planning for growth is a collaborative effort between the Strategy and Planning Unit, Asset Teams and the Asset Planning Division. Strategy Planners seek to understand changes in land use intensification within existing residential and industrial zoned land and identify location and scale of urban growth areas in structure plans and the district plan. This information is then used by Asset Managers as a basis for capital investment planning.

When developing land, Council and Property Developers have specific asset development responsibilities. Property Developers are responsible for the construction of infrastructure assets within the boundaries of their land. Council is not required to manage the timing of this work. Council approves the high-level design for the developer lead capital projects to ensure that assets vested in Council meet engineering standards, align with outcomes sought in structure plans and are fit for purpose. Council is responsible for the delivery of infrastructure required for growth projects beyond the boundary of the development. Asset Engineers determine the scale and timing of impacts on the wider network using structure plans and expected development yield as a guide.

Asset activities have different approaches to capital investment planning for growth including:

Water and Wastewater Activities - the growth impacts on assets are determined through hydraulic models for the network, and capacity studies for the treatment plants. Council maintains and updates the network models periodically to incorporate vested and new assets.

Stormwater Activity - the growth impacts on assets are considered through flood hazard modelling, which is initially delivered by Horizons Regional Council and then interrogated by Palmerston North City Council staff. The stormwater models are updated on an as needed basis to include new growth areas of the city or when the climate or land level data, e.g. LiDAR, underpinning the model needs to be incorporated into the models.

Roading Activity – capital investment planning for growth is based on strategic changes impacting traffic volumes. Some of the changes are due to residential or industrial growth, but others include changes in the national rail or highway network feeding into the city. The impacts of these proposals tend to fall mainly on arterial routes in the city. Changes in traffic volumes and journeys are captured and modelled both within the city and regionally using traffic models.

Parks Activity - planning for local parks is captured during the development of structure plans. Other growth planning for city wide reserves and sports fields happens periodically through usage studies.

Rubbish and Recycling Activity - the main area for growth driven capital planning is around the capacity of the collection fleet and the volume of materials recovered from the waste stream.

Capital Investment Planning for Levels of Service

The drivers for investment to improve levels of service are diverse, including changes in legislation, community expectations, consent requirements, and Council strategy. Often Council has little control over these drivers, so responses are planned on an as need basis.

When a response is required projects are scoped and developed using the approaches outlined in Section 3.1.2.1. The timing of the projects may be influenced by financial constraints, particularly if they are discretionary.

Capital Investment Planning for Renewals

A range of approaches are used to develop long term renewals forecasting. Roading, Three Waters, and Solid Waste activities use Asset Management Information Systems and the Parks and Property activity use rolling budgets combined with staff knowledge.

Renewals planning is strongly influenced by the amount of funding Council allocates to renewals. Council uses a rolling three-year average to determine the amount of renewal funding to allocate. This is discussed in more detail in section 3.1.2.5 Financial Planning.

Council uses variable methods to determine project costs. For those activities that obtain valuations (Three Waters and Roading) we use the replacement cost information from the valuation and apply an appropriate contingency factor. Sometimes valuations are not used for project costing. In these circumstances project costs are based on specific project requirements and considerations. The decision about what costing approach to take will depend on the project needs.

Our ability to forecast renewals is limited in some areas by a lack of asset attribute and condition information. This leads to unbudgeted renewal projects for essential assets, either because the assets were undocumented, or their condition was unmonitored. Three Waters activity have used detailed analysis on deterioration evidence for some asset classes (e.g. water mains) to distribute renewals peaks by relating break rates to estimate failure probability. For the 2021 Asset Management Plans, the Roading Asset Team have purchased three advanced deterioration modelling runs on the dTIMS module, to project future asset condition based on three funding scenarios (status quo, unlimited budget, and moderate funding increase).

We currently do not identify or forecast the cost of consequential renewals for large, new-asset projects until the projects have been capitalised. The future replacement of the new assets can have some impact on renewals budgets, depending on the proportion of the new assets that have short base lives.

For the coming Long Term Plan, the Asset Planning Division will work closely with the Executive Leadership Team around the likely trend in asset condition over time. We will base these discussions on the current and alternate renewals funding levels. Our intent is to support a more holistic, risk-based approach to renewals programming.

Scoping Capital Investment Programmes

The level of detail developed when scoping projects depends on the scale and complexity of the project. This is a risk-based approach, guided by staff judgement rather than formal processes.

For complex projects that require more detailed scoping we may prepare detailed business cases and/or workshop the project with senior management team members or Elected Members. This is useful to confirm the scope/approach being taken during the capital planning stage.

Once budget becomes available Council proceeds towards the procurement stage of the project. The Project Management Office arrange project delivery. A briefing scope is developed by the Asset Planning Division and this is further developed by the Project Management Office before taking the proposal to market.

Process for aggregating and prioritising Capital Investment Projects

Council applies the following prioritisation process for capital investment projects. The first step involves aggregating capital works projects into capital works programmes. Programmes are loaded into the budget model which is managed by the Finance Team. Currently, Asset Managers can include a brief description of the scope of the programme, information about project drivers, financial information, and timing into the budget model. Further discussions with Finance Team are underway about the possibility of including additional programme information to assist with decision making.

The capital investment programmes are initially reviewed in order by activity managers, Executive Leadership Team and Elected Members. The Elected Members prioritise the programmes for funding using the approach outlined in Section 3.1.2.1. Staff receive information on the funding status of their programmes and can provide feedback to the Elected Members before the prioritisation is finalised.

The approved capital investment programme is then adopted and included in the Council's 10-year Long Term Plan. The first three years of the programme generally remain unchanged but items scheduled in year 4 and beyond are subject to change and review. The review occurs during the development of the next Long Term Plan.

Delivering Capital Investment Projects

The graph below shows the amount of actual capital budget[6] spent on delivering capital investment projects against the total amount budgeted 2014-2019.

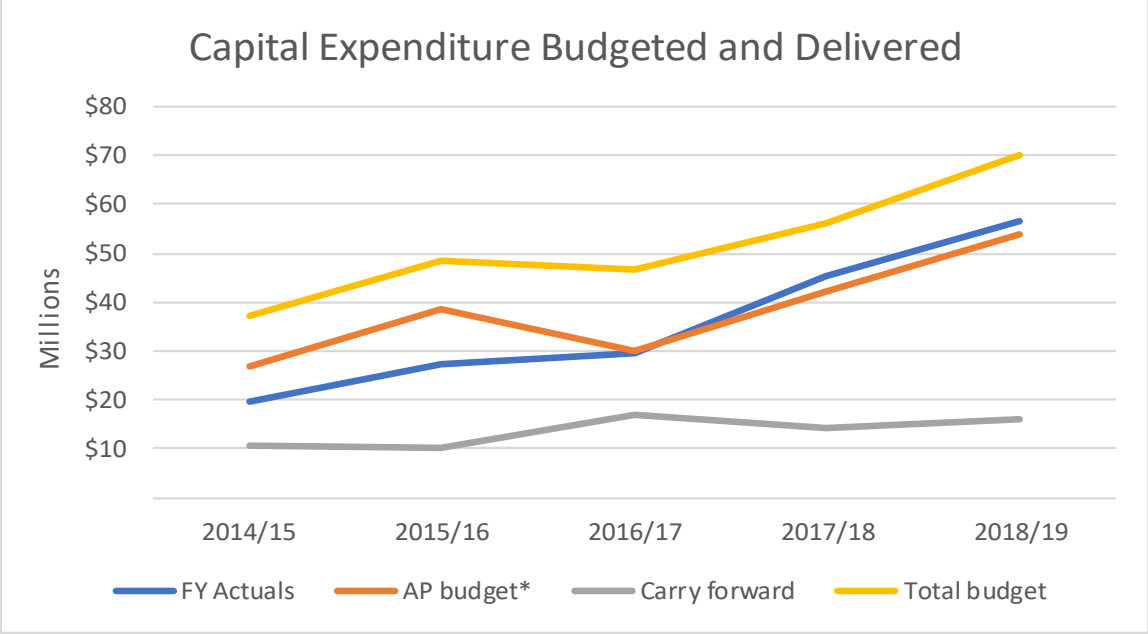


Figure 10 Capital Expenditure Budgeted and Delivered 2014-2019

As shown in the graph, capital project expenditure is less than the anticipated budget across the five year 2014-2019. The amount of unspent budget remains relatively constant and follows changes in anticipated budget from year to year. Overall, the trend indicates an improvement in capital project expenditure with less unspent budget evident from 2016/17 onwards. Some unspent budget is due to programmes which are dependent on decisions or funding from third parties or represent contingency budgets. Unspent budget is usually carried over to the following year.

[6] *Data shows combined information for both new asset and renewal projects. Data is captured at the start of the financial year - July 1.*

3.13.2 Asset Management Maturity Results – Capital Investment Planning

The Asset Management Maturity Assessment results indicate that Council has some improvements to make regarding Capital Investment Planning practices. The current overall score is 57 against a target score of 80. The assessment notes that many plans and projects are based on professional judgement and immediate responses rather than evidence over a longer term.

Table 40: Capital investment planning maturity results

Capital Investment Planning	Current Maturity		Target Maturity
	Score	Reasoning	Score
	57	There are a range of new-capital projects underway but again these are not always linked to identified LOS shortfalls or improvements, or responses to planned growth over the longer term. There is a low level of confidence in out-year requirements for renewals. Projects should be based on criticality and risk and progressively become more detailed in scope and budget as they progress through projects stages. Whole of life cost should be a requirement mandated in the Asset Management Policy.	80

Table 41 below shows the Capital Investment Planning maturity score by asset activity. All activities except for the Property activity, have a 20-point difference with a current maturity score of 60 against a target score of 80. Property is the lowest performing activity with a 40-point difference between the current maturity score of 40 against a target score of 80.

Table 41: Capital investment planning maturity score by asset activity

Activity	Current Maturity		Target Maturity
	Score	Reasoning	Score
Roading and Parking	60	Need to realign programmes to ensure spend is in right areas. Need smaller number of programmes to achieve an outcome for the network. There has been little use of dTIMS.	80
Water Supply	60	Capital spend not strategically aligned or developed with options.	
Wastewater	60	Capital spend not strategically aligned or developed with options. Asset register not used to develop renewals.	
Stormwater	60	Capital spend not strategically aligned or developed with options. Asset register not used to develop renewals.	

Parks and Reserves	60	Capital spend not strategically aligned or developed with options. Asset register not used to develop renewals.	
Property	40	Capital spend not strategically aligned or developed with options. Asset register not used to develop renewals.	
Rubbish and Recycling	60	Capital works projects struggle for funding against other activities.	

Given the current reasonable maturity scores, improving maturity in Capital Investment Planning is considered to be medium priority overall by the Asset Planning Division. Improvement actions may be undertaken by individual activities.

3.13.3 Improvement items - Capital Investment Planning

The following improvement projects have been identified to address the gap between the current maturity score (57) and the target maturity assessment score (80).

Table 42: Improvement items for Capital Investment Planning

Improvement Item	Priority and Timeframe	Person Responsible
Develop a data driven and evidence-based programme of baseline renewal, and new capital projects based on evidence and analysis of current and future asset requirements.	High Year 2	Manager – Asset and Planning
Develop a project prioritisation and decision-making process based on asset criticality and risk.	High Year 1	Manager – Asset and Planning
Define the project thresholds for managing projects in different ways.	Low Year 1	Manager – Asset and Planning
Develop business case process to ensure cases progressively become are more detailed as they progress through the project investigation, feasibility and detailed design stage in years 1-3, reduced detail years 4 - 10, and limited detail potentially >10. s.	Medium Year 1	Manager – Asset and Planning
Further develop process to assess whole of life costs for all capital new and renewal projects.	Medium Year 1	Manager – Asset and Planning

3.14 Financial Planning

3.14.1 Introduction

Financial planning for assets involves the development of plans that aim to meet the needs of assets throughout their lifecycle. Costs include asset acquisition, installation, operation, maintenance, refurbishment and disposal costs. Asset managers and financial managers work closely together to ensure that financial requirements of assets and the services they deliver are considered and appropriately accommodated within the Council's budgets. Financial plans may include actions to generate, spend and invest future income, raise and repay borrowing, and ensure Council's overall financially stability.

Table 43: How Financial Planning supports our Asset Management Objectives

Asset Management Objective	Financial Planning
1.2 We manage our asset-based services to achieve Council's Strategic Direction	Long term financial planning demonstrates the financial sustainability of the asset-based services, which are integral to the delivery of Council's Strategic Direction including vision, goals, strategies, and plans.
1.3 We follow a structured process for developing the foundational Asset Management inputs into the Infrastructure Strategy and Long Term Plan	We use as structured approach to our valuation processes.
1.4 We strive to give the right priority to investment in infrastructure across all asset types	We use long term financial planning to inform the prioritisation processes.
2.3 Our asset management practices meet our statutory obligations	Our financial processes are audited to confirm they meet our statutory obligations.
5.1 We consider the trade-off between risk, cost, and service levels	Long term financial forecasts are an important component in understanding how trade-offs between funding and levels of service will play out in the future.

3.14.2 Financial Forecasting

Successful financial planning requires the ability to manage costs that occur now and into the future. Accurately forecasting costs enables Council's to plan for financial needs and respond to funding requirements. One of the challenges for Councils is to balance the variable funding requirements associated with assets against its goal of ensuring a steady income stream. For example, capital works programmes sometimes require a concentration of spending over a short period of time and then spending requirements may decrease dramatically e.g. completing capital roading programmes during summer months, or replacement of assets in one year but no replacements for several years after. Financial forecasts provide Council with certainty that the assets funding requirements will match the funding availability. The terms and complexity of the financial forecasts will vary according to the life expectancy of the asset being considered and the criticality of the services it provides.

3.14.3 Valuation

Valuations provide Council's with important information to assist with Financial Planning. Valuations provide an understanding of the worth of the asset portfolio at a certain point in time, and how the assets have depreciated over their useful life. This assists financial managers to fairly allocate costs over the life of the assets and plan for asset renewal. The valuation process considers the following for each asset:

- The useful remaining life (URL)

- The replacement cost
- The current value (also referred to as the depreciated value)
- The rate of depreciation
- The valuation may also provide optimised values, for example, assets that are oversized and will be replaced with smaller assets.

The valuation information is used for several purposes:

- Accounting for movements in the asset register and portfolio value over time, providing assurance for capital expenditure (i.e. shows where the money went).
- Defining the costs for new like-for-like assets, informing financial risk transfer (i.e. insurance).
- Defining the remaining useful life of individual assets, to support renewals planning.
- Defining the rate at which the asset portfolio is being worn out helps support intergenerational equity.
- Following Accounting Standards, it supports auditing processes.

INSIGHT - PALMERSTON NORTH CITY COUNCIL FINANCIAL PLANNING

Council's approach to Financial Planning

A key feature of Council's financial system is that it is based on a central treasury model. All funding is accounted for centrally rather than operating multiple ring-fenced reserve accounts for specific purposes. One of the main benefits of the central model is that it makes financing more flexible. Allocation of funding is still controlled through delegated authority with ultimate decision-making resting with Elected Members.

To assist with tracking the long term costs of services the Finance Team operate 'virtual' accounts for activities.

Council uses loans to fund the growth components of projects and recovers the cost of these through Development Contributions.

Council funds levels of service projects using external subsidies and grants (where possible) and the balance through loans, which are then repaid from rates.

Council's throughout New Zealand have a variety of approaches to calculating their annual funding requirements. Many relate the calculation to their projected depreciation expense, often reduced to take account of assets that will not be replaced or that will be funded from external sources.

Council did operate such an approach but some years ago changed its financial strategy to include the following funding requirement calculation components:

- Instead a sum is funded from rates for the year for renewals at a level equating the average budgeted cost of the programmed renewals for the next three years

- In addition, provision is made from rates each year to repay debt over the estimated life of the asset funded (over a maximum of 30 years)

Council's approach is thought to be relatively unique approach amongst New Zealand local authorities with respect to depreciation. It does not operate depreciation reserves nor does it 'put money aside' to fund future renewals.

Council's approach relies on the budgets containing renewal cost projections that are based on quality condition assessments and firm business cases.

It aims to smooth the impact of renewals on rates each year i.e. without significant one-off variations. It means the Council is not exposed to the sometimes significant and unanticipated increases faced by other Councils when assets are revalued and as a consequence the depreciation expense also increases.

Council's financial strategy involves a commitment that it will agree to fund renewals that are required to maintain the desired level of service.

There is a risk that from time to time the Council will face unexpected renewal costs that have been provided for in later years or where there has been no adequate provision. This has to be accommodated by rearranging priorities.

Some contend that Council's approach limits its capacity to respond in such situations or risks meaning insufficient funding is provided for renewals.

The overall approach will be reviewed as part of the development of the financial strategy for 2021-31.

Financial Planning Challenges

One of the financial planning challenges is how best to demonstrate possible trade-offs between levels of service options especially when determining how funding will be allocated at Elected Member level. The focus for capital projects is generally about adding new programmes that add to the existing level of service. In the future we intend to have more integrated level of service conversations and consider where a service trade-off in one area could fund an increased service level in another area.

Forecasting

Changes to local government legislation that require the preparation of a 30 year infrastructure strategy and a 10 year financial strategy as part of the long term planning process have helped raise the budgeting discussion for councils from an annual focus to a longer term more strategic one. There is a natural desire at the political level to focus more on the short to medium term but the staff advice through the development of each long term plan has ensured that there is a focus on long term financial sustainability.

The organisation has now been resourced in a manner that enables it to prepare much more robust longer term programme proposals that help facilitate conversations about the financial sustainability of our services and the impacts of present-day decisions on future levels of service.

Staff throughout the organisation are committed to working together on proposals from the initial outline of asset management options through to the impacts of options on rates.

Valuation

Valuations are undertaken every three years. The valuations are coordinated in a rolling cycle, with the Three Waters, Transport, and Rubbish and Recycling scheduled for 30 June 2020, and Parks and Reserves and Property for 30 June 2022.

The approach taken to valuations varies between activities and is provided in Appendix three.

After the valuation, the asset register is considered the source of truth for the valuation information at the individual asset level (except for Property). The financial register records the valuation information but aggregated at the asset class level (e.g. Wastewater reticulation assets).

The valuation results are used for insurance purposes. Each year Council updates the insurance cover for the incremental addition and disposal of assets. We also periodically review the level and type of insurance cover we have for our assets. Council is in the process of changing the way this is done to fit with new requirements.

Links to other documents

Council's 2021 Infrastructure Strategy and Financial Strategy provides detailed information about the financial context for the delivery of asset-based services. They are key consideration in the development of Asset Management Plans.

3.14.4 Asset Management Maturity Results – Financial Planning

The Asset Management Maturity Assessment results indicate that Council has some improvements to make regarding its Financial Planning practices. The current overall score is 65 against a target score of 85. The assessment notes that Palmerston North City Council is the only Council in New Zealand to rate directly for the next 3 years of renewals requirements. There is some concern that rates may not be able to be increased to meet renewal funding requirements, particularly in years where significant renewals funds are required.

Table 44: Maturity Rating for Financial Planning Overall

Financial Planning	Current Maturity		Target Maturity
	Score	Reasoning	Score
	65	There is no reserve funding for higher than average renewal requirements in any one year. Identified renewal expenditure is not data based and evidence driven resulting in the common incidence of fiscal surprises. This means that the value of identified renewals could be understated and rates insufficient to cover the required activities. In the past renewals budgets have been constrained to meet rates income. There is risk associated with deferred renewal.	85

Table 45 below shows the Financial Planning maturity score by asset activity. All activities have a 20-point difference with a current maturity score of 65 against a target score of 85.

Table 45: Maturity Rating for Financial Planning by Activity

Activity	Current Maturity		Target Maturity
	Score	Reasoning	Score
Roading and Parking	65	The lines between renewal and new capital funding sometimes blurred. No dedicated funding to deal with significant issues from trees.	85
Water Supply		Historically underfunded but the consequences of that have not been communicated.	
Wastewater		Historically underfunded but the consequences of that have not been communicated. The new wastewater treatment plant will create financial pressure.	
Stormwater		Historically underfunded but the consequences of that have not been communicated.	
Parks and Reserves		Need to optimise mix of maintenance, operations and capital funding.	
Property		Have been several instances of poor budgeting, with costs exceeding estimates.	
Rubbish and Recycling		The gap between renewals requirements and funding to be defined and its impact over long term. Performance issues, where noted, drives future expenditure.	

Compared to other Asset Management practices the Financial Planning practices require modest amount of improvement. Improvements will be made over time as resources allow.

3.14.5 Improvement Items - Financial Planning

The following improvement projects have been identified to address the gap between the current maturity score (65) and the target maturity assessment score (85).

Table 46: Financial Planning Improvement Items

Improvement Item	Priority and Timeframe	Person Responsible
Consider revising the financial policy from rating for three year rolling renewals to rating for long depreciation to ensure adequate reserves are built up over time.	Medium Year 3	Chief Infrastructure Officer Chief Financial Officer
Show the renewal requirement for different options and the funding available in the Strategic Asset Management Plan. The consequences of funding constraints should be articulated clearly.	Medium Year 2	Asset and Planning Manager

3.15 Asset Management Enablers

Asset Management Enablers support the effective infrastructure planning and decision processes described in earlier sections of this SAMP. This includes the structures, capabilities, plans, systems, tools and external resources the Council needs for effective Asset Management to occur. It also includes an approach for ensuring Asset Management practices are subject to continuous improvement.

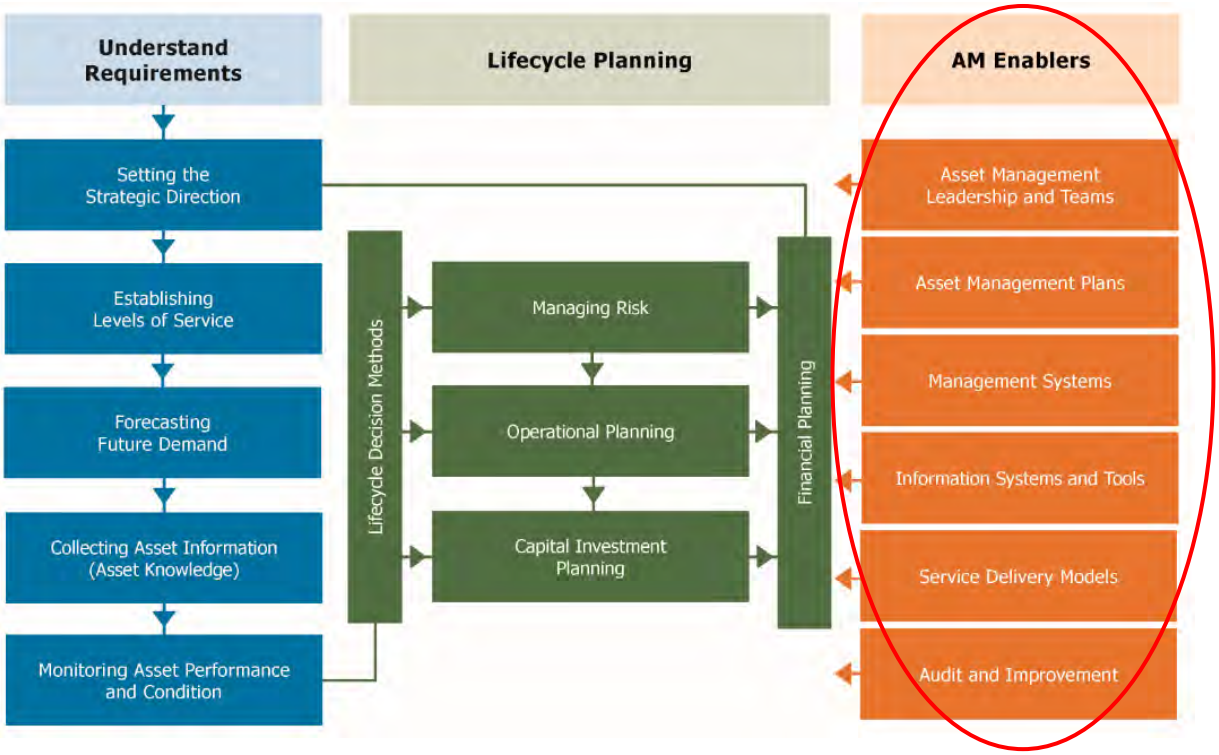


Figure 11: AM enablers

In this section Asset Managers aim to answer key questions

- How will asset management be defined, in the organisational structure?

- What is the right mix of skills and level of resources?
- What systems and tools are needed?
- What approach will we take to deliver the services that support our organisational outcomes?
- How will we continue to advance our asset management practice towards level of practice that is appropriate?

3.15.1 Asset Management Leadership and Teams

Introduction

Leadership is critical when aspiring to achieve enhanced asset management practice[7]. Elected Members, Management Teams, Asset Management staff and other council staff have opportunities to demonstrate leadership at various levels of asset management. In a whole of Council approach to advancing asset management each group has their own specific leadership role to play. Effective leaders articulate and demonstrate a strong commitment to a shared and inspiring vision for asset management. To ensure that the vision is implemented, leaders embody a culture of success and ensure teams are well equipped with resources and are motivated to succeed.

Table 47: How Asset Management Leadership and Teams supports our Asset Management Objectives

Asset Management Objective	Asset Management Leadership and Teams
2.1 Our Asset Planning Division and Asset Management Steering Group provides leadership and coordination of asset management practice across the Council	Our asset management guidance is easy to understand and readily accessible to the wider organisation. We readily engage groups of staff in conversations about all aspects of asset management practice support and coach leaders and their teams.
2.4 Our staff know how their roles relate to asset management	Our organisational structure has clearly defined roles to support the asset management system and staff in these roles have clear asset management expectations included in their job descriptions.
2.5 The executive leadership team recognises the importance of asset management and adequately resources the asset management system subject to budgetary, resource and systems constraints of the organisation	Our Executive Leadership Team understand the role of asset management plays in achieving our organisational outcomes and are committed to adequately resourcing the asset management system.
2.6 We seek cross-discipline and collaborative input into our asset management planning	We understand that asset management is a multi-disciplinary business practice and that our success in advancing asset management practice will be dependent on taking a collaborative whole of organisation approach.
4.4 We make sure that the asset management capability of our people matches the needs of the organization	We provide training opportunities and utilise the skills of experienced staff to ensure our team has the range of Asset Management skills required.

INSIGHT – PALMERSTON NORTH CITY COUNCIL ASSET MANAGEMENT LEADERSHIP AND TEAMS

Leadership of asset management is the responsibility of several different groups within Council. Leadership is usually associated with Elected Members and the Executive Leadership Team. However, in a whole of Council approach it can also be demonstrated by all staff. Each group plays a specific leadership role.

Elected Members

Under the Local Government Act Council is required to provide good quality local public services. To do this Elected Members make decisions about asset investments, the levels of service provided to the community, and the affordability of those services. Elected Members have overall responsibility to ensure the asset portfolio is carefully and responsibly managed on behalf of the

[7] *International Infrastructure Management Manual 2015*

community. Council's Finance and Audit Committee have delegated authority to provide Council staff with direction and monitor progress through accountability reporting.

Executive Leadership Team

The Executive Leadership Team is made up of the General Managers from each Council Unit. This team provides appropriate direction for asset management at the tactical level. The aim is to ensure that a whole of Council approach is taken to delivering services, including, managing assets, and that there is alignment with organisational outcomes. It is also responsible for the overall implementation of the asset management objectives. It does this by ensuring that the organisational structure, asset management roles, responsibilities and resources are appropriate. Day – to-day this team is responsible for managing teams and staff members and creating a workplace culture that is successful and motivated to achieve.

Asset Management Steering Group

At the time of writing, this group is in the process of being established. It is a new component in Council's Asset Management System that will oversee the development of Asset Management documentation including Asset Management Policy, Strategies, and Plans. It will ensure that resources are allocated to the implementation of the Asset Management Improvement Plan and monitor the organisation's progress towards maturity targets.

Asset Planning Division

Leadership and coordination of asset management planning across the organisation is the key responsibility of the Asset Planning Division. This group has a tactical focus and ensures there is close alignment between Council's Strategic Direction and Asset Management Planning. It is also responsible for producing the Strategic Asset Management Plan, Asset Management Plans and the Asset Management Improvement Plan. The group provides support to the Strategy and Planning Unit in the development of the Infrastructure Strategy.

Council staff

The responsibility of managing assets and the supporting asset management systems rests with Council staff. Close contact with asset managers and customers, places staff in the crucial position to be able to manage, monitor and report on the condition and performance of assets and levels of service, and to identify and implement the improvements needed to ensure the desired asset management outcomes are achieved.

Asset Management Maturity Results – Asset Management Leadership and Teams

The Asset Management Maturity Results indicate that Council has some improvements to make regarding its Asset Management Leadership and Teams practices. The current score overall is 63 against a target of 80 is generally due to the lack of cohesive working across Council.

Table 48: Maturity Rating for Asset Management Leadership and Teams Overall

Asset Management Leadership and Teams	Current Maturity		Target Maturity
	Score	Reasoning	Score
	63	Palmerston North City Council has been heavily reliant on experienced staff, with a strong engineering focus, who have not always worked together cohesively. The recent Council restructure confirmed a single infrastructure unit and defined third tier roles.	80

		The Senior Leadership Team has oversight over the asset management activities. There is not a widespread understanding of asset management by the Senior Leadership Team. A cross functional asset management steering group is needed to direct and guide asset management improvement and to build organisational awareness. This should include representatives from Community Services, planning and operational groups.	

Table 49 shows the Asset Management Leadership and Teams by asset activity. The highest performing activities with a 10-point difference are Roading and Parking, Water Supply and Wastewater with a current score of 70 against a target score of 80. While the lowest performing activity with a 40-point difference is the Property activity with a score of 40 against a target score of 80.

Table 49: Maturity Rating for Asset Management Leadership and Teams

Activity	Current Maturity		Target Maturity
	Score	Reasoning	Score
Roading and Parking	70	Transport and waters managed together under one Manager. Have lost of a lot of experienced transport asset management capability. Need more capability to develop renewal programmes and present risk/benefit trade off.	80
Water Supply	70	Each of the three waters has an asset manager. Asset management planning and data administrators have been brought into central teams to generate more cross functionality and improve processes. This has been very reliant on key experienced staff.	
Wastewater	70		
Stormwater	65		
Parks and Reserves	65	The Parks and Reserves Team are recruiting for specialist Horticulture and Parks Management roles to help address identified systems, processes and improvement deficiencies.	
Property	40	Currently going through a restructure but Property has traditionally been under resourced. Property has had a team doing everything, with little time to take a strategic approach.	
Rubbish and Recycling	60	Previously had separated Asset Management and operations team. Now restructured and working more closely together.	

Improving maturity is a priority for the Property activity given its low score. Some resources will also be allocated to improving the maturity in remaining activities. However, this will occur over a longer time frame.

Improvement items – Asset Management Leadership and Teams

The following improvement projects have been identified to address the gap between the current maturity score (63) and the target maturity assessment score (80).

Table 50: Improvement items for Asset Management Leadership and Teams

Improvement Item	Priority and Timeframe	Person Responsible
Complete implementation of the new Infrastructure Unit structure and associated recruitment process.	High Year 1	Chief Infrastructure Officer
Introduce a cross functional asset management steering groups to direct and guide asset management improvements, and to build organisational awareness.	High Year 1	Manager Asset and Planning
Present findings of this review and high-level improvement action plan to the Senior Leadership Team.	Medium Year 1	Manager Assets and Planning
Focus on division and individual asset management capability development.	Medium Year 2	Manager Assets and Planning

3.15.2 Asset Management Plans

Introduction

Asset Management Plans are a written representation of intended asset management programmes for management of assets based on the organisation's understanding of service level requirements and the ability of the network's capability to meet those requirements. The asset management plan is often considered as the business case for the long-term financial forecasts.

Typically, an Asset Management Plan covers the following key areas: the strategic context of the activity, the service level to be provided (in terms of meeting service levels and changing demand), how the organisation intends to provide the service, the financial implications, and the tasks required to improve asset management planning capability over time. For local authorities Asset Management Plans play an important role in the development of 10 Year Plans. Asset Management Plans are part of package of underpinning information necessary to develop a 10 Year Plan. It is important that Asset Management Plans are good quality documents that provide a solid evidence base from which to forecast work programmes and budgets included in the10 Year Plan. Asset Management Plans are subject to a vigorous audit process to ensure information and assumptions are of a suitable quality and standard.

Table 51: How Asset Management Plans Support our Asset Management Objectives

Asset Management Objective	Asset Management Plans
1.1 Our people understand the link between asset management and Council's Strategic Direction	Clear, engaging Asset Management Plans tell the story of how Council's Strategic Direction relates to coal-face tactics for delivering services to the Community in a way that people understand, from both a governance and operational perspective.
1.2 We manage our asset-based services to achieve Council's Strategic Direction	Asset Management Plans provide transparency about how we are managing our assets
1.3 We follow a structured process for developing the foundational Asset Management inputs into the Infrastructure Strategy and Long Term Plan	We have an asset management development programme of work, with a structured framework for preparing the supporting information for the Infrastructure Strategy and Long Term Plan.
2.4 Our people know how their roles relate to Asset Management	The Asset Management Plans support this by telling the story of how our people contribute to asset management.
2.6 We seek cross-discipline and collaborative input into our asset management planning	We seek input and review from all parts of Council involved in the delivery of each asset-based activity, during Asset Management Plan preparation.
5.4 Our Asset Management Plans include life cycle strategies	The lifecycle section of each asset management plans includes life cycle strategies for key asset types.
6.1 Asset Management Plans are complete and at the agreed level of maturity	Our coordinated asset management plan development programme ensures that each activity has a complete asset management plan in place and that the level of maturity of the plan is improving over time.

6.2 Our Asset Management Plans are regularly reviewed to respond to changing circumstances	We will support this by developing a review schedule for our Asset Management Plans.
6.3 Our staff use our Asset Management Plans	Our Asset Management Plans are written with the end user in mind and are readily available to all staff.
6.4 Our Asset Management Plans accurately reflect the current practices for the asset type	We review our asset management plans on an ongoing basis and record any changes for inclusion in the next formal revision of the document.
6.5 We develop and deliver improvement programmes in our Asset Management Plans that address prioritised maturity gaps	Our Asset Management Plan improvement section includes an asset management improvement programme, with prioritised actions to address the identified gaps between current and appropriate asset management maturity.

INSIGHT-PALMERSTON NORTH CITY COUNCIL ASSET MANAGEMENT PLANS

Our approach to Asset Management Plans discussion has been structured on the following areas: philosophy, preparation, and engagement.

Asset Management Planning Philosophy

The Asset Planning Division have sought to better understand Council's Strategic Direction and how Asset Management planning documents should give effect to that direction. The broad vision that has come out of this is to develop Asset Management Plans that:

- Better align with Council's vision and goals.
- Recognise and respond to the City's strategic context.
- Reflect current practice and the challenges facing each activity area.
- Are owned by staff through a collaborative content development process; and
- Recognise a range of audiences, are easily digestible and are intuitive in their way- finding.

Underneath that overarching philosophy, the Asset Management Plans need to provide the following:

- To document the strategic issues and risks associated with the activity.
- To understand drivers of demand for services, and the implications for the asset network.
- To provide input into the rationale for why and how the organisation delivers its services and the key programmes and funding required to deliver these.
- To support financial decision-making and inform understanding of cost of ownership.
- To provide input into the development of the draft Long-Term Plan and the Infrastructure Strategy.
- To document existing and planned works practices and procedures; and
- To demonstrate compliance with relevant legislative requirements.

Strategic Asset Management Plans and Asset Management Plan Document Preparation

To achieve the philosophy outlined above, the Asset Planning Division have approached the development of Asset Management Plans by dividing it into the Strategic Asset Management Plan and the individual activity asset management plans.

The Strategic Asset Management Plan describes:

- The Council's asset management system.
- The Council's asset management practices; and
- The City's strategic context and what this means for asset management.

The individual activity asset management plans cover the transport, water, wastewater, stormwater, solid waste and rubbish, parks and reserves and property activities.

The Asset Management Plans will be completed by the end of June 2020 to provide foundational input into the 10 Year Plan.

While there is a milestone date for completion of the 2021 Asset Management Plans, the Asset Planning Division also plans to maintain the Asset Management Plans as living documents to ensure they stay current with changes in practice and planning as they occur. The approach for this is yet to be developed, but it is anticipated that this will at the minimum involve quarterly updates of improvement progress and annual updates to reflect changes in the annual planning process.

Engagement

Increasing staff engagement with Asset Management Plans is a priority. The approach to developing and presenting Asset Management Plans reflects our intention for greater levels of engagement across the Council.

The Asset Planning Division held workshops with each activity area, to both understand core issues for themselves and to foster staff engagement. The following topics were discussed:

- Workshop 1: Review of current Asset Management Plans, Strategic Issues, Engagement with Stakeholders and Risks
- Workshop 2: Trends for the Activity, Procurement, Lifecycle Planning and Demand Management
- Workshop 3: Levels of Service

The Asset Planning Division provided feedback after the workshops, to ensure that draft sections accurately captured the issues raised and to promote staff engagement with the process.

The audiences that need to be considered when preparing the Asset Management Plans are outlined below.

Audience	Needs	Input
Asset management staff and service providers	Tactical direction for service delivery. Agreed levels of service, asset management programmes and available budget	Identifying and workshopping issues, identifying operational strategies and options, provision of cost information, checking accuracy of draft sections.
GMs and ELT	Understanding of the tactical decisions being made by staff and the risks and service consequences of agreed service levels and budgets	Review of key issues and options during Asset Management Plan preparation, feedback on early draft documents
Elected members	Strategic challenges to levels of service and the long-term risk and financial implications	Workshopping of key issues and options during Asset Management Plan preparation, adoption of Asset Management Plan
Auditors	Accurate representation of the planning information used to develop the Consultation Document and the 10 Year Plan	Audit findings provided back to Council

Asset Management Maturity Results - Asset Management Plans

The Asset Management Maturity results indicate that Council has some improvements to make regarding its Asset Management Plan practices. The current score overall is 56 against a target of 80 generally due to the need for Asset Management Plans to be made more dynamic, interactive and focussed. The results of external peer review note that the plans are of high standard but are not used effectively in the organisation.

Table 52: Maturity Rating for Asset Management Plans Overall

Asset Management Plans	Current Maturity		Target Maturity
	Score	Reasoning	Score
	56	Existing asset management plans are comprehensive but long documents that appear to provide limited utility or operational value. It appears that the Asset Management Plans have been prepared with limited interaction with other parts of Council and trying to be comprehensive have become too long to be useable. The [Asset Management Planning Division] has been bought together to develop Asset Management Plans documents that are more collaborative and inform decision making.	80

Table 53 shows the Asset Management Plans score by asset activity. The highest performing activity with a 10-point difference is the Parks and Reserves activity with a current score of 70 against a target score of 80. While the lowest performing activity with a 35-point difference is Property activity.

Table 53: Maturity Rating for Asset Management Plans by Activity

Activity	Current Maturity		Target Maturity
	Score	Reasoning	Score
Roading and Parking	55	The Asset Management Plan is still very much aligned by asset classes e.g. pavements, roads. Focus is on the more effective use of the transport space to move people i.e. no new roads. Asset management needs to be more focused on the transport corridor and reallocating space e.g. cycle ways. The Asset Management Plan needs to provide the operational plan to give effect to the transport strategy. Network Operating Framework Plan is an initiative to integrate thinking e.g. safety improvements.	80
Water Supply	55	Asset Management Plans are not used and hard to digest.	
Wastewater	55		
Stormwater	55		

Parks and Reserves	70	The Asset Management Plan needs to be updated to reflect the development of significant strategies. The Strategic Asset Management Plan will allow the more strategic information to be removed. Looking to restructure the Asset Management Plan to align with specific sites and planned developments e.g. The Square. Whilst approach to risk, Asset Management processes, condition assessment and 10-year financial forecasts are provided in the Asset Management Plan 2017, demand forecasts are not numerical for sports fields and reserve areas, and performance is not routinely used as a decision-making tool.	
Property	45	Little focus on Financial Management. The Asset Management Plan is not well used. The aim is that it is a living document and to tell the story cohesively. Need Asset Management Plan to be continually updated and aligned to strategies. Need to engage with stakeholders such as Community through the process.	
Rubbish and Recycling	55	Need to closely connect the Waste Minimisation and Management Plan and the Asset Management Plan. The Asset Management Plan was template driven to standard format and subsequently not well used.	

Improvement items - Asset Management Plans

The following improvement projects have been identified to address the gap between the current maturity score (56) and the target maturity assessment score (80).

Table 54: Improvement items for Asset Management Leadership and Teams

Improvement Item	Priority and Timeframe	Person Responsible
Complete a review of the Asset Management Plan templates and formats to more effectively align with Council's needs and activities.	High Year 1	Manager – Asset and Planning
Ensure that the Asset Management Plan development is a collaborative process.	Medium Year 1	Manager – Asset and Planning

3.15.3 Management Systems

Introduction

Management Systems describe the set of procedures and interactions within an organisation that are needed to achieve its objectives[8]. There are several benefits organisations can gain from Management Systems. Organisations that follow formalised processes can improve effectiveness and efficiency, increase customer satisfaction and better manage risk. A documented set of procedures provides an organisation-wide "road map" to follow to deliver quality, consistent services and achieve organisational objectives. Standardised processes can also be used to aid business continuity in the event of emergencies or staff absence. Management systems should be subject to continual improvement to ensure that organisational benefits are maximised.

Table 55: How Management Systems support our Asset Management Objectives

Asset Management Objective	Management Systems
1.3 We follow a structured process for developing the foundational asset management inputs into the Infrastructure Strategy and Long Term Plan	The asset management system documents the processes and resources needed for the development of asset management plans.
2.2 We use consistent asset management processes across Council	Our systems approach recognises asset management as a Council wide business activity with interactions between the asset management system and other management systems of Council, e.g. risk, finance, documents, human resources.
2.3 Our asset management practices meet our statutory obligations	Our asset management policies and practices ensure we are legislatively compliant and aligned with industry practice.
2.7 We lead an organisational culture of continuous improvement in asset management	Continuous process improvement is embedded within our asset management system.
3.6 We use our systems to create understanding of our assets	Our processes to collect, maintain and analyse asset data, to create and transfer information and knowledge, are documented and managed in the asset management system.
4.3 We strive to close identified asset management maturity gaps over time	Our asset management system has a focus on continual improvement of asset management practice.
4.4 We make sure that the asset management capability of our people matches the needs of the organization	Our asset management system documents the resources required to deliver our asset management objectives.

[8] *International Infrastructure Management Model 2015*

INSIGHT- PALMERSTON NORTH CITY COUNCIL MANAGEMENT SYSTEMS

Palmerston North City Council currently documents some of the processes used in asset management. The recently established Asset Information Team is reviewing the Council's approach to systemising "how things are done" here. We recognise that for a large organisation like Palmerston North City Council, it is important that our asset management processes and procedures are well documented. Systemisation will effectively assist us to standardise and improve our asset management practices and help move us towards a more advanced level of asset management. We want to reduce the reliance on key people and make sure our systems are more resilient.

Some asset management processes are currently documented using ProMapp. This is a web-based application that Council uses to create, navigate, share and change management processes. It enables Council to practice quality assurance, risk management and is an effective tool in business continuity.

Several asset management related processes are documented and managed within other management systems of Council. Examples include risk management, document management, human resources and financial management. Some of these management systems have well documented processes, for example finance, whereas others are more rudimentary. A key part of developing and documenting the asset management system will be understanding the interactions with other Council systems.

There are varying degrees of asset management process documentation across the asset activities. In the Roading and Parking activity there are some processes mapped in ProMapp, there is also a good dataset with improvements being made regularly. In the Three Waters activity old documentation exists and is being updated. This is our strongest dataset and will enable us to create good process maps.

Overall, many asset management practices are not documented or are documented but not stored in ProMapp. In the future more processes will be documented in ProMapp.

Asset Management Maturity Results- Management Systems

The Asset Management Maturity results indicate that Council has some improvements to make regarding its Management Systems. The current score overall is 40 against a target of 77 is due having little evidence of real asset management policies, processes or procedures being used by staff.

Table 56: Maturity Rating for Management Systems Overall

Management Systems	Current Maturity		Target Maturity
	Score	Reasoning	Score
	40	There has been an over-reliance on key people. Any review of Asset Management Systems will be a significant undertaking and should build on available documents and reflect the outcomes of other improvement activities. Council has invested in the ProMapp system which has some processes mapped in it, but not enough mapping has been undertaken across all activities.	77

Table 57 shows the Management Systems score by asset activity. The highest performing activities with 30-point differences are the Parks and Reserves and Property activities with current scores of 40 against a target score of 70. While the lowest performing activities with 40-point differences are Roading and Parking, Three Waters, and Rubbish and Recycling activities.

Table 57: Maturity Rating for Management Systems by Activity

Activity	Current Maturity		Target Maturity
	Score	Reasoning	Score
Roading and Parking	40	Few processes mapped with ProMapp.	80
Water Supply	40	ISO accreditation has been achieved at the Water Treatment Plant. There is little documentation of asset management processes.	
Wastewater			
Stormwater			
Parks and Reserves	40	Many Parks and Reserves processes are documented but not all.	70
Property	40	Little or no real process documentation although Council uses Oasis document management system [to store documents]. There is a significant reliance on key people. The plan is to use ProMapp to capture this information.	
Rubbish and Recycling	40	Few processes mapped with ProMapp. Heavy reliance on key people.	80

Improving maturity in Management Systems is medium priority due to the relatively low level of risk associated with this practice. Improvements have been scheduled for Year 2 of the Improvement Plan.

Improvement items – Management Systems

The following improvement projects have been identified to address the gap between the current maturity score (40) and the target maturity assessment score (77).

Table 58: Improvement items for Management Systems

Improvement Item	Priority and Timeframe	Person Responsible
Undertake a formal review of the Asset Management Systems and development of policies, processes, and procedures captured and managed within a quality system.	Medium Year 2	Manager – Asset and Planning
Map the Asset Management processes in ProMapp	Medium Year 2	Manager – Asset and Planning

3.16 Information Systems and Tools

3.16.1 Introduction

An asset management information system is the collection of processes, data, software and hardware and people that help Council manage its assets. One of the most important components of the system is the 'people' that bring all the other components together and integrate the system into Council business. Information Systems are critical to effective asset management and an organisation achieving its asset management objectives. Information Systems provide asset managers with tools that enable them to conduct the degree of asset analysis required for the size and complexity of the asset and to advance the maturity of asset management practices.

Table 59: How Asset Information Systems and Tools Support our Asset Management Objectives

Asset Management Objective	Asset Information Systems and Tools
1.4 We strive to give the right priority to investment in infrastructure across all asset types	Having fit-for-purpose asset management information systems and using them appropriately is an important foundational step in supporting informed prioritisation of our investment in infrastructure.
2.1 Our Asset Planning Division and Asset Management Steering Group provides leadership and coordination of asset management practice across the Council	Our Asset Management Information System is centrally managed by the Asset Planning Division.
2.2 We use consistent asset management processes across Council	We are establishing formal policies and processes for all key aspects of our asset data.
2.7 We lead an organisational culture of continuous improvement in asset management	We continually review our asset information management processes and how we use our Asset Management Information System.
3.1 We understand the performance and condition of our assets	Our Asset Management Information System supports this through the built-in functionality for storing and reporting on asset condition and performance.
3.2 We store all our asset data in formalised systems	Our formal Asset Management Information System solutions support this when we use them in a structured way to store data.
3.3 We store all information about an asset in a single location	We support this through having a formal Asset Management Information System in place.
3.4 We maintain our data so we can rely on it (appropriate quality, completeness, provenance)	We have policies and processes in place, and resource the collection and continual improvement of our asset data sets.
3.5 Our systems enable us to analyse our data	Our Asset Management Information System supports this through presenting our data to us spatially, providing basic analysis functionality, and supporting data supply to external solutions for advanced analysis.

INSIGHT - PALMERSTON NORTH CITY COUNCIL INFORMATION SYSTEMS AND TOOLS

Palmerston North City Council has a suite of software products that together create our Asset Information System (Appendix 4). Alongside software there are also a range of informal systems that are largely undocumented.

Our intention is to reduce the number of informal systems over time. We aim to have a more consistent approach to using our Asset Management Information System. We recognise that having our data stored in one place and in standardised system will enable us to undertake better analysis over the entire asset portfolio.

The asset management roles that our Asset Management Information System supports can be loosely grouped into basic asset information, advanced asset information, operational management, and planning.

Under our new organisational structure, the key subject matter experts responsible for asset registers have been brought together into a single team - Asset Information Team (previously located within the individual service areas). This team provides coordinated management of asset data and supports a whole of system approach to Asset Management Information System software. The aim is to achieve a more consistent approach regarding Asset Management Information System use and maintenance across the entire Asset Planning Division and ensure that future software solutions fully support our asset management objectives.

By improving coordination, we also aim to address some of our existing concerns:

- Prevalence of hardcopy still for data capture
- Reliance on Excel for storage of information
- Lack of connected data makes it difficult to implement Power BI
- Quality (manual entry, sensor drift/errors due to no maintenance)
- Availability (missing data due to broken assets (rain gauges is a classic example)
- Accessibility (not centralised, thus "where is the data I need?")
- Sharing (none of the core systems are cloud based and there is limited data available externally via application programming interface (API)

Our approach for asset register solutions has been to use products that are best for purpose. Hence, we have IPS (originally waters focused), RAMM (originally transport focused) and SPM (originally property focused). Each of these products has broadened in their focus since they first came to market but remain strongest in their specific areas of origin.

Selection and Review of Information Systems

Council periodically reviews its Asset Management Information System software. Reviews are infrequent and if changes are required, they usually come with significant financial and productivity costs. It is uncertain when the last full Asset Management Information System review was undertaken, based on corporate knowledge we estimate it was before 2013. The next Asset Management Information System review is not formally scheduled and will likely be either event driven (e.g. review of wider corporate systems) or pain-point driven.

We are aware that some Councils are moving to integrated solutions, where the asset register is a module within a much larger enterprise management solution. Council has been evaluating alternatives to the currently used financial management System, Ozone. We are working through negotiations with a preferred provider however, none of these solutions considered can provide the range of Asset Management Information System functionality provided by the current applications.

3.16.2 Asset Management Maturity Results - Information Systems and Tools

The Asset Management Maturity results indicate that Council has some minor improvements to make regarding its Information Systems and Tools. The current score overall is 70 against a target of 75 is due Council having asset management systems and tools that are generally fit for purpose. The functionality is considered appropriate for an organisation of Palmerston North City Council's size. However, some improvement is also required to ensure that data base administrators work more closely together.

Table 60: Maturity Rating for Information Systems and Tools Overall

Information Systems and Tools	Current Maturity		Target Maturity
	Score	Reasoning	Score
	70	The asset management system used by Council is generally fit for purpose and provides good level of functionality. Improvement can be found in bringing together the asset database administrators into a team that can support each other and the asst managers more effectively. Currently the administrators are working in isolation and data is not supporting good decision-making.	75

Table 61 shows the Information Systems and Tools and by asset activity. All activities have a 5-point difference with a current maturity rating of 70 against a maturity target score of 75. Minor improvements are required across most activities.

Table 61: Maturity Rating for Information Systems and Tools by Activity

Activity	Current Maturity		Target Maturity
	Score	Reasoning	Score
Roading and Parking	70	Reliance on one experienced staff member.	75
Water Supply		MIKE Urban is [the programme] used for water and wastewater and TUFLOW for stormwater modelling. IPS uses rules-based modelling to develop renewal forecast e.g. if this material, age, then condition is 'X' and then renewal determined.	
Wastewater			
Stormwater			
Parks and Reserves		Assets are held at component level for buildings. Reporting is manual. Asset records are geospatially located but they are not held in the GIS system. Customer requests can be tracked, and response rates monitored. These can be queried based on query type and location - but they are not attached to assets.	
Property		Currently uses SPM Assets in isolation. The one key user has recently left the organisation.	
Rubbish and Recycling		Roadside and park bins asset data in RAMM. All other assets, including the Materials Recovery Facility, closed landfill and wheelie bins, in IPS.	

3.16.3 Improvement Items - Information Systems and Tools

The following improvement projects have been identified to address the gap between the current and target maturity assessment scores.

Table 62: Improvement Items Information Systems and Tools

Improvement Item	Priority and Timeframe	Person Responsible
Incorporate back -up of other asset systems into database administrators' roles	Medium Year 1	Manager Assets and Planning
Review the functionality capabilities of each system and develop processes to use them effectively through training and process development	Medium Year 2	Manager Assets and Planning

3.17 Service Delivery Models

3.17.1 Introduction

Councils have a range of options available to deliver services associated with assets and asset management. Service delivery options range from full in-house delivery of all asset activities by the Council staff, to outsourcing part, or all asset services and functions. Determining which service delivery model is appropriate requires the Asset Manager to consider the cost, benefits and risks associated with the various service delivery options. Council may choose to undertake a review of service delivery models at any time however, the Local Government Act 2002 (s17A) requires Council to review the cost-effectiveness and efficiency of all services at least every six years.

Table 63: How Service Delivery Models support our Asset Management Objectives

Asset Management Objective	Service Delivery Models
1.2 We manage our asset-based services to achieve Council's Strategic Direction	Good service delivery decisions are a fundamental management decision for our asset-based services.
2.3 Our asset management practices meet our statutory obligations	Undertaking six-yearly S17A reviews of the delivery options for our services is a statutory requirement.
5.1 We consider the trade-off between risk, cost, and service levels	We support this objective by considering the cost/risk/quality trade-off between the service delivery options evaluated.
5.2 Our asset owners and managers make decisions based on evaluation of all viable options	Undertaking S17A reviews supports this because managers are required to consider all viable delivery options.

INSIGHT - PALMERSTON NORTH CITY COUNCIL SERVICE DELIVERY MODELS

Compared to other Local Authorities, Palmerston North City Council has a relatively different approach to service delivery. During the 1990s, most Councils chose to outsource a large portion of the asset management delivery functions, including operations, maintenance, capital works, design, and infrastructure planning. In contrast to this, Palmerston North City Council made an intentional choice to retain these functions in house. There has been some attrition over time (e.g. roading maintenance and laboratory services have since been outsourced) but predominantly the Council's service delivery model remains in-house.

Council aims to deliver its services as effectively and efficiently as possible. A range of tools are used to help achieve this aim.

The Council's Strategic Procurement Policy provides guidelines to ensure that a consistent procurement practice is applied across the organisation. This policy applies to all procurement activity undertaken by, or on behalf of, Palmerston North City Council. Procurement activities include all stages of the asset lifecycle from identification of needs through to the end of asset life. All procurement must link to programmes or outcomes in the 10 Year Plan or Annual Budget and provide best value for money.

Council also has a Contract Administration Manual that specifies how contracts for service delivery are composed and managed.

The Council's operations teams enable a mix of external contracts and internal service delivery of Asset Management activities. Council actively compares the cost of in-house delivery with the market through competitive tendering.

Large and specialist physical works that cannot be delivered by Council staff are undertaken through competitively tendered contracts and managed by staff in the Council's Project Management Office. In general, where in-house delivery is available, internal resources are used as the most cost-efficient service delivery method.

Council occasionally uses alternate delivery methods, including private-public agreements, public partnerships (e.g. Manawatu Prison partnership and Manawatu Mountain Bike Club) and community volunteering agreements. These are predominantly found in the Parks and Reserves, and Property activities.

Benchmarking

Council actively monitors the performance of contractors, consultants, and the Council's internal professional services team. Contracts specify the level of performance monitoring and include a quality assurance plan. Service agreements with contractors contain performance measures consistent with the Asset Management Plan and activity KPIs to achieve alignment between the operations and the KPIs in the Long-Term Plan.

External agencies are employed to carry out auditing of some infrastructure activities, predominantly transport. For example, Waka Kotahi undertakes technical and procedural audits of Council's transport asset approximately every three years with the next due early 2020 (delayed to mid-2020 because of Covid19).

Council takes part in the annual National Performance Review carried out by Water New Zealand. Council also takes part in the annual Yardstick and Park check reviews for the Parks and Reserves activity.

Service Delivery Models Review

In addition to the established approach, Council has review processes to ensure that service delivery approaches continue to be cost effective.

Council is required under Section 17A of the Local Government Act 2002 to review the cost effectiveness of all its services at least every six years or within two years of a major contract being reviewed (noting that some exceptions and other triggers apply). To give effect to this, Council has a rolling programme of S17A reviews.

Several infrastructure activities were reviewed between June 2016 and August 2017. All the reviewed activities were assessed as being most cost effectively delivered in-house. The

cemeteries, stormwater, water, and wastewater activities were excluded from the review as it was deemed inefficient to review them at this time. Similarly, the Central Energy Trust Arena, and swimming pools were also exempt due to recent comprehensive reviews.

A review of the transport activity is proposed during the 2018-21 period to reassess the current model and service delivery approach for asset management, professional services, contract management and road maintenance.

3.17.2 Asset Management Maturity Results – Service Delivery Models

The Asset Management Maturity results indicate that Council has some improvements to make regarding its Service Delivery Model practices. The current score overall of 39 against a target of 80 is generally due to having some delivery processes in place however there is also informal and inconsistent application of procurement processes.

Table 64: Maturity Rating for Service Delivery Models Overall

Service Delivery Models	Current Maturity		Target Maturity
	Score	Reasoning	Score
	39	Council spends in order of $100million annually with suppliers. There is a contract register which focuses mainly on recording key dates, but no procurement or contract management system. The procurement processes appear to be informal and inconsistently applied.	80

Table 65 shows the Service Delivery Models maturity score by asset activity. The highest performing activity with a 30-point difference is the Parks and Reserves activity with a current score of 50 against a target score of 80. While the lowest performing activity with a 55-point difference is the Property activity.

Table 65: Maturity Score for Service Delivery Models by Activity

Activity	Current Maturity		Target Maturity
	Score	Reasoning	Score
Roading and Parking	40	Challenges managing contractor performance (lack of mechanisms in contract, stretched staffing resources).	80
Water Supply	40	Generally good practice but not applied consistently.	
Wastewater	40		
Stormwater	40		
Parks and Reserves	50	Recent restructure included delivery approach review.	
Property	25	Informal arrangements with large number of contractors with outstanding work to rationalise approach to procuring services.	
Rubbish and Recycling	40	Contracts in place for key external providers.	

3.17.3 Improvement items - Service Delivery Models

The following improvement projects have been identified to address the gap between the current maturity score (39) and the target maturity assessment score (80).

Table 66: Improvement items for Service Delivery Models

Improvement Item	Priority and Timeframe	Person Responsible
Develop pre-approved procurement panels and formalise contracts with more clearly defined KPIs and monitoring	High Year 2	Manager Project Management Office (PMO)
Develop contract management system capabilities	High Year 2	Manager PMO
Develop procurement processes within the Project Management Office	Medium Year 2	Manager PMO
Review the threshold for formal tendering and quotes from the market	Medium Year 2	Manager PMO

3.18 Audit and Improvement

3.18.1 Introduction

Auditing and improvement planning are important asset management practices that assist Asset Managers to develop and implement continuous improvement programmes. Being responsive to change and improvement enables Local Authorities to effectively deliver their asset management objectives. Required improvements to asset management practices can occur for several reasons including, innovation and new technology, changes in governance and regulation, and meeting customer expectations.

Asset management maturity is often used as an assessment tool to determine an organisation's asset management practices are appropriate for the level of risk it faces. Organisations set appropriate maturity target scores and then assess current maturity practice. A range of improvement projects aim to reduce the gap between the current maturity score and the target score over time.

Table 67: How Audit and Improvement Supports our Asset Management Objectives

Asset Management Objective	Audit and Improvement
2.1 Our Asset Planning Division and Asset Management Steering Group provides leadership and coordination of asset management practice across the Council	The Asset Planning Division lead the development, delivery and reporting of the Council-wide asset management improvement plan.
2.2 We use consistent asset management processes across Council	A key facet of the Council-wide improvement plan is to develop and implement consistent processes to support advancement of asset management maturity.
2.5 The Executive Leadership Team recognises the importance of Asset Management and adequately resources the Asset Management system	The development and justification of projects in the improvement plan drive conversation with the Executive Leadership Team about the importance of Asset Management improvement and the risks

	associated with not improving practice over time.
2.6 We seek cross-discipline and collaborative input into our asset management planning	Our asset management improvement programme takes a corporate lens and is integrated with other business improvement taking place at Council.
2.7 We lead an organisational culture of continuous improvement in asset management	We directly support this by front footing the Asset Management improvement conversation in relevant parts of the organisation.
3.7 We continually improve our understanding of our assets	Our asset management improvement plan identifies the actions needed to close any gaps in our asset knowledge.
4.1 We ensure that appropriate levels of asset management maturity are defined	Our three yearly Asset Management maturity reviews, which define target maturity levels, directly support this objective.
4.3 We strive to close identified asset management maturity gaps over time	The development and delivery of an improvement plan directly supports this objective.
4.5 We gain recognition for our evolving Asset Management practice	Proactive delivery of an intentional improvement plan is key to achieving an evolving Asset Management practice.
5.1 We consider the trade-off between risk, cost, and service levels	We prioritise improvement projects based on costs and benefits.
6.1 Asset Management Plans are complete and at the agreed level of maturity	The level of maturity of our Asset Management Plans is formally assessed.
6.5 We develop and deliver improvement programmes in our Asset Management Plans that address prioritised maturity gaps	The improvement programmes in our asset management plans list all the actions required to close identified maturity gaps, prioritised and resourced based on benefits and costs.

INSIGHT PALMERSTON NORTH CITY COUNCIL - AUDIT AND IMPROVEMENT

Auditing

Palmerston North City Council assesses its asset management maturity every three-years. The assessment is undertaken by an independent assessor and provides insight into the current asset management practices and identifies the improvements needed to advance asset management practice in the future. In the past different assessment methodologies had been used to assess asset management practices, producing varying results that have not been directly comparable. We recognise that a consistent assessment will better position Council to more accurately monitor progress and undertake trend analysis. We plan to develop and document an assessment methodology to assist with consistency and ensure Council obtains maximum value from each assessment.

We are in the process of introducing a raft of significant changes to Asset Management practices at the Palmerston North City Council. Many of these changes are reflected in this Strategic Asset Management Plan and the Asset Management Plans. Guidance and continuous improvement assist us to improve our practices.

Asset Management Plans are also audited by Audit New Zealand as part of the Council's 10-year plan preparation processes.

Improvement

We are developing an improvement register to track identified improvement projects. This will include improvement projects for both the Asset Planning Division and individual activities. Items on the register will include resourcing requirements (even if only indicative), a responsible person, the priority and timeframes.

The priority of the projects will initially be assigned by the project author and relevant budget manager. We have yet to determine the constraints or prioritisation method for the overall improvement programme, but we aim to be more successful delivering our improvement programmes than previously.

Oversight of the total improvement programme will be the responsibility of the Asset Management Steering Group. The Steering Group will monitor progress of the prioritised improvements against delivery milestones and will report this to the Finance and Audit Committee.

3.18.2 Asset Management Maturity Results – Audit and Improvement

The Asset Management Maturity results indicate that Council has some improvements to make regarding its Audit and Improvement practices. The current score overall is 30 against a target of 80 due to the absence of a consolidated, prioritised improvement plan across Council.

Table 68: Maturity Rating for Audit and Improvement Overall

Audit and Improvement	Current Maturity		Target Maturity
	Score	Reasoning	Score
	30	There are improvement sections within each Asset Management Plan. Improvement actions have been documented along with the resources, responsibility and timing. The relative priority of the actions is not clear. It is uncertain whether the actions have been funded, or not. The improvement actions have not been consolidated into one action plan across Council. Improvement actions need to be monitored and reported to the cross functional asset management group.	80

Table 69 shows the Audit and Improvement maturity score by asset activity. All activities have a maturity score of 30 which is a 50-point difference from the maturity target score of 80. Given the maturity assessment rating Audit and Improvement is a priority improvement area for Palmerston North City Council.

Table 69: Maturity Rating for Audit and Improvement by Activity

Activity	Current Maturity		Target Maturity
	Score	Reasoning	Score
Roading and Parking	30	Asset Management improvement plan is documented but not implemented or monitored.	80
Water Supply		The Asset Management Plan is largely ignored. Need to review outputs from this review and develop a three-waters improvement plan and input into organisation wide improvement plan.	
Wastewater			
Stormwater			

Parks and Reserves		Asset Management improvement plan is documented but not implemented or monitored.	
Property		Improvement opportunities are listed in the Asset Management Plan but are not operationalised. Improvement is happening despite this. Value in adopting an Asset Management Steering Group approach to gain wider organisational buy in.	
Rubbish and Recycling		Asset Management improvement plan is documented but not implemented or monitored.	

3.18.3 Improvement items - Audit and Improvement

The following improvement projects have been identified to address the gap between the current maturity score (30) and the target maturity assessment score (80).

Table 70: Improvement Items for Audit and Improvement

Improvement Item	Priority and Timeframe	Person Responsible
Establish a formal organisational improvement plan based on the recommendations in this report and other sources. The plan should show responsibilities, milestones, and budgets.	High Year 1	Manager Assets and Planning
Establish a formalised monitoring and reporting system on asset management improvement progress.	High Year 1	Manager Assets and Planning

4. Strategic Issues and Impacts

4.1 Introduction

Council seeks to understand how future changes could impact on the city's assets and the demand for services. When we understand what is driving changes we can more accurately plan for the future, develop assets to cater for growth, and consider levels of service that meet our community needs. In this section we identify strategic issues and how they may impact on asset management planning and levels of service. These are:

- Council Strategy
- Population Growth
- Household Growth
- City Growth - Residential
- City Growth - Industrial
- Economic Growth
- Legislation, Policy and Guidelines
- Technology Advances
- Customer expectations
- Iwi partnerships
- Sustainability and the effects of climate change
- Natural hazards and adverse weather events.

The impact of these factors on each activity is described in the Part B – Asset Management Plans

A note to the reader:

This section of the Strategic Asset Management Plan refers to Council's Strategic Direction 2018, Assumptions, and other strategic documents. Elected Members have confirmed the Vision and Goals developed for the 2018 10 year Plan will be retained for the 2021 10 Year Plan. Strategies and Plans are being reviewed and consolidated by the Strategy and Planning Unit and will be confirmed by Elected Members in August 2020.

The Strategic Asset Management Plan and review of Asset Management Plans are updated now, on the understanding that further updates and iterations may be required as part of the evolving Long Term Plan process. As far as practically possible, new information will be incorporated into this document. Noting that the ability to incorporate updates will be constrained by the Long-Term Plan project timeline and the auditing process.

At the time of writing this document (May 2020) New Zealand is grappling with the impacts of the COVID-19 pandemic. Palmerston North City Council has planned to invest $3.5B worth of capital project investments in the city and region over the next ten years – this will continue as planned. However mid-April Council proposed ten infrastructure projects (for full or partial funding, totalling $124.9M) in response to central Government's 'Shovel Ready Projects' funding initiative to regenerate economic growth. Securing funding for some of these projects will help kick-start the local economy, bring the community back into the city, and provide confidence for private sector developers and investors to continue to invest in the city's growth. If the funding is approved this will result in changes to the programme of works and other related documents. Depending on the amount and nature of change updates to this Strategic Asset Management Plan may be required.

4.2 Council Strategy

Council utilises strategy to provide the ideal conditions to support growth and development and provide guidance to operational delivery.

4.2.1 Our aspiration

Council will provide smart infrastructure in a considered and timely way to support the city's growth aspirations.

4.2.2 Our future- what do we think it will look like?

Despite potential economic set-backs due to the impacts of COVID 19, Palmerston North is still set to expand, and Council wants to accelerate the city's growth and prosperity. Having a ready supply of land with infrastructure to support the city's growth will ensure Council can harness new development opportunities and increase Palmerston North's competitiveness. Council will provide infrastructure in a timely way while managing the financial risks of providing too much infrastructure in multiple locations. Council recognises that integrated land use planning and infrastructure provision can be a powerful economic development tool.

4.2.3 What's driving change?

Council's vision for Palmerston North is *Small City Benefits, Big City Ambition - He iti rā, he iti pounamu* where every resident is able to enjoy the benefits of living in a small city yet have advantages of a big city. Palmerston North City Council has a clear strategic framework that outlines its aspirations for strong growth and directs where growth will occur.

4.2.4 What are our assumptions?

That the Council's current Strategic Direction will remain largely unchanged. At the time of writing this document (April 2020) Council was considering its ongoing recovery response to the COVID-19 pandemic. The Council will review its operational and capital works programme budgets in June 2020 to respond to the challenges facing the city post-Covid-19.

4.2.5 What other scenarios have we considered?

Council may choose to change its Strategic Direction. Any significant change to Council's Strategic Direction that impact on the assumed growth scenario and requirements of infrastructure will require updates to the Strategic Asset Management Plan, Asset Management Plans and underlying Assumptions.

4.2.6 Our response

Good asset management practice will ensure every asset based service that Council delivers to our community will contribute to achieving the Vision, Goals, Strategies and Plans that form the strategic direction our Councillors have set for the City.

4.2.7 What do our strategies say about this?

Council's Strategic Direction
Council has five strategies that show how it will achieve the vision *Small City Benefits, Big City Ambition- He iti rā, he iti pounamu.* As shown in Table 71, each strategy relates to one of the five goals for the city. This is our Strategic Direction:

Table 71: Council's Strategic Direction

Goal	Strategy	Overview and Direction
Goal 1: An innovative and growing city	Innovative and Growing City Strategy	We are a growing city, and we need to plan for this growth. We need to make it easy to get around, and make sure we cater for everyone's needs as the city expands. We want new industries to create employment to expand our city's opportunities. We want to drive innovation by providing support and infrastructure to enable diversification. We intend to stand out by becoming a low carbon economy. Our target is 12,000 more jobs by 2031.
Goal 2: A creative and exciting city	Creative and Liveable Strategy	We want to offer a great lifestyle in a city that reflects the diversity of city communities. We want to support the arts to flourish and our cultural institutions to thrive as they respond to our communities' needs and interests. We want everyone to have opportunities to be active and to experience the advantages of a big city without hassle or cost. Our target is a score above 65 in the Creative Cities index by 2031.
Goal 3: A connected and safe community	Connected Communities Strategy	We want to be a city everyone feels connected and included. We want to be a safe city, where people have access to the housing they need We want communities to have access to accessible and appropriate social support. We understand we have to work with our partners towards achieving our shared goals. Our target is that more than 75% of people consider Palmerston North is a welcoming and inclusive city with a good standard of living.
Goal 4: An eco-city	Eco City Strategy	We understand that Palmerston North has a responsibility to respond to climate change for the benefit of everyone. Our goal is for the city to decrease carbon emissions and reduce our ecological footprint. We want to protect and enhance our natural and built environments, accommodate growth through intensification, and support active transport. Our target is 30% reduction in CO2e emissions in Palmerston North by 2031.
Goal 5: A driven and enabling council	Driven and Enabling Strategy	We will work as one team with our community to be a catalyst and enabler of change in the city. Our goal is to do things in a simpler, faster, and better way for the overall benefit of our community.

		Our target is to become a Local Government New Zealand "A-Rated" Council by 2028.

Significant Projects

Council is committed to making its vision for the city, a reality. Council uses strategy to make decisions about the courses of action and allocation of limited resources that will best help it towards achieving the vision.

Table 72: Catalyst Projects

Significant Projects	Initiatives
Sustainable growth	Industrial Nature Calls: Wastewater Treatment Plant Upgrade Central North Island Distribution Hub: Regional Freight Ring Road, Regional Freight Hub, Airport and (multi-modal) infrastructure to enable industrial growth; Longburn and North East Industrial Zone (NEIZ) Water storage and drainage (city-wide).
	Residential Infrastructure for residential growth at Whakarongo (including our own development), Kākātangiata (formerly City West), Aokautere, Napier Road, Roxburgh Crescent, Ashhurst and urban intensification.
City Centre Transformation	Streets for People: City Centre Streetscape Plan Civic and Cultural Precinct Master Plan (Te Manawa and Library) Central Energy Trust Arena Master Plan and projects Heritage protection package* City Centre Business Improvement District*
Manawatū River Network	Central Energy Trust Wildbase Recovery Centre Victoria Esplanade Masterplan and projects He Ara Kotahi bridge and shared pathway Manawatū River shared pathway (Ashhurst to city) Te Apiti Biodiversity and recreation Ahimate Park (Waitoetoe) Te Motu-o-Poutoa (ANZAC Park).
City-wide Partners	Rangitāne, Central Economic Development Agency (CEDA), Central and Local Government, Massey University, Research and Food HQ, NZ Defence, MidCentral, DHB and Airport.

*Across city centre

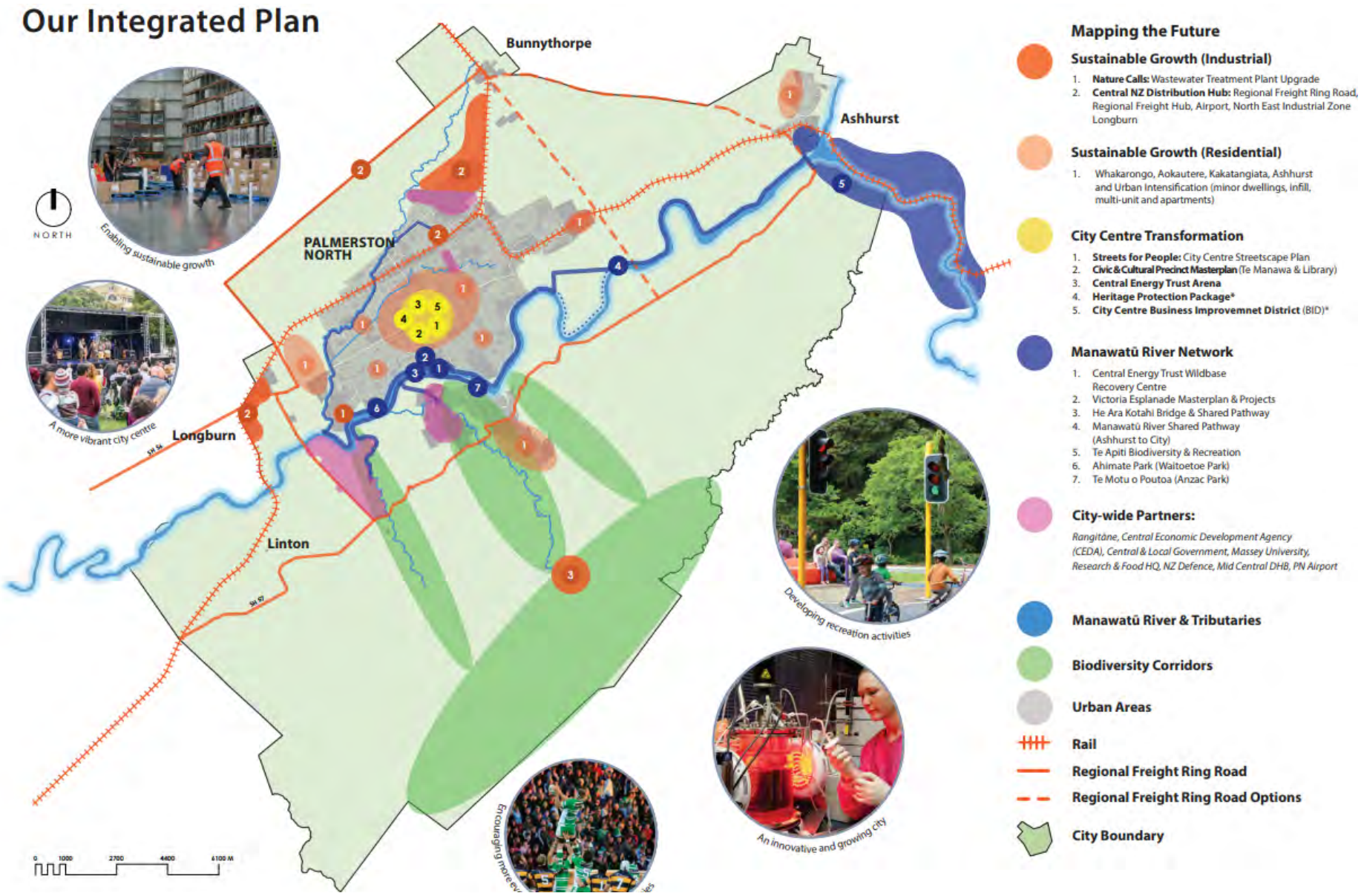


Figure 12: City's Integrated Spatial Plan

Part of Council's Strategic Direction are a range of strategic documents and plans that together form the city's integrated planning and infrastructure framework. The most relevant to the Strategic Asset Management Plan include:

The Innovative and Growing City Strategy is Council's overarching development strategy outlining vision, goals and priorities. The Strategy has been developed to achieve the City Goal 1: An innovative and growing city. Priorities identified include "Priority 2: Providing infrastructure to enable growth..." and the importance of supporting an 'innovation economy' to underpin growth in the future. City planning frameworks are in place for the following development types:

- Housing
- Office and retailing
- Industrial
- Rural

While growth is important, Council is mindful of the impact growth can have on the environment. The Eco City Strategy outlines a balanced approach to growth and infrastructure management that aims to enhance the environment and ensures that growth is sustainable. One of the priorities identified is to invest in infrastructure that serves to protect, enhance and preserve the environment. An example of this in practice is the Council's Best Practicable Option for the Wastewater Treatment Plant Project. The aim of this project is to find the best Wastewater Treatment Plant replacement option that balances the needs of the city's growing service needs with the high value placed on the environment.

One of the key enablers of growth is the District Plan. The District Plan gives effect to four land-use strategies through the City Planning Framework that covers housing, commercial (office and retailing), industrial and rural. The strategies establish the best use of land and direct where private sector investment should occur based on several land use zones. Asset Management Plans give support to the strategies and link into the 10 Year Plan for funding of infrastructure.

Shaping and influencing growth developments is a key focus for Council. Council uses and promotes the principles of good urban design to have high quality public and private developments. The Urban Design Plan includes initiatives that will ensure that within Council there is a multi-disciplinary approach to improving the quality, planning, and delivery of major Council change projects. Council also intends to work more closely with the development community to improve their understanding of the principles and value of good urban design. Other strategies that influence the nature of development include the Connected Communities Strategy. This Strategy recognises that cities are more than just a collection of physical formations but provide for important social networks. The development of assets like community facilities and social housing are also valuable opportunities to promote and develop community connections, and thereby enhance community social wellbeing.

The Infrastructure Strategy identifies significant infrastructure issues for the local authority over a 30-year period and identifies the principal options for managing those issues and the implications of these options.

The Infrastructure Strategy is informed by Council's Strategic Direction and the Asset Management Plans. The significant overarching infrastructure issues identified in the 2021 Infrastructure Strategy are:

- Three Waters Reform
- Wastewater treatment upgrade
- Provision of a regional freight ring road including an additional river crossing
- Developing new infrastructure for growth
- Renewal and maintenance of infrastructure
- Stormwater quality and capacity
- Applying urban design
- Facilities to encourage alternative transport modes
- Security of water supply
- Increasing resilience of infrastructure
- The impact of climate change
- Modernising Central Energy Trust Arena
- Using Council land for housing

- Earthquake strengthening
- Construction industry capacity
- Asset performance and condition

These issues have been addressed in subsequent Council strategies and policies.

The City Growth Plan provides strategic direction to addressing growth. The purpose of the Plan is to provide infrastructure in enable growth and a transport system that links people and opportunities. This reflects the Councils' goal to provide smart infrastructure to support growth in a timely way and assist the City with its goal of an innovative and growing city. The Council also has an Industrial Growth Strategy and Commercial Land Use Strategy that inform the market's investment decisions regarding where growth and supporting infrastructure will occur.

The Long-Term Plan rationalises the achievement of goals according to the Council's priority and budgetary restraints, providing the authoritative forward plan for the management of the Council's infrastructure assets.

Other related Plans, Policies and Frameworks
The following plans and frameworks also assist the Council to ensure that development aligns with the Council's Strategic Direction. Further detail about how each document this fulfils can be found in Appendix Six:

- Urban Design Plan
- Manawatū River Framework
- City Centre Framework
- City Streetscape Plan
- Development Contributions Policy
- Play Policy (community consultation occurring mid-2020)
- Bylaws (those that allow for the creation of Council assets and subsequent management).

4.2.8 What do our policies say about this?

Council is in the process of developing an Asset Management Policy. The Policy intends to establish expectations and guidelines for the strategic management of Council's assets by:

- Providing a consistent approach to asset management within Council;
- Demonstrating that Council is managing its assets in a sustainable manner to deliver appropriate levels of service to current and future generations; and
- Ensuring that decisions and plans relating to assets are robust, defendable and reflect Council's Strategic Direction.

4.2.9 What is our Asset Management Response?

Asset Management Plans demonstrate how the City's infrastructure assets are being developed and managed to deliver services to the community in a sustainable and cost-effective way. They include information about the Council's activities, assets, levels of service and cost of providing service and are key inputs into the 2021-31 Long Term Plan. Some of the key principles and objectives of the Asset Management Plans is that assets are managed to support Council's Strategic Direction. This includes ensuring that there is enough system capacity available at the right time.

Council has conducted an Asset Management Maturity Assessment using the 16 elements of the International Infrastructure Management Manual (IIMM) Maturity Assessment Model 2015. The Assessment 5-state scale includes: Aware (0-20), Minimum (21-40), Core (41-60), Intermediate (61-80) and Advanced (81-100). Council's assets are all currently managed at the Core level. Council has a target of moving all assets to an Intermediate level of asset management. An Asset Management Improvement Plan has been developed and will resourced and implemented by all units of Council.

4.3 Population Growth

The city's population is growing. By 2051 we will have 30,052 more people living here. Our total population will be 121,664.

4.3.1 Our aspiration

That our infrastructure is provided in a timely way to support our population growth and enables us to provide all residents with appropriate levels of service.

4.3.2 Our future – what do we think it will look like?

Population changes

The population of Palmerston North is predicted to grow at a moderate rate overall and is most likely to continue growing at this rate over the 30 years 2021-2051. Over this period the city will grow by a total of 30,052 people or 1001 people on average per annum. The rate of population growth fluctuates over this period from 1.6% in 2021 to 0.7% in 2051.

Table 73: Population Projections 2021-2051

Year	Median projection	People	%
2018	87,320		
2021	91,612	+1,431	1.6
2026	97,833	+1,244	1.3
2031	102,505	+934	0.9
2036	107,111	+921	0.9
2041	112,594	+1,057	1.0
2046	117,479	+1,017	0.9
2051	121,664	+837	0.7

Source: Infometrics for Palmerston North City Council (March 2020)

4.3.3 What is driving change?

Births and deaths

Population growth is partially due to natural increases, where the number of births is greater than the number of deaths. Between 2013 and 2018 natural increases were 2,560 or an average of 512 per annum.

International net migration

One of the main reasons the city's population is growing is due to increases in international net migration to Palmerston North. More people from overseas are currently coming to live in Palmerston North than leave Palmerston North. Graph 1 shows that during 2014-2018 on average 1,737 people per annum have arrived in Palmerston North compared to the 1,224 people per annum that have left Palmerston North. Over the past 5 years there has been a continued upward trend in the numbers of overseas arrivals rising from 414 in 2014 to 709 in 2018.

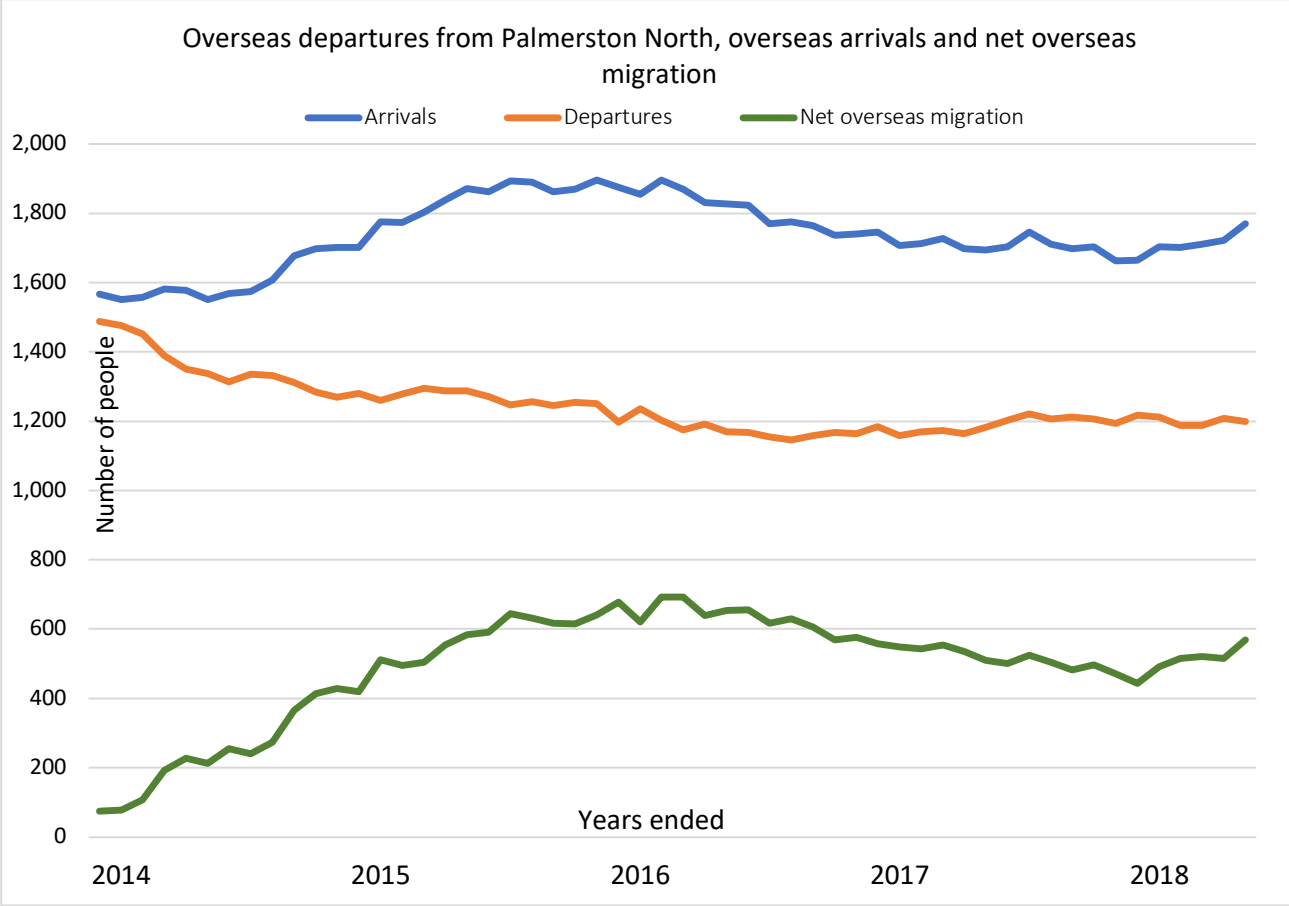


Figure 13 Graph of overseas departures from Palmerston North and arrivals to Palmerston North 2014-2018 Source: Statistics NZ

Refugee resettlement

Some of the city's population growth is due to refugee resettlement. In 2006, Manawatu was designated as a refugee resettlement location and committed to take up to 180 refugees per annum. In the future there is likely to be fewer refugees settling here as there are now more refugee resettlement centres in New Zealand that can accommodate refugees. It is expected that refugee arrivals in the city will drop from 180 to around 150 people a year once Horowhenua and Whanganui start to accept refugees in 2020. Generally, most of the refugees that come to the Manawatū region are resettled into the city.

Investment

There is a significant increase in central government investment that is occurring in Palmerston North and the surrounding region. This is expected to continue for at least the next 15 years (see Section 4.7 Economic Growth for further detail). These major construction projects are expected to bring a sizable increase in the construction workforce in the region.

Boundary Change Proposal

The city's neighbouring villages of Tokomaru and Opiki have presented a boundary change proposal to the Local Government Commission for consideration. Currently these villages are in the jurisdiction of Horowhenua District Council but consider they have closer connection to Palmerston North City Council and access most services here. The proposal will go out for public consultation. If the boundary change proceeds the population of Palmerston North could possibly increase by just over 1,000 people and Palmerston North City Council will need to consider how best to provide services to Tokomaru and Opiki communities. In the meantime, Council will continue to monitor the progress of the proposed boundary change and work with the Local Government Commission.

4.3.2 What are our assumptions?

Council is assuming that the population will increase in line with the population projections.

4.3.3 What other scenarios have we considered?

The Council bases the growth projections on a medium growth scenario. Other scenarios that are considered include population projections with an additional +20% margin. These projections are used to model capacity to service household growth and are discussed in section 4.4 Household Growth.

4.3.4 What do our strategies say about this?

The Innovative and Growing City Strategy is Council's overarching development strategy outlining vision, goals and priorities. The Strategy has been developed to achieve the City Goal 1: An innovative and growing city. Council takes its responsibility seriously to manage and renew for the future the city infrastructure that the community relies on for its health and wellbeing. The Council aims to take an innovative and agile approach to infrastructure planning and ensures that growth is sustainable.

The City Growth Plan provides strategic direction to addressing growth. The purpose of the Plan is to provide infrastructure in enable growth and a transport system that links people and opportunities. This reflects the Councils' goal to provide smart infrastructure that will support growth in a timely way and assist the City with its goal of an innovative and growing city.

As noted in the Long-Term Plan 2021-31; if growth is less than predicted, Council will revisit the timing of the infrastructure development programme. This could result in some projects being deferred and expenditure being lower than forecast.

As with all long-term prediction's uncertainty increases over longer time frames and actual figures can change from the forecast figures. To overcome this uncertainty Council monitors actual growth and changes to the population. Any changes to work programmes are reflected in subsequent Asset Management Plans, Annual Plans and Long-Term Plans.

4.3.5 What is our Asset Management response?

Changes in population can increase pressure on infrastructure assets and services. Council predicts and then monitors population growth to inform Asset Management Planning, the development of assets, provision of services and the timing of projects. A range of asset management software is used to store asset data and complete forecast modelling. This enables Council to have a good understanding of its assets and determine if and how the assets can respond to increasing demand. Data sets require continuous updating and improvements to remain relevant.

4.4 Household Growth

The number of households in the city is increasing. By 2051 there will be an additional 12,970 houses here.

4.4.1 Our aspiration

That our infrastructure assets have the capacity to accommodate household growth and provide appropriate levels of service.

4.4.2 Our future- what do we think it will look like?

Household growth

The number of households in Palmerston North is growling moderately and is most likely to continue growing at this rate over the 30 years 2021- 2051. The number of households will increase from 34,260 in 2021 to 47,230 by 2051. This represents a total increase of 12,970 houses or an average of 432 new houses per annum. The rate of household growth fluctuates from its lowest in 2051 of 0.8% to its highest 1.5% in 2021. The projections include an additional 20% (2021-31) and 15% (2031-51) to accommodate additional housing capacity required by the National Policy Statement on Urban Development Capacity.

Table 74: Household Growth Projections 2018-2051

Period ending	Households	Number of additional households (avg annual)	Rate of change %
2018	32,773		1.2 actual 2013-18
2021	34,260	496	1.5
2026	36,799	508	1.4
2031	39,305	501	1.3
2036	41,419	423	1.1
2041	43,432	403	1.0
2046	45,394	393	0.9
2051	47,230	367	0.8

Source: Infometrics for Palmerston North City Council (March 2020) (Note: Growth assumptions will be confirmed by Elected Members in September)

4.4.3 What is driving change?

Population increases

The number of future households will increase to accommodate the growing population of Palmerston North. By 2051 we will have 30,052 more people living here. Our total population will be 121,664 people.

National Policy Statement on Urban Development Capacity

Council has a responsibility under the requirements of the National Policy Statement - Urban Development Capacity to provide sufficient housing and business land development capacity. More available land will assist Council to meet the strong demand for housing and residential sections (further discussion on the requirements is provided in the following section City Growth – Residential).

Appeal and affordability

Palmerston North is an attractive, well-appointed city and offers lifestyle, education, employment and business opportunities typically available in much larger cities. Its many positive attributes provide an appealing small city lifestyle option with big city advantages for those that live here and for those people seeking to relocate. Housing affordability in the city compares favourably

with most New Zealand high and medium growth urban areas, although is still rated as seriously unaffordable in other surveys[9]. The price-cost ratio for the city also compares favourably with most high and medium growth councils although has deteriorated since 2015 and is expected to deteriorate further in 2019[10].

Social housing
Providing enough housing for those with social housing needs has become a topical issue for both Local and Central Government. A key influence on short to medium term household growth in the city will be the extent to which the government responds to the growing waiting list for social housing it commits to build in the city. Council will continue to monitor this situation.

4.4.4 What are our assumptions?

Council is expecting that the rate of household growth will follow projections.

4.4.5 What other scenarios have we considered?

No other specific scenarios have been considered. Council continually monitors the supply and demand of urban development. If the rate of growth is different from what is predicted, changes are made to the timing of infrastructure growth programmes.

4.4.6 What do our Strategies say about this?

Council has developed a Housing and Future Development Plan in response to the directives of the National Policy Statement - Urban Development Capacity and to further its own goals of enabling growth and employment opportunities. The Housing and Future Development Plan aims to:

- identify additional opportunities for housing to meet projected growth demands.
- identify detailed infill and redevelopment capacity opportunities within the existing urban area and alternative policy mechanisms to drive intensification.
- identify specific opportunities to utilise Council property for housing.

Outcomes include:

- Council is proactive in promoting affordable housing
- Housing remains more affordable than most cities.

4.4.7 What is our Asset Management response?

When Asset Management Planning, Council uses household growth projections to estimate the amount of new housing that needs to be built in the city and the amount of infrastructure capacity required to service new and existing housing. Council is continually evaluating the future demands for services and how these might be met. The three-yearly review of the Asset Management Plans and the 10 Year Plan minimises the risk of development and expenditure not matching growth requirements.

[9] *Dermographia International Housing Affordability Survey.*

[10] *Price-cost ratio data gathered from Ministry of Business, Innovation and Employment (MBIE)/Ministry for the Environment (MfE) Urban Development Capacity Dashboard.*

4.5 City Growth - Residential

The city's footprint is growing. In the future there will be more greenfield development in the North, East and West of the City to provide for residential growth. Housing density may also increase with new infill housing development occurring throughout the city.

4.5.1 Our aspiration

- That our new infrastructure is in place to support greenfield development.
- That our existing infrastructure has enough capacity to support infill development.

4.5.2 Our future- what do we think it will look like?

More residential land is being developed to accommodate population and household growth. Future development areas indicated on the map below show development over the long, medium and short term.

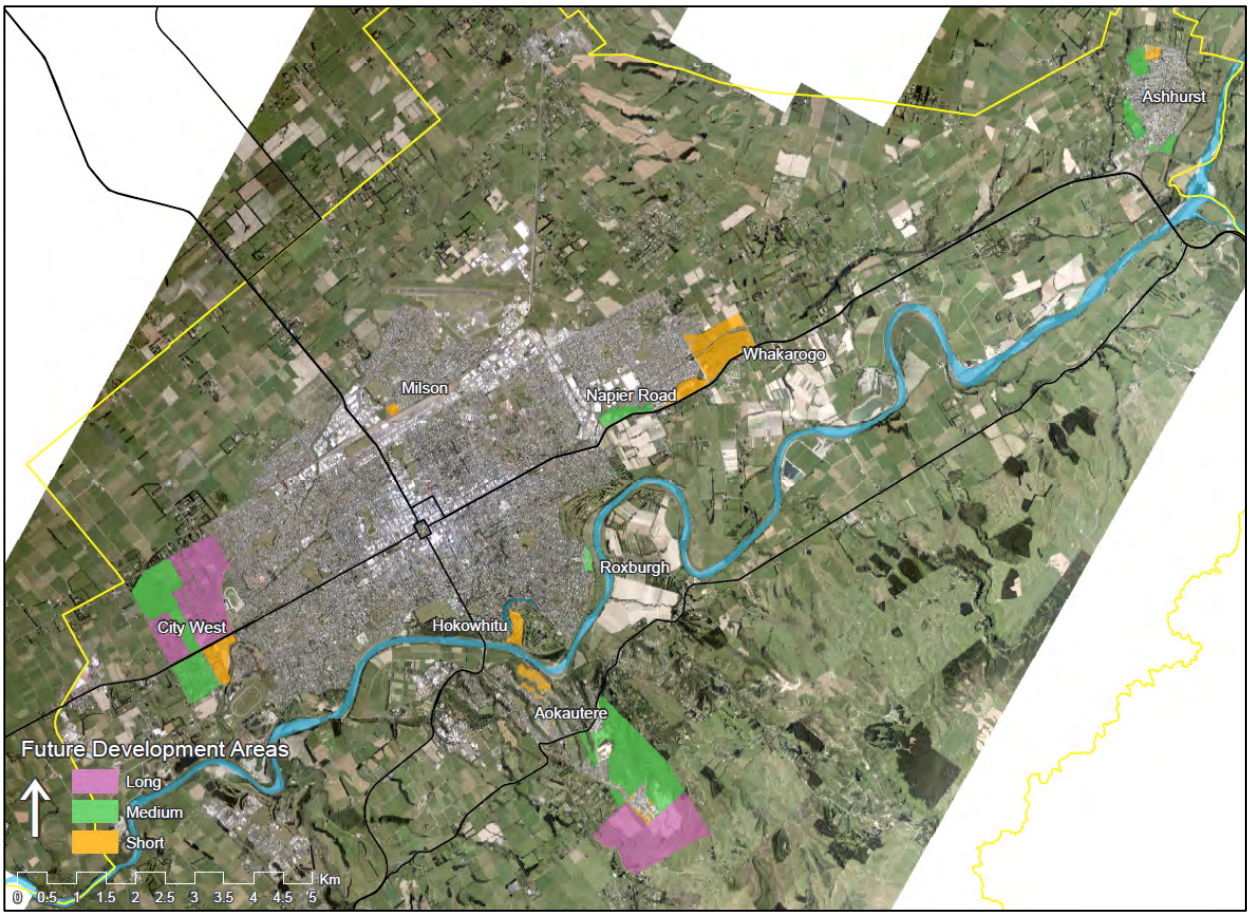


Figure 14: Future Development Areas Palmerston North

Long Term: 11-30 years

- Aokautere - the recent construction of a water reservoir has enabled further development capacity in this area providing options over the long, medium and short term (900 lots).

Medium Term: 4-10 years

- Kelvin Grove will undergo more development including Napier Road to Roberts Line (314 lots)
- Planning is underway to rezone Roxborough Crescent from its current industrial use to residential use (100 lots)
- In the West of the city, development identified for medium-long term greenfield housing will be initiated earlier than initially expected to meet demand. This will include the area bound by the Mangaone Stream, Te Wanaka Road and Pioneer Highway (Racecourse land) (2,500 lots)
- Development at Ashhurst will provide an option for affordable first homes (300 lots)
- There is also potential for a further 50 lots on Flygers Line, this is still to be confirmed.

Short Term: 0-3 years

- Zoning adjustments will occur to rural land located north and west of Ashhurst (300 lots) and at Fairs Road, Milson (30 lots)
- The land previously occupied by the Hokowhitu teaching campus has also been rezoned for residential development (130 lots)
- Rezoning is underway for the Racecourse land in City West to provide more short-term development options – Kikiwhenua (220 lots)
- Council wants new greenfield housing at Whakarongo brought to the market quickly. The Council will work closely with landowners and develop its own land at Whakarongo in preparation for building (500 lots).

For more detailed planning timeframes please refer to Appendix Five.

4.5.3 What is driving change?

Population and household increases

Increases in population and household growth are the main reasons driving demand for new residential development.

National Policy Statement on Urban Development Capacity

Palmerston North City Council meets the criteria and requirements of the National Policy Statement on Urban Development Capacity. The National Policy Statement states that local authorities with urban area resident populations of over 30,000 people shall, on at least a three-yearly basis, carry out a housing and business development capacity assessment. Furthermore, at any one-time Council must ensure there is sufficient housing and business land development capacity. Sufficiency is based on the following requirements:

Short-term	Development capacity must be feasible, zoned and serviced with development infrastructure.
Medium-term	Development capacity must be feasible, zoned and either: serviced with development infrastructure, or the funding for the development infrastructure required to service that development capacity must be identified in a Long-term Plan required under the Local Government Act 2002.
Long-term	Development capacity must be feasible, identified in relevant plans and strategies, and the development infrastructure required to service it must be identified in the relevant Infrastructure Strategy required under the Local Government Act 2002.

4.5.4 What are our assumptions?

Council is assuming that the types of residential development will remain constant for the next 30 years. This means that:

- 38% of all new houses will be within the existing urban area through infill subdivision
- 50% greenfield
- 12% rural.

Some of these assumptions rely heavily on final assessments of the appropriateness of the land for affordable development.

4.5.5 What other scenarios have we considered?

In the past, Council has considered other areas for residential growth. These areas include Cloverlea and Te Matai Road but have not proceeded due to various factors. Land identified for possible development goes through a rigorous resource management process and is subject to technical assessment to ensure that it is fit for purpose.

4.5.6 What do our Strategies say about this?

Council has completed a Housing and Business Development Capacity Assessment May 2019 and a Housing and Future Development Plan that will be implemented in accordance with the

National Policy Statement – Urban Development Capacity. The Plan identifies future housing growth options beyond those that have already been identified. Council is ensuring that residential land supply exceed demand by 20%. This means there is a constant supply of at least 1,800 greenfield residential sections available for development.

It is an important Innovative and Growing City Strategy goal that infrastructure capacity is provided to accommodate residential growth. Council will not approve any greenfield development to proceed until network infrastructure is provided. The location of new greenfield development is well established which means there is high level of certainty about the location of new infrastructure to service greenfield growth.

Council aims to review and update the District Plan in a proactive manner. The recently reviewed Residential Zone of the District Plan has enabled more opportunities to increase housing density in the city by allowing more infill and smaller housing options including:

- Multi-unit housing development
- Minor dwellings
- Minimum lot size reduced to 350m².

4.5.7 What is our Asset Management response?

Through the practice of Asset Management Planning Council must take into consideration the number of additional households expected over the next 30 years and determine if the city's infrastructure has enough capacity to accommodate the increase in households. For example, it is expected that the demand for stormwater drainage services will increase in line with household growth. Careful consideration is given to the staging of developments and the provision of infrastructure. Key to achieving this goal is collaborating with Strategy and Planning Team and aligning growth forecasts, developing spatial plans and determining future demand on asset-based services. Our Asset Management Plans are continually reviewed to respond to changing circumstances.

4.6 City Growth – Industrial

The city is poised for industrial growth. The recently formed North East Industrial Zone and Extension Area provides the City with competitive development options for a wide range of large industrial businesses to establish themselves here. Other existing industrial land options for small to medium industrial development exist in Tremaine Avenue and Longburn.

4.6.1 Our aspiration

That our new infrastructure is in place to support industrial growth in new areas, providing businesses with "spade ready land" and essential services.

4.6.2 Our future- what do we think it will look like?

More industrial businesses will be established in the city's industrial growth area, North East Industrial Zone (NEIZ) and Extension Area.

4.6.3 What is driving change?

The NEIZ is an appealing industrial area suitable for large-format freight, distribution and logistics activities and has excellent transport network connections. The zone is approximately 233 hectares in total and is highly accessible to the planned Waka Kotahi regional freight ring-road and neighbours the Palmerston North Airport.

To date there has been a good level of development and uptake of industrial land. As at July 2018:

- Approximately 51.7 hectares of NEIZ land is either developed or purchased with the intention to develop
- Council-owned water, wastewater, roading and stormwater infrastructure is in place
- The 2021-31 10 Year Plan contains $12m of infrastructure programmes to support development of the Extension Area including the construction of a water bore.

Figure 15: North East Industrial Zone and Extension Area

Plans for the development of a Regional Freight Hub (in excess of 170 hectares) in the NEIZ Extension Area and Bunnythorpe are also underway, made possible with $40 million of funding from the Provincial Growth Fund. KiwiRail announced the preferred site for the rail hub on 2 July 2020 and a rail designation for the land was notified for public submissions on 26 March 2021.

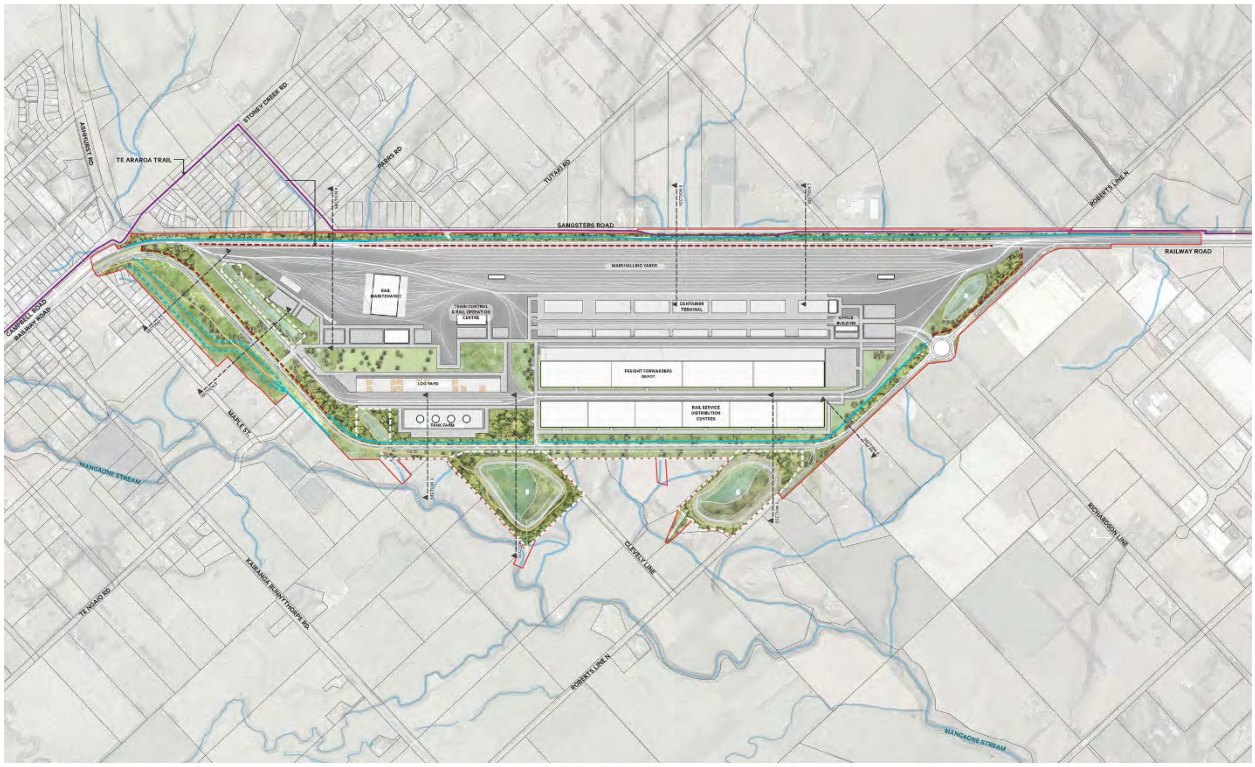


Figure 16: Regional Freight Hub

Other smaller industrial development options are available on the outskirts of the city, and at Longburn.

4.6.4 What are our assumptions?

Council is expecting development to continue at the North East Industrial Area and development to start in the Extension Area during 2021-23.

4.6.5 What other scenarios have we considered?

No other specific scenarios have been considered. The timing of infrastructure development will be monitored by Council and altered to meet the establishment of industry, as far as possible. It requires careful balancing as there is a risk that Council makes substantial investment for initial businesses, but the overall uptake is slower than expected. Council is able to mitigate this risk by entering into Developer Agreements to help with the timely provision of infrastructure when required.

4.6.6 What do our Strategies say about this?

It is an important Innovative and Growing City Strategy goal that Council provides infrastructure to enable new industries and new economies to develop. These in turn will create employment opportunities to sustain and grow our city. Land development can be cyclical in nature and is affected by many factors outside of Council's influence. One factor the Council can control is the timing of new infrastructure. Having "spade-ready land" can be a strong incentive for new development because it means that land is zoned, and network infrastructure is available.

The City Growth Plan provides strategic direction to address growth. The purpose of the Plan is to provide infrastructure in enable growth and a transport system that links people and opportunities. This reflects the Councils' goal to provide smart infrastructure that will support growth in a timely way and assist the City with its goal of an innovative and growing city. The Council also has an Industrial Growth Strategy and Commercial Land Use Strategy that inform the market's investment decisions regarding where growth and supporting infrastructure will occur. Council will undertake a collaborative planning exercise to direct future investment in rail in the north-east area and at

Longburn. Integrating rail to form a significant intermodal freight and distribution hub is a major strategic goal.

Council will continue to work with the private landowner of industrial land at Longburn. To enable further development the privately owned infrastructure will require an upgrade to meet Council's Engineering Standards. If this goes ahead it could affect development interest at Longburn. There is the possibility that the existing Fonterra Dairy and Goodman Fielder plants at Longburn may seek to discharge their trade waste to the City's wastewater treatment plant. Council is assessing both the network and treatment plant capacity requirements of this change as part of the Wastewater best practicable option project.

4.6.7 What is our Asset Management response?

Determining demand for different services is a critical Asset Management Planning technique. The capacity required to service different types of industry can vary significantly. Food processing or pharmaceutical activities place a heavy demand on water and wastewater, while freight and distribution activities place a heavy demand on roads. Council aims to have a good understanding of the industry and any development that is likely to occur, and the industry it would like to attract, so it can appropriately plan for infrastructure. Oversizing infrastructure is inefficient while under sizing may mean the city could miss development opportunities. Meetings with potential developers and industry groups provide Council with opportunities to be proactive about industrial land developments.

4.7 Economic Growth

Palmerston North will have strong economic growth for the next fifteen years.

4.7.1 Our aspiration

Our infrastructure positions the City as a competitive option for business and enables economic growth opportunities.

4.7.2 Our future – what do we think it will look like?

Palmerston North is the major economic hub for the Manawatū–Whanganui region for education, research, health services, retailing, defense, business services such as banking and finance, insurance, and professional services, government administration, agribusiness and logistics.

Creating Prosperity
The city's growing economic influence within the region is also demonstrated by the number of people commuting to work in Palmerston North from surrounding local authority areas, and the expansion of the city's labour market over the past 25 years. With 34% of the regional population, Palmerston North has 48% of jobs and 49% of earnings for the region. Projected growth in the economy will lead to more industrial, commercial and residential development, all of which requires additional infrastructural capacity. By 2031 the Council, along with other partners, aims to have created an additional 12,000 jobs here. Key industry employment sectors include health care and social assistance, public administration and safety, retail and tourism, logistics, and research.

Regional Investment Projects
Accelerate25 notes the significant economic development potential of the Manawatu-Whanganui region that could come about through:

- Focusing on distribution and transport connections, to make it easier to get business done
- Completing the regional freight ring road will reduce car and heavy vehicle transport flows in the main urban area and improve links to national and international markets
- Improved air service options and connectivity for passengers and freight will benefit the region, by improving economic viability for businesses in the city and wider region, increasing tourism expenditure and boosting the city's image.

Palmerston North city plays a key role in realising these economic development opportunities. While all opportunities are important, Council is particularly interested in the development of a Regional Freight Ring Road, including an additional crossing on the Manawatu river. This is a key strategic goal.

4.7.3 What is driving change?

Council has been collaborating with other Councils and Waka Kotahi for more than a decade to develop the Regional Freight Ring Road. It is noted as a key development in the Joint Land Transport Study 2010 and seeks to address a number of land-use and transportation issues, including:

- Diverting state highway traffic out of the city centre
- Reducing heavy traffic in urban areas
- Reducing congestion on eastern transportation corridors in the urban area
- Servicing urban growth, including in the Whakarongo, North East Industrial Zone and Kākātangiata (City West) areas
- Supporting existing activity and economic development opportunities at the airport, FoodHQ and Linton Defence
- Realising the benefits of additional river crossings, including improved resiliency and connectivity
- Freeing up capacity for alternative transportation modes in urban areas by reducing potential conflicts
- Providing clear transportation signals for inter-regional traffic
- Promoting regional economic development
- Gaining opportunities to link with other modes, including rail and air
- Improving the safety, efficiency and effectiveness of the transportation network.

In March 2018 Waka Kotahi announced its preferred option to replace the state highway through the Manawatū Gorge, arising from technical and economic investigations. Alongside this, Waka Kotahi also committed to advancing investigations for a Rural Freight Ring Road, including a second bridge across the Manawatū River, which from the earlier Manawatū Gorge assessments showed would be the type of investment to unlock regional economic development opportunities.

Capital Investment Projects

A major increase in public and private sector capital investment is providing a significant boost to economic activity and population growth in the city. As shown in Table 75 the development and construction projects planned for Palmerston North and the Manawatū region amount to $3.5 - $4.5 billion of construction activity to 2041. Major projects which have been confirmed or are already under development include:

Table 75: Capital Investment Projects 2017-2030

Development	$ million	Timing
Te Ahu a Turanga (Manawatū Gorge)	650	Start 2020
Linton and Ohakea regeneration	397	2018-2030
Mercury Energy – Turitea (Stages 1 & 2)	450	Start August 2019
Massey University capital plan	230	2020-2030
Powerco growth and security project	245	2017-2024
Hokowhitu campus redevelopment	90 - 135	Start 2019
Ohakea - P-8A Poseidon aircraft infrastructure	300	Finished by 2023
Waka Kotahi regional roading investment	335 - 370	2021-2030
BUPA retirement village	40	Started 2017
KiwiRail regional freight hub (initial investment)	300	Designation 2021
MidCentral DHB investment plan (Mental health/surgical facilities $80m & new critical service block $370m)	450	To be confirmed
PNCC urban growth capital projects	151	2021-2041
PNCC city centre streetscape upgrade	25	2021-2029
Arena Master Plan	25	2021-2031
Seismic Upgrade of Council Buildings	150	2021-2035
Palmerston North wastewater plant	350	2023-2027

Palmerston North Wastewater Treatment Plant Upgrade (Nature Calls)

One of the most significant decisions Council faces is how to proceed with an upgrade to the city's wastewater treatment plant. The resource consent for the discharge from the Council's main wastewater treatment plant to the Manawatū River is due to expire in 2028. Following a review of the consent in 2013, Council agreed to a new condition in the resource consent which requires Council to complete a best-practicable option review for its wastewater treatment and disposal by June 2021 and lodge a new consent application by June 2022. The review will need to identify ways to reduce the impact of the city's wastewater treatment discharge on the river, particularly when the river level is low. Council will actively engage with the community in the lead-up to this process, to help identify a preferred future treatment and disposal option. Financial provision to undertake investigations and manage the consent application process for this project

has been made in the current Long Term Plan budget. However, there is significant uncertainty about potential capital costs for the new treatment and discharge option and ongoing operating costs. These will not be known until completion of the review and the granting of the consent. Whatever option is chosen, it will have a significant impact on Council's debt levels and rates requirements. At this stage, a provisional sum of $350 million (plus inflation) has been budgeted with an assumption that the expenditure will be incurred between 2023 and 2027.

Provincial Growth Funds
The Manawatū – Whanganui region has received $48.2 million from the Provincial Growth Fund[11]. $40 million of this fund was granted to KiwiRail to assist with the establishment of a rail hub in the NEIZ Extension Area. Council has constructively influenced the formation of a multi-modal freight and distribution hub; this is a major strategic goal for the city.

4.7.4 What are our assumptions?

We are assuming that economic trends will continue positively and there will be no long term significant economic threats such as increased unemployment, homelessness, lack of income or reduced personal wellbeing.

4.7.5 What other scenarios have we considered?

Council considers a range of economic growth scenarios including low, medium and high growth. Council will continue to monitor Economic Growth and assess any impacts and effects on residents. If necessary, Council will modify its priorities through the Annual Plan process each year and Long Term Plan every 3 years.

4.7.6 What do our Strategies say about this?

Funding of the Regional Freight Ring Road is a major infrastructure consideration noted in Council's Infrastructure Strategy. Council is currently awaiting the completion of a business case being undertaken by Waka Kotahi New Zealand Transport Agency that will identify the extent of funding required for these transport improvements from Waka Kotahi, PNCC and /or other parties. At this stage, Council is working on the assumption that the delivery of the Regional Freight Ring Road will solely be a Council responsibility. Council assumes that Waka Kotahi will not formally approve the Regional Freight Ring Road as part of the State Highway network and will therefore not allocate funding. If this situation eventuates Council will implement its plan to develop the Regional Freight Ring Road by 2043, which is much later than ideal and potentially constrains economic development opportunities in the meantime. Council will continue to advocate to Waka Kotahi on progressing the Regional Freight Ring Road as early as possible. This timing of this project may change as it is part of Council's work programme being considered for advancement considering the recovery response to the COVID-19 pandemic.

The Innovative and Growing City Strategy (and associated Plans) acknowledges the importance and availability of key infrastructure and relative affordability of land as the city's economic development advantages. Council wishes to drive entrepreneurship and innovation by providing the infrastructure to enable traditional sectors to diversity and expand, and new industries to grow and create employment opportunities that sustain and expands the city's future. Increased economic activity and expanding industries will provide employment opportunities and attract more people to the city.

It is an important Innovative and Growing City Strategy goal that Council provides infrastructure to enable new industries and new economies to develop. New industries and economies will in turn create employment opportunities to sustain and expand our city's growth and development. Land development can be cyclical in nature and is affected by many factors outside of Council's influence. One factor the Council can control is the timing of new infrastructure. Having "spade ready land" can be a strong incentive for new development because it means that land is zoned, and network infrastructure is available.

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[11] The Provincial Growth Fund supports projects within the transport, tourism and food sectors, that create economic development opportunities.

The Eco City Strategy identifies the approaches Council is taking to achieve future-focused and sustainable growth. This includes actively pursuing new and sustainable economies that have a low impact on the environment. Council is working towards the city becoming a low carbon economy and uses planning and effective use of infrastructure to assist achievement of this aspiration. Examples include enabling micro-scale wind turbines and promoting energy efficiency design for major new commercial buildings and multi-unit residential dwellings.

4.7.7 What is our Asset Management Response?

Through the practice of Asset Management Planning Council aims to deliver the required level of service to existing and future customers in the most cost-effective way. Council seeks to understand the performance and condition of assets to analyse and evaluate the best cost effective and efficient option for responding to changes in demand. Options include:

- Additional Investment
- Demand management
- Changing the level of service.

Council has anticipated and allowed for increasing costs by applying inflation adjustors to future work programmes and delivery of services.

4.8 Iwi Partnership

Rangitāne o Manawatū are acknowledged as having a significant and special relationship with the Council by virtue of them being Tangata Whenua. Council values the partnership it has with Rangitāne o Manawatū.

4.8.1 Our aspiration

That our infrastructure enables us to provide levels of service that are considerate of iwi aspirations.

4.8.2 Our future- what do we think it will look like?

Rangitāne o Manawatū are Tangata Whenua within the Palmerston North City Council boundary. Rangitāne have lived in the region for hundreds of years. Within this area the Rangitāne o Manawatū iwi consists of the following hapu:

- Ngati Hineaute
- Ngati Te Rangitepaia
- Ngati Te Rangiaranaki
- Ngati Mairehau (Ngai Tuahuriri)
- Ngati Kapuarangi ki Manawatū
- Ngati Tauira

Rangitāne o Manawatū have a primary involvement in the central urban area of the city. Other hapu are involved along the Manawatū River and environs and other parts of the rohe.

4.8.3 What is driving change?

Within reason, Council can develop and manage infrastructure and provide levels of service in a manner that support iwi aspirations. Many of the following iwi aspirations are also shared by the Council and can be found in individual Asset Management Plans (see Part B). Rangitāne o Manawatū have identified the following aspirations:

Table 76: Rangitāne Aspirations for Activities

Solid Waste	Reduce landfill load Waste Management Plan needs clear goals and accountability for reducing waste Urban streams are no longer impacted by littering and fly tipping Council needs to support people who have a waste problem so that it doesn't get into the environment Need for a Waste Minimisation strategy Divert green waste and food waste from landfill
Park and Reserves	Wāhi tapu to be managed collaboratively with Rangitāne o Manawatū, especially along the Manawatū River Iwi involvement in work rather than contractors Wetlands should be enhanced, protected and created wherever possible
Property	Sustainability criteria needs to be considered in leases Climate change criteria should be considered in leases Council's Strategic Direction should apply to lease holders of public land Iwi representatives should be considered for leased land where there is a governance structure in place (e.g. Square Edge)
Roading	Stormwater sensitive design should be business as usual for roading renewals and capital new projects Expressions of Rangitāne are incorporated into streetscape designs

Stormwater	Stormwater sensitive design. Flooding as a result of climate change. Restoration of urban waterways A high proportion of Māori communities live in downstream locations susceptible to flooding. Improvements are needed to stormwater infrastructure to protect these communities. Wetlands should be enhanced, protected and created wherever possible Cultural monitoring is undertaking through Hei Manga Oranga project
Water	Future-proofing water supply is seen as important Climate change resilience is factored into water supply availability Water use information should be publicly available Water use is sustainable Rainwater collection encouraged for urban development
Wastewater	Discharge is taken out of the Manawatū River
Bulk Earthworks	Environmental impacts of bulk earthworks are offset with ecological restoration

4.8.4 What are our assumptions?

Council has a formal commitment to the partnership with Rangitāne o Manawatū.

4.8.5 What other scenarios have we considered?

No other specific scenarios have been considered. Council values its relationship with Rangitāne o Manawatū and will continue to work in partnership with iwi.

4.8.6 What do our Strategies say about this?

Councils commitment to its partnership with Rangitāne o Manawatū is articulated in several key strategic documents including:

Innovative and Growing City Strategy

- Collaborate with Rangitāne o Manawatū on post-settlement property development opportunities: Provide tailored support and guidance to Rangitāne o Manawatū as they enter a new post-settlement development phase
- Consultation on major city developments
- Mana Whakahono a Rohe to provide a mechanism for Council and iwi to come to an agreement on ways Rangitāne o Manawatū may participate in Resource Management Act decision-making.
- Work closely with regional iwi/Māori to identify opportunities to unlock the potential of local iwi businesses, workforce and investment

Connected Communities Strategy

- Develop collaborative agreements with Rangitāne o Manawatū in response to social and community issues
- Work closely with Rangitāne o Manawatū to improve Māori community well-being
- Work with the other public sector signatories to the Kotahitanga Alliance partnership agreement (2016) to prioritise and promote a set of regional Whānau Ora outcomes to provide excellence in service delivery for Māori whānau.

Creative and Liveable Strategy

- Incorporate Rangitāne o Manawatū's history and aspirations in modern-day Palmerston North
- Collaborate with Rangitāne o Manawatū on major Council projects, particularly in the city centre and at the Manawatū River Park.

Eco City Strategy

- Council acknowledges the special relationship Māori have with the land, forests, rivers and sea
- Working together in partnership with Rangitāne o Manawatū to restore the mauri of the waterways and forests
- Engaging proactively and collaboratively to ensure positive outcomes where Rangitāne values are embodied.

Other Strategic Documents

Statutory acknowledgement
Under the Rangitāne o Manawatū Settlement Act any land-use or subdivision consents that are triggered adjacent to the Manawatū River or any of its tributaries requires Rangitāne O Manawatū to be notified. Palmerston North City Council District Plan directs Council to engage with iwi early on resource management matters.

MoU co-management
A MoU with Rangitāne o Manawatū was signed on 2 August 2019. This establishes a co-management Committee in Council to manage Anzac Park: Te Motu o Poutoa. The Committee will have governance authority on any projects or programmes related to Te Motu o Poutoa. It is likely a Reserve Management Plan for Te Motu o Pouta will be developed at the request of this Committee. Asset Management Plans will reflect the direction or requirements outlined in the Reserve Management Plan.

Manawatū River Framework
This document provides strategic vision for any developments near the river and recognises the importance of the river to the city. There is specific reference to a requirement to express Rangitāne and Maori culture through storytelling and recognition of significant sites e.g. He ara kotahi bridge.

District Plan – Chapter 17: Natural and Culture Heritage
Wāhi tapu are protected from inappropriate activities and subdivision. A resource consent will be triggered for any activity or subdivision related to scheduled wāhi tapu. These are listed in Chapter 17 and shown on Council's GIS maps.

City Centre Framework
Co-ordinates public and private investment and identifies strategic development sites within the city. One of the sub-drivers in the framework is to ensure that Council ensures there is an expression of Rangitāne culture in the city. There is also mention of Council supporting Rangitāne to create their own ways of sharing their stories and heritage, through symbols, stories and a range of artistic media will enrich the city's places. This should be a key consideration when undertaking projects in the City Centre, especially renewals and capital new programs for streetscapes, Te Marae o Hine (The Square) and other public spaces.

Vegetation Framework
Rangitāne o Manawatū have expressed preference for native species when considering plantings. Fruit and nut tree plantings are also encouraged.

4.8.7 What is our Asset Management response?

Asset Management Planning
Council will take into consideration iwi aspirations when developing and managing infrastructure and providing levels of service.

4.9 Sustainability and Climate Change

Climate change is a significant environmental challenge. In the future the city's climate will be different from now and may require changes to infrastructure assets and levels of service to accommodate differences.

4.9.1 Our aspiration

That our infrastructure is sustainable and provides for the changes likely to be experienced by the present and future generations.

4.9.2 Our future - what do we think it will look like?

A changing climate has significant impact for infrastructure with many assets having life-cycles of over a hundred years, some even more. Using numerous warming signal models NIWA have produced a range of climate change predictions for the regions out to 2090. The projected impacts of climate change are likely to become more noticeable towards the end of this period, particularly for water, stormwater and wastewater assets. NIWA predictions indicate that the Manawatū region will become warmer and subject to more extreme weather events such as heavy rainfall and high winds. By 2090 the average temperature in this region could be up to 2.8C warmer and have 2% more rainfall than recorded in 1995 and be subject to significant seasonal variability[12]. Drought severity is projected to increase in most areas of the country, with one of the few exceptions including Taranaki-Manawatū.

4.9.3 What is driving change?

The Resource Management Act 1991 and Local Government Act 2002 require Councils to adapt to the effects of climate change. Incorporating climate change is also required into existing frameworks, plans, projects and standard decision-making procedures. A climate change perspective is now integrated into activities such

NIWA conclude that part of the New Zealand warming trend is probably due to natural variability, but a significant contribution to the warming can be attributed to greenhouse gas increases. And that furthermore, it is extremely likely (95–100 per cent) that human influence has been the dominant cause of the observed warming since the mid-20th century.

In 2016 New Zealand became a signatory to the Paris Agreement, the global agreement on climate change that commits all countries to act on climate change. The Climate Change Response (Zero Carbon) Amendment Act 2019 is New Zealand's response to climate change and aims to reach net zero greenhouse gas emissions by 2050. The Act introduces a new framework to assist the move to a low emissions and climate resilient society. This includes new requirements for local authorities to set emission reduction target and mitigation policies and provide reports on progress. In line with the government target, Palmerston North City Council will make efforts to reduce the city's greenhouse gas emissions over the ten years 2021-31.

4.9.4 What are our assumptions?

Provision is being made to adapt infrastructure for climate change based on NIWA predictions for 2090. If the changes are different from what is predicted, this will be assessed as they become evident.

4.9.5 What other scenarios have we considered?

No other specific scenarios have been considered. NIWA climate changes forecasts are made by qualified scientist and meteorologists considered subject matter experts. Climate measurements have been made in New Zealand for about 150 years, with reasonable coverage of reliable data from at least the early 1900s.

4.9.6 What do our Strategies say about this?

Eco City Strategy

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[12] *Ministry for the Environment 2018:33. Climate Change Projections for New Zealand: Atmosphere Projections Based on Simulations from the IPCC Fifth Assessment, 2nd Edition. Wellington: Ministry for the Environment.*

The Council wants a future-focused city that plans for and cares about the future, enhancing its natural and built environment. The aim is that the city will realise the benefits to society from creating clean energy, lowering carbon emissions, and reducing its ecological footprint. The Council target is a 30% reduction in CO2e in Palmerston North by 2031. The task of lowering the city's carbon footprint forces us to identify our inefficiencies and improve the way Council delivers infrastructure.

Initiatives include:

- Monitoring packages to track energy use, carbon emissions, and water quality.
- Promoting a 'citizen science' approach, giving a platform for residents to meaningfully contribute to biodiversity monitoring.
- Using new technology such as LED lighting and electric vehicles to improve efficiency, reduce carbon emissions and improve air quality.
- Better use of waste, including composting organic matter, rather than sending valuable resources to landfill.
- Assessing embedded carbon as part of lifecycle carbon accounting in the options development and detailed design of major new assets.

4.9.7 What do our Policies say about this?

Council sustainability initiatives

Energy management

Council is aware of the advantages in using energy wisely, namely the opportunities that exist to reduce operating costs by conserving energy and to reduce future costs by implementing technology. These initiatives assist Council to reduce the demand for energy whilst still delivering agreed levels of service to the community. Basic energy management techniques for the Council are:

- Use of building products and solutions that reduce energy transfer between the external and internal environment
- Use of new technology that delivers the same output and/or levels of service with lower energy use
- Use of sustainable energy sources such as wind and solar
- Reducing the use of vehicles
- Siting buildings to maximise solar energy gain
- Insulating individual assets to reduce heat loss-e.g. water heaters, hot water pipes
- Reducing energy use by 'turning off' devices when not in use and covering swimming pools when not in use.

Energy management initiatives for each activity are listed in Section 7 of the Part B management plans.

Environmental management

Council has implemented new environmental initiatives. This has been in response to several factors:

- Increased public awareness of the environment and the need to preserve and restore it
- International and national responses to climate change and its impacts
- Increases in environmental standards with respect to resource consent conditions
- Withdrawal of products considered to be harmful to the environment

The environmental initiatives for this Council include:

- Recycling paper, plastics and other office products
- Disposing of hazardous goods such as chemicals and asbestos following industry approved practices
- Utilising products which have a lower carbon footprint and/or can be recycled
- Compliance with resource consent conditions to take and/or discharge from/to the environment.

4.9.8 What is our Asset Management response?

Climate change is a long-term phenomenon but an important part of Council's Asset Management Planning considerations. Infrastructure planning assumptions regarding climate change are based on the NIWA predictions. For example, engineering designs for new stormwater systems are designed to accommodate heavy rainfall sustained over short periods of time. Council will monitor changing weather patterns provided by NIWA climate scientists and take this into account in designing and upgrading infrastructure.

Local authorities are expected to undertake asset management practices that provide for the delivery of agreed levels of service and meet environmental standards in the most cost-effective manner for present and future generations. One of the key objectives of the Asset Management Plans is that a whole of life approach is taken in asset management decisions, so future scenarios are considered when making asset decisions today. Taking a sustainable approach is therefore an underlying principle of asset management, rather than a factor only considered when significant decisions are made. The development and implementation of this Strategic Asset Management Plan demonstrates the commitment made by Council to the sustainable management of assets. Part B asset management plans describe how sustainability is considered at each stage of the asset lifecycle.

4.10 Technology Advances

Advances in technology provide Council with the capability to operate in a different way. New technology can result in managing assets and providing levels of service in a better, easier, more efficient or more cost effective way.

4.10.1 Our aspiration

We will actively research new infrastructure technology that enables Council to deliver appropriate, good quality infrastructure assets and public services efficiently and effectively.

4.10.2 Our future- what do we think this will look like?

Technological advances in infrastructure management are constantly being researched and developed. In the last decade, cutting edge technological advancements have been made that complement the typically often labour-intensive infrastructure management practices of days gone by. Commentary provided by Price Waterhouse Cooper suggests that breakthrough technologies are rapidly transforming the way infrastructure is built and operated, reshaping the way the infrastructure industry operates, bringing major implications for Councils and customers. For example, in the future there may be an increased use of drones for supervising ongoing capital investment programmes, monitoring the progress of infrastructure development projects, managing maintenance of existing infrastructure and conducting asset inventories. Other technological advances include the use of robotics, 3D printing and overlaying of virtual reality with infrastructure assets to provide the industry with more sophisticated infrastructure planning tools.

4.10.3 What is driving change?

Digital Strategies and New Technology
At a national level the Government is encouraging the use of new technology. In May 2018 the Digital Government Leadership Group commissioned the development of a Digital Government Strategy. The purpose of this strategy is to "set the direction and create the conditions to transform the way government operates in an increasingly complex and fast-changing digital world".

Similar to national direction, Council's Strategic Direction in the 2021-31 Long Term Plan focusses on using digital transformation and smart new technology to bring about greater organisational proficiency. Council aims to replace obsolete technology with new technology, alongside staff training, redesigning and updating business processes and organisational structures, embracing change and supporting innovation. Using smart practices are considered business as usual and will be used to solve customer problems, makes things easier, reduce and meet Council's strategic goals. Council is responsive to the changing of needs of customers, and this will be reflected in the delivery of services.

4.10.4 What are our assumptions?

Council will research the use of new infrastructure technology that enables it to deliver good quality public services effectively and efficiently.

4.10.5 What other scenarios have we considered?

No other specific scenarios have been considered.

4.10.6 What do our Strategies say about this?

Council has identified four themes that are reflected in all plans developed to deliver on Council strategies. One of these themes include Smart City Practices. This approach includes a range of technology initiatives including monitoring packages to track energy use, carbon emissions, and water quality and utilising new technology such as LED lighting and electric vehicles to improve efficiency, reduce carbon emissions and improve air quality.

Palmerston North City Council is undertaking Organisational Transformation. At an organisational level the Council aspires to become a "Driven and Enabling" organisation. A transformation programme has been established to accelerate the delivery of the culture, digital and capability and capacity plans. To this end, a high performing culture, a digital experience that is easy, useful

and enjoyable and an organisation with the right people, with the right skills, in the right roles capture the ambition and the expectation. Over the next two years Council will:

- Grow our collective ability to innovate and change
- Empower our people to deliver projects, products and services through new ways of working
- Guide decision-making that is robust and prioritise projects, products and services that deliver the most value to our customers, quickly.
- Encourage bold collaboration, where innovation is fostered, barriers are removed, with the customer placed 'front and centre'.

4.10.7 What is our Asset Management response?

Council will assess whether new technology advances its Asset Management Planning practices and/or levels of services. New technology can be cost prohibitive and Council will seek to balance the cost with the ratepayer's ability and willingness to pay. As new technological advances become more developed the cost of purchasing may reduce. Council uses current technology to maintain an understanding of the city's assets including radio-based telemetry, Internet of Things networks, asset information systems, networks models, and GIS. Other techniques like Structure Plans and Spatial Plans are also used to enhance understanding of development capacity and visually present what future residential and industrial development areas will look like.

4.11 Customer Expectations

Palmerston North City Council aims to deliver a customer centric experience. Using various forms of customer feedback information, Council determines the levels of service that customers can expect to receive. Key to delivering the levels of service is having good quality infrastructure assets, with the capacity to deliver services.

4.11.1 Our aspiration

That our assets enable us to provide customers with the levels of service we promised to deliver.

4.11.2 Our future- what do we think this will look like?

Council intends to continue delivering the same range of services to customers in the near future. Services include asset-based services water, wastewater, waste collection and management, storm water, property services including public toilets, community halls and sports facilities. There are also a range of non-asset-based activities including animal control, community development and economic development.

4.11.3 What is driving change?

Customer expectations tend to change over time. Various influences drive customer expectations, many of these are outside Council's control including societal trends, changing social norms and advancement in new technology. For example, greater awareness regarding the impact of plastic in the environment can influence the level of customer demand for Council's recycling services.

4.11.4 What are our assumptions?

Council will provide the same level of service to customers that is specified in the Asset Management Plans and the Long-Term Plan 2021-31. Council assumes that there will be no unexpected changes to legislation or other external factors that will alter the nature of the services provided. If there are changes to legislation that result in service level adjustments these usually have a transition period that allow Councils to respond as necessary.

4.11.5 What other scenarios have we considered?

Levels of service are reviewed on a three-yearly cycle in the Asset Management Plan review and the Long-Term Plan development. As part of this review Council considers other levels of service scenarios, and these are documented as part of the review process. Depending on the Level of Service the review might include assessing if the level of service is fit for purpose and the costs and savings associated with increasing or decreasing the level of service. Some of the Levels of Service Performance Measures are mandatory and are therefore not subject to review. Council staff, Elected Members and the community will be involved with Levels of Service Reviews during 2019/20.

4.11.6 What do our Strategies say about this?

As part of Council's commitment to meeting Goal 5. 'A driven and enabling council', it has developed a set of organisational performance priority actions and established a Transformation Team. The Team will lead the Council to become more customer focussed. The aim is to enhance the customers experience with council by creating an organisation that goes above and beyond. The organisational performance priority actions for operational excellence, require that;

- Asset Management Plans are integrated with the Long-Term Plan, are strategically aligned and evidence based.
- Design led, strategy- linked approach to infrastructure
- New commercial delivery model in place for infrastructure services and asset management.

4.11.7 What is our Asset Management response?

Monitoring customer satisfaction against the levels of service provided gives Council vital information about whether expectations are being met. The Asset Management Plans set out both customer and technical levels of services and target KPIs that enable performance to be

measured. A performance management framework is also included in the Long-Term Plan 2021-31 and is monitored and reported to Council and the community on a quarterly and annual basis. A survey is undertaken on an annual basis to measure how well Council services, are meeting residents' expectations. Other sources of information such as the customer complaints data base, public submissions, general feedback and levels of service workshops are also used to gauge customer expectations and considered when setting levels of service. Council aims to balance customer expectations and service delivery with the community's ability and willingness to pay.

4.12 Natural Hazards and Adverse Weather Events (Resilience)

Natural hazards can pose a significant risk to infrastructure assets. Resilience of critical assets is particularly important for reliable service delivery. Other risks such as biological hazards, security, technological, security and economic risks are important considerations when planning for reliable service delivery.

4.12.1 Our aspiration

That our infrastructure is as resilient as possible and can cope with significant disruptions posed from natural hazards and adverse weather events.

4.12.2 Our future- what do we think it will look like?

Palmerston North city is subject to several natural hazards including floods, earthquakes, volcanoes, landslides and wildfires. While no-one can accurately predict when a natural hazard may occur, planning in advance of a natural hazard event can mitigate the effects.

The Ministry for the Environment predicts that over the longer term, the Manawatū-Whanganui region will become warmer and be subject to more extreme weather events. The region is likely to experience more frequent heavy rainfall events.

4.12.3 What is driving change?

- Natural Hazards
- Floods

Floods

The Manawatū – Whanganui region is a flood risk zone due to its low-lying physical landscape and proximity to the Manawatū and Whanganui rivers. The flood hazard map below shows the extent of flood waters in a 1 in 200-year flood.

Even with the river being contained within stop banks, a major river flow event would result in surface flooding of areas of the city, along with increased rainfall associated with a flooding event. Infrastructure assets, including roads, bridges, energy supply, water and sewage services will be substantially disrupted in a flooding event like the 2004 flood event which exceeded the 1 in 100-year level.

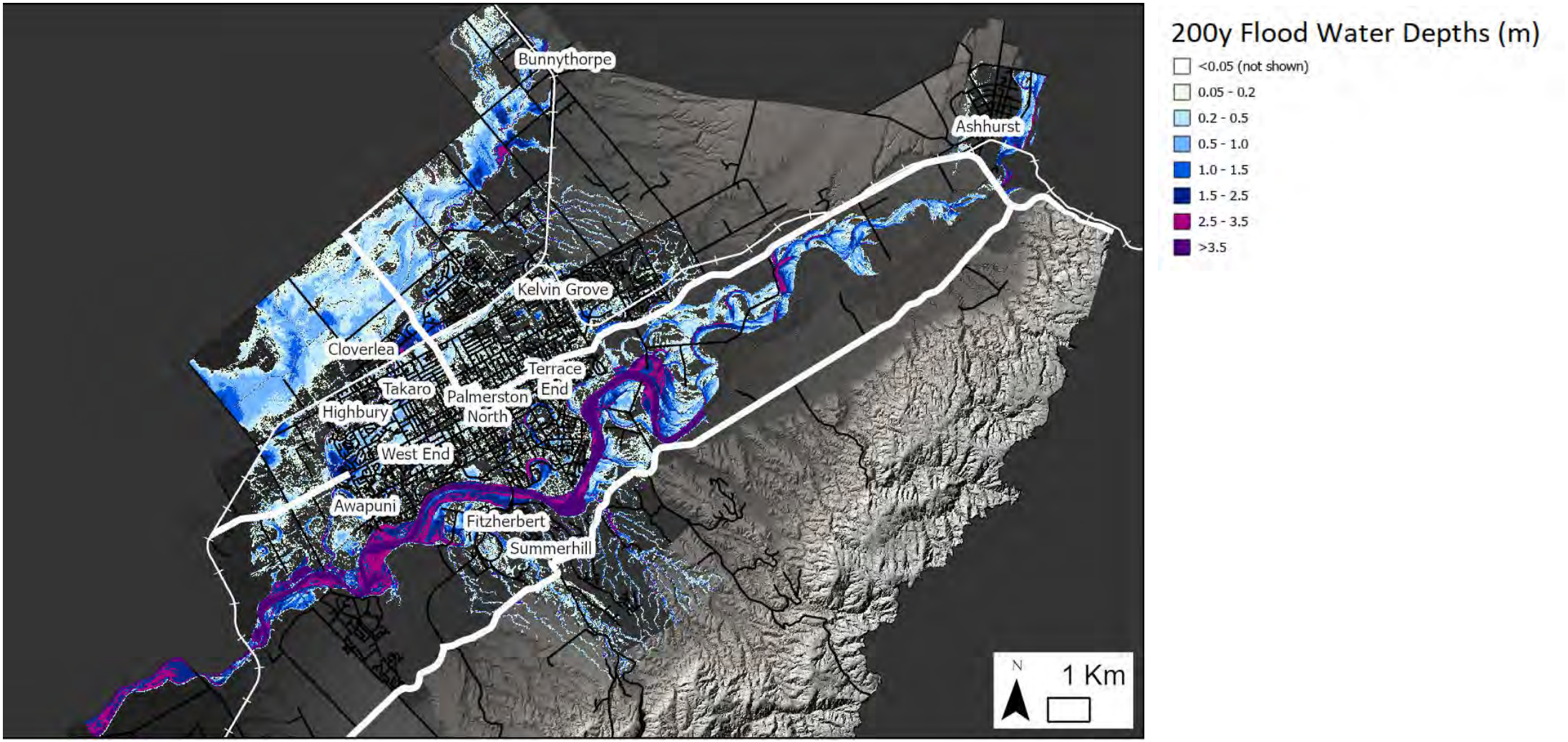


Figure 167: 1-in-200-year Flood Hazard Map Palmerston North

Earthquakes

Palmerston North is in a high- risk seismic area with earthquakes in the Manawatū-Whanganui Region being geologically diverse with numerous potential earthquake sources. The region encompasses some of the most seismically active parts of New Zealand. Earthquakes have the potential to cause damage to infrastructure assets from surface fault rupture, land movement, ground shaking and liquefaction (differential ground settlement and lateral spreading).

Volcanoes

Mount Ruapehu, Tongariro and Ngauruhoe are three active volcanoes located approximately 150 km due north of the city. They comprise the volcanic plateau of central North Island. In the event of a significant volcanic eruption of one or more of these volcanoes, the potential exists for an ash cloud to spread south with a resulting deposition of fine sediment across the entire city. This event occurred, at a moderate level, due to the 1996 eruption of Mount Ruapehu. Projected ashfall associated with a moderate eruption could cause; ongoing electricity outages caused by flashovers, for the duration of the eruption, particularly in some wet conditions, potential ash entry causing clogging of water networks and damage to other critical infrastructure.

Landslides

Landslides are the displacement and downslope movements of parts of a slope. They may be earthquake triggered, rainfall triggered, or a combination of both. They can affect all lifelines that are sited on or below steep slopes. Significant slips can damage, destroy, or prevent access to assets.

Other Natural Hazards

The other natural hazards that may affect council assets include lightning and wildfires.

Adverse weather events

In an adverse weather event, infrastructure and assets will be affected by flooding, scouring, washouts, slips and debris from high winds, potentially isolating communities and disrupting major routes - which was observed in the 2004 floods. Adverse weather events are expected to intensify caused by the effects of climate change. Adverse weather events can be caused by ex- tropical cyclones leading to heavy rain and strong winds.

Increased rainfall

River flooding and ponding may result following a sustained period of high intensity rainfall across the in Manawatu River catchment as Palmerston North city is located along the Mangaone Stream and second largest river in the region – the Manawatū River. Stormwater drainage to the river relies on gravity discharge for the majority of urban catchments. Increased high intensity rainfall within the city can also cause local inundation and flooding of properties in low lying areas or within overland flow paths.

Severe storms

A widespread severe storm would impact infrastructure power supply, water supply, wastewater treatment and telecommunications. The road and electricity network will be affected by flooding, scouring, washouts, slips and debris from high winds and the potential for isolation of communities and disruption to major routes evident in the 2004 floods.

4.12.4 What are our assumptions?

- There will be no significant natural disasters such as storms, floods, earthquakes and volcanic eruptions that damage city infrastructure.
- There will be no adverse weather events that cause significant damage to the city's infrastructure.

4.12.5 What other scenarios have we considered?

Risk scenarios are currently being developed as a part of the Risk Management Policy.

4.12.6 What do our Strategies say about this?

The Long-Term Plan 2021-31 notes that given the 30-year timeframes of the Asset Management Plans there is a high likelihood that one or more weather events will occur during this period. If a significant emergency event did occur Council would reprioritise programmes of works and budgets accordingly. The Council can source commercial infrastructure insurance through the Local Authority Protection Programme (LAPP). The LAPP fund was designed to cover 40% of the repair costs for certain damage infrastructure. In other circumstances Central Government may fund the remainder of the costs.

A key part of increasing the resilience of the city's infrastructure is to require new infrastructure to be built to a standard that will better withstand the effects of seismic events such as liquefaction. The review of the District Plan and Council's Engineering Standards for Land Development incorporate requirements for increased resilience will assist to address these matters.

The Lifelines Vulnerability Study is a requirement under the Civil Defence and Emergency Management Act 2002. Council has assessed its critical assets, lifelines and emergency response plan to be prepared for emergency situations as a result of a natural hazard or adverse weather event. Depending on the type and scale of the event a specific recovery plan would be developed at the time of the event to address the key vulnerability points noted in the study. These include:

- With no significant fuel storage in the region, the fuel supply is almost completely reliant on the road network with fuel trucked in from ports in Wellington and Napier. Only 1-2 days' supply is held in service stations.
- Most of the region's electricity is supplied from Bunnythorpe, via regionally significant transmission lines. The transmission lines from Taranaki provide an alternative supply for the region if those lines fail, as does the Tararua Wind Farm.
- Gas transmission lines running south from the Taranaki gas fields supply reticulated gas to the region.
- There are three north-south fibre cables through the North Island (Chorus). The Palmerston North exchange is regionally significant as it provides switching into several local exchanges in the region.
- Wharite site provides telecommunications, broadcasting and radio services to and through the city and on to Taranaki.
- Critical transport infrastructure includes the trunk rail lines, Palmerston North airport and the 'inland port' in Palmerston North which is one of three major food distribution centres in New Zealand. SH 57 is the nationally significant road in the region.

Palmerston North is part of the Manawatū-Whanganui Civil Defence Emergency Management Group. The Civil Defence Emergency Management Act requires the Group, in partnership with emergency services, lifeline utilities and others to prepare an Emergency Response Plan that includes:

- Hazards and risks to be managed by the Group
- Civil defence emergency management necessary to manage the hazards and risks
- Arrangements for declaring a state of emergency in the area
- Arrangements for co-operation and co-ordination with other Groups.

The Manawatū-Whanganui Civil Defence Emergency Management Group Plan 2016-2021 covers the Civil Defence Emergency Management operational arrangements for the assets and services described in the city council's Asset Management Plans.

The four phases of disaster management outlined in the plan and their applicability to Asset Management Planning include:

Reduction
Identifying and analysing long-term risks to human life and property from natural or man-made hazards, and taking steps to eliminate these risks where practicable, and where not, reduce the magnitude of their impact and likelihood of them occurring.

This is achieved through two key initiatives:

- Palmerston North City Council contribution to the Lifelines Advisory Group which aims to facilitate information exchange and collaborate between the various utility service providers in the region with respect to CDEM. This group is also responsible for maintaining and improving the Regional Lifelines Project Report 'Risks and Responsibilities.
- Ensuring that the development of infrastructure development is in keeping with Palmerston North City Council District Plan provisions, which in turn has been informed by Horizons One Plan with respect to placement of critical infrastructure in areas prone to natural hazard events.

Readiness
Developing operational systems and capabilities before a disaster happens. These include self-help and response programmes for the public as well as specific programmes for emergency services. A significant portion of the CDEM Group's work is undertaken as readiness initiatives. The group provides co-ordinated planning to ensure an effective response to the affected communities and for the co-ordination of responding agencies.
Response
This relates to response actions taken immediately before an emergency is declared and lasts until the normal systems can accommodate the recovery process. A fundamental principle for this phase is that agencies should respond to an emergency by activating their own plans and co-ordinating with the lead agency.
Recovery
This relates to activities beginning after initial impact has been stabilised and extending until the community's capacity for self-help has been restored. Recovery is a key part of the comprehensive approach to CDEM and for this reason the Group has a comprehensive Recovery Plan. The impact of a major event can lead to long term recovery needs for the City.
Recent changes to the Civil Defence Emergency Management Act strengthen recovery planning by making it more efficient and effective. This amendment specifically requires CDEM Groups to amend their plans to include strategic planning for recovery from the hazards and risks in their district.

4.12.7 What do our Policies say about this?

Council has developed several Business Continuity Plans. However, as noted in the Asset Management Maturity Assessment these are not in place for all activities and are not fully tested. Further resilience testing and planning is required across the assets, especially in wastewater where the consequences of failure are considered high.

A Risk Management Policy is currently being developed.

4.12.8 What is our Asset Management Response?

To inform Asset Management Planning, and future work programmes Council has undertaken substantial work to assess seismic strength and maximum probable floods on key infrastructure such as Council's major bridges. Other key infrastructure that is critical to the continuation of services, such as the water and wastewater treatment plant have also been assessed and work identified to enable these structures to meet the required levels for withstanding seismic shock. Further resilience testing and planning is still required. Council recognises that adequate resilience built into the system is essential for ongoing reliable service. An understanding of risk is a powerful way of directing resources to areas of most need and improving resilience in the networks. Our Asset Management Planning takes into account the technical consideration of risk across activities e.g. public health risk, road safety risk, health and safety risk, that support Council to meet its statutory obligations. Council aims to make improvements in this area by establishing a Risk Management Policy and risk information management system.

4.13 Legislation, Policy and Guidelines

Legislation, policy and guidelines can significantly influence the provision of infrastructure and the levels of service Council provides. For example, Council is required by law to provide services including water, wastewater, stormwater, roading and waste.

4.13.1 Our aspiration

Council remains abreast of any changes in legislation, policy and guidelines that impact on infrastructure planning or levels of service.

4.13.2 Our future - what do we think this will look like?

The Government is currently progressing several legislative reforms to address national and international issues. Amongst those most relevant to local authorities include urban development, drinking water, freshwater, wastewater and stormwater (three waters) reform, and climate change. These changes will impact on the way that Council delivers services.

4.13.3 What is driving change?

Resource Management Act 1991 Reforms
In 2019 the Government announced a comprehensive 2 stage reform of the Resource Management Act (1991). The reform aims to improve environmental outcomes and enable better and timely urban development within environmental limits. It seeks to address issues with resource consenting, enforcement and Environment Court provisions. The second stage includes spatial planning. This has the potential to help local authorities make better decisions about infrastructure over longer timeframes. Palmerston North City Council already has a spatial plan but will continue to monitor progress and other new reform requirements.

National Environment Standards- Freshwater
National Environmental Standards for Freshwater sets out potential regulations that are part of a package of proposed freshwater regulations. It sets out proposals to stop the degradation of waterways and restore them to a healthy state.

Water Services Bill – Three Waters Reform Programme
The Government has reviewed how to improve the regulation and supply arrangements of drinking water, wastewater and stormwater (three waters) to better support New Zealand's prosperity, health, safety and environment. On 27 July 2020, the Water Services Bill was introduced to Parliament for the purpose of introducing a new regulatory framework for drinking water. The Bill established Taumata Arowai as a dedicated water regulator to oversee the new regulatory regime, which includes stronger obligations on water suppliers and local authorities to manage risks to sources of drinking water.

Climate Change Response (Zero Carbon) Amendment Act
The Climate Change Response (Zero Carbon) Amendment Act 2019 is New Zealand's response to climate change and aims for New Zealand to reach net zero greenhouse gas emissions by 2050. The Act introduces a new framework to assist the move to a low emissions and climate resilient society. This includes new requirements for local authorities to set emission reduction targets and mitigation policies and provide reports on progress. Palmerston North has set a target of 30% reduction in CO2e in Palmerston North by 2031.

4.13.4 What are our assumptions?

Council is already aware of the legislative changes in process. We are assuming there will be no other unexpected changes to legislation that will impact on management of assets or the services provided by the assets, throughout the life of the Long-Term Plan 2021-31 and Asset Management Plans.

What other scenarios have we considered?

Council recognises that as a result of the Water Services Legislation there is likely to be some change to the three waters activity. This includes changes to national and regional water quality policies that could affect the design and consenting of the city's new Wastewater Treatment Plant. These changes are being taken into consideration in the planning phase for the Wastewater Treatment Plant.

4.13.5 What do our Strategies say about this?

Council gives effect to legislation through its various Strategies and Plans these include the Long-Term Plan and District Plan.

4.13.6 What do our Policies say about this?

The Council's Asset Management Policy specifically refers to Asset Management Plans and practices meeting the requirements of the Local Government Act and all other legislation relevant to the specific activity (refer below).

4.13.7 What is our Asset Management Response?

One of the most important Asset Management Planning objectives is that asset management practices meet statutory obligations. All of Council's statutory obligations for quantity and quality of service are considered as drivers for demand when asset management planning. Council aims to comply with all legislation, policy and guidelines relating to the management of infrastructure and provision of services. This includes:

Legislation

Local Government Act 2002

Under the Local Government Act 2002 Council has a statutory responsibility to meet the current and future needs of communities. This includes considering how a local authority should ensure prudent stewardship and the efficient and effective use of its resources in the interests of its district or region, including by planning effectively for the future management of its assets. Council's must take a sustainable development approach and consider the social, economic, and cultural well-being of people and communities; the need to maintain and enhance the quality of the environment; and the reasonably foreseeable needs of future generations. This means Council must plan for new infrastructure but also look after the infrastructure it already has. This is usually done by renewing assets when they reach the end of their useful life. Council could choose to defer renewals, but this would place an increased financial burden on future generations and is unlikely to meet the primary purpose of local government.

The Building (Earthquake-prone Buildings) Amendment Act 2016

The Building (Earthquake-prone Buildings) Amendment Act 2016 introduced major changes to the way earthquake-prone buildings are managed under the Building Act 2004. The Act uses information from past earthquakes in New Zealand and overseas to minimise effects of future earthquakes. Palmerston North is identified as being a 'High Seismic Risk' area, meaning all earthquake-prone buildings must be identified by council within five years and seismic work by building owners is completed within 15 years. Council owned earthquake prone buildings are also classified as protected heritage buildings under the District Plan as it is of national importance under the Resource Management Act 1991. Heritage buildings preserve the character and history of the city, providing economic development opportunities that assist with city centre revitalisation. Council will assess each individual owned building to determine the optimal solution for complying with legislative requirements. Council will identify unreinforced masonry buildings in the city centre as a priority which will require strengthening within seven-years. Council has recently adopted the Earthquake Prone Building Policy 2019.

Other legislation

Statutory requirements provide Council with a minimum level of service standard and these have been reflected in the levels of service shown in Part B. The key legislation relating to the

management of infrastructure activities is listed below. For further detail about the impact of the statute on infrastructure and levels of service please refer to Appendix Seven.

- Resource Management Act 1991
- Reserves Act 1977
- Health Act 1956
- Public Works Act 1981
- Civil Defence Emergency Management Act 2002
- Health and Safety at Work Act 2015
- Building Act 1991
- Fire Service Act 1975
- Emissions Trading Scheme.

National Policy Statements

National Policy Statements are ordered by central government to address problems of national significance to achieve the purpose of the Resource Management Act (1991). National Policy Statements provide standards, requirements and recommendations as a decision-making guide for Council's asset management activities.

- National Policy Statement for Freshwater Management 2014
- National Policy Statement for Urban Development Capacity 2016
- National Policy Statement for Renewable Electricity Generation 2011.

National Environmental Standards

National environmental standards are a set of minimum land use requirements, ordered by central government to improve environmental consistency at the local level. Local authorities must implement and enforce the requirements of these standards, relating to matters in the Resource Management Act (1991). These include:

- National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health 2011
- National Environmental Standards for Plantation Forestry 2018.

Industry Guidance and Trends

Industry guidance is often developed in response to addressing specific issues and trends across a sector. Industry Guidance reflects the best current technology, national standards and expectations.

- Three Waters Review
- Water Supply Review (Office of the Auditor General)
- Managing stormwater systems to reduce the risk of flooding (Office of the Auditor General).

Regional Policy

Physical and natural resources in the region are managed collaboratively between Horizons Regional Council, territorial authorities (including Palmerston North City Council) and the community. Council must meet the requirements of applicable Regional Policy which includes:

- Regional Land Transport Plan 2015-2025
- One Plan
- State of the Environment Report

5. Assumptions

Please note these assumptions may be subject to change as Council proceeds through development of the Long Term Plan, Financial Strategy and Infrastructure Strategy, and recovery response to the COVID-19 pandemic.

Table 77 Assumptions, Risk, Level of Uncertainty and Implications

Section	Assumption	Risk	Level of uncertainty of assumption	Implications
1. Council Strategy	That the Council's current Strategic Direction will remain largely unchanged for the term of election.	That the Council's current Strategic Direction will undergo significant change.	Low	Any significant change to Council's Strategic Direction will require updates to the Strategic Asset Management Plan and Asset Managed Plans and Assumptions.
2. Population Growth	Council is assuming that the population will increase in line with the projections.	The rate of population growth will be substantially different than forecasted.	Medium	If growth is less than predicted, Council will revisit the timing of the infrastructure development programme. This could result in some projects being deferred and expenditure being lower than forecast. As with all long-term prediction's uncertainty increases over longer time frames and actual figures can change from the forecast figures. To overcome this uncertainty Council monitors actual growth and changes to the population. Any changes to work programmes are reflected in subsequent Asset Management Plan, Annual Plans and 10 Year Plans.
3. Household Growth	Council is assuming that the rate of household	The rate of household growth will be	Medium	Council will monitor the supply and demand of urban development. If the rate of growth is different from what is predicted, changes will

	growth will increase in line with projections.	substantially different than forecasted.		need to be made to the timing of infrastructure growth programmes. Council is continually evaluating the future demands for services and how these might be met. The three-yearly review of the Asset Management Plans and the 10 Year Plan minimises the risk of development and expenditure not matching growth requirements.
4. City Growth- Residential	Council is assuming that the types of residential development will remain constant for the next 30 years. This means that 33% of all new houses will be within the existing urban area through infill subdivision, with the balance being 55% greenfield and 12% rural.	Privately initiated development is approved in areas other than those planned for by the Council or earlier than anticipated.	Medium	Some of these assumptions rely heavily on final assessments of the appropriateness of the land for affordable development. If the land assessments are not positive Council may be required to invest more in infrastructure than it had planned to, to ensure land provides for affordable housing options.
5. City Growth- Industrial	Council is expecting development to continue at the North East Industrial Area and development to start in the Extension Area during 2021-23.	Privately initiated development is approved in areas other than those planned for by the Council or earlier than anticipated.	Medium	The timing of infrastructure development will be monitored and altered to meet the establishment of industry, as far as possible. It requires careful balancing as there is a risk that Council makes substantial investment for initial businesses, but the overall uptake is slower than expected. Council mitigates this risk by creating Developer Agreements (as per the Development Contributions Policy) to help with the timely provision of infrastructure.

6. Economic Growth	Economic trends and employment growth will continue positively and there will be no major long-term economic threats.	There will be a large-scale economic crisis that will be a threat to Palmerston North	Low	Council will monitor any impacts and effects on residents, and if necessary, modify its priorities through the Annual Plan process each year and Long Term Plan every 3 years.
7. Legislation, Policy and Guidelines	Council is assuming there will be no unexpected changes to legislation that will impact on management of assets or the services provided by the assets (throughout the life of the Long-Term Plan 2021-31 and Asset Management Plans).	There are unexpected changes to legislation that impacts on management of assets or the services provided by the assets (throughout the life of the Long-Term Plan 2021-31 and Asset Management Plans).	Low	Council recognises that as a result of the Water Services Legislation there is likely to be some change to the three waters activities including changes to national and regional water quality policies that could affect the design and consenting of the new wastewater treatment plant. Legislative changes generally have transition periods for Council as necessary.
8. Technology Advances	Council will research the use of new infrastructure technology that enables it to deliver good quality public services more effectively and efficiently.	Advancing technology will be cost prohibitive or have a negative effect on asset management.	Medium	Council will assess whether new technology advances its Asset Management Planning practices and/or levels of services. New technology can be cost prohibitive and Council will seek to balance the cost with the ratepayer's ability and willingness to pay. As new technological advances become more developed the cost of purchasing may reduce.
9. Customer Expectations	Council will provide the same level of service that is specified in the Asset Management Plans and the Long-Term Plan 2021-31.	There are unexpected changes to legislation that impacts on management of assets or the services provided by the assets	Low	Council assumes that there will be no unexpected changes to legislation or other external factors that will alter the nature of the services provided. If there are changes to legislation that result in service level adjustments these usually have a transition

		(throughout the life of the Long-Term Plan 2021-31 and Asset Management Plans).		period that allow Councils to respond as necessary.
10. Iwi Partnership	Council has a formal commitment to the partnership with Rangitāne o Manawatū and provides levels of service in a manner that support iwi aspirations.	Council is unable to provides levels of service in a manner that support iwi aspirations.	Low	Many of the Rangitāne o Manawatū iwi aspirations are also shared by the Council and can be found in individual Asset Management Plans. Council remains committed to the partnership it has with Rangitāne o Manawatū.
11. Sustainability and Climate Change	In the longer term, increased frequency and intensity of storm events as the result of climate change.	Climate change predictions are significantly different than forecasts.	Low	Provision is being made to adapt infrastructure for climate change based on NIWA predictions for 2090. If the changes are different from what is predicted, this will be assessed as they become evident.
12. Natural Hazards and Adverse Weather Events	There will be no significant natural disasters such as storms, floods, earthquakes and volcanic eruptions and no adverse weather events that damage city infrastructure.	There will be significant natural disasters such as storms, floods, earthquakes and volcanic eruptions and adverse weather events that damage city infrastructure.	High	Given the 30-year timeframes of the Asset Management Plans there is a high likelihood that one or more significant events occur during this period. If a significant emergency event did occur Council would reprioritise programmes of works and budgets accordingly. The Council has the ability to source commercial infrastructure insurance through the Local Authority Protection Programme (LAPP). The LAPP fund was designed to over 40% of the repair costs for certain damage infrastructure. In other circumstances Central Government may fund the remainder of the costs.

6. Appendices

Appendix One – External and Internal Stakeholders

Appendix Two – Operational Planning Key Positions

Appendix Three - Approach to Valuations

Appendix Four – Asset Information System Software

Appendix Five- Timeframes for Residential Growth Areas

Appendix Six- Council Plans, Policies and Frameworks

Appendix Seven- Legislation, Policy and Guidelines

Appendix Eight- Terms

Appendix One: External and Internal Stakeholders

External Stakeholders

External stakeholders are the key groups of people who receive or have a strong interest in the services provided. These can be corporate groups (such as clubs, companies, government departments, trusts) or informal collections of people (for example, rate payers, or customers). These stakeholders may have aligned or conflicting preferences.

Table 78: External Stakeholders

Group	Description
Rangitāne o Manawatū	Tangata whenua who have with a partnership with the Palmerston North City Council
Residents	People who live within the Palmerston North City Council boundaries
Ratepayers	People who own properties within the Palmerston North City Council boundaries but may/not reside in the city
Service users	Users of the services on an occasional or regular basis e.g. visitors
Businesses and NGOs	Individuals or organisations who carry out their business in the city, including educational facilities.
Government agencies	For example, Ministry of Health, Waka Kotahi, Ministry for the Environment. Roles include: regulation and monitoring policy direction infrastructural funding assistance managing assets that directly affect Council's infrastructure handling complaints about Council
Horizons Regional Council	The environmental, regulatory, and monitoring body under the Resource Management Act for the natural resources in the Manawatū-Whanganui region.
Third parties operating on Council land/out of Council facilities	Community groups, management trusts, and businesses run their operations out of Council owned facilities or on Council land. Includes Council controlled and Council affiliated organisations.
Contractors	Contractors and tradespeople who assist in the delivery of Council activities.
Neighbouring local authorities	Manawatū, Horowhenua and Tararua districts adjoin Palmerston North City, and we are within the boundary of Horizons Regional Council. Council has a shared services arrangement with Manawatū District Council for building consents. Horizons Regional Council provides public bus services in the city and Council contributes towards that cost. Council maintains relationships with other Councils for the exchange of information and management practices.

Internal stakeholders

Internal stakeholders include parts of Council that either contribute to or oversee the delivery of the service. There may be internal customer relationships between them but ultimately, they are all aligned to deliver the corporate objectives and serve customers.

Table 79: Internal Stakeholders

Group	Description
Councillors	Elected members who contribute to the development of policies and strategies, including budget approval and consideration of officer recommendations. This is to ensure the services provided meet the needs of local communities and make the best use of resources. Councillors rely on officers and asset management plans for information needed to make informed decision regarding assets and levels of service. To do this effectively they need to have confidence that the information and advice provided is accurate, has a sound basis and is aligned with Council's Strategic Direction.
Executive Leadership Team	The senior managers of Council, including the Chief Executive and the General Managers of the units.
Infrastructure	Provides asset-based services, around which the Asset Management Plans are written.
Finance Unit	Provide financial and corporate services including development of funding policies and financial forecasts.
Strategy and Planning Unit	Provide strategic planning services including policy and strategy development, growth forecasts etc.
Customer Unit	Responsible for council/customer interface, and the delivery of community services such as libraries, community housing and community development.
Marketing and Communications Unit	Responsible for external communication and Council's external image.
Activity Divisions	The collections of Council staff involved with managing, planning (including creating Asset Management Plans), operations and delivering a related group of services – for example, Roading and Footpaths, Parks and Reserves.
Information Management Division	Provide information services to Council, including IT and records management.
Asset and Planning Division	Responsible for asset management practice across the organisation.

Appendix Two: Operational Planning Key Positions

Table 80: Activities and their operational planning responsibilities

Activity	Positions	Operational planning responsibility
Parks and Reserves	Manager - Parks and Reserves Parks and Reserves Operations Supervisor	Setting operational objectives Developing operational strategies to deliver objectives Operational scheduling to deliver strategies Continuity Planning
Property	Manager – Property Facilities Management Team Leader	Setting operational objectives Developing operational strategies to deliver objectives Operational scheduling to deliver strategies Continuity Planning
Rubbish and Recycling	Manger – Waste Management Rubbish & Recycling Engineer Waste Operations Supervisor Waste Collection Supervisor Awapuni Site Supervisor	Setting operational objectives Developing operational strategies to deliver objectives Operational scheduling to deliver strategies Continuity Planning
Three Waters	Manager – Transport and Infrastructure Activity Manager Water Activity Manager Wastewater Activity Manager Stormwater Water Operations Manager Water Treatment Supervisor Wastewater Treatment Supervisor Network Controller	Setting operational objectives Developing operational strategies to deliver objectives Operational scheduling to deliver strategies Continuity Planning
Transport	Manager – Transport and Infrastructure Activity Manager Transport Activity Manager Active Transport Senior Transportation Engineer Senior Contracts Engineer Delivery Team Leader	Setting operational objectives Developing operational strategies to deliver objectives Operational scheduling to deliver strategies Continuity Planning

Appendix Three: Approach to Valuations

Table 81: Council Approaches to Valuations

Activity	Notes
Three waters	Where applicable, construction contract information from the last three years is used. In cases where this information is not available the first principles approach is used to determine the rates. These historical rates are compared with industry rates (from suppliers and QV Cost builder) and sanity checked against inflation indexes, before a final rate is chosen. A consultant is used in a peer review capacity but brought in early to agree the methodology/processes at the start. Unit rates allow for diameter, depth (inferred from invert depths), and cover (as a composite rate for specific assets based on Council's Asset Information Analyst's (3 Waters Network) identification of key assets such as long runs of trunk mains through pasture). There is a rolling incremental review of plant sites (e.g. dams reviewed in 2014, WTP and WWTP in 2017), prioritised on staff judgement or a project requires it.
Roading	Similar to the Three Waters but the assets are valued using the current contract rates. This means that changes in the roading contract impact the valuation directly. Work is currently underway to move to a new valuation module. The Fitzherbert Ave bridge and the new Manawatu River cycleway bridge are the only large site-based assets, with the rest of the bridges owned by NZTA.
Property	The valuation is undertaken by an external provider (previously Morgan's Property Advisors). Unlike most other council assets, which do not have a ready resale market, property assets are typically valued based fair market value for the whole site.
Parks and Reserves	The valuation is undertaken by an external provider (previously Morgan's Property Advisors). Land assets, which are much of what the Parks and Reserves team manage, are not part of the fixed asset register. However, improvements (eg drainage, playgrounds) are.
Rubbish and recycling	Similar approach to the Three Waters. Other than the MRF site, the bulk of the assets are mobile plant.

Appendix Four: Asset Information System Software

Table 82: AIS software by Activity

FUNCTION	THREE WATERS	TRANSPORT	RUBBISH AND RECYCLING	PARKS AND RESERVES	PROPERTY
ASSET REGISTER	IPS	RAMM	IPS	SPM, IPS and RAMM	SPM
ASSET INSPECTIONS	IPS, Infrastructure Data, hard copy	RAMM, Excel	Excel	SPM, Auditor Excel (hard copy), IPS	Fulcrum, hard copy
VALUATIONS	IPS	RAMM	IPS	Externally provided	Externally provided
MAPPING	ArcGIS	ArcGIS	ArcGIS	ArcGIS	
ANALYSIS INCLUDING SPATIAL	ArcGIS, Power BI, Salesforce Einstein Analytics, Excel	ArcGIS, Power BI, Excel	ArcGIS, Power BI, Salesforce Einstein Analytics, Excel	ArcGIS, Excel	Excel
WORKS ORDER	IPS	RAMM	IPS	K Base and IPS	Work Track
PROCEDURES	Promapp, Word	Promapp, Word	Promapp, Word	Promapp, Word	Promapp, Word
AS-BUILTS	Autodesk Vault	RAMM	Autodesk Vault	Autodesk Vault	Autodesk Vault
TELEMETRY/COMMS / REMOTE SENSING	Abbey, Sensum Networks: Radio, Encrypted Cellular, LoraWan	Eco-Visio SCATS Frog Parking	Elemos		Fibre (Library, CDC)
SCADA	Wonderware				
DRINKING WATER STANDARDS COMPLIANCE	Drinking Water Online, Infrastructure Data				
LAB DATA	Salesforce				

CONSENT MONITORING	Salesforce RC Monitoring	RC Monitoring	RC Monitoring	RC Monitoring	
TRADEWASTE	Salesforce				
PIPE CCTV	IPS			IPS	
PURCHASE ORDERS	Ozone	Ozone	Ozone	Ozone	Ozone
RISK MANAGEMENT	Project Status, Yoda Risk Register	Project Status, Yoda Risk Register	Project Status, Yoda Risk Register	Project Status, Yoda Risk Register	Project Status, Yoda Risk Register
PROJECT MANAGEMENT	Project status, Trello, ProjectManager.com, Power BI				
CUSTOMER BILLING	Ozone		Ozone, Excel		
CUSTOMER REQUESTS	K Base, IPS	K Base	K Base	K Base	K Base
BOOKING SYSTEMS			Manual	Excel Promapp Priava (Arena)	
SUPPLY & DEMAND DATA	Salesforce QSD		Salesforce QSD		
SUPPLY & DEMAND DATA					Various but unknown
MODELLING	MIKE Urban WD MIKE Urban CS TUFLOW, MIKE FLOOD	Cube			
LOGISTICS			Smartrak		Smartrak
WATER METER READING	Ozone, Manual				

COMMERCIAL COLLECTIONS					
LEASE MANAGEMENT					Ozone

Appendix Five: Timeframes for Residential Growth Areas

Future Development Areas						
	NPS – UDC timeframes	Short term 0-3 years	Medium 3- 10 years		Long 10 – 30 years	
Location	PNCC timeframes	1 – 5 years	6 – 10 years	11- 15 years	16 – 20 years	21 – 30 years
Milson						
Aokautere						
Ashurst						
Kelvin Grove (Napier Road – Roberts line)						
Whakarongo						
Hokowhitu						
Roxborough						
Kikiwhenua (stage 1 of city west)						
Flygers Line						
City West (Kakatangiata) - less Kikiwhenua						

*The information included in this table has been updated from 2017 Growth Narrative. Updates have been made to 10/10/2019 and are subject to further change.

Appendix Six: Council Strategy, Plans, Policies and Frameworks

The following Council Vision, Strategies and Goals are already discussed in this document but listed here for the sake of completeness:

Vision: Small City Benefits, Big City Ambition.

Goals:

- An innovative and growing city
- A creative and exciting city
- A connected and safe community
- An eco-city
- A driven and enabling Council

Strategy:

- Innovative and Growing City Strategy
- Creative and Liveable Strategy
- Connected Communities Strategy
- Eco City Strategy
- Driven and Enabling Strategy

Together this is Council's Strategic Direction

Other related Strategies and Plans:

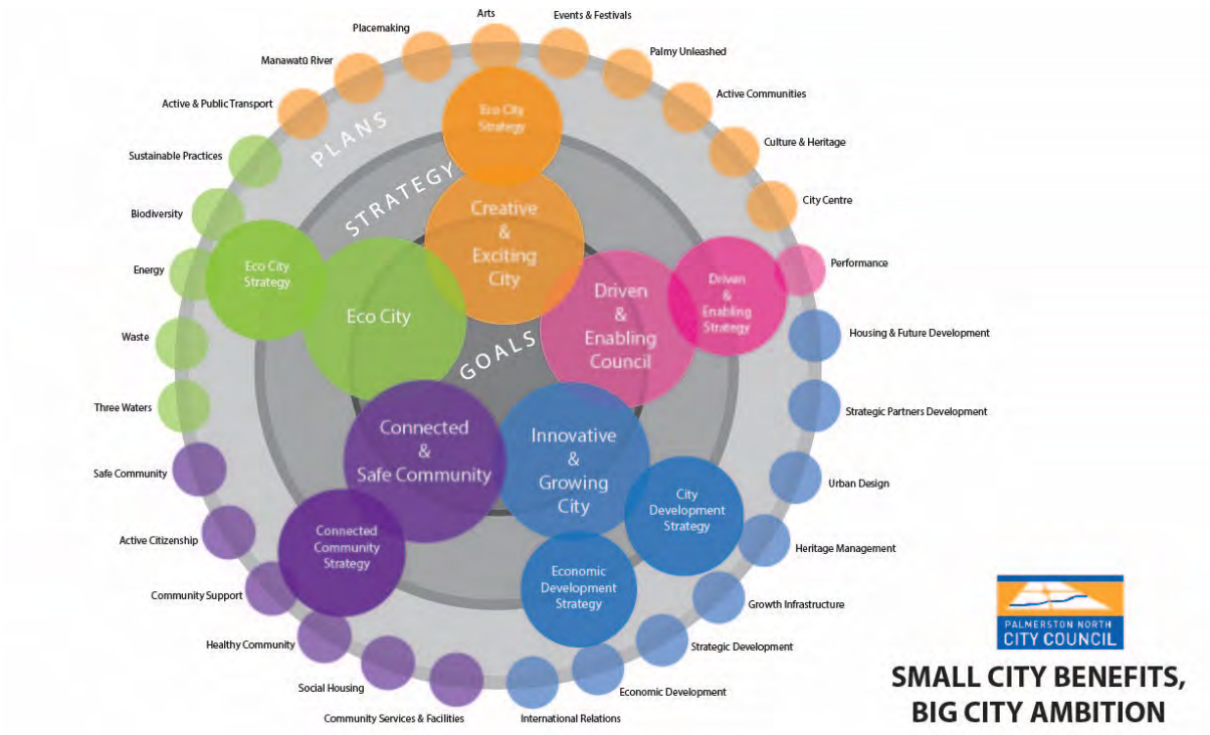
- Infrastructure Strategy
- Financial Strategy
- Industrial Growth Strategy
- Commercial Land Use Strategy

- Long Term Plan
- Housing and Future Development Plan
- District Plan
- City Growth Plan
- Emergency Response Plan

Other related Strategies, Plans, Policies and Frameworks referred to in this document:

Urban Design Plan

Palmerston North City Council is committed to urban design outcomes through the Urban Design Plan which shall enable opportunities for employment and growth to achieve our goal of being an innovative and growing city. The Urban Design Plan promotes the need for greater internal collaboration, knowledge and application of good urban design practice to improve the planning, delivery and quality of Council projects.



The Manawatū River Framework, City Centre Framework and City Streetscape Plan are urban design documents encouraging greater private development, public space investment and quality design outcomes. The District Plan also gives effect to quality urban design outcomes both at the city level and through the Industrial, Business, Recreation and Residential Zones.

It is important to understand that the Urban Design Plan along with all other council strategies and plans are interconnected. Quality urban design contribute to not just our goal to be an innovative and growing city but other strategic city goals and outcomes. That is a creative and exciting city, a connected and safe city; an eco-city and a driven and enabling council.

Any Council led projects must ensure that there is a sound understanding and application of the principles and value of good urban design. Through increased collaboration and closer working relationships, Council can demonstrate good urban design practice through their own activities by protecting and managing infrastructure utilising new technologies, recognising life costs and ongoing care.

Urban design creates functional, attractive, vibrant, sustainable places and cities by bringing together people, businesses and other sectors when designing buildings, streets and open spaces. Urban design is not just concerned with how buildings and cities look but the social, economic, cultural and environmental outcomes of the design.

Development Contributions Policy

Council has a Development Contributions Policy that enables it to recover from those persons undertaking development a fair, equitable and proportionate portion of the total cost of capital expenditure necessary to service growth over the long term.

Play Policy

Council are currently developing a play policy for the city, to meet needs of the community and council commitment to play. The play policy extends across the whole city and moves away from traditional playgrounds and play equipment by focusing on emerging themes such as natural play and accessibility. The play policy will ensure council provides a range of play

option across a range of age groups, provide guidelines for play space management, ensuring that council investment is sustained and increased over time. Council currently have frameworks, masterplans, strategies and reserve management/development plans in place that creates play zones, attracting the community to destinations around the city.

Bylaws

Bylaws are rules set out to regulate behaviour or activities under the Local Government Act 2002. The purpose of bylaws is to; protect the public from nuisance, protect, promote and maintain public health and safety and to minimise the potential for offensive behaviour. Bylaws support the protection of Council's asset management activities and infrastructure by set rules, requirements and regulation to meet levels of service. Relevant Bylaws include:

- Stormwater Drainage Bylaw
- Water Supply Bylaw
- Wastewater Bylaw.

Appendix Seven: Legislation, Policy and Guidelines

Legislation

The key legislation relating to the management of the infrastructure activities are listed below. The statutory requirements provide Council with a minimum level of service standard and have been reflected in the levels of service shown in Part B. Council is currently complying with all legislative requirements:

Resource Management Act 1991

Council is required to:

- Managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being
- Sustain the potential of natural and physical resources to meet the reasonably foreseeable needs of future generations
- Comply with the District and Regional Plan
- To avoid, remedy or mitigate any adverse effect on the environment
- Take into account the principles of the Treaty of Waitangi in exercising functions and powers under the Act relating to the use, development, and protection of natural and physical resources
- Safeguard the life-supporting capacity of air, water, soil and ecosystems.

Reserves Act 1977

The regulatory framework for controlling the use and effects of reserves as follows:

- Classification of the different types of reserve and specifies the purpose of each.
- Specification of the statutory procedures for managing each reserve.
- Requirement of Council to protect, to an extent compatible with the principal or primary purpose of each reserve, the scenic, historical, archaeological, biological, geological or other scientific features and indigenous flora and fauna and wildlife.
- Requirement of Council to prepare and submit to the Minister for approval a management plan for most reserves and specifies the consultation that must be carried out.
- Governs Council's ability to grant leases or licenses over particular activities or buildings within reserves.

Public Works Act 1981

Enables acquisition of land for Council's activities and disposal of surplus land.

Civil Defence Emergency Management Act 2002

Requires councils to function at the fullest possible extent during and after an emergency and to have plans for such functioning (continuity).

Health and Safety at Work Act 2015

The Act and related regulations require that employees and contractors are given the highest level of protection from workplace health and safety risks, so far as is reasonably practicable.

Building Act 1991

Produce Project Information Memoranda (PIMs) that supply all available information relating to an individual property.

Fire Service Act 1975

Requires approved evacuation schemes. Applies generally to public buildings used by more than 100 people or buildings used for childcare, accommodation for more than 5 people and other users

Further legislation applicable to the management of each activity is listed in the Part B Asset Management Plans. The legislation sets the minimum levels of service for environmental, design, and health and safety standards.

Emissions Trading Scheme

The New Zealand Emissions Trading Scheme (NZ ETS) was created in 2008 through the Climate Change Response Act 2002. The scheme encourages the reduction of greenhouse gas emissions and is the Government's main tool for meeting climate change targets.

The NZ ETS puts a price on greenhouse gas emissions, by charging emitters a certain amount for each metric tonne of carbon dioxide or equivalent (units) emitted. This price is intended to create a financial incentive for businesses to invest in technologies and practices that reduce emissions. It also encourages forest planting by allowing eligible foresters to earn New Zealand emission units as their trees grow and absorb carbon dioxide.

Consultation regarding proposed changes to the NZ ETS was carried out in 2018/2019. In February 2021 a new Climate Change Commission will deliver advice on the first three emissions budgets for the 2021-2030 period and the first emissions reduction plan. In 2022, the Government will present the first national plan adoption.

National Policy Statements

National Policy Statement for Freshwater Management 2014 is implemented by Horizons Regional Council in the One Plan. Horizons Regional Council provide integrated management with territorial authorities, including Palmerston North City Council, to ensure the effects of land use and development of infrastructure does not have any adverse effects on freshwater bodies. Asset management activities must continue to comply with resource consents granted by Horizons Regional Council.

National Policy Statement for Urban Development Capacity 2016 identifies Palmerston North City as a 'medium growth area' and directs Council's land use planning and infrastructure to meet the future demands associated with urban growth. Council has developed the Housing and Business Development Capacity Assessment and the Housing and Future Development Plan to meet requirements:

- Infrastructure facilitates development capacity
- Collaboration with relevant stakeholders (central government, infrastructure providers and council-controlled organisations)
- Provide plans that meet future demands, giving communities a variety of choices at an affordable price
- Monitor housing markets and business growth
- A 3-year supply of land ready to be developed with available infrastructure (short term)
- A 10-year supply of land zoned with available infrastructure, identified in the 30-year Infrastructure Strategy (long term).

National Policy Statement for Renewable Electricity Generation 2011 guides local authorities on how to deal with renewable electricity generation in relevant Resource Management Act (1991) planning documents (District Plan), to achieve central government's goal that 90% of electricity is from renewable sources by 2025. Council is required to include renewable electricity generation in relevant plans and policies.

National Environmental Standards

National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health 2011 involves assessing and managing contaminants in soil to protect human health and requires that any land with contaminated soils is identified and remedied to ensuring the land is safe for human use. Territorial authorities must prevent and mitigate any adverse effects of the use of contaminated land. Horizons Regional Council holds the database (HAIL register) for all contaminated sites in the city.

National Environmental Standards for Plantation Forestry 2018 provides regulations to avoid negative environmental effects related to eight core forestry activities. Council is required to implement the regulations and stricter rules in sites of significance, at the local level.

Industry Guidance and Trends

The Three Waters Review is a national inquiry into the provision of the 'three waters' services that was initiated in mid-2017 by the Minister of Local Government. The review aims to determine how to improve the supply and regulation of these services following the campylobacter outbreak in Havelock North in 2016. The review process in June 2019 involved consultation with stakeholders to inform and develop regulatory proposals. The proposals include investigating high-level options for the delivery of services. These proposed improvement schemes are expected to impact the future provision of Council's three waters services. Council is collaborating with other councils in the region to investigate service delivery options that could meet central governments requirements, while being considerate of communities in the region. The extent to which this review will affect the management of Council's water assets is currently unknown.

The Office of Auditor-General released a Water Supply Review report in 2018, "Managing the supply of and demand for drinking water", following an audit of Palmerston North City Council. The report concluded that councils with "a broad range of objectives for providing drinking water and a greater balance between supply and demand management tools are in a better position to respond to future challenges". It praised councils that considered water efficiency and water conservation despite there not being "national outcomes that support prudent water use or national requirements to be water efficient". This approach was not prevalent but there is a trend with councils putting more focus on these aspects of water supply. This report will contribute to the Three Waters Review and may have implications on Council's future regulatory arrangements for water supply.

Another report released in 2018 by Office of the Auditor General, titled "Managing stormwater systems to reduce the risk of flooding", may also have implications for Council's infrastructure assets. The report concluded that councils audited had a lack of knowledge and understanding of the flood risks within their regions and the current state of their stormwater systems. The audit indicated councils may be planning to under-invest in their stormwater - consistent with historical trends. These factors all negatively affect the councils' ability to prepare and respond to future flooding events. The report concluded councils need to prioritise gathering "thorough and reliable information about their stormwater systems and flood risks". It was recommended all councils consider the report and identify where improvement could occur in their stormwater systems management.

Regional Policy

The Regional Land Transport Plan 2015 is a requirement under the Land Transport Management Act 2003. The vision and strategic direction for land transport are implemented at the regional level (Horizons Regional Council) and territorial authorities are responsible for physically delivering these projects through asset management plans. Accelerate25 – the Regional Economic Development Action Plan provides a strategy for the Regional Land Transport Plan to optimise economic growth opportunities through; growing businesses, skills and talent, digital connectivity and distribution and transport. Palmerston North city is recognised as an economic hub and major freight route for the region.

Horizons Regional Council's One Plan is a combination of the Regional Policy Statement, Regional Plan and Coastal Plan, prepared by Horizons Regional Council under the Resource Management Act 1991. The One Plan sets out resource management issues, rules and provides a resource management framework to follow over a 10-year period. Physical and natural resources in the region are managed collaboratively between Horizons Regional Council, territorial authorities, including Palmerston North City Council and the community.

Part I Regional Policy Statement

Identifies which policies, objectives and methods will address resource management issues. The most significant resource management issues identified in the One Plan are:

- Water quality degradation – caused by the discharge of nutrients "runoff"
- Increasing demand for water supply – exceeding supply
- Unsustainable and poor land use
- Rapid decline of Indigenous biodiversity

The One Plan recognises climate change as an overarching issue for the region.

Part II Regional Plan

Controlling the use of resources in the region. The One Plan sets out rules for:

- Land use activities (vegetation clearance).
- Discharges to land and water (stormwater, domestic wastewater, human effluent, landfills etc).
- Using/ taking and diversions of water and water bores.
- Consent compliance.

The rules set out in the One Plan are expected to change through plan changes and amendments. Council will continue to monitor these changes as they occur, to investigate the extent these changes will affect the new wastewater treatment plant best practicable options.

The State of the Environment report 2019 published by Horizons Regional Council, reports on natural resource management trends, issues and pressures. The state of the environment report presents key environmental challenges what is being done to address them. Collaboration with territorial authorities within the region is essential to improve the regional environment and its natural resources.

Key Issues:

- Decline in the natural environment.
- Increasing natural resource demand.
- Changes in the region associated with climate change.

What is being done to address these issues:

- Working in collaboration with other authorities and research agencies within the region.
- Integrated approach to resource management.
- Continued monitoring.
- Ensure that resources are managed sustainably for the future.
- Engaging with communities to aid in climate change adaptation.
- Maintaining and enhancing the natural environment.

Appendix Eight – Terms

Table 83: Glossary

Term	Definition
Activity	An activity the Council delivers with its assets. Asset based activities include: Property; Parks and Reserves; Rubbish and Recycling; Stormwater; Transport and Parking; Wastewater; and Water Supply.
AM	Asset Management
AMIS	Asset Management Information System – the system used to store asset information. This may also provide advanced analysis functionality, such as renewals forecasting, asset valuation, and operational planning.
AMM	Asset Management Maturity
AMSG	Asset Management Steering Group
BPO	The project underway to identify the Best Practical Option (BPO) for the upgrade of the wastewater treatment plant.
IIMM	International Infrastructure Management Manual (2015) – practical guidelines for implementing asset management.
LGA	Local Government Act (2002) – the legislation that mandates council's existence and defines its purpose and primary statutory obligations.
LTP	Long Term Plan
LOS	Level(s) of Service – refers to the standard of service delivered. The exact meaning varies a little, depending on the context. Can refer to the overall standard of customer experience provided by an activity (e.g. "our pools provide a great level of service"), or a particular aspect of the service (e.g. "what level of service do you provide for water loss response times?"). It may also refer to the service that was intended, or the service that was received.
RAMM	The AMIS (see above) used for roading and footpath data
SMART	Specific, Measurable, Achievable, Relevant, and Time-bound - used as an adjective to describe the characteristics of a good KPI/performance measure.
SPM	The AMIS software used by Parks and Reserves, and Facilities.

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