KOMITI HANGANGA
INFRASTRUCTURE AND REGULATORY COMMITTEE

29 February 2024

Order Paper for the meeting to be held in the
Council Chambers, 2nd Floor, 30 Laings Road, Lower Hutt,
on:

Thursday 7 March 2024 commencing at 2:00 pm

The meeting will be livestreamed on Council's Facebook page.

Membership

Cr S Edwards (Chair)
Cr T Stallinger (Deputy Chair)

Mayor C Barry	Cr G Barratt
Cr K Brown	Cr B Dyer
Deputy Mayor T Lewis	Cr A Mitchell
Cr G Tupou	

For the dates and times of Council Meetings please visit www.huttcity.govt.nz

Have your say
You can speak under public comment to items on the agenda to the Mayor and Councillors at this meeting. Please let us know by noon the working day before the meeting. You can do this by emailing DemocraticServicesTeam@huttcity.govt.nz or calling the Democratic Services Team on 04 570 6666 | 0800 HUTT CITY

KOMITI HANGANGA | INFRASTRUCTURE AND REGULATORY COMMITTEE

Chair:	Cr Simon Edwards
Deputy Chair:	Cr Tony Stallinger
Membership:	Mayor Campbell Barry Deputy Mayor Tui Lewis Cr Glenda Barratt Cr Keri Brown Cr Brady Dyer Cr Andy Mitchell Cr Gabriel Tupou
Quorum:	Half of the membership
Meeting Cycle:	Meets on an eight-weekly basis or as required
Reports to:	Council
Membership Resource Management Act (RMA) Hearings	An independent Commissioner plus a minimum of either three or four elected members (including the Chair) and alternates who have current certification under the Making Good Decisions Training Assessment and Certification programme for RMA Decision Makers

OVERVIEW:

This is an operationally focused committee, overseeing Council's above and below-ground core infrastructure needs, and core regulatory functions. The committee is aligned with the Economy and Development and Environment and Sustainability directorates.

AREAS OF FOCUS:

- Three waters infrastructure
- Three waters reform
- Water investment
- Roading/active transport
- Infrastructure strategy
- Integrated transport strategy
- Wharves
- Environmental consents
- Regulatory functions including enforcement
- Treaty partnerships
- Riverlink
- Cycleways
- Accessibility
- Footpaths renewal programme
- Oversight of Major Projects Steering Group

PURPOSE:

To deliver quality infrastructure to support healthy and sustainable living, providing efficient and safe transport options and promoting the city's prosperity. To consider matters relating to the regulatory and quasi-judicial responsibilities of the Council under Council's bylaws and relevant legislation including the following:

- Building Act 2004
- Dog Control Act 1996
- Fencing of Swimming Pools Act 1987
- Local Government Act 1974 and the Local Government Act 2002
- Public Works Act 1981
- Reserves Act 1977
- Resource Management Act 1991
- Sale and Supply of Alcohol Act 2012

DELEGATIONS FOR THE COMMITTEE'S AREAS OF FOCUS:

- All powers necessary to perform the committee's responsibilities including the activities outlined below.
- Develop required strategies and policies. **Recommend draft and final versions to Council** for adoption where they have a city-wide or strategic focus.
- Implement, monitor and review strategies and policies.
- Oversee the implementation of major projects provided for in the Long Term Plan (LTP) or Annual Plan.
- Oversee budgetary decisions provided for in the LTP or Annual Plan.
- Oversee the development and implementation of plans and functions that promote economic well-being.
- Advocate for strong relationships with Council's Mana Whenua partners as outlined in the Tākai Here agreements ensuring the outcomes of the committee are in line with the aspirations of the partners.
- Advocate for the best interests of Māori communities in Lower Hutt having regard to the committee's goals.
- Ensure the committee is operating in a way that is consistent with various pieces of legislation that provide for Te Tiriti o Waitangi.
- Maintain an overview of work programmes carried out by Council's Economy and Development Directorate.
- Undertake the administration of all statutory functions, powers and duties other than those specifically delegated to any other committee or subcommittee or retained by Council.
- Conduct any consultation processes required on infrastructure issues before the committee.
- Approve and forward submissions (other than those delegated to the District Plan Review Committee).
- Any other matters delegated to the committee by Council in accordance with approved policies and bylaws.
- The committee has the powers to perform the responsibilities of another committee

where it is necessary to make a decision prior to the next meeting of that other committee. When exercised, the report/minutes of the meeting require a resolution noting that the committee has performed the responsibilities of another committee and the reason/s.

- If a policy or project relates primarily to the responsibilities of the Komiti Hanganga | Infrastructure and Regulatory Committee, but aspects require additional decisions by the Komiti Hapori Ahurea me ngā Rangapū | Communities, Culture and Partnerships Committee and/or Komiti Kaupapa Taiao | Climate Change and Sustainability Committee, then the Komiti Hanganga | Infrastructure and Regulatory Committee has the powers to make associated decisions on behalf of those other committees. For the avoidance of doubt, this means that matters do not need to be taken to more than one of those committees for decisions.

Additional Infrastructure Delegations:

- Determine roading issues considered by the Mayor and Chief Executive to be strategic due to their significance on a city-wide basis, including links to the State Highway, or where their effects cross ward or community boundaries.

- Hear objections to specified traffic matters where the community board wishes to take an advocacy role.

- Make decisions under Clause 11(e) of the Tenth Schedule of the Local Government Act 1974 and the Transport (Vehicular Traffic Road Closure) Regulations 1965 in respect of temporary road closures, including making decisions on any ancillary matters including, without limitation, approval of temporary "No Stopping" restrictions under Hutt City Council Traffic Bylaw 2017.

- Undertake hearings on road stopping under the Local Government Act 1974.

- **Make recommendations to Council** whether to proceed with a road stopping and the disposal of stopped road, including (where the proposal includes or involves a related acquisition, disposal or land exchange) a **recommendation to Council** on the acquisition, disposal or exchange.

- Consider and **recommend to Counci**l any request to the Crown that a road is stopped under section 116 of the Public Works Act 1981, and the disposal of the stopped road.

- Make any resolution required under section 319A of the Local Government Act 1974 regarding the naming of new roads and alterations to street names (other than those in the Harbour and Wainuiomata Wards, which are delegated to the community boards in those areas).

Additional Regulatory Delegations:

- Develop any regulations required to achieve Council's objectives.
- Approve Council's list of hearings commissioners under the Resource Management Act 1991, including councillors sitting as hearings commissioners and independent commissioners.
- Conduct statutory hearings on regulatory matters and make decisions on those hearings[2], excluding those conducted under the Resource Management Act 1991, which are delegated to the Hearings Subcommittee and District Plan Hearings Subcommittee.
- Authorise the submission of appeals to the Environment Court on behalf of Council.
- Make decisions on applications required under the Development Contributions Policy

for remissions, postponements, reconsiderations and objections.

- **Recommend to Council** the list of members approved to be members of the District Licensing Committee under section 192 of the Sale and Supply of Alcohol Act 2012.

Delegations to make Appointments:

- The Chair of the Komiti Hanganga | Infrastructure and Regulatory Committee, in conjunction with the Chief Executive, is authorised to appoint a subcommittee of suitably qualified persons to conduct hearings on behalf of the committee.
- The Chair of the Komiti Hanganga | Infrastructure and Regulatory Committee, in conjunction with the Chief Executive, is authorised to appoint a Hearings Subcommittee of suitably qualified persons to conduct resource consent and related hearings on behalf of the committee.
- The Chair of the Komiti Hanganga | Infrastructure and Regulatory Committee is authorised to appoint three people from the list prepared under the Sale and Supply of Alcohol Act 2012 to specific meetings (Chair and two members).

NOTE:

The Manatū mō te Taiao | Ministry for the Environment advocates that Councils offer specialist Resource Management Act (RMA) training in areas that are difficult to grasp or where mistakes are commonly made. This is to complement the Good Decision Making RMA training that they run (which is an overview and basic summary of decision making, rather than an in-depth training in specific areas of the RMA). Therefore, in order to facilitate this, the RMA training run for councillors that wish to be hearings commissioners is mandatory.

Reasons for the importance of the training:

1. Hearings commissioners are kept abreast of developments in the legislation.
2. Legal and technical errors that have been made previously are avoided (many of which have resulted in Environment Court action which is costly, time-consuming and often creates unrealistic expectations for the community).
3. The reputation of Council as good and fair decision makers or judges (rather than legislators) is upheld.

HUTT CITY COUNCIL

KOMITI HANGANGA | INFRASTRUCTURE AND REGULATORY COMMITTEE

Meeting to be held in the Council Chambers, 2nd Floor, 30 Laings Road, Lower Hutt
on
Thursday 7 March 2024 commencing at 2:00 pm.

ORDER PAPER

PUBLIC BUSINESS

1. OPENING FORMALITIES - KARAKIA TIMATANGA

Whakataka te hau ki te uru	Cease the winds from the west
Whakataka te hau ki te tonga	Cease the winds from the south
Kia mākinakina ki uta	Let the breeze blow over the land
Kia mātaratara ki tai	Let the breeze blow over the ocean
E hī ake ana te atakura	Let the red-tipped dawn come with a sharpened air.
He tio, he huka, he hau hū	A touch of frost, a promise of a
Tīhei mauri ora	glorious day.

2. APOLOGIES

No apologies have been received.

3. PUBLIC COMMENT

Generally up to 30 minutes is set aside for public comment (three minutes per speaker on items appearing on the agenda). Speakers may be asked questions on the matters they raise.

4. CONFLICT OF INTEREST DECLARATIONS

Members are reminded of the need to be vigilant to stand aside from decision making when a conflict arises between their role as a member and any private or other external interest they might have

5. RECOMMENDATIONS TO TE KAUNIHERA O TE AWA KAIRANGI | COUNCIL - 27 March 2024

a) Asset Management Policy

Report No. IARCC2024/1/47 by the Head of Assets & Facilities 10

CHAIR'S RECOMMENDATION:

"That the recommendations contained in the report be endorsed."

b) Raised Crossings - Harcourt Werry Drive and Waiwhetu Road/Waterloo Road

Report No. TSC2024/1/19 by the Traffic Engineer 20

CHAIR'S RECOMMENDATION:

"That the recommendations contained in the report be endorsed."

6. THREE WATERS UPDATE

Report No. IARCC2024/1/48 by the Strategic Advisor 37

CHAIR'S RECOMMENDATION:

"That the recommendation contained in the report be endorsed."

7. REGULATORY MATTERS

Report No. IARCC2024/1/49 by the Head of Planning 51

CHAIR'S RECOMMENDATION:

"That the recommendation contained in the report be endorsed."

8. PROPOSED TEMPORARY ROAD CLOSURE: MURITAI ROAD FOR THE EASTBOURNE MEMORIAL RETURNED SERVICES ASSOCIATION ANZAC DAY EVENT 2024 - 2026

Report No. IARCC2024/1/50 by the Traffic Engineer - Contractor 69

CHAIR'S RECOMMENDATION:

"That the recommendations contained in the report be endorsed."

9. PROPOSED TEMPORARY ROAD CLOSURES: LAINGS ROAD, KNIGHTS ROAD AND QUEENS DRIVE, HUTT CENTRAL - ANZAC DAY DAWN SERVICE 2024 2026

Report No. IARCC2024/1/51 by the Traffic Engineer 76

CHAIR'S RECOMMENDATION:

"That the recommendations contained in the report be endorsed."

10. TRANSPORT ACTIVITY MANAGEMENT PLAN

Report No. IARCC2024/1/52 by the Principal Advisor – Micromobility Programme 83

CHAIR'S RECOMMENDATION:

"That the recommendations contained in the report be endorsed."

11. INFORMATION ITEM

Infrastructure and Regulatory Forward Programme 2024

Memorandum dated 20 February 2024 by the Democracy Advisor 315

CHAIR'S RECOMMENDATION:

"That the recommendation contained in the memorandum be endorsed."

12. QUESTIONS

With reference to section 32 of Standing Orders, before putting a question a member shall endeavour to obtain the information. Questions shall be concise and in writing and handed to the Chair prior to the commencement of the meeting.

13. EXCLUSION OF THE PUBLIC

CHAIR'S RECOMMENDATION:

"That the public be excluded from the following parts of the proceedings of this meeting, namely:

14. RECOMMENDATIONS TO TE KAUNIHERA O TE AWA KAIRANGI | COUNCIL - 27 March 2024

TE WAI TAKAMORI O TE AWA KAIRANGI - PROPERTY MATTERS

15. NATIONAL LAND TRANSPORT PLAN (NLTP) 2024-27 IMPROVEMENT PROJECTS AND LOW COST, LOW RISK PROJECTS - FINAL SUBMISSION

16. CROSS VALLEY CONNECTIONS PROGRAMME UPDATE

The general subject of each matter to be considered while the public is excluded, the reason for passing this resolution in relation to each matter, and the specific grounds under section 48(1) of the Local Government Official Information and Meetings Act 1987 for the passing of this resolution are as follows:

(A)	(B)	(C)
General subject of the matter to be considered.	Reason for passing this resolution in relation to each matter.	Ground under section 48(1) for the passing of this resolution.
Te Wai Takamori o Te Awa Kairangi - Property Matters.	The withholding of the information is necessary to enable the local authority to carry out, without prejudice or disadvantage, commercial activities (s7(2)(h)). The withholding of the information is necessary to enable the local authority to carry on, without prejudice or disadvantage, negotiations (including commercial and industrial negotiations) (s7(2)(i)).	That the public conduct of the relevant part of the proceedings of the meeting would be likely to result in the disclosure of information for which good reason for withholding exist.
National Land Transport Plan (NLTP) 2024-27 Improvement Projects and Low Cost, Low Risk Projects - Final Submission.	The withholding of the information is necessary to enable the local authority to carry on, without prejudice or disadvantage, negotiations (including commercial and industrial negotiations) (s7(2)(i)).	That the public conduct of the relevant part of the proceedings of the meeting would be likely to result in the disclosure of information for which good reason for withholding exist.
Cross Valley Connections Programme Update.	The withholding of the information is necessary to enable the local authority to carry on, without prejudice or disadvantage, negotiations (including commercial and industrial negotiations) (s7(2)(i)).	That the public conduct of the relevant part of the proceedings of the meeting would be likely to result in the disclosure of information for which good reason for withholding exist.

This resolution is made in reliance on section 48(1) of the Local Government Official Information and Meetings Act 1987 and the particular interest or interests protected by section 6 or 7 of that Act which would be prejudiced by the holding of the whole or the relevant part of the proceedings of the meeting in public are as specified in Column (B) above."

Vanessa Gilmour
DEMOCRACY ADVISOR

HUTT CITY TE AWA KAIRANGI **Infrastructure and Regulatory Committee**

20 February 2024

Report no: IARCC2024/1/47

Asset Management Policy

Purpose of Report

1. The purpose of this report is to seek Council's approval of the draft Asset Management Policy (the Policy).

Recommendations

That the Committee recommends that Council:

(1) receives and notes the report; and

(2) approves the draft Asset Management Policy (the Policy) attached as Appendix 1 to the report.

For the reasons outlined in the report.

Background

2. Asset Management was identified as a key area for improvement for Council, with opportunities to improve consistency and co-ordination across business units.

3. The Policy is a short statement that sets out the guiding principles by which Council intends to apply asset management to achieve its organisational objectives.

4. To best reflect Council's vision and objectives, we used facilitated workshops with Council Officers to identify the principles that most readily resonate with Council values.

5. The workshop attendees included Heads of key internal service areas who are responsible for leading asset management implementation as well as key personnel who liaise with Wellington Water.

6. This policy will be a Council Group policy that includes Council Controlled Organisations (CCOs) within its' scope. Seaview Marina and Urban Plus Chief Executives were engaged with and their approval given.

7. The asset management policy has been developed in alignment with international best practice, in particular the International Standard for Asset Management, ISO 5500X series. This series of standards was initially published in 2014 but has more recently become a key focus for best practice in New Zealand.

8. This is the first version of this policy. This policy will be reviewed every three (3) years in a timeframe to fit Council's needs to ensure Council's values and objectives are being met.

Discussion

9. Following engagement with the CCOs, it was agreed that the policy is kept at a high level and provides the overarching philosophy to group asset management.

10. No additional group reporting, timelines or deadlines are imposed upon on our CCOs consequent to this policy being implemented. Asset conditions are reported within the existing reporting framework.

Climate Change Impact and Considerations

11. The matters addressed in this report have been considered in accordance with the process set out in Council's Climate Change Considerations Guide.

12. This Policy has been developed to support future proofing of our assets and make our communities resilient, by improving investment decisions and planning processes to ensure reliable, consistent and quality service delivery, in the face of significant environmental challenges.

Consultation

13. The Assets team led meetings with internal stakeholders, including team members from Finance, Neighbourhoods and Communities, and Legal. The updated draft Policy incorporates their feedback.

14. The Assets team also undertook a review of Asset Management Policies from neighbouring and similarly sized Councils.

Legal Considerations

15. An internal legal review of the draft Policy has been undertaken. The draft Policy incorporates the feedback, including adding approval from the CCO Boards.

Financial Considerations

16. Not applicable.

Appendices

No.	Title	Page
1⇩	Draft Asset Management Policy	12

Author: Alannah Laban, Head of Assets and Facilities Management
Approved By: Jon Kingsbury, Director Economy & Development

ASSET MANAGEMENT POLICY

COUNCIL GROUP

Division	Assets and Facilities
Date created	February 2024
Publication date	March 2024
Review period	January 2027
Owner	Head of Assets and Facilities
Approved by	Council

Version	Author	Date	Description
		DD/MM/YYYY	Approved by Council.
V 1.0	Name	DD/MM/YYYY	Approved by Urban Plus Board.
		DD/MM/YYYY	Approved by Seaview Marina Board.
V 2.0	Name	DD/MM/YYYY	Reviewed.

CONTENTS

1. INTRODUCTION

Hutt City Council's vision for Te Awa Kairangi Lower Hutt is a city where everyone thrives. We are entrusted to provide a wide range of services to our communities that require the ownership and stewardship of physical assets. Implementing asset management practices allows us to manage assets sustainably and effectively over their full life span, to maximise benefits and reduce risks, for present and future generations. This policy establishes corporate leadership, direction and commitment for implementing asset management across the Council Group.

2. PURPOSE

The Asset Management Policy outlines our fundamental principles that will guide consistent asset management across the Council Group. Supporting mana whenua in their role of kaitiakitanga (guardianship) is the central pillar of this policy, as we seek to manage assets in a way that benefits both present and future generations.

This policy has been developed to support the following objectives:

- To future proof and make our communities resilient, by improving investment decisions and planning processes to ensure reliable, consistent and quality service delivery, in the face of significant environmental challenges
- To provide clear leadership and commitment to improve the level of asset management accountability and capability across Council Group
- To enable fit-for-purpose approach that aligns our asset management practices with the International Standard for Asset Management (ISO 5500X series).

3. SCOPE

This policy applies across Council Group, including Hutt City Council internal departments and the following Council Controlled Organisations (CCOs):

- Seaview Marina Limited
- Urban Plus Limited

The assets and activities considered within the scope of the policy include:

- Physical assets and supporting systems that are owned and/or managed by Hutt City Council.
- Activities related to the management of assets carried out either by Hutt City Council or an outsourced service provider who is required to plan, establish, implement, manage and continually improve the asset portfolio and/or the asset management system.

The scope of this policy excludes service areas where assets are not owned and/or managed by Hutt City Council. However, we will communicate this policy to strategic partners and others managing assets within Te Awa Kairangi Lower Hutt, and seek their alignment with the policy where:

- Hutt City Council is making a financial contribution towards assets that support community services provided by others
- Hutt City Council own the land, but is leased or licenced to others to develop, own and manage assets on it.

4. ASSET MANAGEMENT PRINCIPLES

In managing our assets, we seek to embed the fundamentals of asset management as set out in ISO55000, into our asset management practices:

- Value: Assets exist to provide value to the organisation and its stakeholders.
- Alignment: Asset management translates the organisational objectives into technical and financial decisions, plans and activities.
- Leadership: Leadership and workplace culture are determinants of realisation of value.
- Assurance: Asset management gives assurance that assets will fulfil their required purpose.

We have adopted the following set of principles to underpin our asset management practice, recognising the role we play in securing a sustainable environment for current and future generations.

Hutt City Council is committed to:

- **Long term sustainability:** We manage our assets in accordance with sustainable development principles including due consideration of long-term financial, societal, cultural and environmental impacts, particularly carbon reduction and impacts of climate change.
- **Life cycle approach:** We aim to get best value for money over the whole life of the asset, including acquisition, operations, maintenance, resilience, renewal and decommissioning of assets when required to recycle investment.
- **Meaningful partnership:** We partner with Mana Whenua to ensure their values and culture are reflected in our approach to asset management and recognise their role in achieving our shared outcomes.
- **Stakeholder engagement:** We engage with our communities and stakeholders to understand their current and future needs and expectations, while seeking to balance cost, risk and performance of assets.
- **Strategic alignment:** Our asset management decision-making and planning aligns with our Te Tiriti o Waitangi obligations, relevant national and regional policies and Council strategies.
- **Integrated approach:** We integrate asset investment and management activities within the business through strategic conversations, corporate and business planning, budgeting and reporting processes.
- **Transparent decision making:** We use formal, consistent, repeatable approaches to decision making, including accurate and up to date information and data as evidence, to balance long and short term investment decisions.
- **Managing risk:** We identify risks that could compromise the sustainability and resilience of our assets and manage these within our risk management framework.
- **Supporting asset management:** We prioritise and direct resources, expenditure and capability to implementing the asset management system and practices, in order to deliver agreed community outcomes.
- **Compliance:** We comply with the Local Government Act Part 6 (Planning) and all other relevant legislative, regulatory and statutory requirements.
- **Reviewing performance:** We monitor, report on and review performance of assets and relate this to public benefit, adjusting to meet agreed community outcomes as required.
- **Continual improvement:** We uphold asset management as a priority and strive towards a best practice approach that focuses on performance, continual improvement and personal leadership.

5. ROLES & RESPONSIBILITIES

This policy recognises the primary role of corporate and other senior leadership necessary to a well-functioning Asset Management System and the asset management culture within Hutt City Council.

Role	Responsibility
Council Elected Members	Approve the Asset Management Policy Approve asset funding through financial plans Priority setting and articulating community values
Corporate Leadership Team (CLT)	Endorse this policy and any amendments Approve funding and resources for implementation Approve any exceptions to the policy Lead the implementation of the Asset Management Policy across the organisation
CCO Governing Bodies	Lead the implementation of the Asset Management Policy across the organisation
Asset Management Steering Committee	Leading adoption of the policy within departments Communication of policy across the organisation
Other staff & service providers	Comply with the asset management principles outlined in this policy

6. DEFINITIONS

The following definitions apply to this document:

Assets means physical assets and supporting systems recognised by Hutt City Council. Examples include land, buildings, structures, transport system, three waters infrastructure, plant and equipment, natural assets, cultural and heritage collections, ICT systems, digital services and asset information/data.

Asset life cycle encompasses all stages, from asset creation to asset end-of-life, involved in the management of an asset (based on ISO 55000, 3.2.2, 3.2.3), and would typically include planning, acquisition, operations, maintenance, resilience, renewal and decommissioning of redundant assets.

Asset management is the coordinated activity of an organisation to realise value from assets (ISO 55000, 3.3.1).

Asset management objectives are specific measurable results to be achieved through asset management. They provide direction for the organisation to ensure that its asset portfolio can fulfil its requirements. Objectives should be available as documented information in the SAMP. Levels of service are one type of objective that enable the organisation to meet the service needs of the customers and users of its asset(s).

Asset Management Plan (AMP) is documented information that specifies the activities, resources and timescales required for an individual asset, or a grouping of assets, to achieve the organisation's asset management objectives (ISO 55000, 3.3.3). Refer Appendix A.

Asset Management Policy documents the intentions and direction of an organisation as formally expressed by its top management (ISO 55000, 3.1.18). It is a short statement that sets out the principles by which the organisation intends to apply asset management to achieve its organisational objectives. The policy relates to the organisational leadership's overarching intentions for assets,

asset management and the asset management systems and does not relate to specific assets (ISO 55002, 5.2). Refer Appendix A.

Asset Management System is the management system for asset management whose function is to establish the asset management policy and asset management objectives (ISO 55000, 3.4.3).

Council Group is the whole Hutt City Council organisation made up of all Hutt City Council internal departments and Council Controlled Organisations (CCOs).

Infrastructure Strategy is a requirement of the Local Government Act 2002 Section 101B (1). It provides a long term financial forecast (for a period of at least 30 consecutive years) and outlines how infrastructure assets are to be managed. Section 101B (6) defines the infrastructure assets that must be included in the strategy. Refer Appendix A.

International Standard for Asset Management (ISO 5500X series) consists of three separate documents: ISO 55000 – the concepts and definitions which underpin the standards, ISO 55001– the requirements that make up the standard, and ISO 50002 – guidance on the requirements. The standard was released in early 2014.

Levels of service are parameters, or combination of parameters, which reflect social, cultural, environmental and economic outcomes Hutt City Council delivers. The parameters can include safety, customer satisfaction, quality, quantity, capacity, reliability, responsiveness, environmental acceptability, cost and availability. Levels of service statements describe the outputs or objectives Hutt City Council intends to deliver to customers.

Management System is a set of interrelated or interacting elements of an organisation to establish policies and objectives and processes to achieve those objectives (ISO 55000, 3.4.2)

Strategic Asset Management Plan (SAMP) is documented information that specifies how organisational objectives are to be converted into asset management objectives, the approach for developing asset management plans, and the role of the asset management system in supporting achievement of the asset management objectives (ISO 55000, 3.3.2). Refer Appendix A.

7. OTHER RELEVANT POLICIES & STRATEGIES

- Infrastructure Strategy – in accordance with the Local Government Act 2002
- Long Term Plan – in accordance with the Local Government Act 2002
- Strategic Asset Management Plan(s) (commencing development)
- Asset Management Plans
- Seismic Performance of Council Buildings
- Heritage Policy (Te Ao Māori)
- Arts & Culture Policy
- Treasury Risk Management Policy
- Lower Hutt Climate Action Pathway
- Interim Carbon Reduction and Climate Resilience Plan for Hutt City Council
- Integrated Transport Strategy
- Reserves Investment Strategy
- Reserves Strategic Direction
- Regional Living Well Strategy
- Regional Places and Spaces Plan
- Regional Sports Fields Plans
- Waste Management and Minimisation Plan
- Indigenous Biodiversity Strategy (in development)

8. IMPLEMENTATION

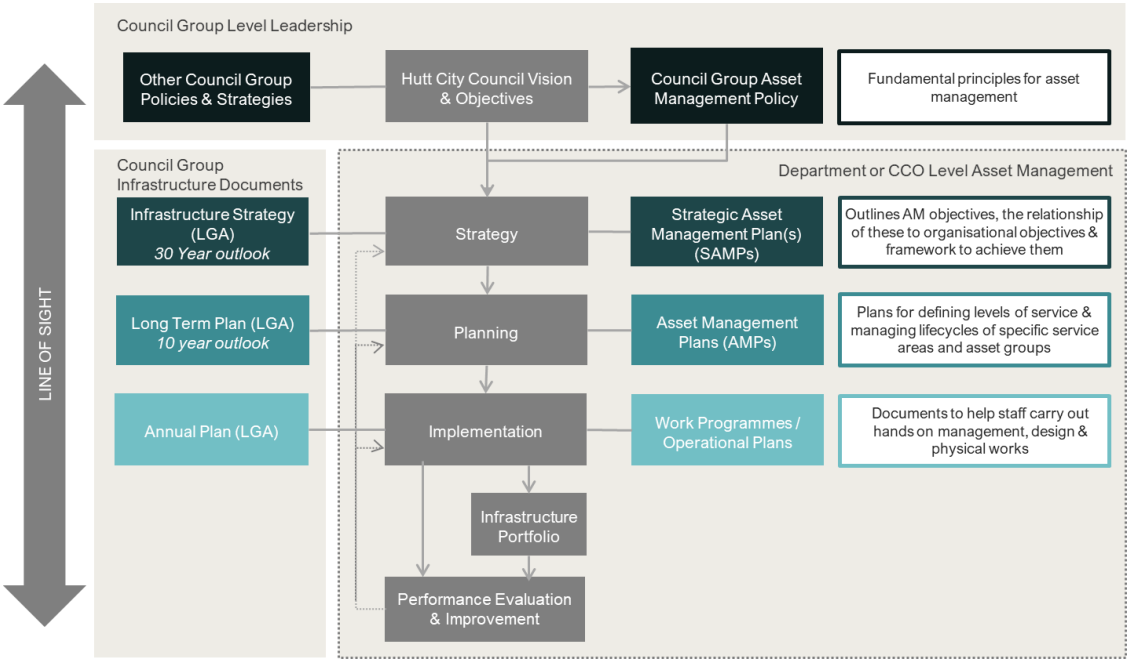
The approach to implementing the principles outlined in this policy should be documented in the Strategic Asset Management Plan(s) (SAMPs). Refer Appendix A.

9. POLICY REVIEW

This is the first version of this policy. This policy will be reviewed every three (3) years in a timeframe to fit Hutt City Council's needs to ensure Hutt City Council's values and objectives are being met.

APPENDIX A – ASSET MANAGEMENT SYSTEM

The diagram below shows how the Council Group Asset Management Policy sits at an organisational leadership level providing clear direction for implementing asset management at the department or CCO level.



Note: Only the primary connections are shown to avoid over-complexity.

HUTT CITY TE AWA KAIRANGI **Infrastructure and Regulatory Committee**

02 February 2024

Report no: TSC2024/1/19

Raised Crossings - Harcourt Werry Drive and Waiwhetu Road/Waterloo Road

Purpose of Report

1. To seek approval for the raised crossings in the locations listed in the recommendations below.

Recommendations

That the Committee recommends that Council:

(1) notes the Chair of the Traffic Subcommittee has referred this traffic matter to the Infrastructure and Regulatory Committee;

(2) approves the installation of a new raised crossing on Harcourt Werry Drive, east of Kennedy Good Bridge as shown in Appendix 1 to the report; and

(3) approves the installation of two new raised pedestrian crossings at the Waterloo Road/Waiwhetu Road roundabout intersection as shown in Appendix 2 to the report.

Raised Crossing on Harcourt Werry Drive

Background

2. Harcourt Werry Drive is a high-speed road, with a speed limit of 70 km/hr. The long stretch of straight road can encourage drivers to speed, posing a significant safety hazard for both pedestrians and cyclists.

3. To future-proof pedestrian and cyclist safety, considering Riverlink's expected traffic increase, a formal crossing on Harcourt Werry Drive is a necessary investment.

4. It has also been a long-standing request from the community, particularly cyclists and pedestrians.

Discussion

5. Officers have identified a safe crossing opportunity on Harcourt Werry Drive near Kennedy Good Bridge.

6. Currently, there are two courtesy crossing points, east and west of Kennedy Good Bridge as shown in image 1 below and do not provide legal protection for either pedestrians or cyclists.

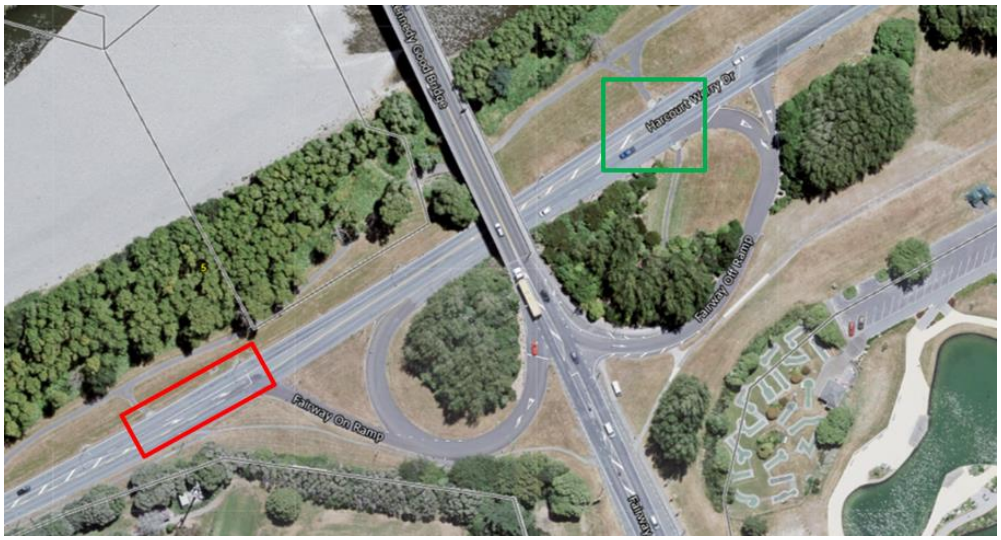


Image 1

7. The courtesy crossing on the west of the Kennedy Good Bridge has limited scope for improvement as it is obstructed by a right-turning bay into the Fairway on Ramp as shown in the red box highlighted in image 1 above.

8. Consequently, the courtesy crossing point highlighted by the green box in image 1 above, is the identified location for proposed improvements. Image 2 below illustrates the concept design for the proposed crossing at this location.

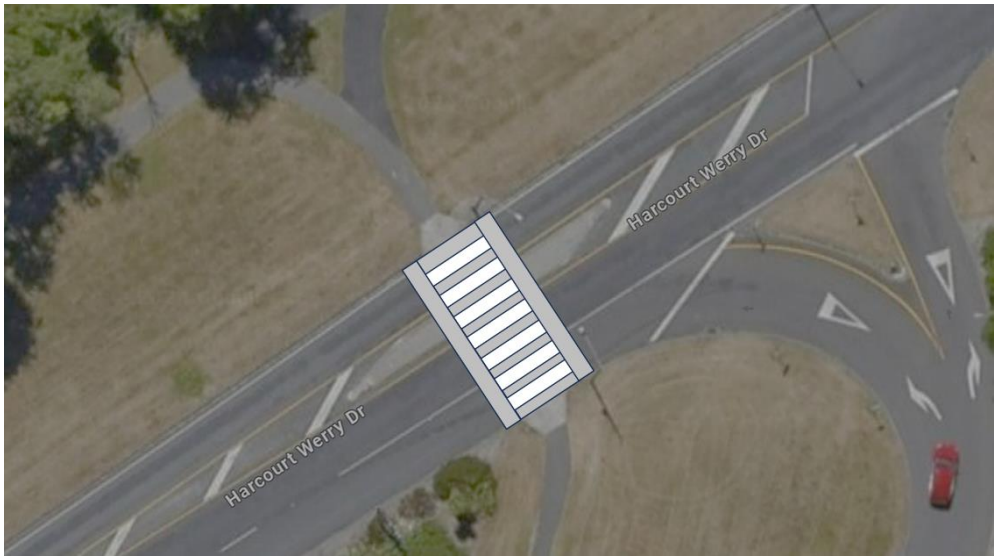


Image 2

9. A **raised pedestrian crossing** is considered an optimal fit for this location, as shown in (indicative) image 3 below.

Image 3 (Indicative Image Only)

10. The crossing will enable pedestrians to cross Harcourt Werry Drive and provide a safe, **convenient point for cyclists to dismount and access the River Trail.**

11. The crossing will be designed with flexibility in mind, allowing for a future upgrade to a **dual crossing** to accommodate the expected increase in pedestrian and cyclist volumes after the Riverlink changes.

12. The crossing is in close proximity to the Avalon Skate Park, Avalon Playground and Avalon Park Lions Mini Golf, all popular spots for families and recreational users who access the River Trail, see image 4 below.

Image 4

Driver Feedback Signs

13. Considering Harcourt Werry Drive's 70 km/hr speed limit, **driver feedback signs and crossing alert signs will be installed in accordance with NZTA specifications.** These measures will proactively alert approaching vehicles to slow down and yield to pedestrians and cyclists using the crossing.

14. The installation of a crossing on Harcourt Werry Drive would:

    a) enable safety for pedestrians and cyclists;

    b) reduce the risk of accidents;

    c) encourage active transport; and

    d) enhance accessibility to the River Trail and other nearby recreational facilities for improved convenience of all users.

Consultation on Harcourt Werry Drive

15. Consultation opened 20 October and closed 3 November 2023 with residents, cyclist groups, New Zealand Police and Fire and Emergency Services.

16. Hutt City Council Kaupapa Māori Design officer advises this crossing is not of any particular relevance to Mana Whenua.

17. **Consultation Summary**: The initial consultation for Harcourt Werry Drive received no public feedback.

    However, re-engagement with the Cycle Activity Network generated eight responses all strongly supporting the proposed raised dual crossing as summarised in Appendix 4 attached to the report.

Crossings on Waterloo Road/ Waiwhetu Road Intersection

Background

18. The Waterloo Road - Waiwhetu Road intersection is a busy roundabout with a high volume of pedestrian traffic. Currently, there is no formal pedestrian crossing at this intersection, forcing pedestrians to cross the road at their own risk.

19. This is a significant safety hazard, especially for vulnerable road users such as children and the elderly as vehicles do not tend to give way to pedestrians at this intersection.

20. A number of local residents have expressed their concerns about the safety of this intersection, particularly that the refuge islands provided at the courtesy crossings do not provide an adequate route or protection for caregivers with prams, mobility scooter users or young children crossing on bikes or scooters.

Discussion

21. Currently, there are two courtesy crossing points one each on Waterloo Road and on Waiwhetu Road East.

22. Officers propose to improve these crossing points by providing raised pedestrian zebra crossings.

23. Raised pedestrian zebra crossings provide a dedicated and legal crossing point for all pedestrians to cross safely and conveniently.

24. Designed with tactile paving on both approaches, visually and mobility-impaired pedestrians and those using e-scooters will be aided for a safer crossing.

25. Two raised pedestrian crossings are proposed, on Waterloo Road and on Waiwhetu Road approaches to the roundabout, see image 5 below and Appendix 2 attached to the report.

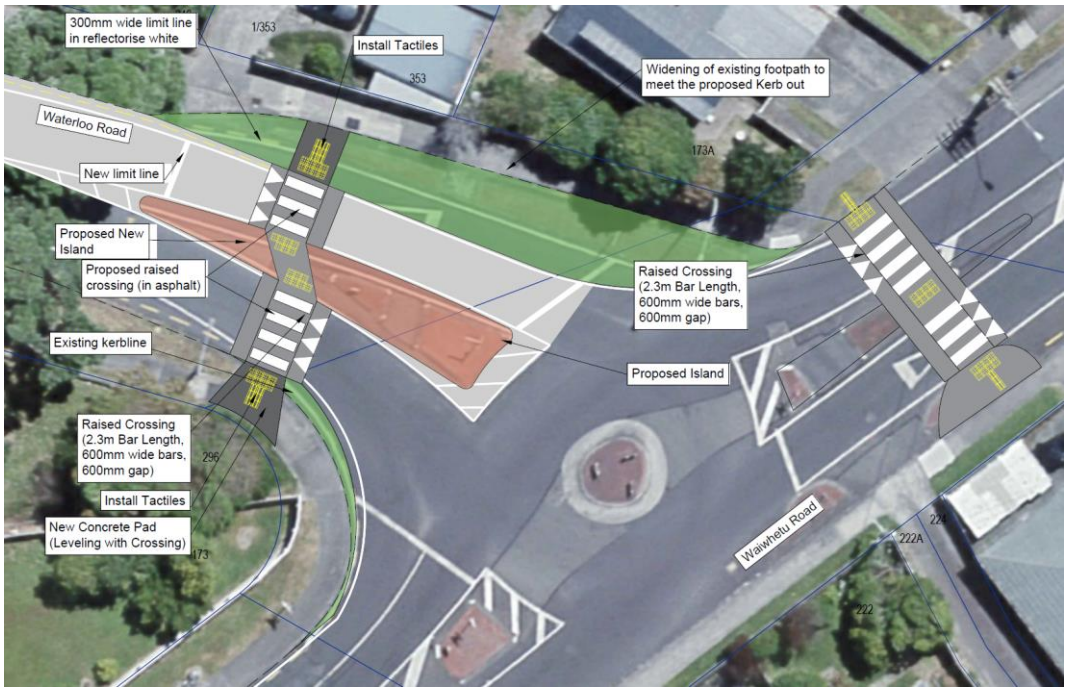


Image 5

Consultation

26. Consultation opened 20 October and closed 3 November 2023 with residents, cyclist groups, New Zealand Police and Fire and Emergency Services.

27. Hutt City Council Kaupapa Māori Design officer advises these crossings are not of any particular relevance to Mana Whenua.

28. **Waterloo Road/Waiwhetu Road Consultation Summary:** 5 submissions were received from residents with four in favour of the proposed raised crossings as summarised in Appendix 3. One item of feedback was received expressing concerns about the crossing costs. Our response emphasised the vital role these crossings play in ensuring the safety of pedestrians and other vulnerable road users.

Options:

a) approves the installation of a new raised crossing on Harcourt Werry Drive east of Kennedy Good Bridge;

b) approves the installation of two new raised pedestrian crossings each at Waterloo Road and Waiwhetu Road approaches at the Waterloo Road/Waiwhetu Road roundabout intersection as shown in Appendix 2 attached to the report; and

c) reject the raised crossings.

29. Officers recommend option (a) and option (b) as the new proposed raised crossings would improve safety, accessibility, active transport and community satisfaction.

Climate Change Impact and Considerations

30. The matters addressed in this report have been considered in accordance with the process set out in Council's Climate Change Considerations Guide.

Legal Considerations

31. Council approval is required to make the proposed raised crossings enforceable by Land Transport (Road User) Rule 2004.

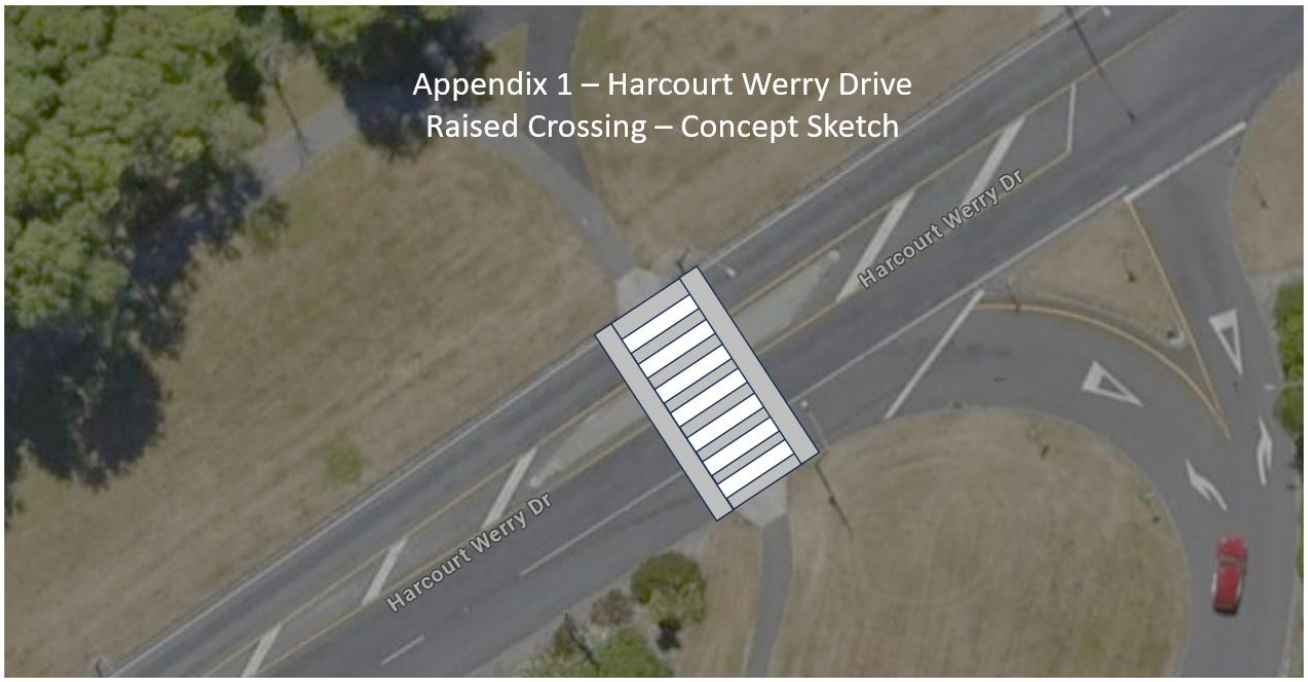
Financial Considerations

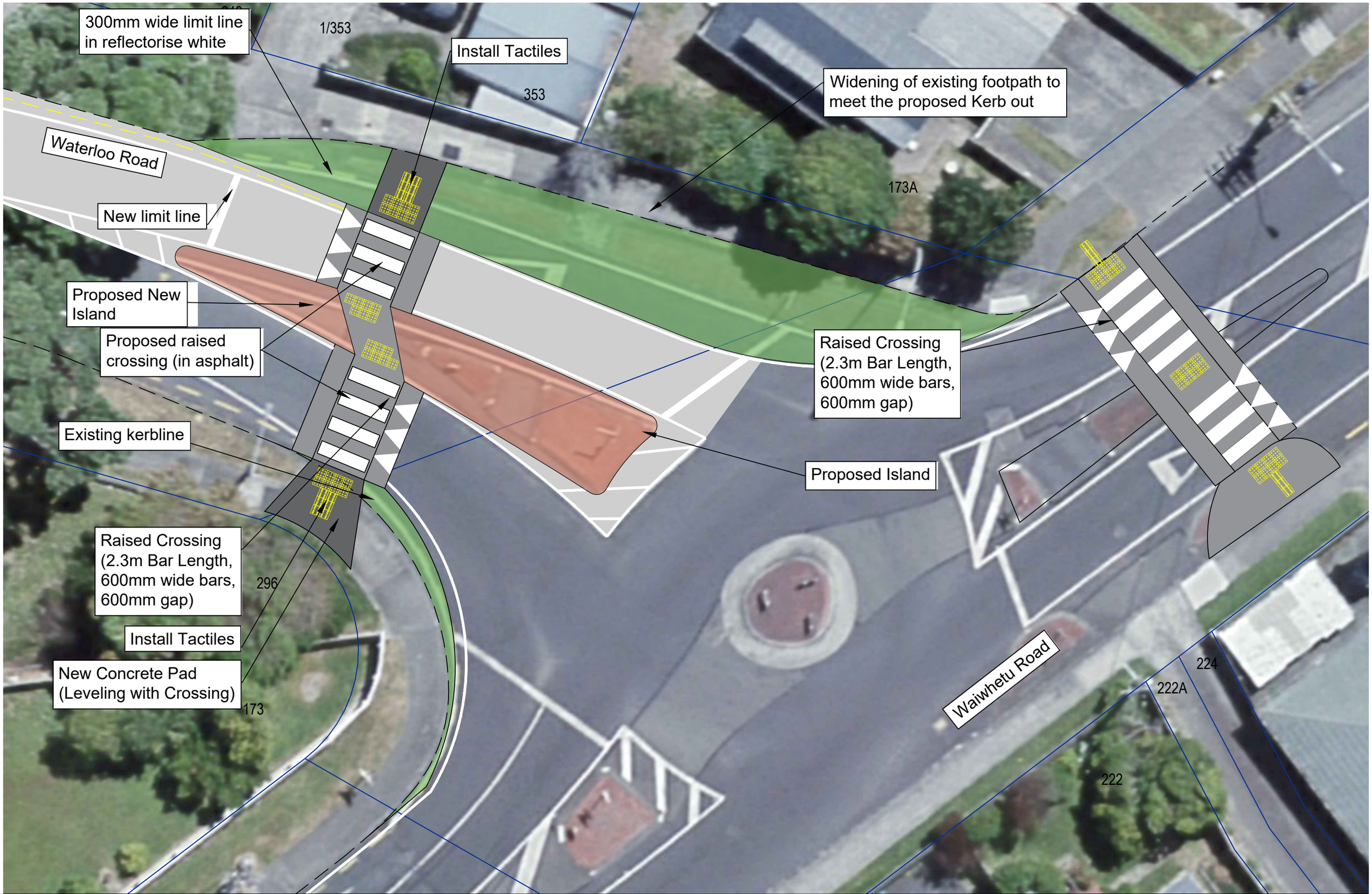
32. The construction of the new proposed raised crossings will be funded from the National Land Transport Plan (NLTP) 2021-2024 Low Cost, Low Risk transport budget.

Appendices

No.	Title	Page
1⇩	Appendix 1 - Harcourt Werry Drive Raised Crossing Concept Sketch	26
2⇩	Appendix 2 - Waterloo-Waiwhetu Raised Pedestrian Crossing Concept Design	27
3⇩	Appendix 3 - Waiwhetu-Waterloo Road Raised Pedestrian Consultation Summary	28
4⇩	Appendix 4 - Harcourt Werry Drive Raised Dual Crossing - Consultation Summary	31

Author: Anita Manda, Traffic Engineer
Reviewed By: Rona Lemalu, Project Delivery Manager
Reviewed By: Andrea Mitchell, Acting Head of Transport
Approved By: Jon Kingsbury, Director Economy & Development


Appendix 1 – Harcourt Werry Drive
Raised Crossing – Concept Sketch
Harcourt Werry Dr
Harcourt Werry Dr



PROJECT:	WATERLOO PEDESTRIAN CROSSING IMPROVEMENTS WATERLOO ROAD / WAIWHETU ROAD ROUNDABOUT	STATUS:	CONCEPT DESIGN	Designed/Drawn	Approved / Date 09/23
		TITLE:	Plan of Pedestrian Crossings and Intersection Improvements	Sheet. No. 001 / Revision A / Project No. 2210A / Scale 1:150 @ A3	

Consultation Feedback Summary

Proposed Raised Pedestrian Crossings on Waiwhetu Road and Waterloo Road at Waiwhetu Road/Waterloo Road Roundabout

Location	# of Feedback received	Positive	Negative	Feedback	# of letters distributed
Waiwhetu Road and Waterloo Road	05	04	00	01	50

Feedback Responses for Eastern Hutt Road Raised Crossing, near Taita College

Response	Theme
Hi, We **fully support** your proposal. We have been concerned for a long time about the safety of this area as vehicles are always speeding / travelling too fast for the conditions, and doing a 'sling shot' through the existing roundabout on Waiwhetu Road in particular. We live at no 347 Waterloo Road and it a dangerous proposition trying to exit and enter our property at times. The existing very large Pohutukawa trees also provide an obstruction to vision.	Positive
To whom it may concern in the traffic engineering team , I am writing to **express my support** to Hutt City Councils proposed safety plan/ improvements to the waterloo rd / waiwhetu rd roundabout area . We live locally and often walk in the area. The speed of vehicles almost makes it impossible to cross the road and turn into our driveway. We are very happy with the proposed plan and look forward to commencement of works .	Positive
Hello Traffic Engineering Team People, I'm Chris Hill, one of the residents in the flats at 220 Waiwhetu Road.	Positive

Thank you for the information about the proposed installation of pedestrian crossings outside our front gate. **I think it's a good idea, and long overdue.** My only concern is this: there are 26 flats at 220 Waiwhetu Road, and one household at 222 Waiwhetu Road. I hope that the traffic island at the southern end of the intersection along Waiwhetu Road will not be extended further south than it is at present. Currently, we are able to exit our properties, drive across the southern end of the intersection, and proceed into Waterloo Road or north into Waiwhetu Road. Likewise, if we are returning home by driving north along Waiwhetu Road, we are able to pull into the centre of the road before we reach the traffic island, and then drive on to our properties. If the traffic island is extended further south, both these manoeuvers would become impossible for us. I hasten to add that we come and go with a great deal of care, and that, to the best of my knowledge, we have not caused any accidents by doing do – well, not for the past 22 years while I have been living here. I hope this feedback is useful.	
Hi. Just a few questions about the crossing on the Waterloo and Waiwhetū roundabout. First I can not understand why crossings are put near roundabouts. Now don't get me wrong crossings are good and needed, this looks like a very expensive crossing why not just one of the simple crossings away from the roundabout. like the one up near the Waterloo bridge or the Fairfield crossing not only will there be a crossing but a bus stop right next to it and a very large tree.. If you are going to widen the footpath that side will it not be harder to see the crossing and the bus stop as you come around the corner as the footpath is not a small one would it not be better to decrease it so you are able to see around the corner better. I also do understand that council will do what they feel best so asking the public is a waste of time. Its just I have always wonder why a crossing so near a roundabout.?	Feedback

Good morning, I refer to the attached letter received recently. I wish to **express our very strong support** for this initiative. It is extremely dangerous trying to cross these roads at this intersection . Since there is a bus stop near the intersection on both Waterloo and Waiwhetu roads , passengers are at risk when they need to cross if they need to catch the bus or when they get off the bus and try to cross. Would you also consider installing judder bars in Waiwhetu road similar to the ones that are installed at the pedestrian crossing in Knights road at the exit from the railway station ? The way many vehicles drive down Waiwhetu road at high speed and the way they enter the roundabout is highly dangerous . The number of accidents that occur at this roundabout is legendary. Many thanks for taking the initiative to make our roads safer .	Positive

Consultation Feedback Summary

Proposed Raised Dual (Pedestrian and Cyclist) Crossing on Harcourt Werry Drive

Location	Total	Positive	Negative	Feedback
Harcourt Werry Drive (near Kennedy Good Bridge)	05	05	00	02

Concept Design (shown below for reference)

Feedback Responses

Response	Theme
Could I please strongly endorse the proposal for a crossing on Harcourt Werry drive below the Kennedy Good Bridge. Safely connecting the river trail with Avalon is a key link in the active transport network through Hutt. Increasing uptake of active modes will: • Reduce preventable death through cancer, heart disease and diabetes • Make a small but important contribution to the huge mode shift we need for the HCC to achieve it's CO2 reduction goals for the City • Decongest our roads for those who need to still need to use cars If a speed reduction is necessary to make this crossing tenable, that is a worthwhile price to pay for the above outcomes (in addition to the safety outcomes of speed reduction). Please note, the path from the crossing up to the road will also need upgrading – it is much too narrow to safely be a bidirectional shared path.	Positive

Hi, Unfortunately I was away over the period when the feedback on the proposed Harcourt Werry Crossing was requested. Patrick Morgan has now advised me that the deadline has been extended to the 8th February so hopefully my comments can be included in your review. As we live near this area and use the existing 'safe haven' arrangement regularly, **I fully support the concept of a raised crossing for pedestrians and cyclists as a much safer option than the existing hurry up and dash arrangement.** I feel that similar crossings at Marsden Street, High Street and Taita Drive have proven that the design works well. Unlike the flaw in the Marsden Street crossing where an electric pole obscures the motorists view of cyclists, the proposed Harcourt Werry crossing will have buildouts and thus excellent sightlines. I raise a few points to ponder: 1. Motorists wanting to turn left into Harcourt Werry from the off-ramp from Kennedy Good bridge will naturally be looking right for traffic heading south on Harcourt Werry. The crossing, as shown in the document, will be very close to this junction and motorists are likely to accelerate away to 'take the gap' in the traffic when they will suddenly confront the crossing. It may be safer to shift the crossing further south or, as a minimum, have signage near the exit of this lane warning of an impending crossing. 2. The proposal document largely justifies the Harcourt Werry crossing on the grounds of its proximity to all the family-based activities that occur in Avalon Park. It should be noted that the lack of any safe crossing point over the off-ramp off Kennedy Good bridge is, in my opinion, of much greater concern. This off-ramp must be crossed to reach the Harcourt Werry crossing point from Avalon Park. Fortunately, HCC in the recent past improved matters marginally by adding hit posts to force drivers not to cut the corner when exiting Kennedy Good bridge. Nevertheless, it still remains a dangerous crossing. Sightlines are severely limited for crossers and motorists alike. Pedestrians from the west strain to see cars exiting from the bridge while pedestrians from the east are suddenly surprised by cars exiting from Fairview Drive. If you are going to encourage use of this Harcourt Werry crossing by users of Avalon Park, you really need to include a safe way of crossing this off ramp.	Positive + Feedback
Hi I believe that you are still taking feedback on this crossing. It is well used and dangerous being on a fast busy road. I live on the Belmont hills and do all my commuting by push bike. It's dangerous because of the speed and frequency of the cars. Another factor is cars shooting in from the feeder lane from Kennedy Good bridge.	Positive + Feedback

There are also many recreational bike riders, mostly retirees, who use this often, as riding the River Trail is a great outing. The meeting place is often Avalon Park. Your notice mentions Avalon Park as a destination for families. Please be aware that the crossing from the end of Kennedy Good bridge to Avalon Park is even more dangerous! It's really hard to know which cars coming over the bridge are going to turn, as not all indicate. This crossing is also used by school children cycling or walking from the hills to the Naenae schools. **I think the crossing and lowering of speed is a great idea. Any improvement to the other crossing would also be most welcome.**	
Kia ora thanks for bringing this to our attention. Here's our submission **Cycling Action Network strongly supports proposals to** **1. install a raised dual crossing for cyclists and pedestrians on Harcourt Werry Drive, and** **2. set a 50 kmph speed limit there.** Why? There's no doubt speed is a major factor in the number of deaths and injuries on New Zealand roads. It causes more injuries than alcohol and drugs, and it's estimated that 87% of current speed limits are incorrectly set. The risk of injury or death if you are hit by a vehicle is substantially lower at speeds below 60km/h. But what of the argument that slowing drivers down and prolonging trips mean the economy will suffer? There are two answers to this. The first is that evidence shows lower speed limits in urban areas add virtually no time to journeys. You can see why in this simple simulation that compares traffic with different speed limits. The second is that people don't always productively use the time saved by faster travel. In fact, research suggests people often choose to travel further, especially for their daily commute. Making journeys faster can also encourage people to travel more often. This is called induced demand, and it adds to congestion. Source: Lower speed limits don't just save lives – they make NZ towns and cities better places to live (https://theconversation.com/lower-speed-limits-dont-just-save-lives-they-make-nz-towns-and-cities-better-places-to-live-194448) About CAN	Positive

CAN is New Zealand's national charity of cycling advocates. We work with government, local authorities, businesses and the community on behalf of cyclists, for a better cycling environment. CAN's goals are to: Promote the benefits of cycling Improve safety for cyclists Encourage the creation of a good cycling environment Advocate for integrated cycle planning Increase the number of cyclists on our roads. More at https://can.org.nz	
Kia ora **I was very pleased to hear about the proposal for a cycle/pedestrian crossing on Harcourt Werry Drive adjacent to the Kennedy Good bridge**. I am a recreational cyclist and frequently cross at that point as part of a trip up the river and back down the beltway to Petone. I have found the similar crossings in Marsden Street and at the north end of the beltway to be very good and motorists are courteous in giving way to cyclists. I expect that the proposed crossing would be great for families travelling from Avalon Park to the river trail and back. **This proposal has my strong support.**	Positive
I recommend that the upgrade of this crossing point for cyclists and pedestrians between Kennedy Good Bridge and the river trail be carried out as soon as possible. I use this crossing quite often by cycle and welcome any improvement in safety. The proposed reduction in speed on Harcourt Werry drive will be a small cost for the improved safety. The changes should also be accompanied by improvements to the trail from Fairway Drive which is too narrow for a shared 2-way path. Thank you	Positive + Feedback
Hello, **I fully support the addition of the proposed raised dual crossing on Harcourt Werry Drive below the Kennedy Good Bridge.** These are key facilities that will assist with pedestrian and cyclist safety and assist with increasing active mode share. Safely connecting the river trail with Avalon is a key link in the active transport network through Hutt. Increasing uptake of active modes will:	Positive

• Reduce preventable death through cancer, heart disease and diabetes • Make a small but important contribution to the huge mode shift we need for the HCC to achieve its CO2 reduction goals for the City • Decongest our roads for those who need to still need to use cars **I also support the other proposed raised dual crossings across Lower Hutt.**	
Hi Anita, Thanks for sending through the email address. Much appreciated. Submission on proposed crossing. I frequently use the River trail when traveling (cycling) North and join it at the point of the proposed crossing as I come down via Hill Road, the underpass under SH2 and across KG bridge. I also use when cycling to Avalon park with my grandchildren when we approach it from the South having joined the cycle trail at Melling. **I wholeheartedly support the proposal. Currently crossing a 70km/h traffic stream is not for the faint hearted and a major impediment to the perception of a cycling as a safe means of transport.** Given the amount of time and money the council has invested in creating Avalon Park as a major hub for child related activity it seems to me to be incongruous and counter productive that existing traffic management creates active barriers that prevent children from accessing that facility safely under their own steam. As noted in may own use, safe links between the river trail and the city are essential in creating a viable active transport network. This crossing is a key component of that network. I note that it is also proposed to reduce the speed limit to 50km/h when approaching the crossing. Whilst I fully support this speed reduction, I note that observed compliance with short lengths of lower speed limit is poor and recommend that an active user controlled lights be installed.	Positive + Feedback

Please note also, that for the crossing to achieve maximum benefit, the path joining it to Fairway drive should also be upgraded to accommodate bidirectional shared use. [redacted] President, Normandale Residents Association	

Infrastructure and Regulatory Committee

13 February 2024

Report no: IARCC2024/1/48

Three Waters Update

Purpose of Report

1. This report provides an update on three waters activities including the latest information on the government's programme for water reform.

Recommendation

That the Committee receives the report and notes its contents.

Background

2. Wellington Water Limited (WWL) provides Council with regular updates on capital and operating projects and programmes. These are summarised in the following paragraphs. This report also provides an update on the new government's plans for the future delivery of three waters.

2023/24 CAPEX Programme

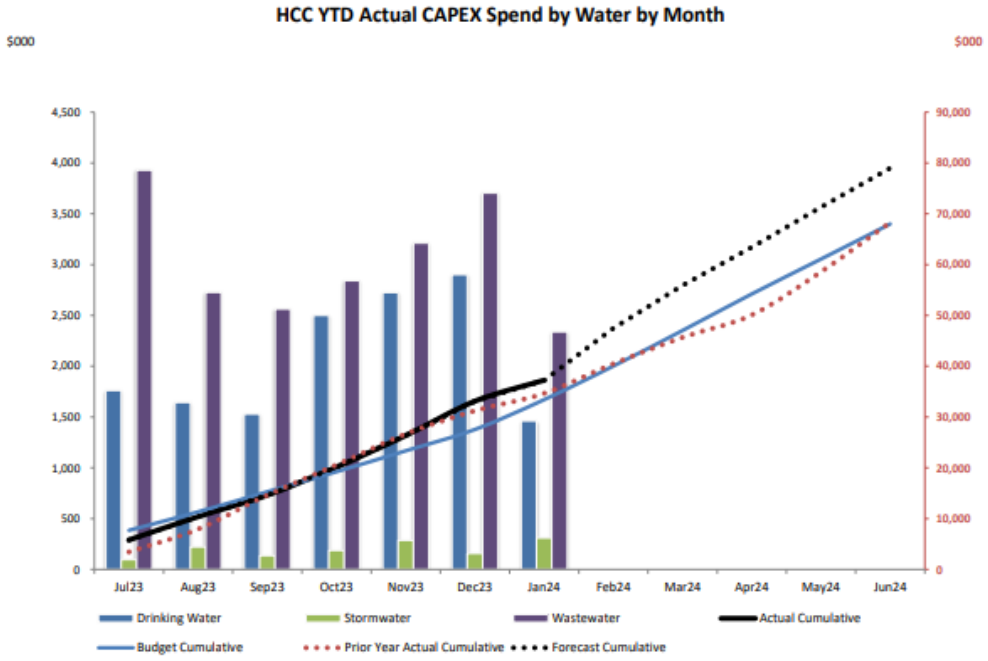
3. The capital spend by WWL up to 31 January 2024 on Three Waters CAPEX projects was $37.2M, compared to a year to date budget of $33.4M.

4. The year end forecast of $79M is greater than originally budgeted due to three main factors, being;

   a) the bringing forward from future years of renewal works valued at $5.7M;
   b) the introduction of pressure reduction work of $4.1M to help reduce leaks; and
   c) a cost overrun of $2.9M on the Barber Grove to Seaview Wastewater Treatment Plant wastewater trunk main.

5. A report on this was considered by the Long Term Plan/Annual Plan Subcommittee on 20 February 2024 and the changes to the programme and budget approved.

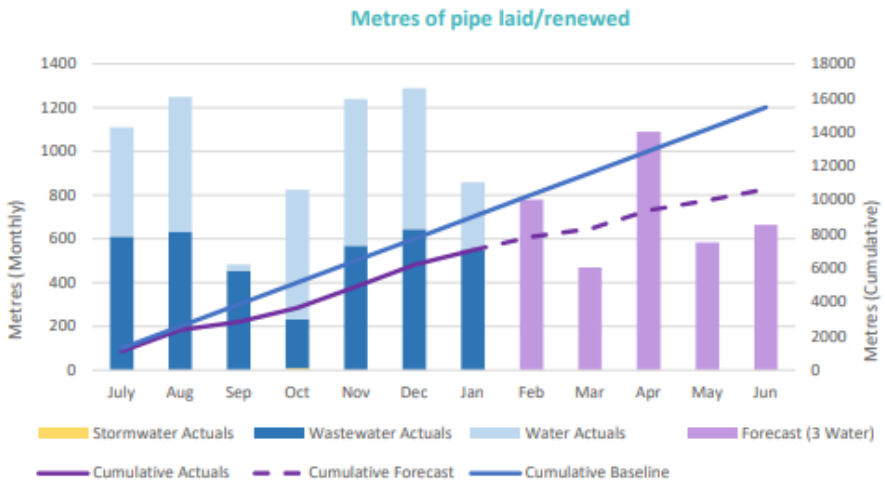
6. The following graph shows the CAPEX spend by water type by month up until 31 January 2024 and the projected tracking of the programme spend up to year end.



7. The renewals programme has a target to deliver 15.3 kilometres of ageing pipe renewals, broken down as follows:

a) Wastewater 9.8 kilometres;
b) Water 5.3 kilometres; and
c) Stormwater 0.2 kilometres.

8. To date around 7km of pipes have been renewed in Wainuiomata, Epuni and Woburn, with the works on track to deliver approximately 12 kms by year end. This is less than what was initially projected to be delivered mainly due to an early optimistic forecast. Some works that were thought would be completed in this year's programme are now likely to occur later in 2024.



9. A full schedule of project works that are either in physical progress or in design are summarised in the following schedule.

Physical Works in Progress during January 2024:
- Wainuiomata 21-22 Wastewater Renewals - Frazer St
- Wainuiomata 21-22 Water Supply Renewals - Hine Road
- Epuni and Woburn WW Network Renewals.
- Avalon Wastewater Renewals 22-23 (Year2)
- Knights Road - Colin Grove E Coli Wastewater and Stormwater - Package 2
- Wainuiomata Water Supply Renewals - Lees Gr and Holland Street
- HCC Watermain Renewals - Package 5 (Howard Road phase 2)
- HCC VHCA Reservoir Water Quality Renewals – Construction has commenced on the Kamihi and Korokoro Reservoirs.

Procurement in Progress during January 2024:
- HCC Urgent Works Pressure Management - URGENT WORKS
- Totara Park Road-Bridge Pipework Seismic Resilience WWJV (UHCC)

Design completed during January 2024:
- No Physical Works completed in January

Design in Progress during January 2024:
- Te Mome Pump Station
- Muritai Road-Rona Street-Marine Parade Stormwater Improvement - Optioneering WIP
- Jackson St Stormwater Improvements - Optioneering assessment to incorporate additional scope
- Wainuiomata North Wastewater Trunk Main Upgrade - in Detailed design
- Kingsley Reservoir Seismic Resilience - optioneering assessment complete.
- Kamahi Pressure Control Valve Installation - in planning
- Avalon Wastewater Renewals - 23-24 (Year 3)
- HCC Watermain Renewals - Package 3
- HCC Watermain Renewals - Package 5 (Howard Road phase 3)
- Wainuiomata Water Supply Renewals – Hair St, Sunny Grove
- Wainui and Stokes Valley GI Ridermain Renewals

Barber Grove to Seaview Wastewater Trunk Main

10. The cost overrun on the Barber Grove to Seaview WWTP wastewater trunk main project was reported to the Long Term Plan/Annual Plan Subcommittee on 20 February 2024. The total cost of the project was $34.4M, 25% above the original estimate of $27.5M. Attached as Appendix 1 is the close out report on this significant project.

Gracefield Reservoir

11. The remedial work on the Gracefield Reservoir was completed late last year. The work was undertaken as part of the Urgent Capital Works Programme. The total cost of the work came in at $0.5M, half of what had been originally forecast. Funding of $35.1M (uninflated budget) to replace this reservoir is included in the 2024-2034 draft Long Term Plan spread across years 3 to 8.

Jackson Street Stormwater Renewal Project

12. WWL is investigating the option to renew water and wastewater infrastructure in Jackson Street at the same time as the stormwater renewal works. WWL is now expected to report back on the feasibility of undertaking the works concurrently in May 2024, following investigations, along with the cost implications of doing so.

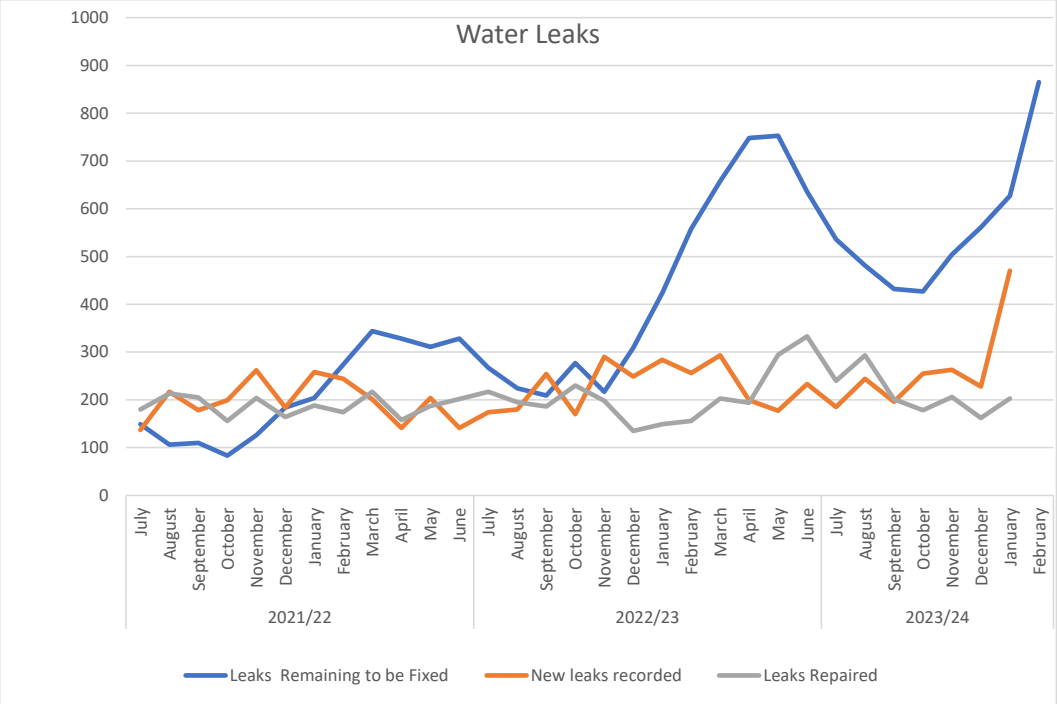
13. If Council decides that works should be undertaken on the networks concurrently, construction will commence mid-2025, otherwise stormwater renewals on their own would commence August 2024.

14. Note that in planning renewals Wellington Water considers resilience over the expected life of the asset, particularly in areas that may be prone to sea level rise. The Jackson Street renewals have been planned on that basis.

Water Leaks

15. The number of unresolved water leaks for the city has increased over the past two months. This appears to be a cyclic occurrence with capacity to fix leaks reduced, owing to the summer holiday period. At the end of January 2024 there was a total of 865 leaks waiting to be fixed. Almost 700 leaks were reported over the December/January period with just over 365 fixed in this same period.

16. The following graph records for the past three years the reported leak history with the number of leaks waiting to be fixed increasing over the past year. As reported at the previous meeting of this Committee this is mainly due to WWL proactively locating hard to see leaks which the public have not been able to report.

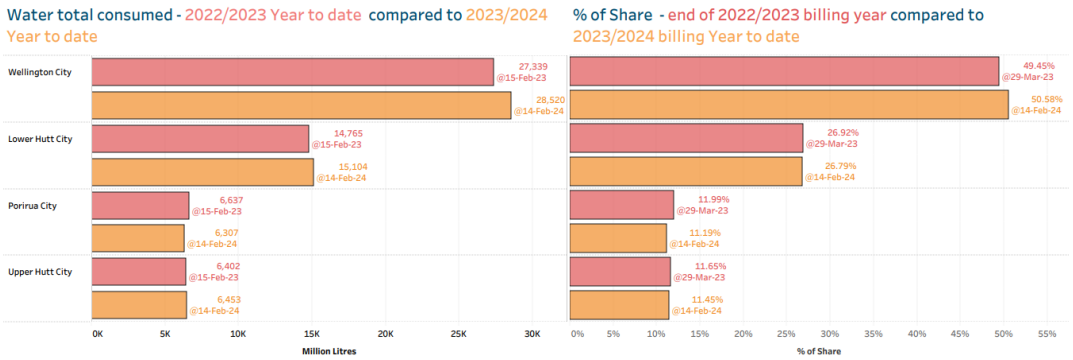


17. Council has recently agreed to include an additional $2.8M in the draft Long Term Plan to clear this backlog in response to the ongoing water shortage.

Bulk Water

18. Bulk water consumption is measured and billed each year by Greater Wellington Regional Council on a 1 April to 31 March basis.

19. For the period ending 14 February 2024, Hutt City usage was 15,104 megalitres which was a 2.3% increase in usage over the same period for the previous year. As a percentage of total use across the four-Council region the results are marginally lower (26.79% compared to 26.92%) than for the 2022/23 year. These results are outlined in the following table.



Seaview Wastewater Treatment Plant

20. A key issue for the treatment plant has been the poor odour compliance. There were 143 odour complaints received for the treatment plant between 1 November 2023 and 31 January 2024. Greater Wellington Regional Council (GWRC) assessed the plant odour to be offensive and objectionable and therefore not meeting consent conditions on 13 occasions between 31 October and 12 December 2023. The main cause of the odour was the biofilter media replacement, with several other equipment maintenance issues also contributing.

21. GWRC issued 26 infringement notices to WWL and Veolia, while Hutt and Upper Hutt City Councils each received 13 infringement notices for odour during this period. Wellington Water provided a response letter to GWRC related to these infringement notices on 31 January 2024 disputing the interpretation and application of infringement notices and are in ongoing discussions with GWRC regarding this.

22. A public meeting was held on 6 December 2023 jointly between HCC and WWL to explain and apologise for the odour during this period. The media replacement work was substantially completed before Christmas, with some settling in period and reinstatement work including the fixed watering system completed in January.

23. A follow up odour survey and investigation has concluded that while the odour has reduced, the biofilter is still not operating fully effectively and that the "plenum" air distribution system under the biofilter cells requires replacement. This was identified during condition inspection work in November 2023 but was not able to be undertaken at the time due to the time required to plan the work effectively. This work is likely to occur during the winter months later this year.

24. Council has included $13M in the first three years of the draft 2024-2034 Long Term Plan to renew and improve the plant's odour control systems to help address the odour issue. Due to the ongoing odour around the site the investigation and design phases of this work have been brought forward rather than await the new financial year. The project team is currently finalising its project management plan for the work and has been instructed to provide a proposal on what activities can be fast tracked within this financial year.

25. Further public meetings have been scheduled on a quarterly basis and the level of proactive notification of maintenance will be increased to keep the community better informed of any activity that might contribute to an odour issue.

Local Water Done Well

26. The government has repealed the Water Services Entities Act 2022 as part of its 100-day work programme.

27. The Prime Minister and Minister of Local Government announced on Monday 12 February 2024 government's plans to implement the replacement regime, ***Local Water Done Well***. Legislation will consist of three stages:

    a) repeal the existing legislation –February 2024;

    b) establish the framework and transitional arrangements – Introduced and enacted in mid-2024; and

    c) establish enduring settings and begin transition – Introduced December 2024 and enacted mid-2025.

28. Key aspects of ***Local Water Done Well*** will include:

    a) Councils being required to develop a water services delivery plan within 12 months to transition to a future water model that can meet regulatory and investment requirements; (required to be completed around mid-2025);

    b) The water services delivery plan can be done either individually or jointly, with final decisions still sitting separately with each Council;

    c) No mandated future model so this could include a bespoke approach for the Wellington region, including an asset owning CCO;

    d) Ability for increased borrowing and over time increased revenue from water users; and

    e) Increased regulation on both water quality and asset investment.

29. The government has indicated that it expects Councils to bear the costs of preparing the water service delivery plan and any establishment and transition costs with the creation of a new entity. It further expects that future delivery of 3 waters will be financially sustainable.

30. In response to these pending changes, the region's Chief Executives are working together to consider a pathway for the region's Councils to work collaboratively on a preferred model and develop a shared water services delivery plan.

Climate Change Impact and Considerations

31. This report touches on the current WWL capital work programme for which Council has previously made decisions as part of the consideration of the Long Term Plan on Climate Change considerations.

Consultation

32. There are no specific consultation matters to comment on in this report.

Legal Considerations

33. There are no legal considerations.

Financial Considerations

34. There is likely to be a budget overrun for the Barber Grove to Seaview WWTP trunk main which will be known shortly. The final claim from the contractor is currently being assessed.

35. Operating expenditure for fixing water leaks is expected to exceed budget, as additional resources are being used to keep leaks to a manageable level.

36. Projected budget overruns will be proactively managed, with an aim to work with WWL to find offsets to manage within the overall net budget.

Appendices

No.	Title	Page
1⇩	Barber Grove to Seaview WWTP wastewater trunk main close out report	44

Author: Bruce Hodgins
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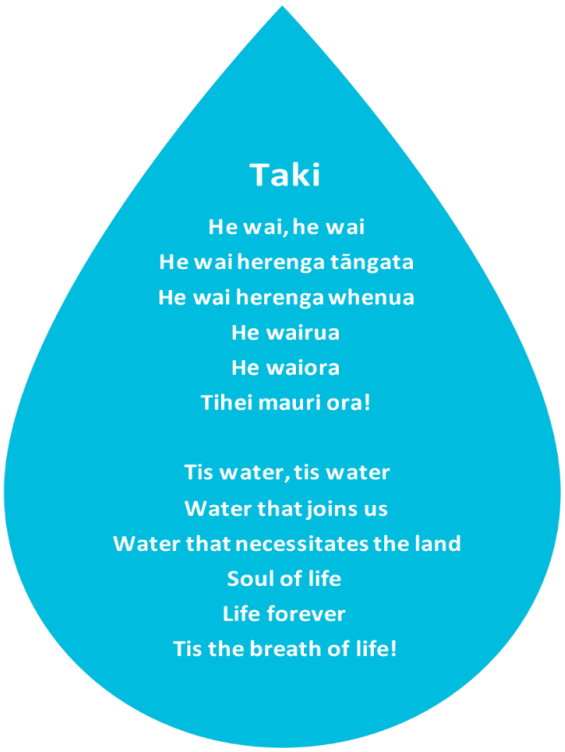
Approved By: Alison Geddes
Director Environment and Sustainability

Barber Grove to Seaview WWTP
Pipe Duplication Project

Project Close Out Report

January 2024

Prepared by: Linda Fairbrother, Project Lead, Wellington Water



Te Horopaki

Background

The Main Collecting Sewer (MSC), constructed in the 1960s, is a 1.2km long rubber ring jointed concrete pressure pipe that conveys wastewater from Barber Grove Pump Station to Seaview Wastewater Treatment Plant (WWTP). All untreated water from the Hutt Valley (except Wainuiomata and Eastbourne) is delivered to the treatment plant through the MCS.

The underlying soils in the Seaview and Moera area are prone to liquefaction in a seismic event. This can cause pipes like the MCS to float resulting in the joints failing and pulling away from one another. The existing main collecting sewer is therefore considered highly vulnerable to failure during an earthquake and would be extremely difficult to repair. A failure of this main would result in raw sewage flowing overland into the stormwater system, discharging into the Waiwhetu Stream and/or into Te Awa Kairangi. This would also cause disruption and damage to the local community including commercial properties.

This project was originally programmed for delivery in 2015, but due to funding constraints was deferred and re-programmed for delivery from 2020.

Whakarāpopototanga

Summary

The project successfully installed a new 1.2km long, one-metre diameter pressurised wastewater pipeline using trenchless technology (55%) and open trench construction. The new pipeline now services 90% of Hutt Valley residents, and provides increased resilience for the environment in the event of a large earthquakes.

The project construction took longer than expected which resulted in increased costs, in turn exceeding the project budget. At the time of this report the final claims are still under review so the final cost cannot be confirmed.

The innovation used to deliver this project resulted in a reduced impact for the community and in particular road users and businesses along the route of the pipeline. Complex connections on live pressure pipes were completed with no wastewater entering the environment. The innovation undertaken on this project saw it win a Civil Contractors New Zealand award and be a finalist in the Australasian Society for Trenchless Technology awards held in Brisbane 2023.

Ngā hoaketanga

Project Objectives

1. Review and update the 2014 detailed design to ensure it meets current standards, specifications and best practice
2. Deliver a new resilient pipeline with a 100 year design life.

Whakataunga

The Solution

Following review of the 2014 design, a procurement approach was identified to seek a contractor to deliver both the construction and input into the final design.

The successful tenderer, McConnell Dowell engaged in the design review and brought innovation and new technology to the project in the form of micro tunnelling. The Early Contractor Involvement (ECI) period allowed the project delivery team time to foster a customised and collaborative approach.

Micro tunnelling allowed the pipeline to be installed in a more resilient layer of the ground, less suspectable to liquefaction, further enhancing the resilience of the new asset. The other significant benefit of the micro tunnelling approach was the reduced disruption to the local community and in particular allowed us to maintain two way traffic on Randwick Road for the duration of the project. This would not have been possible with a traditional open trench solution.

The final design allowed for 55% of the pipeline to be installed using micro tunnelling technology, the remaining portion was largely installed by traditional open trench construction.

Hauora o te Taiao

Heath, safety, environment & quality

General Health & Safety Status

McConnell Dowell demonstrated a commitment to keeping their staff and sub contractors safe on this project. Throughout delivery Wellington Water observed high reporting rates for risk identification, positive observations and incidents.

A total of seven health and safety incidents occurred during construction. None of these were lost time injuries and were generally minor cuts and abrasions.

There was one serious incident where an overhead communications cable was struck. No one was injured. Following the investigation, the route cause was found to be that the risks and hazards were not correctly re-assessed following a change in the original planned activity. McConnell Dowell demonstrated their commitment to collaboration and transparency throughout this investigation process.

General Environmental Status

Throughout this project no wastewater was spilled.

A number of complex connections to live pressure pipelines were completed during construction. The new pipeline was installed while protecting the integrity of the existing Main Collecting Sewer. There was no interruption of service to the community as a result of these works.

There was one environmental incident where untreated ground water entered the stormwater system – and ultimately Te Awa Kairangi. This was due to human error when an additional pump used to remove ground water from an excavation was not installed correctly.

As part of making this right, mana whenua was invited to a project toolbox session to emphasise the importance of protecting our waterways – this was well received both by mana whenua and the contractors. Additional controls were put in place and no further incidents occurred.

General Quality

Throughout the project strict quality management plans were followed, which included destructive testing of a number of pipe welds – all of these tests during the project passed.

Comprehensive quality information packs for the new pipeline have been submitted and reviewed as part of our Quality Assurance plan.

Raupapa Kaiwhaipānga

Stakeholder Management

During this project there were a total of 56 stakeholder complaints. Most of these were regarding noise in the Elizabeth / Randwick Road area and following the partial closure of Seaview Road. The contractors were found to be very responsive and made adjustments to their set up accordingly.

Of note more than 20 compliments / positive feedback were also recorded during the construction period.

With an average of 30,000 vehicles travelling through the Seaview round-a-bout every day, 18,000 of which travelling down Randwick Road the Early Contractor Involvement (ECI) focus on reducing the impact to road users produced positive outcomes. The works were disruptive, but through strong planning and stakeholder management the disruptions were minimised wherever possible. It is fair to assume that there would have been far more complaints if this project was delivered with a traditional open trench approach.

There was positive collaboration with mana whenua throughout the works. Mana whenua named the Tunnel Boring Marchine (TBM) – Te Rū Tiokaoka and performed karakia blessings at the start of the project and for the launch of Te Rū Tiokaoka on the first tunnelling drive.

Te Hōtaka Wā

Programme timeline

The original construction programme was for 13 months. During this time there were a number of challenges ranging from Covid-19, unexpected ground conditions and material delays. These resulted in approximately six weeks extension of time being granted.

Construction works commenced in February 2022 and Practical Completion was achieved on 22 September 2023 – a total of 19 months, 6 months longer than originally planned.

Whakapaunga utu

Project Expenditure

At the time of contract award the estimate to construct this project was $27.5m. This estimate included a contingency sum.

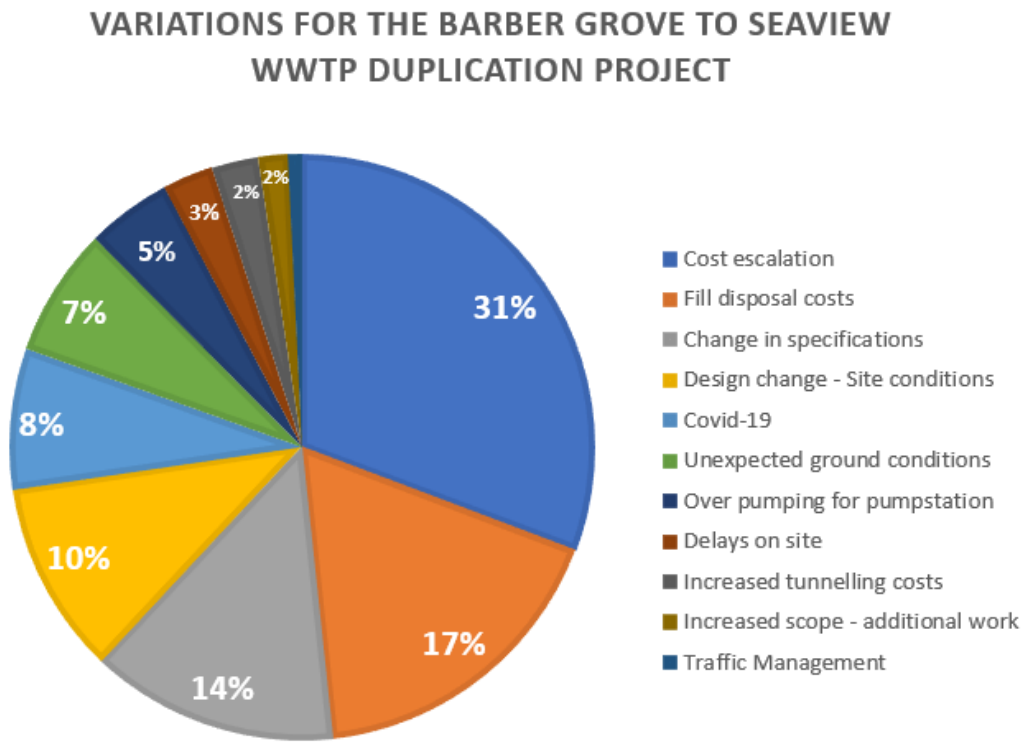
Mid way through the construction additional funding was sought to allow for the realisation of risks including cost escalation, unexpected ground conditions and design changes. At this time, a revised budget of $31.5m was requested.

Final claims are still being assessed at the time of this report. The March 2023 estimate of $31.5m will be exceeded. Based on information available at the time of this report we expect the final project cost to be approximately $34m.

The main drivers for the additional costs are:

- **Realisation of known risks**, some assessed costs exceeded earlier estimates
- **Increased cost escalation**, costs exceeded what was estimated in March
- **Pro-longed programme**, delivery took almost four months longer than expected.

A summary of the additional project costs are included in the image below:



Whiwhinga

Awards

The innovation in this project saw nominations for awards both internationally and within New Zealand.

- Halversons Civil won an award at the Wellington Wairarapa Civil Contractors New Zealand (CCNZ) awards for their secant shaft pile in the centre of the Seaview round-a-bout.
- McConnell Dowell were a finalist in the Australasian Society for Trenchless Technology (ASTT) awards held in Brisbane for the New Installation Project of the year award.

Now that the project is complete, it is likely the project will be submitted for more awards in the coming year.

Huanga

Outcomes

Following the completion of this project the Hutt Valley has a new, resilient pipeline to convey wastewater from the Barber Grove Pump Station to the Seaview Wastewater Treatment Plant.

This pipeline has delivered on the Service Goals identified in the project brief to:

I. protect the public health risks associated with wastewater and,

II. provide resilience in the event of a seismic event.

Primary customer outcome		Outcome 1: Safe and healthy water
Primary goal		1.4 We minimise public health risks associated with wastewater and stormwater
Secondary customer outcome		Outcome 3: Resilient networks support our economy
Secondary goal		3.2 We provide three water networks that are resilient to shocks and stresses

The new duplicate pipeline allows for operational redundancy. This means we now have the ability to divert flows from one pipeline to the other to allow for maintenance or inspection activities. Before the new MCS was completed this functionality was not possible and posed a risk of wastewater entering the environment if works were required.

The new pipeline was also successfully constructed and commissioned with no wastewater spilling or entering the environment. This was achieved through thorough planning and undertaking the complex connections on live pipelines using a specialist team.

The new pipeline has been constructed with resilient Polyethylene (PE) pipe. The tunnelling solution also allowed for it to be placed in a layer of ground that is less suspectable to liquefaction. This means that in a seismic event the new pipeline is expected to perform well and reduce the risk of failure that would result in wastewater entering the environment.

In addition to the water outcomes for the project it is also important to note that lighting for the Lightwing Sculpture has been installed on Seaview round-a-bout. Lighting was planned as part of the sculpture's original installation but was deferred due to this project. The project team have worked with the E Tū Trust to install lighting to their design. These new lights have not been switched on yet, the timing for this is being worked through in conjunction with HCC and the E Tū Trust.

HUTT CITY TE AWA KAIRANGI

Infrastructure and Regulatory Committee

12 February 2024

Report no: IARCC2024/1/49

Regulatory Matters

Purpose of Report

1. To provide the Committee with an update on regulatory matters arising from the work of the Environment and Sustainability Group.

Recommendation

That the Committee receives and notes the information.

Background

2. From 12-16 February, International Accreditation New Zealand (IANZ) undertook a Building Consents (BCA) Accreditation Assessment of the Building Control Unit (including BCA) and Territorial Authority (TA) functions) on behalf of Ministry of Business, Innovation & Employment (MBIE). The assessors concluded that they would be recommending the continuation of the BCA Accreditation for Council. It was noted that there had been substantial business improvement work done since their last visit and they recognised that the function was on a sound footing to achieve compliance with statutory timeframes in the near future.

3. Recommendations related largely to detail around further implementation of the Objective, Go Get and the new Quality Management System (QMS). Performance against statutory timeframes was noted as a general non-conformance, however, it was also recognised that legacy consents had detrimentally affected our performance statistics. The auditor made the comment that with the legacy consents removed, the performance against statutory timeframes is satisfactory. A full report will be provided in 10 days. The IANZ assessors will return in two years' time as we are considered low risk.

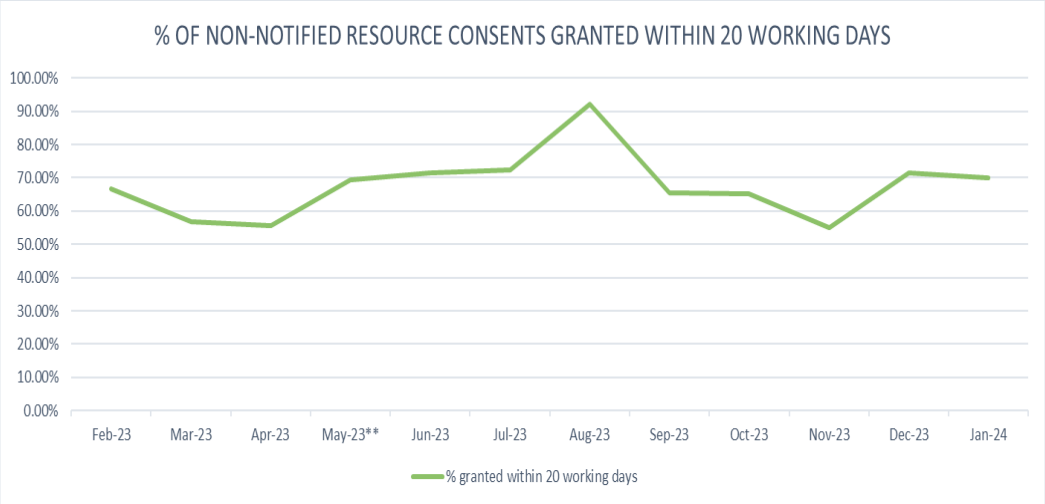
4. The latest edition of Kaihanga was issued in October 2023. Kaihanga is a newsletter targeted at our stakeholders and available to the public on the Council webpage. It focuses on topics across the Building Consents, Resource Consents and Development Engineering teams. The latest Kaihanga featured information from our consenting teams and updates on District Plan Change 56 and the new EPlan. The full edition can be viewed here: https://mailchi.mp/huttcity.govt.nz/kaihanga-6205224

Resource Consents

5. There are currently 110 resource consent applications in the system. 57 of these are being actively processed and 53 are on hold. Approximately 24 (21%) of these consents are over 20 working days (down from 66% in August 2022). Below is a table summarising the throughput and statutory compliance of resource consents for each month since February 2023. It is noted that in January 2023 59.5% were issued within 20 working days compared to 70% in January 2024. If we removed any consents that came in prior to 2023, 81% of consents are being issued within 20 Working days.

Table 1: Non-notified consents granted within 20 working days since February 2023

Feb 23 – Jan 24	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
Land use	10	10	12	9	6	5	0	7	6	3	3	3
Subdivision	6	0	1	2	0	4	0	1	0	5	4	2
Land use & Subdivision	10	9	2	4	3	2	2	7	7	3	2	4
Change of Condition	4	2	5	3	1	2	0	2	2	0	1	5
Total	**30**	**21**	**20**	**18**	**10**	**13**	**23**	**17**	**15**	**11**	**10**	**14**
% granted within 20 working days	67%	57%	55%	70%	71%	72%	92%	65%	65%	55%	71%	70%



6. The table below shows that land use consents were the dominant consent in the first half of 2023, with subdivision consents picking up towards the second half of 2023.

Table 2: Resource consents received since February 2023

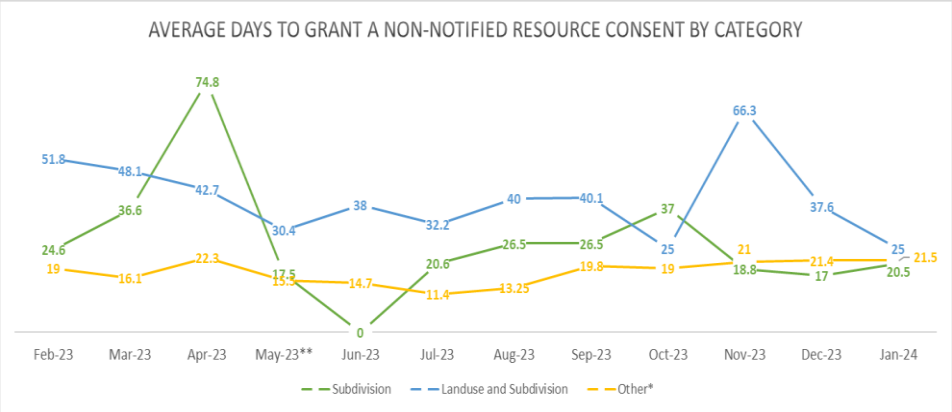
Feb 23 – Jan 24	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
Landuse	14	9	11	7	9	7	16	2	4	10	17	12
Subdivision	2	3	1	7	2	4	3	5	2	9	1	1
Landuse and Subdivision	6	3	5	6	6	11	9	8	3	5	7	5
PBA	0	2	0	6	0	2	3	0	1	2	0	0
Change of Condition	5	5	1	2	3	3	3	2	3	3	5	0
Total	**27**	**22**	**18**	**28**	**20**	**27**	**34**	**17**	**13**	**29**	**30**	**18**

7. The average working days to process a consent has continued to reduce steadily. Table 3 below shows the average working days for all issued resource consents and includes many legacy consents that came in prior to 2023. There is a considerable overall improvement in the average days to grant a consent. In January 2023 consents were issued in an average of 36 days, and the average is now down to 22.3 days as of January 2024. A more accurate snapshot of the consenting timeframe is demonstrated in table 4, as discussed in paragraph 8.

Table 3: Average days to grant a resource consent

Feb 23 – Jan 24	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
Subdivision	24.6	36.6	74.8	17.5	0	20.6	26.5	26.5	37	18.8	17	20.5
Landuse & Subdivision	51.8	48.1	42.7	30.4	38	32.2	40	40.1	25	66.3	37.6	25
Other*	19	16.1	22.3	15.5	14.7	11.4	13.25	19.8	19	21	21.4	21.5
Total	**36**	**35.9**	**34.8**	**21.5**	**24**	**23.1**	**18**	**29.4**	**23**	**45.35**	**25.9**	**22.3**

*Includes Permitted Boundary Activities (PBA), Land use and Change of Condition consents



*Includes Landuse, PBA and Change of Conditions Consents

8. Table 4 shows the average working days to issue consents that came in during 2023 only (specifically excluding legacy consents which came in prior to 2023). This table shows that the average working days to grant a resource consent is consistently under 20 working days.

Table 4: Average days to grant resource consents received in 2023

Consent types	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Subdivision	0	0	0	18	17.5	0	20.7	16.7	26.5	37	18.8	17
Landuse & Subdivision	0	0	19	25.5	28	13	19.3	20.2	20.2	23.25	27.3	23.3
***Other**	0	17.6	13.8	16.9	14.5	15.4	17.1	16.7	18.3	19	21.3	19
Overall Average	**0**	**17.6**	**14.4**	**17.9**	**19.7**	**15.1**	**18.6**	**17.6**	**20.6**	**22.1**	**23**	**19.2**

9. The reliance on external resources to process consents has also reduced significantly, with only 5 resource consents allocated to external resources in the last 3 months. It is considered that the reliance will continue to decline as a number of new staff have recently joined the team and are currently being trained and gaining experience.

10. It is important to flag a significant risk in relation to the use of external resources and also to resource consent processing times as a result of the proposed increases to Development Contribution that are likely to take effect from 1 July 2024. The last time there was a substantial increase in Development Contributions in July 2021, there was also significant influx in the number of resource consents that were submitted in the month prior in order to avoid the higher development contribution payments. It is unknown what level of applications we are likely to receive prior to the 2024 increase. If there is a similar amount to the previous experience in 2021 then this will impact on resource consent processing times, require an increased use of external resources with associated cost implications for Council.

11. The Resource Consents Team is planning to implement a number of actions, including communicating with the development community through the Customer Advisory Group (CAG) and the development industry newsletter (Kaihanga) to mitigate these risks as far as possible. However it cannot fully negate the potential impacts of the Development Contributions increases on workloads and our ability to resource the potential influx of resource consents

12. The business improvement project underway to reduce the number of consents that have been on hold for over 12 months is progressing well. This list has been reduced down to 12, from the original list of 112. Each 6 months we add any additional consents that have been on hold for longer than 12 months and will continue to work through them. There are 22 long term holds currently being worked through as of February 2024.

Resource Consents update

Riverlink Update

13. The Riverlink project includes three primary areas of work relating to flood protection works, Melling transport improvements, and urban renewal and revitalization works. In November 2022, the Environment Court confirmed the designations and resource consent approvals for all these works.

14. The first stage of construction works will be for the new Mills Street stop bank. This is scheduled to begin in mid-February, pending all conditions are satisfied and certifications given.

15. In this stage the true left bank between Kennedy-Good Bridge and Melling bridge will become a construction site and closed to the public, which will be the first large scale disturbance of amenities.

Pre-application update

16. At the last update it was noted that we were seeing some pre-application requests for larger scale developments taking full advantage of the recent PC56 provisions. However, since this time we have not seen anything of similar scale, and pre-application meetings continue steadily as normal to include a range of multi-unit residential and commercial requests.

Table 5: Significant resource consents received since October 2023

Location	Development
176 Liverton Road, Kelson	Renewal of earthworks consent for Belmont Quarry
16D Pitoitoi Road, Days Bay	Landscaping redevelopment at Williams Park
38 Treadwell Street, Naenae	Construction of 42 residential units including earthworks and associated unit title subdivision
12 Hollard Grove, Avalon	Construction of 18 residential units and associated earthworks

T**able 6: Update of notable consents from previous reports**

Location	Development
30 Benmore Crescent (Manor Park)	Resource Recovery Park, including infrastructure for retail, café, material recovery, construction/waste/demolition sorting, and general waste transfer. A related application is being processed to upgrade intersection in SH2 designation. **Update February 2024:** Additional information submitted by the applicant is being reviewed by Council's expert advisors and the consent remains on hold, awaiting also for the approval from Waka Kotahi. No decision has been made on notification.
47 The Esplanade (Petone)	Construction and use of a 9.5m high, 3.5m wide billboard with a 7m digital screen. The digital billboard will be used for third party advertising that will change on a rotating basis, displaying an image for 8 seconds. **Update February 2024: Following the s**ubmissions period ending in early October the processing planner needed to find an alternative landscape and urban design expert following the closure of the existing design firm engaged. Having sorted a replacement expert, we are moving forward with identifying date options for a hearing.
56 Wood Street (Wainuiomata)	Residential development by Kainga Ora comprising 40-units and associated 53-lot subdivision. **Update February 2024:** No change from previous update - **t**he applicant has responded to planning, engineering and traffic related further information issues. The response has been reviewed and a few matters need further clarification. On going discussion is occurring in regard to the stormwater and wastewater infrastructure. No decision on notification will made until all of the information requested has been provided.

Table 7: Notable consents granted since October 2023

Location	Development
18 Bunny Street, Hutt Central	New four-storey mixed use building comprising ground-floor commercial activity and 9 residential units in the Central Commercial activity area.
541 Hebden Crescent, Stokes Valley	Retrospective resource consent for an expansion to consented operations for the asphalt plant co-sited with Belmont Quarry.
26A & 28 Marina Grove, Hutt Central	Multi-unit development of 35 dwellings and related subdivision.
1A Boulcott Street, Boulcott	Change to condition 55 of RM180108 relating to the construction of the High Street/Boulcott Street intersection – this was to allow for staging occupation to advance prior to completion of the intersection upgrade in line with agreements made with the HCC Transport Team
48 Udy Street, Petone)	Residential development comprising 30-units and associated 53-lot subdivision.
41 Birch Street, Hutt Central	Multi-unit development consisting of 14 dwelling units and 2 commercial units and associated subdivision

RMA Compliance

Table 8: Compliance Notices issued since February 2023

Feb 23 – Jan 24	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Total
Infringements	5	6	4	9	2	2	7	0	1	2	6	1	45
Abatement Notices	2	0	0	0	0	0	0	0	1	0	0	0	3
Enforcement Orders	0	0	0	0	0	0	0	0	0	0	0	0	0
Prosecutions	0	0	0	0	0	0	0	0	0	0	0	0	0

17. The infringements issued since October 2023 were related to noise from works outside of permitted hours, truck movement outside of permitted hours, and sediment down stormwater drains.

Table 9: Complaints received since February 2023

Feb 23 – Jan 24	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Total
Complaints received	34	28	28	33	38	20	36	25	16	21	31	35	345
Complaints acknowledged within 24hrs	34	28	28	33	38	20	36	25	16	20	31	35	344
Complaints resolved	14	28	26	21	42	19	20	16	15	14	19	26	260
% **Acknowledged within 24hrs**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**95.2**	**100**	**100**	**99.5**

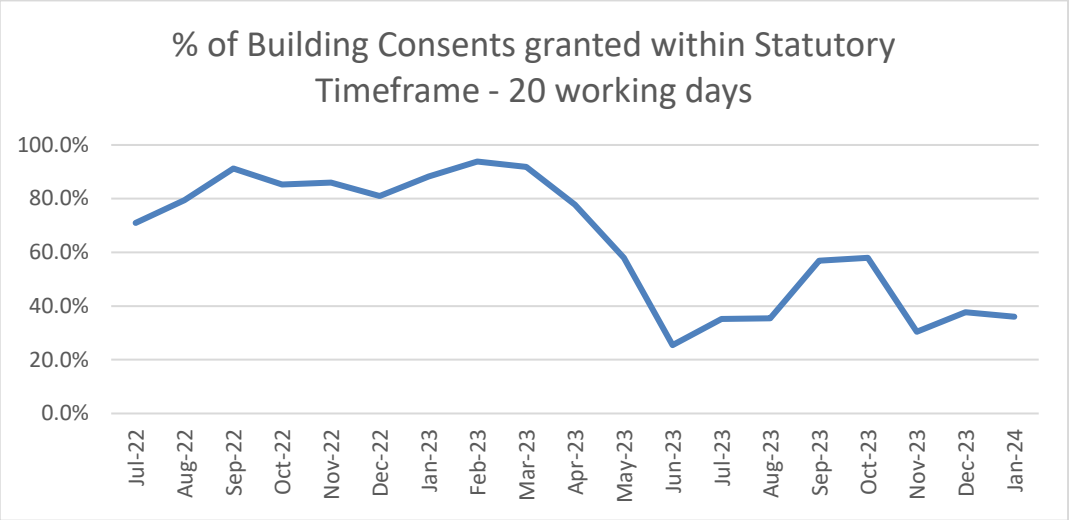
18. The number of complaints coming into the enforcement team has remained steady and is largely attributed to insufficient erosion and sediment controls, works occurring after hours, and noise or vibrations.

19. Complaints from the Manor Park development increased in October and November 2023, and were largely attributed to noise and vibrations. The complaints dropped off in December when the consent holder stopped works for the year. The complaints increased again January 2024 as a result of dust, and heavy vehicles operating after hours. Meetings were held with the consent holder and council staff, with the consent holder co-operating and agreeing to engage experts to install noise and vibration meters around the site. Council staff will be given access to these meters to determine any breaches in real time.

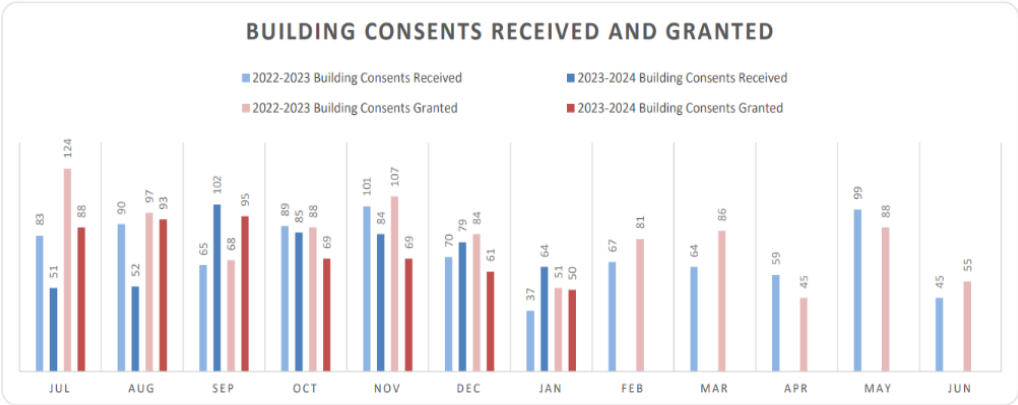
20. We have recently added more resource into the compliance function to cover the increased complexity and demand of the Riverlink project, and the cycleways.

Building Control

21. Building Consenting is currently tracking at an average of about 50% in statutory timeframes in the last quarter to 31 December 2023. This downturn of performance from 93.8% earlier in the year was initially caused by a peak in volume in April (due to a change in building regulations requiring a higher standard of insulation) and has been exacerbated by the implementation of a new data management and digital consenting system (Objective and Objective Build) addressing legacy consents in the system and the capacity and capability gap between the level of skills required and resources available. The BCA is still heavily reliant on external resources to backfill consent processing and inspections which has had significant budget implications. The graph below shows our statutory performance by month.



22. The number of new building consents accepted are approximately 25% below those accepted during the first two quarters of financial year 2022/2023, which is a further reduction of approximately 30 percent compared with financial year 2021/2022. Revenue when compared with financial year 2022/2023 has fallen by approximately 4 percent. Operating costs are also forecasted to increase approximately 11 percent by the end of the financial year when compared with the previous financial year. This is largely due to the increase in larger, more complex multi-unit residential and commercial consents compared with smaller residential consents and the need to outsource to fill capacity and capability gaps.



2023-2024 KPIs	KPI %	YTD % Achieved	YTD totals
100% **Building Consents** granted within 20 days	100%	41.9%	220/525
100% **Code Compliance Certificates** issued within 20 days	100%	57.6%	239/415

23. There were 180 building consents granted in the same November to January period. Initial February data is suggesting that we are now returning to normal operating timeframes (65% statutory performance for the first three weeks), however our statutory timeframe will continue be negatively impacted for some time, as legacy consents (that are already over 20 days) come off hold.

24. At the end of January there were 122 active consents within statutory timeframes, 20 active applications exceeding statutory timeframes and 51 suspended applications that exceed statutory timeframes.

25. Table 8 below shows the rolling twelve-month total number of BCs and CCCs issued each month. The corresponding graph depicts these figures against the statutory compliance rate for each month.

Table 8: Number of Building Consents and Code Compliance Certificates issued since November 2022

	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Total
BC granted	81	86	45	81	55	88	93	95	69	69	61	50	873
CCC's issued	74	79	27	94	95	57	63	55	58	76	57	49	505

26. The Building Control function continues to focus on implementing a programme of improvements and as mentioned above, has just passed the two-yearly BCA Accreditation assessment with IANZ.

27. While the assessors commented that the department was now in a solid position to improve performance in the near future the stated requirement is to achieve 95% throughput against statutory timeframes to meet the expected standard to maintain accreditation as a BCA. The assessor commented that the BCA was already achieving that if legacy consents were removed and agreed that we can report our performance against statutory timeframes on that basis, for the purpose of closing out the assessment.

Table 10: Notable Building Consents Received

Location	Development
BC230860 - 8 Burnham Street PETONE 5012	COMMERCIAL – Otane School – MOE Contract - Construct 3 school buildings, Building A - admin block, Building B - single classroom, Building C - three teaching spaces (to be relocated)
BC230942 - 5 Andrews Avenue HUTT CENTRAL 5010	COMMERCIAL - Seismic Strengthening to 67% NBS (IL2) and fit out of rear ground floor residential unit.
BC240030 - 255 Rata Street NAENAE 5011	COMMERCIAL - Wesley Rata Village - Redevelop two buildings into 15 self-contained residential units (Building A - Units 1-12), Building B - Units 12-15), replace windows, doors, some cladding (Building C)
BCPRE230046 - 8 Railway HUTT CENTRAL 5010	COMMERCIAL Pre-application - Refurbishment of Woburn Station
BC200941.51 - 195 High Street HUTT CENTRAL 5010	COMMERCIAL - CPU for High Street Apartments - Convert levels 1-3 & additional 4th floor into residential apartments, ground floor retail fit out and more

Earthquake Prone Buildings

28. All earthquake-prone buildings are recorded on a national register, managed by MBIE, more info in https://epbr.building.govt.nz/.

29. An earthquake prone notice was issued to Health NZ for the Hutt Hospital Clock Tower following a provision of Detailed Seismic Assessment (DSA) from Health NZ in early February.

Inspections of residential pools

30. There were 27 pool fencing inspections completed for the period 1 November to 31 January. Of the 27 pools inspected, 13 were ruled compliant, 9 non-compliant, 4 new pools were inspected and 1 removed. All pools that are deemed non-compliant will be reinspected at a later date.

Building Warrants of Fitness Audits

31. Between 1 November and 31 January, 22 BWoF audits have been completed. During the period 12 audits passed, 9 failed and 1 is pending further information. The most common reasons for failing BWoF audits are, no BWoF, issues with emergency exits and owners failing to provide maintenance and testing records.

Land Information Memoranda

32. From 1 November 2023 to 31 January 20224, we received 298 LIM applications, 282 LIM reports issued and all within the statutory timeframe (10 working days), and 6 cancelled.

33. The LIM team had a big month last month (January), we issued 93 LIM reports and receiving 111 requests. By way of comparison 75 LIMs were issued in January 2019.

Table 12: Number of LIM applications received

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
2023 - 24	91	108	110	116	120	67	111					
2022 - 23	58	105	104	129	109	68	76	91	91	70	98	85
2021 - 22	91	76	116	136	146	78	101	104	114	78	89	79

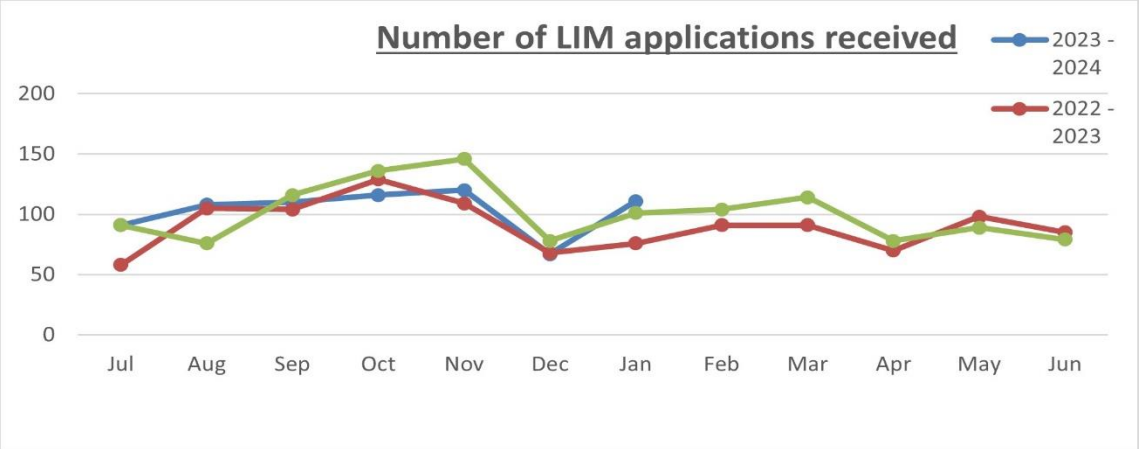
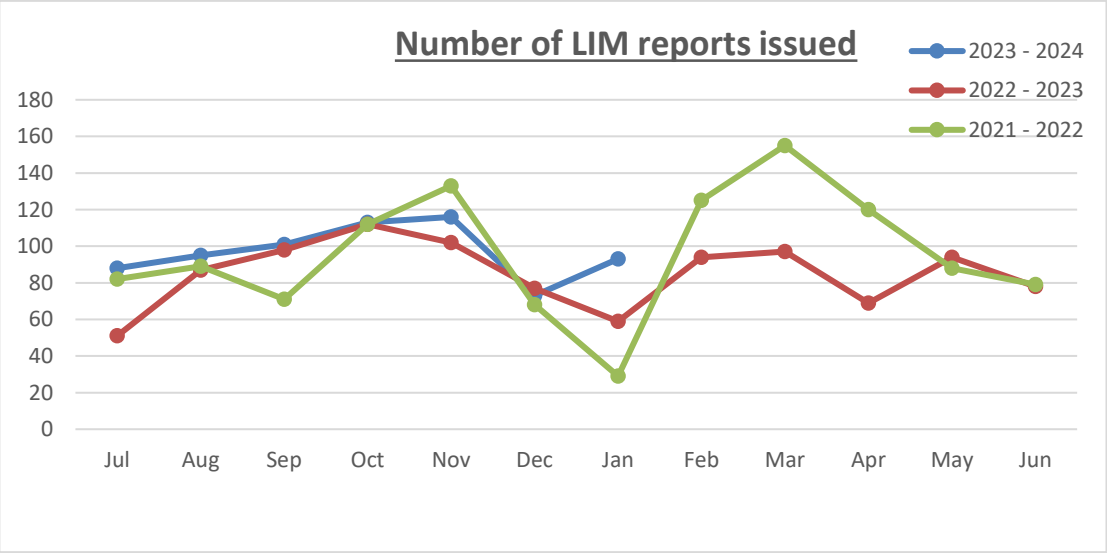


Table 13: Number of LIM reports issued

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
2023 - 24	88	95	101	113	116	73	93					
2022 - 23	51	87	98	112	102	77	59	94	97	69	94	78
2021 - 22	82	89	71	112	133	68	29	125	155	120	88	79



Environmental Health

Alcohol Licensing

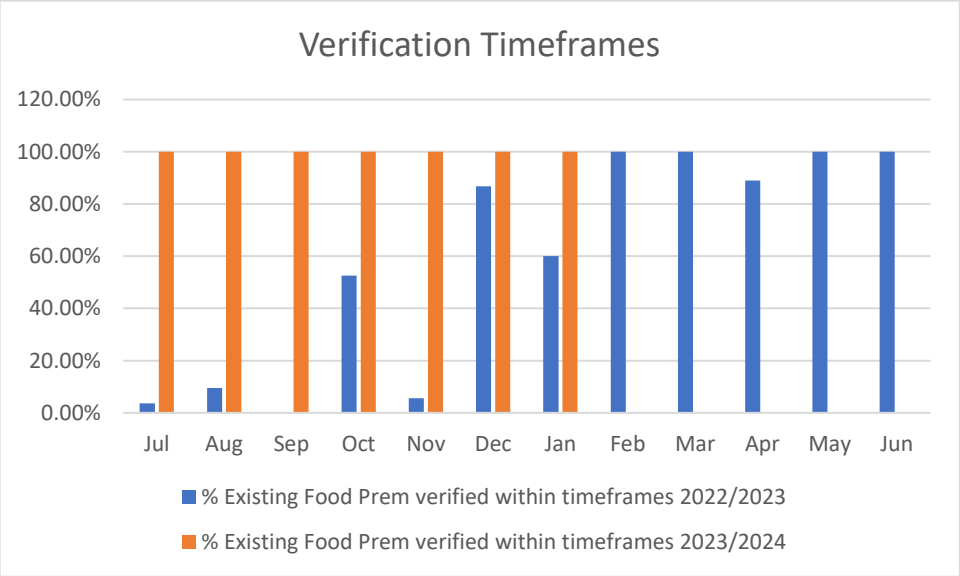
34. Seventeen peak-hour compliance checks were undertaken during November to the end of January. The inspectorate is on track (62% YTD) to achieve its annual KPI target of 95%.

35. A District Licensing Committee hearing was held in December 2023, regarding an application for the renewal of an on-licence for the Roadhouse Bar and Grill, located in Laings Road. The application attracted objections from members of the public, primarily due to noise concerns. The licence was renewed for a truncated period and the outdoor area hours were reduced also.

Food

36. The food verifiers are exceeding the verification KPI of 95%, currently tracking at 100%. This target has been met consistently since July 2023 which is a significant improvement on the previous year.

Table 13: Food Verification Timeframes July 2022 to January 2024



Litter

37. There were 69 complaints to Council about fly tipping during November, December, and January. This is one more than the previous three months. Four of these related to the Te Awa Kairangi area. The Greater Wellington Regional Council (GWRC) has advised of 43 instances where household refuse items were dumped along the river environs during the same time, similar to the previous 3 months.

Noise

38. Council's Noise Control/Smoke Nuisance contractor continues to perform well. Attendance times did slip a little from previous months, but that is expected given the busier summer months resulting in more complaints. Thus far this year they have attended 91% of attendances within 45 minutes (KPI is 85%).

Table 14: Attendance Timeframes July 2022 to January 2024

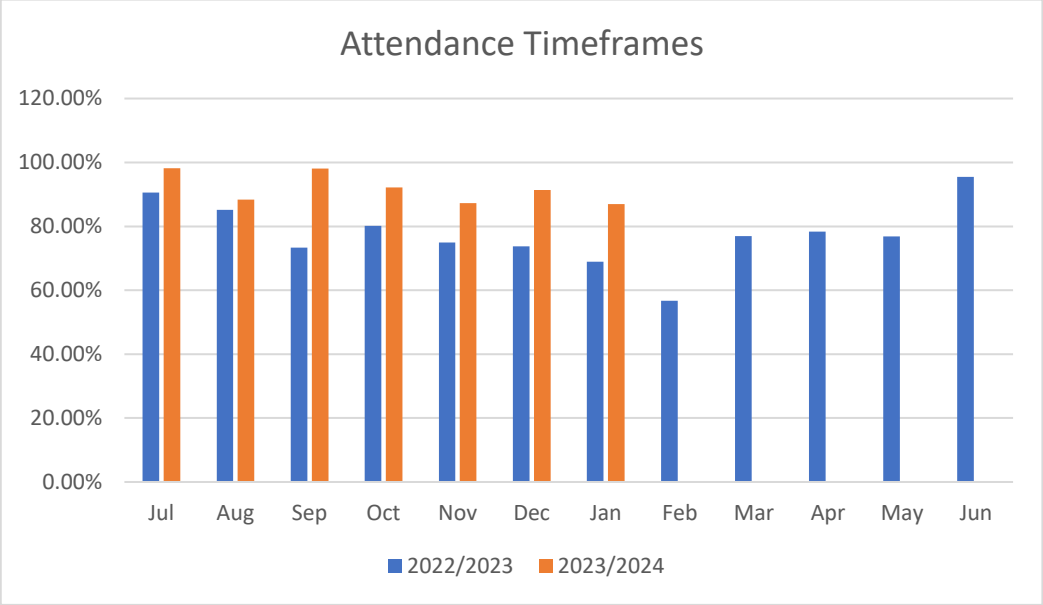
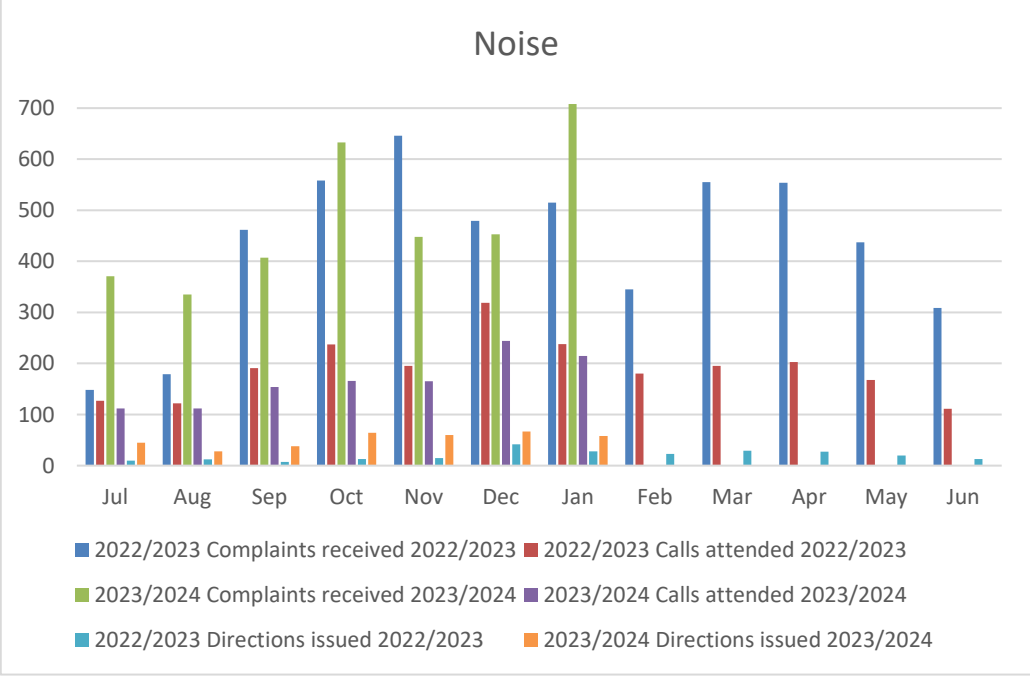


Table 15: Noise complaints, attendances and directions issued July 2022 to January 2024



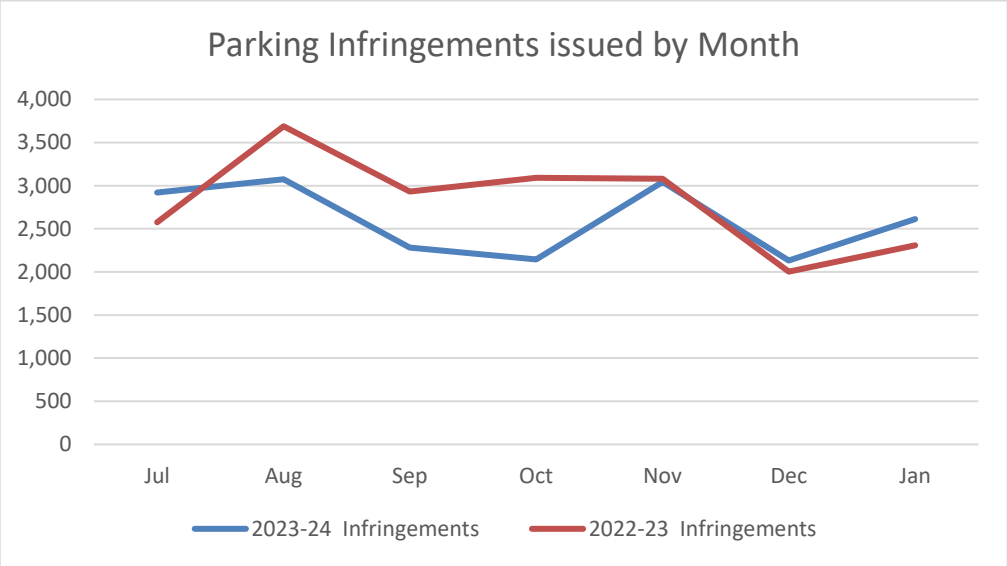
39. During November to end of January, 2 abatement notices and 8 infringement fines were issued for ongoing residential noise issues and non-compliance with notices and directions. Ten items of stereo equipment were also seized during this period, 3 of which will not be released back to the owner due to concerns that noise will not be kept to reasonable levels in the future.

Parking Services

40. In the period between July 2023 to January 2024, a total of 19,677 infringements were issued. A comparison with the previous year's figures is shown below. The number of infringements fluctuates from month to month depending on factors such as staff absence due to illness and availability.

Table 16: Total number of parking infringements issued by month:

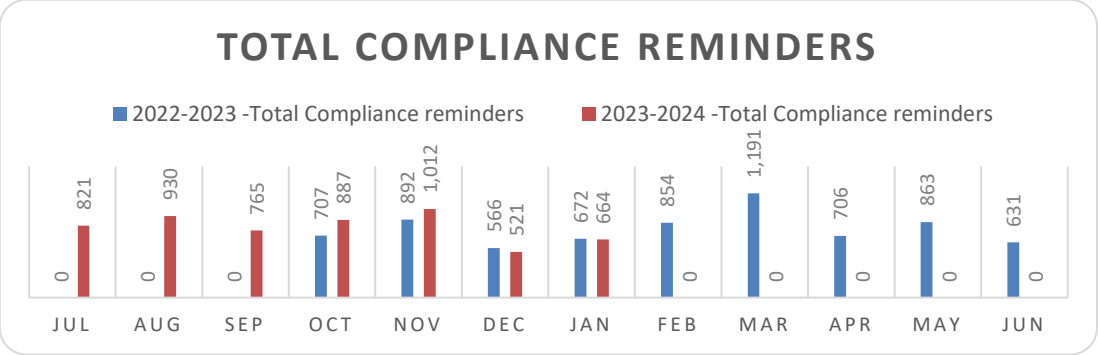
	July	Aug	Sept	Oct	Nov	Dec	Jan	Total
2022/23	2575	3688	2932	3090	3081	2003	2308	18208
2023/24	2922	3074	2281	2144	3042	2132	2613	19677



41. Parking Services began formally issuing compliance reminder notices in October 2022, notifying motorists that their warrant of fitness or licence label is nearing the expiring date. Public awareness of the safety hazards associated with operating an unsafe vehicle is the key driver behind this work, promoting safer communities across Te Awa Kairangi ki Tai, Hutt City.

42. The chart below outlines the number of compliance reminders issued since July 2022.

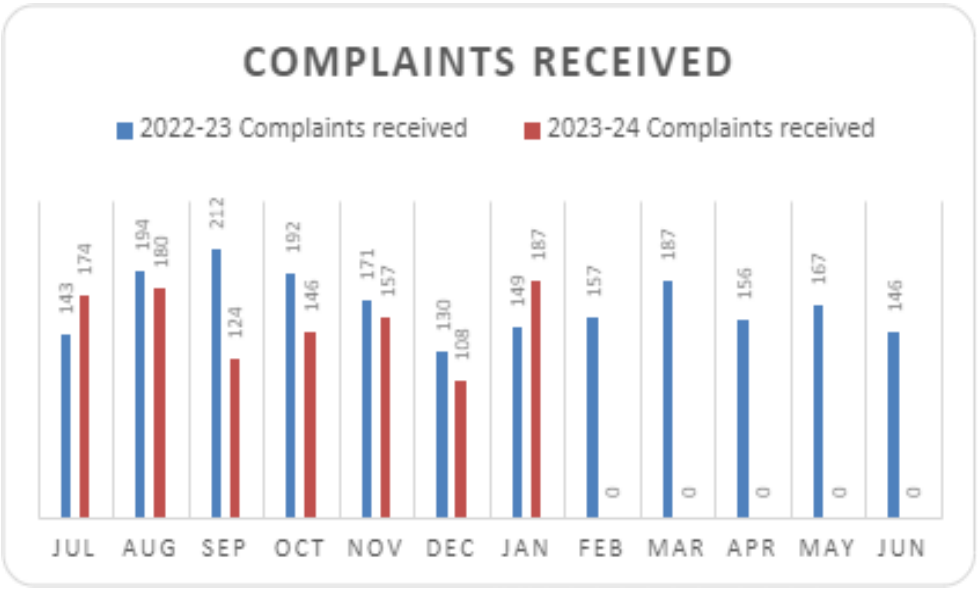
Table 17: Parking compliance reminders by month



Animal Services

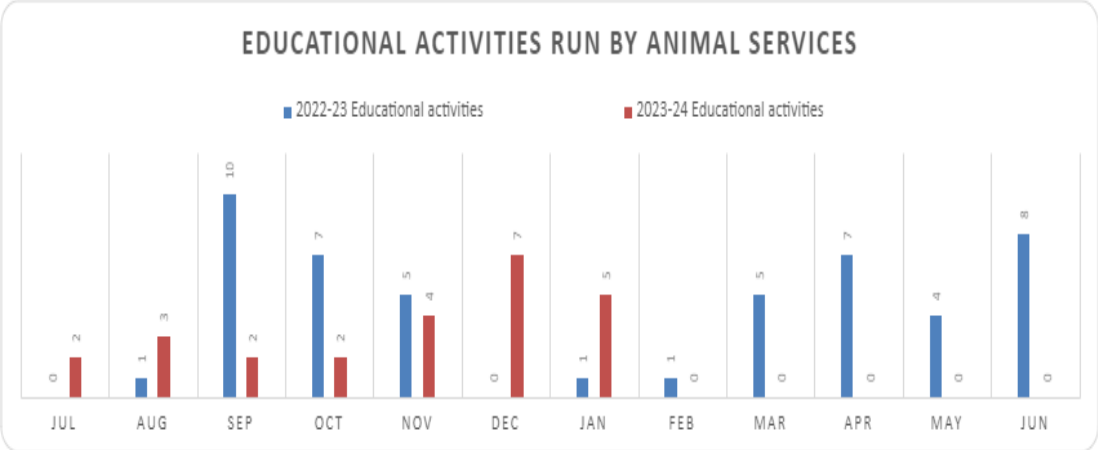
43. There are 10,461 recorded dogs in Lower Hutt for the 2023/2024 period. 1,046 dogs have not yet been registered. Reminders are sent and ultimately an infringement fine is issued for outstanding registration fees.

Table 18: Complaints were received from July 2022 to January 2024.



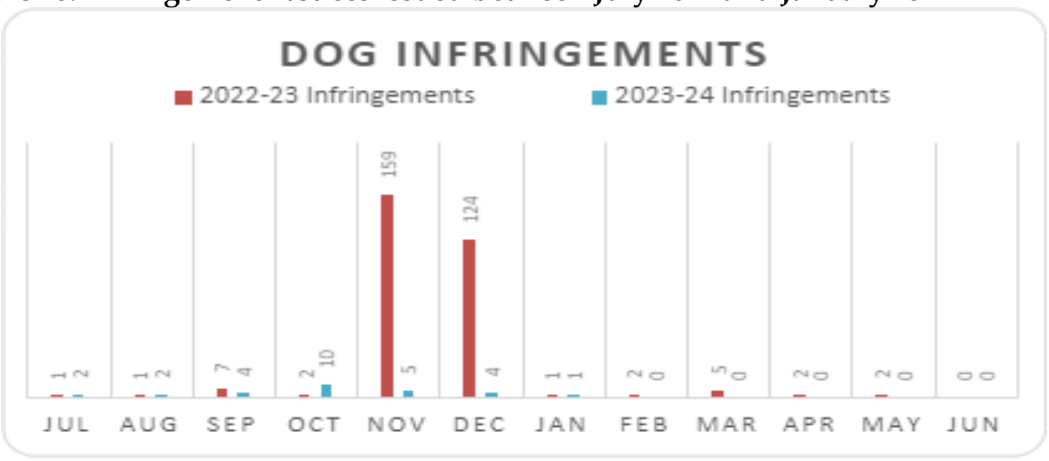
44. Animal Services have several community outreach programmes such as community education programmes on requests, and school education programmes. They also visit private residences to assist owners with dog behaviour. The current KPI requires that the same, or more visits be undertaken than the previous year, which would become unachievable. The proposed KPI for 2024/25 is 20 visits per annum.

Table 19: Educational Activities by Animal Services from July 2022 to January 2024



45. Animal Control Officers can issue infringement notices for non-compliance with the Dog Control Act 1996. The chart below shows the number of infringements issued between July 2022 and Jan 2024. The spike in infringements in November 2022 and December 2022 is due to dogs that had not been microchipped as required by the Dog Control Act 1996, despite being reminded several times during the year.

Table 20: Infringement Notices issued between July 2022 and January 2024



Climate Change Impact and Considerations

46. Fleet Management is committed to reviewing vehicles that come up for renewal to check if they are still required and prioritise a change to electric vehicles, where appropriate. Vehicles across Animal Services, Building, Parking and Environment Health have been replaced by electric vehicles.

47. With development on the most densely populated floodplain in Australasia, which is subject to climate impacts, great care needs to be taken to ensure development is appropriate and this risk is mitigated. This is currently managed using thorough peer reviews and expert technical advice. Council is also preparing new up-to-date hazard mapping for the District Plan Review and will be proposing a more proactive approach to managing hazards in the Draft District Plan which will be consulted on later this year.

Legal Considerations

48. There are no legal considerations.

Financial Considerations

49. Financial results for all areas are reported to the appropriate committee and in Council's Annual Report.

Appendices

There are no appendices for this report.

Author: Tim Johnstone
Head of Planning

Author: Richard Barton
Project Manager

Approved By: Alison Geddes
Director Environment and Sustainability

HUTT CITY TE AWA KAIRANGI **Infrastructure and Regulatory Committee**

02 February 2024

Report no: IARCC2024/1/50

Proposed Temporary Road Closure: Muritai Road for the Eastbourne Memorial Returned Services Association ANZAC Day Event 2024 - 2026

Purpose of Report

1. The purpose of this report is to seek approval for the temporary closure of identified roads in Eastbourne to accommodate the Eastbourne Memorial Returned Services Association Anzac Day Event 2024 and seeks advance approval to cover years 2025 and 2026.

Recommendations

That the Committee:

(1) notes and receives the information;

(2) notes that the recommendations should not be amended without first carrying out further consultation with affected parties and verification from Council's Traffic Engineer that the amendment(s) are not likely to cause an unreasonable impact on traffic;

(3) agrees to temporarily close the following road, subject to the conditions listed in the Traffic Impact Report attached as Appendix 1 to the report:

Muritai Road, Eastbourne (the section of road between the intersections of Rimu and Makaro Streets);

Anzac Day Service – 2024: Thursday 25 April 2024 between the hours of 8:00am to 11:00am (attached as Appendix 2 to the report);

Anzac Day Service – 2025: Friday 25 April 2025 between the hours of 8:00am to 11:00am (attached as Appendix 2 to the report);

Anzac Day Service – 2026: Saturday 25 April 2026 between the hours of 8:00am to 11:00am (attached as Appendix 2 to the report); and

(4) agrees to temporarily rescind the existing parking restrictions during the listed event and impose a 'No Stopping' parking restriction on the following roads:

Muritai Road, Eastbourne (the section of road between the intersections of Rimu and Makaro Streets);

Anzac Day Service – 2024: Thursday 25 April 2024 between the hours of 8:00am to 11:00am (attached as Appendix 2 to the report);

Anzac Day Service – 2025: Friday 25 April 2025 between the hours of 8:00am to 11:00am (attached as Appendix 2 to the report); and

Anzac Day Service – 2026: Saturday 25 April 2026 between the hours of 8:00am to 11:00am (attached as Appendix 2 to the report).

For the reasons that the proposed road closure and parking restrictions are required to accommodate the annual Eastbourne Memorial Returned Services Association - Anzac Day Service 2024-2026 and closures for previous year's events have not solicited any complaints from the public.

Background

2. Council receives numerous requests throughout the year for public roads to be closed for public and private events. For the closures to have an effect, under Schedule 10 of the Local Government Act 1974 (LGA), Council approval is required.

3. Council has received a request from the Eastbourne Memorial RSA (Inc.) for approval to hold its annual ANZAC Day Service, an event involving a temporary road closure and temporary 'No Stopping' restriction as detailed in the recommendations above. Details of the event and expected impact on traffic are attached as Appendix 1 to the report.

4. At its meeting on 12 August 2008, Council approved a procedure for Council to follow to comply with the LGA (Schedule 10) provisions for temporary road closures for events.

5. Processes have been established to implement these procedures, including the required communications and consultations before any approval of a closure.

6. For those events where vehicles remain on temporarily closed roads and are inconsiderately parked, it is also necessary for Council to pass a resolution that for the duration of the event allows for the legal removal of vehicles at the direction of the event organiser. This is administered by Council's Parking Enforcement Officers.

7. This report has been prepared in accordance with the approved procedures.

Discussion

8. This is an annual event citing no traffic issues with historic approvals.

9. The event is in the early morning of a public holiday and a short detour around the proposed road closure (Muritai Road between its intersections of Rimu and Makaro Streets).

10. Council Traffic Engineer has assessed the proposed closures regarding the expected impact on traffic. The Traffic Engineer has provided a professional opinion as to whether the resulting impact on traffic is likely to be reasonable or unreasonable:

    Eastbourne Memorial RSA – ANZAC Day Service 2024-2026: The proposed closure, if implemented in accordance with an approved temporary traffic management plan and associated conditions are not likely to have an unreasonable impact on traffic or the network.

11. Any vehicles remaining within the proposed road closures during these events will be a safety concern and therefore temporary 'No Stopping' restrictions are required to enable these vehicles to be removed.

12. Where existing parking restrictions are in place, these are to be temporarily rescinded to facilitate the temporary 'No Stopping' restrictions.

13. Temporary Traffic Management Plans prepared for the event will be assessed by Council's Traffic Management Coordinator (TMC) to ensure traffic safety and traffic flow management.

Options

14. The Committee can:

    a) approve the proposed temporary road closure; or

    b) amend and defer all or part of the Committee's decision to the Council meeting on Wednesday 27 March 2024, to give officers time to assess the proposed amendments and offer an assessment on the impact on traffic and the network.

15. Officers recommend option (a) as the effects of the event can be effectively managed through the conditions of the road closure approvals, as successfully proven in previous years.

Climate Change Impact and Considerations

16. The matters addressed in this report have been considered in accordance with the process set out in Council's Climate Change Considerations Guide.

17. The decision will not be affected by a changing climate.

Consultation

18. Public notice of any decision to close roads will be advertised in The Hutt News.

19. At its meeting held on 13 February 2024 the Eastbourne Community Board endorsed the officer's recommendations.

Legal Considerations

20. Approval is required from Council, or the Infrastructure and Regulatory Committee, to allow for the temporary closure of roads and temporary 'No Stopping' restrictions. This will ensure that Council is complying with the requirements of the LGA (Schedule 10) for the temporary closure of roads for events within its jurisdiction.

Financial Considerations

21. For community events, the cost of public notices in The Hutt News is covered by existing budgets. This is a community event.

Appendices

Author: Amin Shahin
Traffic Engineer - Contractor

Author: Rogan Murugadhas
Traffic Engineer

Reviewed By: Evandro Scherer
Transport Engineer Manager

Reviewed By: Andrea Mitchell
Acting Head of Transport

Approved By: Jon Kingsbury
Director Economy & Development

Traffic Impact Report

Proposed Temporary Road Closure:

ANZAC Day (Eastbourne Memorial RSA) Event 2024

1. Description of Event

An application has been received from the Secretary of the Eastbourne Memorial RSA (Inc) to temporarily close Muritai Road (from Makaro Street to Rimu Street), to vehicular traffic on Thursday 25 April 2024 between 8:00am and 11:00am for their ANZAC Day parade and service.

2. Public Notice

The public notice advising that the Council is proposing to consider this closure will be published in the Hutt News closer to the event date.

3. Consultation

This is an annual event with a very basic road closure & detour in the early morning on a public holiday. It is expected that there will not be negative feedback.

4. Traffic Impact Assessment

Prior Closures

The proposed closure for this event will not result in a road being closed for an aggregate of more than 31 days in any year as set down in Schedule 10, Section 11e of the Local Government Act 1974.

Traffic Impact

In the opinion of the Council Officer, acting as Council's Traffic Engineer, the proposed closure, if

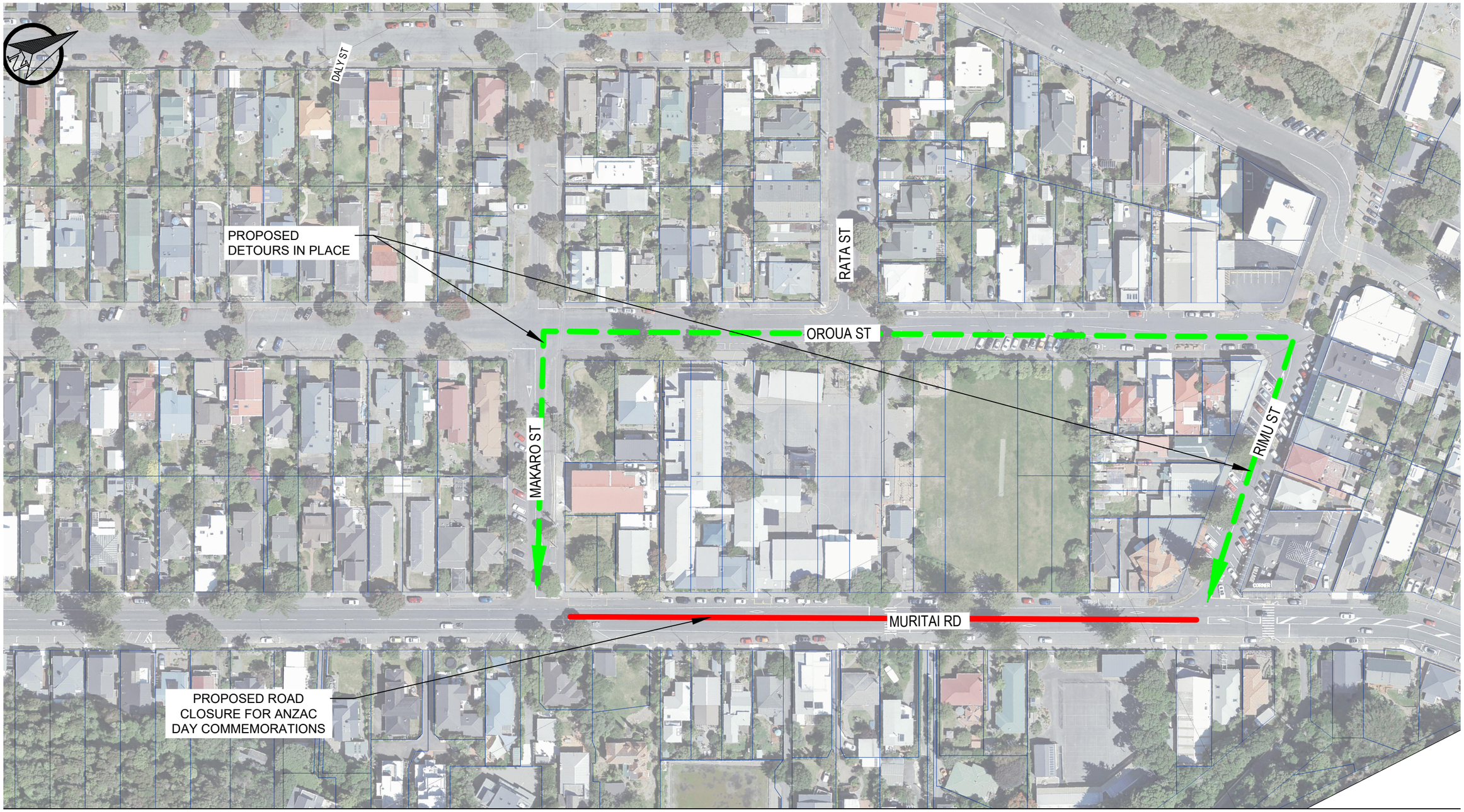
implemented according to an approved temporary traffic management plan, is not likely to impede traffic unreasonably, subject to the conditions listed below. It is noted that the Council reserves the right to modify this opinion at any time.

Previous closures of this section of Muritai Road on a public holiday have had no reported traffic problems.

5. Conditions of Closure

Subsequent to approval, the applicant will be notified of the decision, and if approved, required to adhere to the following conditions;

- The access requirements of residents and business affected by the closures must be taken into account.
- The event organiser must apply for a Corridor Access Request (CAR) via Submitica (www.submitica.com) no less than 30 days prior to the event
- The event organiser must provide to Council a compliant Temporary Traffic Management Plan (TTMP) prepared by a suitably qualified person and be appropriate for both the level of road and the nature of the closure, no less than 30 days prior to the event.
- All Temporary Traffic Management (TTM) must comply with NZTA's Code of Practice for Temporary Traffic Management (CoPTTM) and any conditions set down by Councils' Corridor Manager and/or Traffic Management Coordinator (TMC)
- The event organiser must gain both CAR and TTMP Approvals a minimum of 7 days prior to the scheduled event date to ensure the event can proceed.
- All TTM is to be installed by suitably qualified personnel, under the supervision of a NZTA qualified Site Traffic Management Supervisor (STMS).
- The closure is restricted to the roads, dates and times as approved by Council.
- The event organiser must have a valid Health and Safety plan which details how emergency vehicles can gain access to the closure area during the event.
- The event organiser is required to comply with the directions of both the Police and authorised officers of the Road Controlling Authority (HCC).
- The event organiser is responsible for the management of all work relating to the physical closure of roads and maintaining both the closure and public safety within the closure area.
- The event organiser is responsible for ensuring closed roads are left in a suitably clean and tidy state following the completion of the event.



EGEND

ROAD CLOSURE

DETOUR

REVISION	AMENDMENT	DRAWN	APPROVED	REVISION DATE
1	INITIAL DESIGN – DRAFT	A SHAHIN	E SCHERER	21/01/24

HUTT CITY TE AWA KAIRANGI

PROJECT
PROPOSED TEMPORARY ROAD CLOSURE
EASTBOURNE MEMORIAL RSA ANZAC DAY MURITAI ROAD, EASTBOURNE THURSDAY 25 APRIL 2023 8:00am TO 11:00am

Infrastructure and Regulatory Committee

08 February 2024

Report no: IARCC2024/1/51

Proposed Temporary Road Closures: Laings Road, Knights Road and Queens Drive, Hutt Central - ANZAC DAY DAWN SERVICE 2024 2026

Purpose of Report

1. The purpose of this report is to seek approval for the temporary closure of Roads in Hutt City for the Civic - Anzac Day Dawn Service and Wreath Laying in 2024 and seeks advance approval to cover years 2024 and 2026.

Recommendations

That the Committee:

(1) notes and receives the information;

(2) notes that the recommendations should not be amended without first carrying out further consultation with affected parties, and verification from Council's Traffic Engineer that the amendment(s) are not likely to cause an unreasonable impact on traffic;

(3) agrees to temporarily close the following roads, subject to the conditions listed in the attached Traffic Impact Report attached as Appendix 1 to the report:

Anzac Day Dawn Service – 2024: Thursday 25 April 2024 between the hours of 5:00 to 11:00am, attached as Appendix 2 to the report;

Anzac Day Dawn Service – 2025: Friday 25 April 2025 between the hours of 5:00 to 11:00am, attached as Appendix 2 to the report;

Anzac Day Dawn Service – 2026: Saturday 25 April 2026 between the hours of 5:00 to 11:00am, attached as Appendix 2 to the report;

(a) Laings Road, Hutt Central (the section of road between the intersections of Myrtle Street and Queens Drive); between 5.00am- 6.00am;

(b) Knights Road, Hutt Central (the section of road between the intersections of Stevens Grove and Laings Road); between 5.00am- 6.00am;

(c) Queens Drive, Hutt Central (the section of road between the High Street roundabout and Laings Road); between 5.00am – 11.00am; and

(4) agrees to temporarily rescind the existing parking restrictions during the listed event, and impose a 'No Stopping' parking restriction on the following roads:

Anzac Day Dawn Service and Wreath Laying – 2024: Thursday 25 April 2024 between the hours of 5:00 to 11:00am, attached as Appendix 2 to the report;

Anzac Day Dawn Service – 2025: Friday 25 April 2025 between the hours of 5:00 to 11:00am, attached as Appendix 2 to the report;

Anzac Day Dawn Service – 2026: Saturday 25 April 2026 between the hours of 5:00 to 11:00am, attached as Appendix 2 to the report;

(a) Laings Road, Hutt Central (the section of road between the intersections of Myrtle Street and Queens Drive); between 5.00am-6.00am;

(b) Knights Road, Hutt Central (the section of road between the intersections of Stevens Grove and Laings Road); between 5.00am-6.00am; and

(c) Queens Drive, Hutt Central (the section of road between the High Street roundabout and Laings Road), between 5.00am – 11.00am.

For the reason that the proposed road closures and parking restrictions are required to accommodate the Civic - Anzac Day Dawn Service and Wreath Laying 2024-2026. Closures for previous year's events have not solicited any complaints from the public.

Background

2. Council receives numerous requests throughout the year for public roads to be closed for public and private events. For closures to have an effect, under Schedule 10 of the Local Government Act 1974 (LGA), Council approval is required.

3. Council has received a request from the Mayor's Office for approval to hold the Civic ANZAC Day Dawn Service and Wreath Laying. This is an event involving both temporary road closures and temporary 'No Stopping' restrictions as detailed in the recommendations above. Details of the event and expected impact on traffic are attached as Appendix 1 to the report.

4. At its meeting on 12 August 2008, Council approved a procedure for Council to follow to comply with the LGA (Schedule 10) provisions for temporary road closures for events.

5. Processes have been established to implement these procedures, including the required communication and consultation before any approval of a closure.

6. For those events, where vehicles remain on roads and are inconsiderately parked, it is also necessary for Council to pass a resolution that, for the duration of the event allows for the legal removal of vehicles at the direction of the event organiser, administered by Council's Parking Enforcement Officers.

7. This report has been prepared in accordance with the approved procedures.

Discussion

8. This is an annual event with historically proposed closures meeting with approval.

9. Council's Traffic Engineer has assessed the proposed closures regarding the expected impact on traffic. The Traffic Engineer has provided a professional opinion as to whether the resulting impact on traffic is likely to be reasonable or unreasonable:

   Civic ANZAC Day Dawn Service and Wreath Laying 2024-2026: The proposed closures, if implemented in accordance with an approved temporary traffic management plan and associated conditions, are not likely to have an unreasonable impact on traffic or the network.

10. Any vehicles remaining within the proposed road closures during these events will be a safety concern and therefore temporary 'No Stopping' restrictions are required to enable these vehicles to be removed.

11. Where existing parking restrictions are in place, these will be temporarily rescinded to facilitate the temporary 'No Stopping' restriction.

12. Temporary Traffic Management Plans prepared for the event will show how traffic safety and flow will be managed.

Options

13. That the Committee:

    a) approves the proposed temporary road closure and the associated 'No Stopping' parking restrictions; or

    b) amends and defers all or part of the Committee's decision to the Council meeting on 27 March 2024, to give officers time to assess the proposed amendments and offer an assessment on the impact on traffic and the network.

14. Officers recommend option (a) as the effects of the event can be effectively managed through the conditions of the road closure approvals, as successfully proven in previous years.

15. Officer do not recommend option (b) as this may delay the approval process of the road closure for the event.

Climate Change Impact and Considerations

16. The matters addressed in this report have been considered in accordance with the process set out in Council's Climate Change Considerations Guide.

17. The decision will not be affected by a changing climate.

Consultation

18. The public will be notified that Council was to consider the proposed temporary road closure through a Public Notice advertisement in The Hutt News closer to the date. No correspondence had been received at the time this draft report was finalised.

19. Public notice of any decision to close roads will be advertised in The Hutt News.

20. The Sebel Hotel, with guest access sited at 15 Queens Drive, was emailed by Council on 31 January 2024 to seek their written approval to support the annual road closure on Queens Drive between 5-11am on 25 April. The Hotel Manager replied with their approval later the same day.

Legal Considerations

21. Approval is required from Council, or the Committee, to allow for the temporary closure of roads and temporary 'No Stopping' restrictions. This will ensure that Council is complying with the requirements of the LGA (Schedule 10) for the temporary closure of roads for events within its jurisdiction.

Financial Considerations

22. For community events, the cost of public notices in The Hutt News is covered by Council budget. For commercial events, the cost of public notices is passed onto the appropriate event organiser. This is a community event.

Appendices

No.	Title	Page
1⇩	Appendix 1 - Traffic Impact Report	80
2⇩	Appendix 2 - ANZAC DAY ROAD CLOSURE MAP	82

Author: Rogan Murugadhas
Traffic Engineer

Reviewed By: Evandro Scherer
Transport Engineer Manager

Reviewed By: Andrea Mitchell
Acting Head of Transport

Approved By: Jon Kingsbury
Director Economy & Development

Traffic Impact Report

Proposed Temporary Road Closure:

ANZAC Day (Civic) Ceremonial Events 2024

1. Description of Event

The Mayor's Office has applied to temporarily close **Laings Road**, (between Myrtle Street and Queens Drive), **Knights Road** (between Stevens Grove and Laings Road) to vehicular traffic on Thursday 25TH April 2024 between 5.00am and 6.00 am for the Anzac Day Dawn Parade.

The Mayor's Office has also applied to close **Queens Drive** (between Laings Road and High Street), to vehicular traffic on Thursday 25th April 2024 between 5:00am to 11:00am for the Anzac Day Wreath laying Ceremony.

2. Public Notice

The public notice advising that the Council is proposing to consider this closure will be published in the Hutt News closer to the event date.

3. Consultation

This is an annual event with a very basic road closure & detour in the early morning on a public holiday. It is expected that there will not be negative feedback.

4. Traffic Impact Assessment

Prior Closures

The proposed closure for this event will not result in a road being closed for an aggregate of more than 31 days in any year as set down in Schedule 10, Section 11e of the Local Government Act 1974.

Traffic Impact

In the opinion of the Council Officer, acting as Council's Traffic Engineer, the proposed closure, if implemented according to an approved temporary traffic management plan, is not likely to impede traffic unreasonably, subject to the conditions listed below. It is noted that the Council reserves the right to modify this opinion at any time.

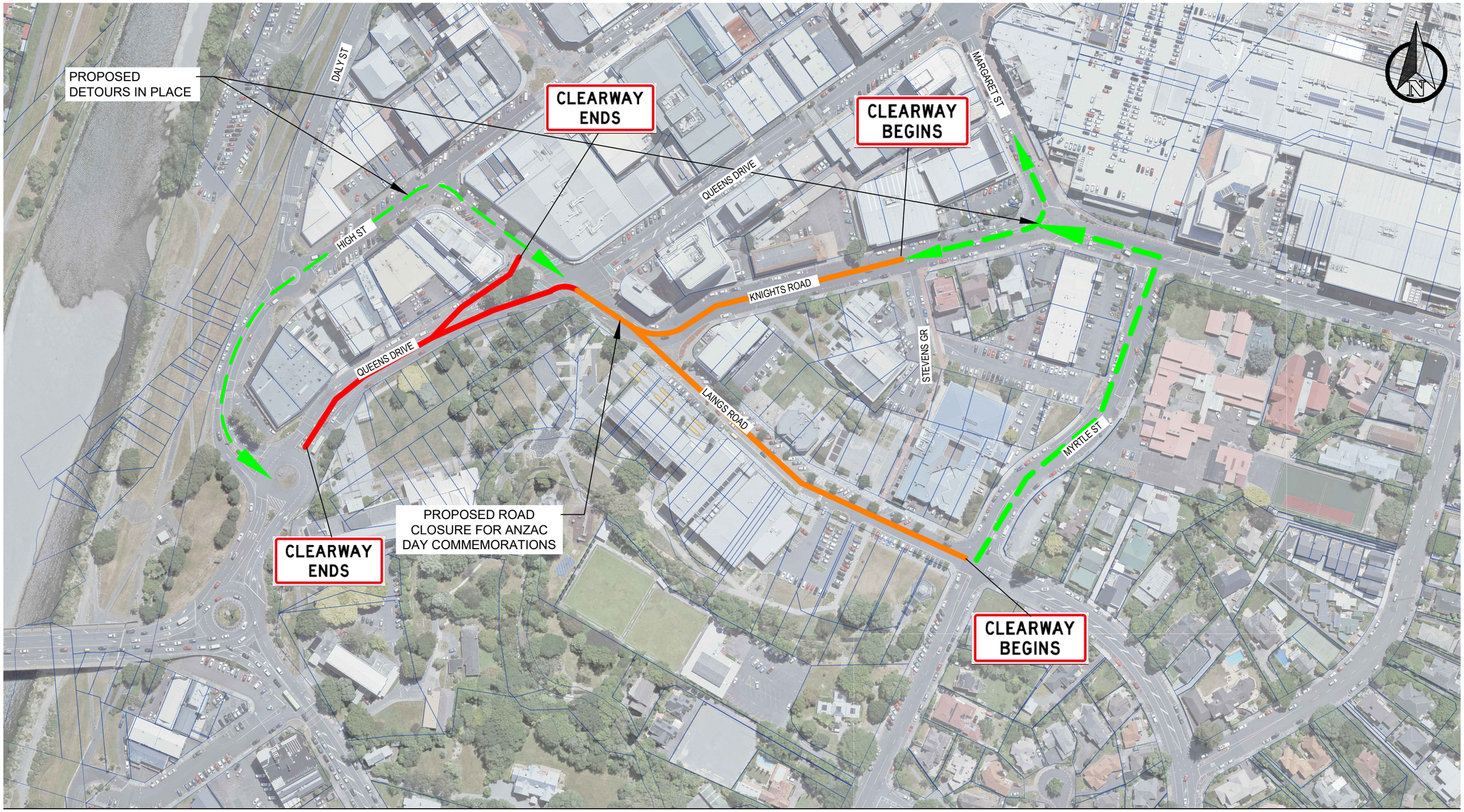
In this particular instance there should be very little in the way of wider network effects because the event is being held on a public holiday (ANZAC Day).

Previous closures of these sections of Roads on a public holiday have had no reported traffic problems.

5. Conditions of Closure

Subsequent to approval, the applicant will be notified of the decision, and if approved, required to adhere to the following conditions.

- The access requirements of residents and business affected by the closures must be taken into account.
- The event organiser must apply for a Corridor Access Request (CAR) via Submitica (www.submitica.com) no less than 30 days prior to the event.
- The event organiser must provide to Council a compliant Temporary Traffic Management Plan (TTMP) prepared by a suitably qualified person and be appropriate for both the level of road and the nature of the closure, no less than 30 days prior to the event.
- All Temporary Traffic Management (TTM) must comply with NZTA's Code of Practice for Temporary Traffic Management (CoPTTM) and any conditions set down by Councils' Corridor Manager and/or Traffic Management Coordinator (TMC)
- The event organiser must gain both CAR and TTMP Approvals a minimum of 7 days prior to the scheduled event date to ensure the event can proceed.
- All TTM is to be installed by suitably qualified personnel, under the supervision of a NZTA qualified Site Traffic Management Supervisor (STMS).
- The closure is restricted to the roads, dates and times as approved by Council.
- The event organiser must have a valid Health and Safety plan which details how emergency vehicles can gain access to the closure area during the event.
- The event organiser is required to comply with the directions of both the Police and authorised officers of the Road Controlling Authority (HCC).
- The event organiser is responsible for the management of all work relating to the physical closure of roads and maintaining both the closure and public safety within the closure area.
- The event organiser is responsible for ensuring closed roads are left in a suitably clean and tidy state following the completion of the event.



EGEND

ROAD CLOSURE FROM 5:00am to 11:00am

DETOUR

ROAD CLOSURE ONLY FROM 5:00am to 6:00am

0 60 120 Meters Scale 1:2000 @ A3

REVISION	AMENDMENT	DRAWN	APPROVED	REVISION DATE
1	INITIAL DESIGN – DRAFT	R MURUGADHAS	E SCHERER	13/02/2024

HUTT CITY TE AWA KAIRANGI

PROJECT
PROPOSED TEMPORARY ROAD CLOSURE
SHEET
CIVIL ANZAC DAY 25 APRIL 2024 - 2026 5:00am TO 11:00am

HUTT CITY TE AWA KAIRANGI **Infrastructure and Regulatory Committee**

02 February 2024

Report no: IARCC2024/1/52

Transport Activity Management Plan

Purpose of Report

1. To provide a summary of the current position of the Transport Activity Management Plan (AMP) which underpins our Maintenance, Operating and Renewals (MOR) funding submission to New Zealand Transport Agency (NZTA) and future steps.

Recommendations

That the Committee:

(1) receives and notes the report;

(2) notes the Transport Activity Management Plan (AMP) underpins the Council's National Land Transport Plan (NLTP) 2024-27 submission for Maintenance, Operating and Renewals (MOR) funding from the NZ Transport Agency (NZTA) and focuses on subsidised activities;

(3) notes the November 2023 report IARCC2023/5/358 considered by the Infrastructure and Regulatory Committee, set out the matters relating to the MOR funding and AMP submission made to NZTA on 8 December 2023;

(4) notes the AMP attached as Appendix 1 to the report is the version submitted on 8 December 2023;

(5) notes that no NZTA feedback has been received but when feedback is received, or the MOR funding amounts are agreed, the AMP may need to be updated; and

(6) notes officers will only revisit this AMP with Council if decisions outside their delegations are required.

Background

2. The AMP is a subset of information provided for the Long Term Plan Activity Management Plan (LTP AMP) that was part of the documentation provided to the LTP auditors during February 2024.

3. There is currently on-going uncertainty for feedback from NZTA on timelines and implications as funding priorities are set out through the Government's Government Policy Statement (GPS) and the publication of that is due shortly.

4. No NZTA feedback on the AMP or MOR funding sought which would impact the AMP, has been received at the time of drafting this report.

5. The AMP may need to be updated if there are material changes to priorities or the funding amounts agreed. It is also possible funding may not be set for the entire 2024-27 period for MOR immediately. This means future annual updates may be required in 2025 and 2026.

Discussion

6. As there is more certainty, officers will assess implications for the AMP and current Council decisions (and draft LTP) and if further decisions or Council approval is required.

Climate Change Impact and Considerations

7. Climate Change impact implications of the MOR funding which the AMP focuses on are covered by the NZTA assessment process.

8. The Transport AMP includes sections on climate and environmental considerations for the AMP.

Consultation

9. Consultation implications of the MOR funding which the AMP focuses on are covered by the NZTA assessment process or as the MOR funding aligns with the draft LTP are covered within Council's LTP processes.

Legal Considerations

10. This process follows the mandate process set by NZTA.

Financial Considerations

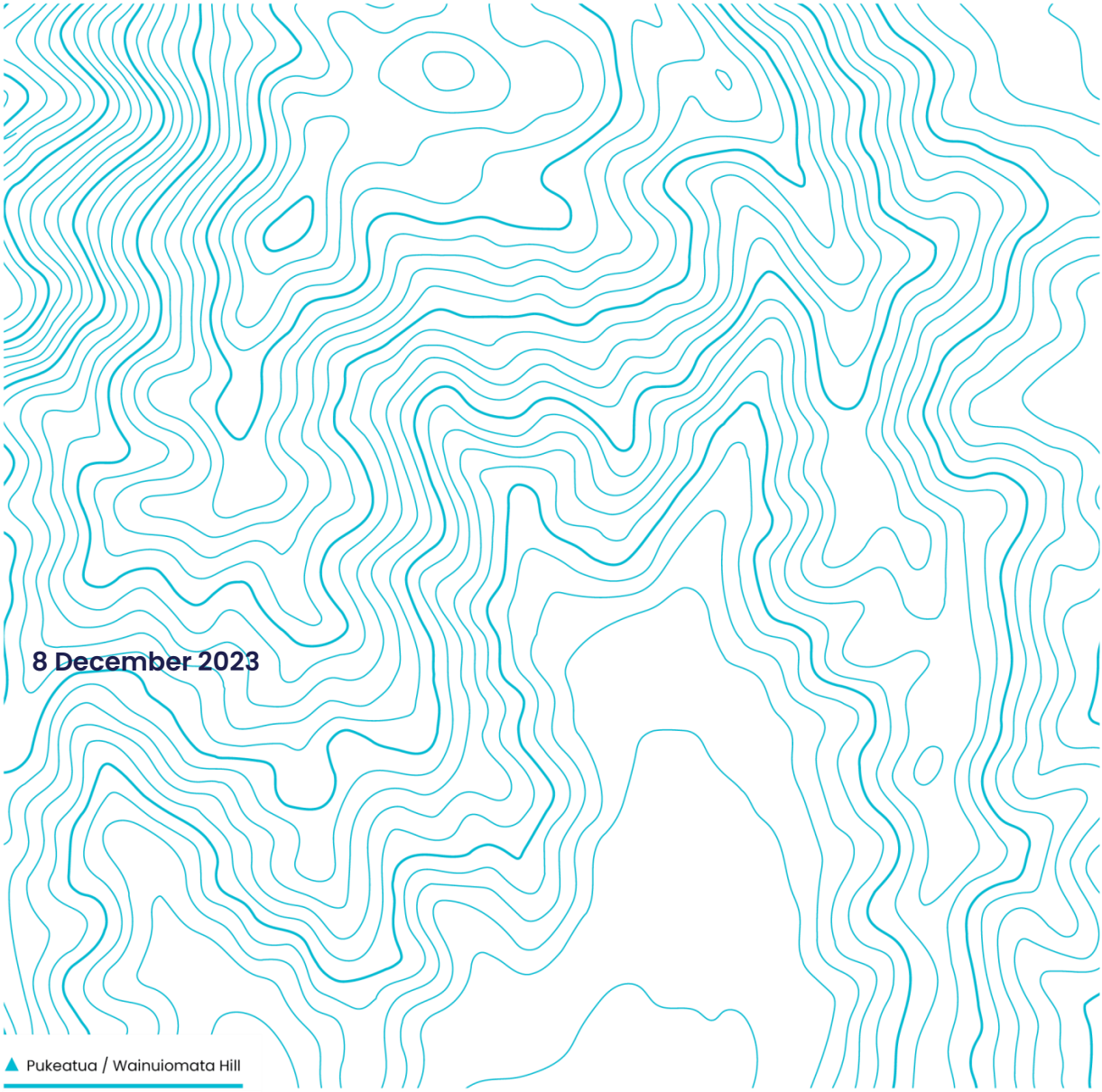
11. The AMP reflects the MOR funding which aligns with the draft LTP which are covered within Council's LTP processes.

Appendices

No.	Title	Page
1⇩	Appendix 1 - Transport Activity Management Plan (AMP)	85

Author: Declan Millin, Principal Advisor - Micromobility Programme
Author: Ashfaq Clyde, Senior Management Accountant
Author: Aaron Sergent, Management Accountant
Reviewed By: Andrea Mitchell, Acting Head of Transport
Approved By: Jon Kingsbury, Director Economy & Development

Transport Activity Management Plan | 2024-2027



Foreword:

As a Council we are clear that our purpose is to ensure our city and its people thrive. This requires forward-thinking planning that prioritises resilience, facilitating growth while mitigating environmental impacts. The establishment of a secure, resilient, and efficient transport system is integral to realising these objectives.

This Activity Management Plan clarifies the methodology employed to identify the necessary programs of work for the maintenance, operation, and renewal of our transport system. It adheres largely to the Business Case Approach and forms an integral part of our ongoing efforts to enhance the resilience and efficiency of our transport infrastructure.

The challenges posed by the global pandemic in 2020 significantly impacted our social and economic well-being. Despite these challenges, our Council remains dedicated to making considered investments in core infrastructure. These investments serve as the foundation for the future success of our city and its people, reinforcing our commitment to their sustained growth and prosperity.

The Transport Activity Management Plan will be presented to the Infrastructure & Regulatory Committee on 7 March 2024 to seek their recommendation for Council to approve and signing of the following parties.

Campbell Barry
Mayor

Jo Miller
Chief Executive

Table of Contents

1.0 Executive Summary

Hutt City Council's (HCC) vision is for Te Awa Kairangi ki Tai Lower Hutt to have a sustainable transport network that supports our net zero emissions goal, connects communities, and enables all of our people to thrive.

HCC have been through a robust process to ensure an evidenced based Activity Management Plan (AMP) which aligns with government policy, direction, and guidance. The resulting achievement precisely meets its intended objectives, encompassing a fitting programme that aptly addresses the distinctive issues inherent to our city. Additionally, it acknowledges the shared challenges confronted by all local Councils.

1.1 Why Prepare This Plan?

HCC proactively manage the Council's transportation assets, and activities, to facilitate the safe movement of people and goods throughout the city.

This AMP explains the transport services that HCC will deliver for the community, what level of service will be achieved, and how this will be funded.

Developing an environmentally, economically, and socially sustainable transport system will protect our city and enable our children and grandchildren to thrive.

1.2 What is Included?

The HCC transport network consists of 486 km of formed, sealed roads. These are classified in the table below. Details about lane lengths (km) and vehicle journeys (vkt) are included in a later Section about Existing Network Conditions.

	ONF Category	Lane (km)	Vehicle Journeys (vkt)
URBAN	Transit Corridors	9.2	14
	Urban Connectors	241.6	309.1
	Activity Streets	106.6	120
	Main Streets	3.9	5.8
	Local Streets	533.4	53.2
	Total Urban Network	894.7	502
RURAL	Rural Connectors	50.7	4.4
	Peri-urban Roads	3.1	0.1
	Rural Roads	17.9	0.8
	Total Rural Network	71.7	5.3
	Unclassified	0.6	0
	Total Network	967	507.4

Source: Transport Insights web portal

These roads are augmented by[1]:

- **683 km** of footpath
- **779 km** of kerb and channel
- **44** Road bridge/large culverts
- **5** Pedestrian subways
- **1** Tunnel
- **21** footbridges
- **151** retaining walls
- **48 (7.4km)** seawalls
- **14,158** streetlights
- **24** sites with traffic signals
- **154** Pay & Display meters
- **1,923** Pay & Display carparks
- **18,692 m** Safety guardrails

1.3 Levels of Service

HCC wants a resilient, sustainable transport system that improves the quality of life for today's community without compromising the ability of future generations to meet their own social, environmental, economic, and cultural needs. This means providing our community with transport options that connect people easily, safely, and affordably to where they need to go, whether travelling by foot, bike, car or public transport. A sustainable transport system will enable us to tackle our climate change challenges, reduce congestion, create more liveable places, and support the health and wellbeing of our communities.

The overarching target Levels of Service for Council are shown in the table below. More detailed information about specific Key Performance Indicator (KPI) targets are included within detailed portions of this AMP.

User Group	Service Level
Pedestrian and mobility assisted users	Footpaths that are smooth and free of hazards.
Crossings that are safe and easy to negotiate for all users	Medium term – but important to start now.
Cyclists	Cycling lanes that give separation from heavy traffic and safer access for cyclists around the city.
Motorists	A roading network that enables easy and comfortable movement for vehicles throughout the city with a high level of safety and a low level of delays.
Heavy vehicle drivers	Roads suitable for heavy transport including routes for over-dimensional vehicles.

[1] Source: RAMM

User Group	Service Level
Utility users	The allocation of alignment and the coordination of works for utilities within the road corridor.
Residents and businesses	A roading network that provides convenient access to property and discourages inappropriate traffic activity in residential areas. Planned maintenance work that minimises the impact of road works on residents and business.
Developers	Advice on servicing of developments.
All users	A streetscape that is attractive, safe, clean, and well-lit at night. Parking that is conveniently available throughout the city to meet the needs including those of retailers, shoppers, commuters and visitors.

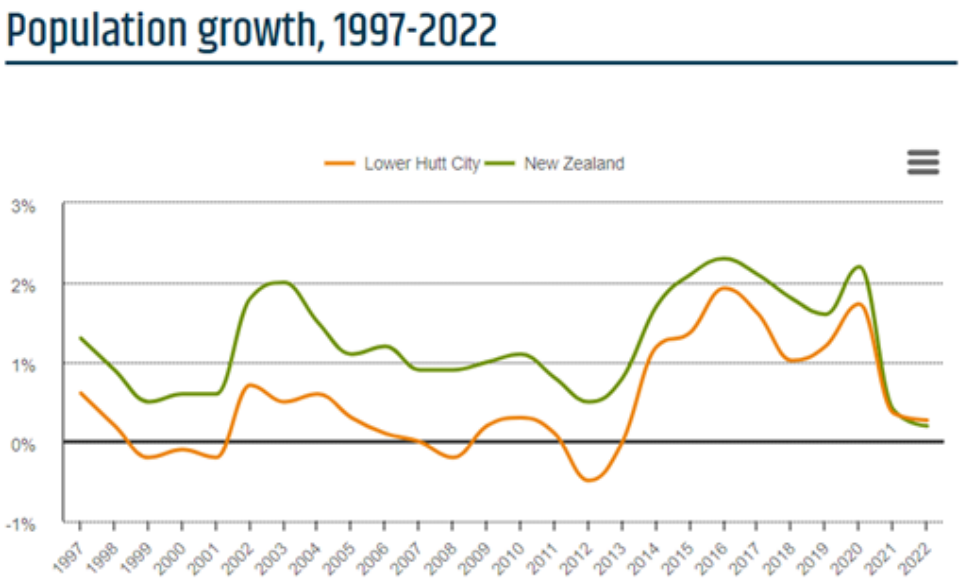
1.4 Key Problems

Hutt City is facing the following key problems which, when addressed by appropriate interventions, will provide the following expected benefits

Key Theme	Problem Statement	Expected Benefits	Required Interventions
Network Compliance	Old and weak pavements result in reduced life expectancy and increased cost to HCC	Improved reliability, efficiency, and effectiveness of transport network	Develop a plan to optimise maintenance and renewals of pavements based on visual inspection, NPV's, and ONF.
Network Resilience	Climate change increases extreme weather events and the frequency of flooding & landslips	Resilient, sustainable, and adaptable transport infrastructure	Develop a plan to assess flooding and landslip vulnerabilities and prioritise targeted upgrades.
Network Future Capacity	Population growth and densification increases congestion which reduces community liveability	Safe, healthy, liveable, and vibrant city	Develop a plan to optimise demand management and capacity improvement.

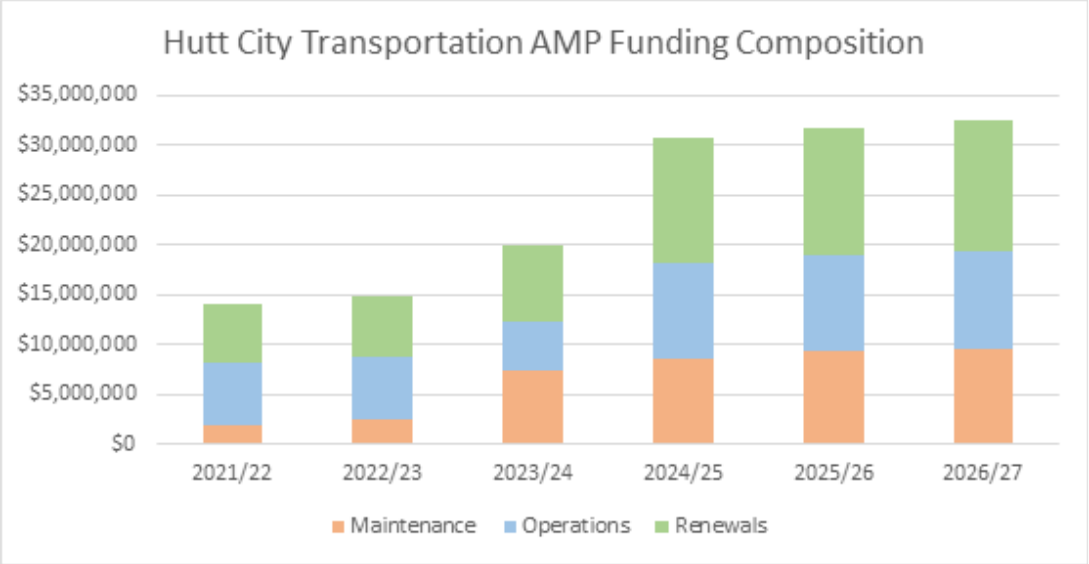
1.5 Future Demand

Traditionally lower than the overall population growth of New Zealand, the current rate of growth now exceeds the overall rate for NZ. The migration of people into Lower Hutt results in increased demand on all infrastructure, including the transport network.



1.6 Maintenance, Operations, and Renewal Programme

The following chart shows the composition of Maintenance, Operations, and Renewals over the past three years, with the projected costs over the next three years. This increase generally reflects an increase in costs due to escalation and inflation, and not an increase in the quantity of work.



A detailed table showing the breakdown by individual Work Categories is shown below:

		2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
MAINTAIN							
111	Sealed Pavement Maintenance	$852,800	$852,800	$6,041,545	**$4,751,788**	**$4,856,328**	**$4,967,995**
112	Unsealed pavement maintenance	$0	$0	$0	**$0**	**$0**	**$0**
113	Routine drainage maintenance	$478,464	$424,519	$446,003	**$1,509,142**	**$1,542,343**	**$1,577,808**
114	Structures maintenance	$91,402	$444,776	$419,596	**$593,210**	**$606,260**	**$620,201**
124	Cycle path maintenance	$11,800	$34,380	$23,481	**$158,096**	**$170,058**	**$171,209**
125	Footpath maintenance	$538,635	$681,365	$469,639	**$1,556,194**	**$2,021,805**	**$2,068,295**
140	Minor events	$0	$0	$0	**$100,000**	**$100,000**	**$100,000**
OPERATE							
121	Environmental maintenance	$871,890	$860,510	$666,887	**$1,365,416**	**$1,395,455**	**$1,427,542**
122	Network service maintenance	$3,029,406	$2,864,594	$2,278,128	**$5,754,780**	**$5,838,592**	**$5,941,805**
123	Network operations	$117,242	$136,758	$111,627	**$162,659**	**$166,281**	**$169,534**
131	Rail level crossing warning devices	$6,221	$0	$5,543	**$7,837**	**$8,010**	**$8,194**
151	Network and asset management	$2,136,891	$2,406,442	$1,745,931	**$2,178,879**	**$2,200,467**	**$2,264,065**
RENEW							
211	Unsealed road metalling	$0	$0	$0	**$0**	**$0**	**$0**
212	Sealed road resurfacing	$2,926,739	$3,461,573	$3,448,775	**$3,414,371**	**$3,489,487**	**$3,569,724**
213	Drainage renewals	$280,024	$319,976	$230,970	**$326,537**	**$333,721**	**$341,395**
214	Sealed road pavement rehabilitation	$1,554,341	$1,828,872	$1,801,885	**$7,467,544**	**$7,631,830**	**$7,807,317**
215	Structures component replacements	$190,000	$84,315	$146,281	**$0**	**$0**	**$0**
216	Bridge and structures renewals	$0	$0	$1,300,000	**$0**	**$0**	**$0**
221	Environmental renewals	$0	$0	$0	**$0**	**$0**	**$0**
222	Traffic services renewals	$757,000	$161,491	$576,041	**$924,311**	**$946,547**	**$969,629**
224	Cycle path renewal	$0	$0	$0	**$0**	**$0**	**$0**
225	Footpath renewal	$234,659	$338,474	$311,810	**$446,268**	**$456,086**	**$466,573**
SAFETY							
432	Safety promotion, education, and advertising	$154,900	$144,396	$165,404	**$215,000**	**$215,000**	**$215,000**
TOTAL BY YEAR:		**$14,232,414**	**$15,045,241**	**$20,189,546**	**$30,932,032**	**$31,978,269**	**$32,686,286**
TOTAL BY AMP CYCLE:		**$49,467,201**			**$95,596,587**		

1.7 Capital Programme

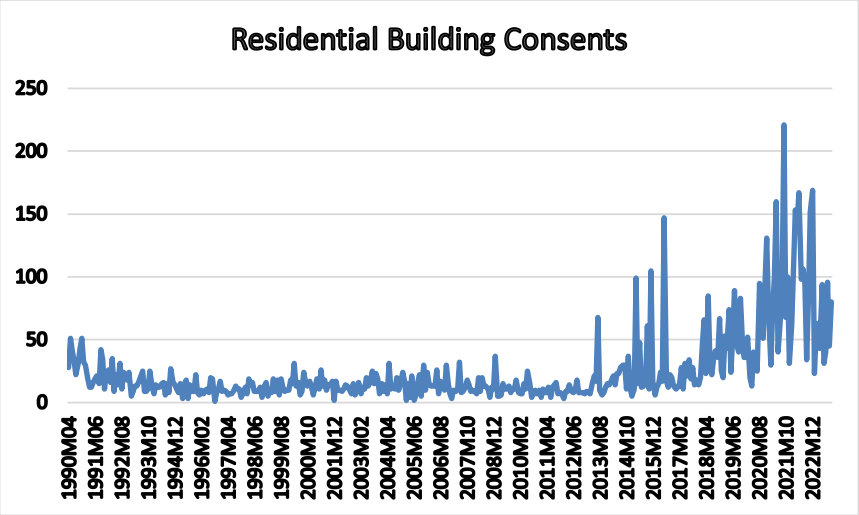
This information will be provided after the Council Infrastructure and Regulatory Committee meeting where Council will determine the priorities to be put forward for RLTP consideration.

This has resulted in dwellings being built all over the city, including on narrow streets with no provision for offstreet parking.

1.8 Key Changes

There is a significant increase in housing within Lower Hutt, as shown by the increasing number of residential building consents.

This has resulted in dwellings being built throughout the city, including on narrow streets with no provision for off-street parking.



1.9 Key Risks and Assumptions

HCC have identified the following key risks to the Transport Network:

- Network Resilience
- Geography and Geology
- Environment
- Transport Demand and Level of Service
- Existing Asset Management Capacity
- Community Aspirations

In addition to strategic risk management, a Transport Risk Register is maintained for key risks associated with the transport network, and is augmented by specific project risk registers.

In addition, Council have made key assumptions as part of this AMP, within the following items:

- Population Growth
- Cross Valley Connection Outcomes
- Traffic Forecasts and Modelling
- Electric Vehicle Usage
- Long term impact of working from home post-pandemic
- Economic impacts

1.10 Affordability

The AMP reflects the Draft long-term plan (DLTP) numbers as at 30th October 2023 which provide an initial level of confidence that the impacts of this level of spend on ratepayers is understood and is supported by Council to progress to the next stages of the long term plan process which will stretch into mid-2024.

The DLTP numbers will be taken through further internal refinement and then through consultation in early 2024, with a final decision in mid-2024. Further changes are possible from the current numbers (which impacts work programmes that are possible or service levels) up to the final decision.

In parallel discussions will be held with Waka Kotahi as to how their affordability constraints and allocations will impact these AMP values. If Waka Kotahi cannot or chose other Councils to fund this may limit the overall AMP programme to what Waka Kotahi allocates to HCC.

2.0 Strategic Business Case

The transport network is a significant asset which is essential to the continued economic success of Hutt City, and must be effectively managed to ensure a safe, efficient, and sustainable future.

The Strategic Case will justify the proposed investment, based on evidence and targeted levels of service. This phase considers the relative size, impact and risks of key problems and associated consequences.

- **population changes** (e.g. densification and aging)
- **economic supply and demand** (e.g. housing and cost-of-living)
- **technology changes** (e.g. instant information and electric vehicles)
- **environmental changes** (e.g. floods, drought, and sea level change)

Within this high-level context, HCC has prepared this Transport AMP to proactively manage the Council's transportation assets, and activities, to facilitate the safe movement of people and goods throughout the city.

2.1 Background

This is the third AMP cycle where Waka Kotahi, NZTA, has requested implementation of the Business Case Approach (BCA). It is recognised that an AMP can fulfil the role of the business case up to and including the Programme Business Case (PBC) for continuous programmes such as road maintenance.

HCC has adopted the BCA approach for this AMP to demonstrate that Council's funding request is in alignment with government policy, regional priority, and in response to clearly identified problems and/or strategic benefits.

2.2 Context

Lower Hutt City (Lower Hutt, or City) is located at the southern end of New Zealand's North Island, about 10-20 kilometres north-east of the Wellington CBD.

The City prides itself on being relaxed and welcoming. Lower Hutt was the site of the country's first organised European settlement and is now at the cutting edge of creative innovation.

The Hutt Valley is sheltered by the surrounding hills, so the weather is generally warmer and less windy than conditions in Wellington City. People like living in Lower Hutt because of:

- A good range of schools and community hubs
- A go-to suburb for more affordable housing

- Five nearby regional parks
- Picturesque walking and cycling trails
- Attractive riverside and beach locations
- Expansive coastal views
- A large retail shopping centre
- A Saturday market for fresh produce
- Public transport and ease of getting around
- It is just 15 minutes from downtown Wellington and 30 minutes from the international airport.

Te Awa Kairangi, the Hutt River, is an important asset for the City in terms of its identity and potential to provide increased levels of amenities that can attract and stimulate use of and investment in the city centre.

Lower Hutt is multicultural, neighbourly and offers a big green backyard for all to enjoy.

Source: https://profile.idnz.co.nz/hutt/home

2.2.1 Our Customers and Stakeholders

HCC takes the Local Government Act 2002 very seriously with respect to the broad responsibility to consult with all "stakeholders" within the Council area, including:

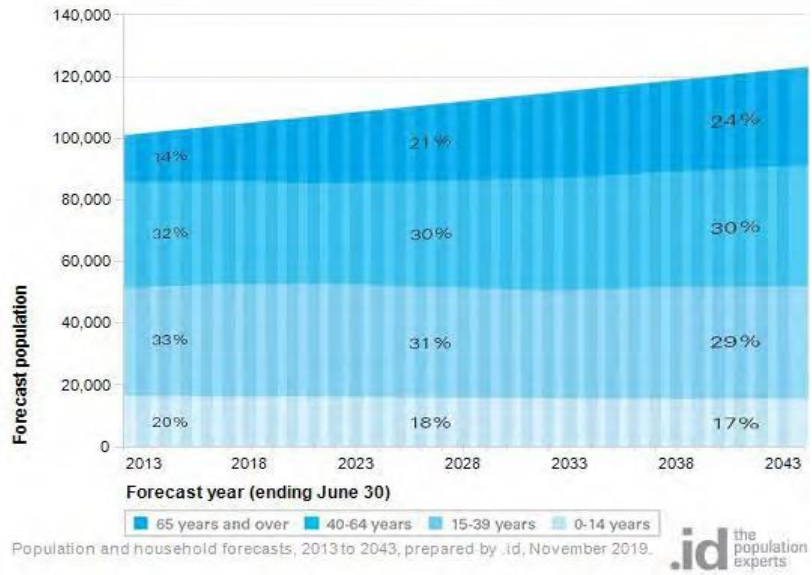
- Hutt City Residents
- Hutt City Businesses
- Mana Whenua
- Kiwi Rail
- Waka Kotahi, NZTA
- Te Ringa Maimoa
- Neighbouring Councils
- Wellington Water
- Wellington Electricity
- Other Utility Providers
- Wellington Lifelines Group
- Suppliers / Contractors

2.2.2 Demographics

The Hutt City Estimated Resident Population for 2022 is 112,500, up by 3.5% from the 108,700 residents in 2019.

By 2043 the population is expected to grow to 122,212.

Over that same time the age distribution will change, with a notable increase in the percentage of seniors, as shown in the figure below.



2.2.3 Economics

The Gross Domestic Product (GDP) is presently growing faster within Lower Hutt City than for the country overall

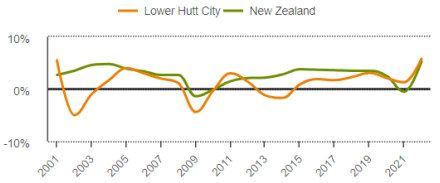
Gross domestic product, 2022

$7,363	2.1%
million in 2022 prices	of national total

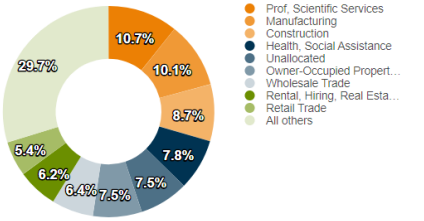
Economic growth, 2012-2022 Annual average % change

	2022	Last 10 years
LOWER HUTT CITY	5.8%	1.6%
NEW ZEALAND	5.3%	3.0%

Economic growth, 2001-2022



Industry proportion of GDP, 2022



Biggest contributors to economic growth, 2012-2022

Professional, Scientific and Technical Services	$234m
Construction	$211m
Retail Trade	$138m
Health Care and Social Assistance	$129m
Public Administration and Safety	$105m
All other industries	$263m
Total increase in GDP	$1,079m

Manufacturing and Professional Scientific Services account for nearly 21% of GDP within the region, with 18.4% of the workforce. The high GDP for these two industries may reflect the benefit of Callaghan Innovation and other business enterprises in the Seaview/Gracefield area.

In 2022, self-employed workers account for nearly 15% of the city workforce, while the unemployment rate was only 2.9%. The five industries that employed the most people, are Construction; Health Care and Social Assistance; Retail Trade; Professional, Scientific and Technical Services; and Manufacturing, which collectively account for just over 53% of the workforce.

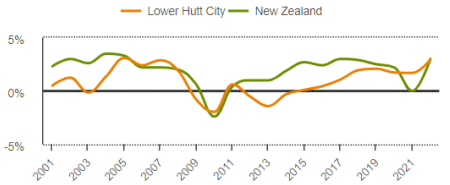
Total employment, 2022

53,956	2.0%
Filled Jobs	of national total

Employment growth, 2012-2022 Annual average % change

	2022	Last 10 years
LOWER HUTT CITY	2.9%	1.0%
NEW ZEALAND	3.0%	2.1%

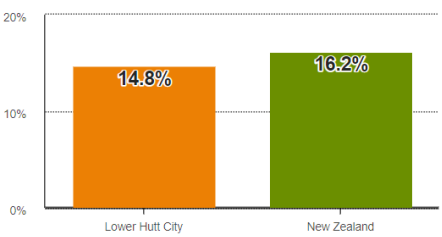
Employment growth, 2001-2022



Industries which created most jobs, 2012-2022

Construction	1,626
Accommodation and Food Services	1,083
Health Care and Social Assistance	998
Public Administration and Safety	736
Education and Training	591
All other industries	156
Total increase in employment	5,188

Self-employment rate, 2022



Although the mean annual earnings are slightly less in Lower Hutt than across NZ, housing is more affordable here than in the rest of NZ.

Mean annual earnings 2022

$65,969	$69,585
Lower Hutt City	New Zealand

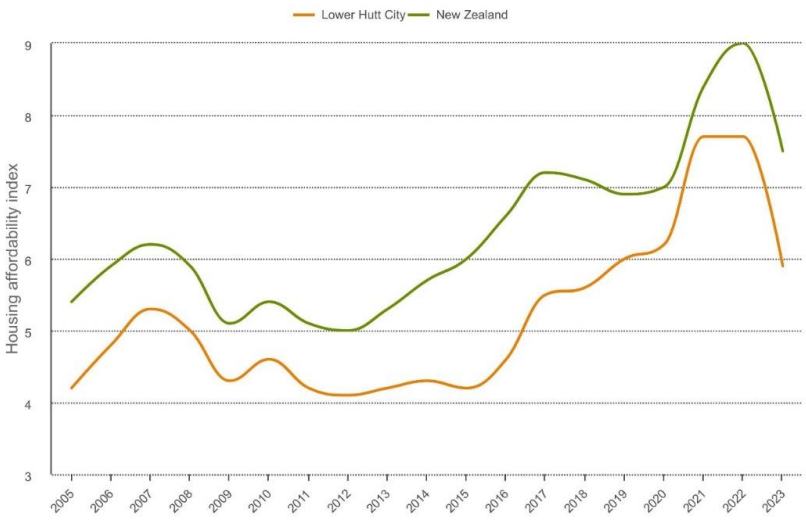
Annual earnings growth, 2012-2022 Annual average % change

	2022	Last 10 years
LOWER HUTT CITY	5.5%	2.7%
NEW ZEALAND	5.6%	3.2%

Rental Afforability Index

Source: Infometrics

Housing Affordability Index



Source: Infometrics

2.2.4 Our economy demands quality transport

Transport to support a highly productive economy

Lower Hutt's top five industries are highly dependent on quality transport infrastructure. The professional, scientific and technical services, manufacturing, construction, health care and social assistance and wholesale trade sectors make up 43% of Lower Hutt's GDP – a much higher proportion than the national average of these sectors.

Productivity is higher in Lower Hutt – again these top five industries generate 14% more GDP than the NZ average with a strong high-value services sector.

GDP in Lower Hutt City measured $7,363m in the year to March 2022, up 5.8% from a year earlier. New Zealand's GDP increased by 5.3% over the same period.

GDP per filled job in Lower Hutt City measured $136,465 in the year to March 2022, which was higher than in New Zealand ($132,815).

	Productivity			Share of industry		
	GDP per filled job, 2022 prices, year to March			Share of GDP, year to March 2022		
	Lower Hutt	NZ	% more compared to NZ-wide	Lower Hutt	NZ	% more compared to NZ-wide
Professional, scientific and technical services	**$154,665**	**$129,560**	**19%**	**10.72%**	**9.51%**	**13**
Manufacturing	**$155,382**	**$130,207**	**19%**	**10.12%**	**8.97%**	**13**
Construction	**$91,076**	**$87,717**	**4%**	**8.7%**	**6.87%**	**27**
Health care and social assistance	**$89,125**	**$79,814**	**12%**	**7.85%**	**6.22%**	**26**
Wholesale trade	**$167,129**	**$148,287**	**13%**	**6.38%**	**5.26%**	**23**
Rental, hiring and real estate services	$390,215	$346,393	13%	6.17%	6.17%	0
Retail trade	$75,708	$79,335	-5%	5.37%	5.31%	1
Public administration and safety	$140,502	$115,050	22%	5.02%	4.67%	0
Education and training	$61,636	$61,768	0%	3.89%	3.53%	1
Transport, postal and warehousing	$164,499	$124,983	32%	3.74%	3.64%	3
Electricity, gas, water and waste services	$372,381	$481,005	-23%	3.19%	2.68%	19
Financial and insurance services	$268,809	$273,557	-2%	2.73%	5.52%	-51
Administrative and support services	$55,198	$53,432	3%	2.68%	1.95%	37
Other services	$78,845	$57,233	38%	2.58%	1.71%	51
Information media and telecommunication:	$303,540	$340,472	-11%	2.33%	3.97%	-41
Accommodation and food services	$38,862	$40,797	-5%	1.73%	1.93%	-10
Arts and recreation services	$121,516	$89,483	36%	1.61%	1.22%	32
Agriculture, forestry and fishing	$73,988	$121,406	-39%	0.17%	4.98%	-97
Mining	$24,000	$491,568	-95%	0.01%	0.82%	-99
Owner occupied property operation				7.5%	7.6%	
Unallocated				7.5%	7.5%	

Source: Infometrics Lower Hutt Regional Economic Profile

New Zealand's Science City

Lower Hutt is a manufacturing export, science, technology, and innovation hub for New Zealand. Seaview Gracefield is home to New Zealand's innovation agency and Callaghan Innovation and is celebrated as a centre of excellence for STEMM and extraordinary depth and range of research and development institutions and infrastructure.

In May 2023 funding was announced from MBIE for an additional $230m investment into Science City which will take shape in Gracefield as new development of a research, innovation and technology park that will include investment in energy futures advance manufacturing and materials, a biotech hub, a commercial zone and site infrastructure and support services.

Sitting alongside this productive R&D community are well performing incubators, highly reputable patent attorneys, strong and motivated venture capital companies, and a thriving angel investment community – who, coupled with a network of support agencies, offer commercialisation opportunities as well as a host of other supports enabling success.

Exporters need access to market

87% of Lower Hutt's manufacturing GDP is from exports sales. This activity is centred in Seaview Gracefield, Petone and Wingate. Local businesses demand and position themselves in Lower Hutt for our highly skilled workforce and access to core transport routes such as SH2, SH1, rail freight and CentrePort in Wellington.

This is amplified more so by Lower Hutt's central location within New Zealand is valued by an increasing number of businesses who are setting up distribution warehousing and centres in Petone, Seaview and Gracefield.

A city of transport innovators

Our manufacturing, science and technology sector contributes a massive $1b to the Lower Hutt economy every year, and employs thousands of people, who live, work, and play in our community. However, it's the innovation in transport technology that makes is world leaders

Local business has created the Southern Hemisphere's first electric ferry and local companies through Paihau Robinson Research are collaborating with Air New Zealand and Airbus to create the first commercial electric aircraft in New Zealand. Other transport related innovators are:

- Fraser Engineering, producing world class fire trucks, including the one of the world's first electric fire support vehicles being shipped to Australia in 2023.
- Metco Engineering producing parts for Rocket Lab.
- Pertronic making world leading fire detection systems used across the globe.
- Resene Paints who produce world class paint.
- Vanguard innovators and makers of road safety and protection systems.

Industrial land demand is set to change

Lower Hutt has little vacant business land available, but infill and redevelopment capacity in existing business land should be sufficient to meet demand even under the higher growth assumptions.

The 2019 Housing and Business Development Capacity Assessment shows that Lower Hutt is projected to experience an overall decline in demand for business land over the 30 years to 2047 and this is due to a projected decline in demand for industrial land.

A moderate increase is expected in demand for land for government, retail, health, education, and training.

Under a high growth assumption overall demand for business land is projected to increase slightly over the 30 years to 2047.

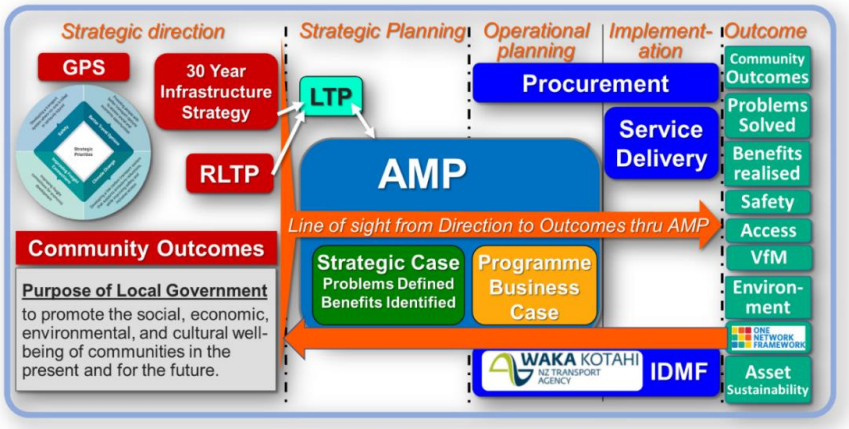
However, since Covid19 we have seen an increasing demand for space in Lower Hutt that goes against these projections.

Vacancy rates are very low for land, industrial space, and employment centres in Lower Hutt as a non-metro area become more appealing for an evolving needs and preferences of our local and regional workforce.

2.3 Strategic Alignment

HCC intends to demonstrate that this AMP aligns with International, Central Government, Regional Government, and Local Government policies, strategies, and plans.

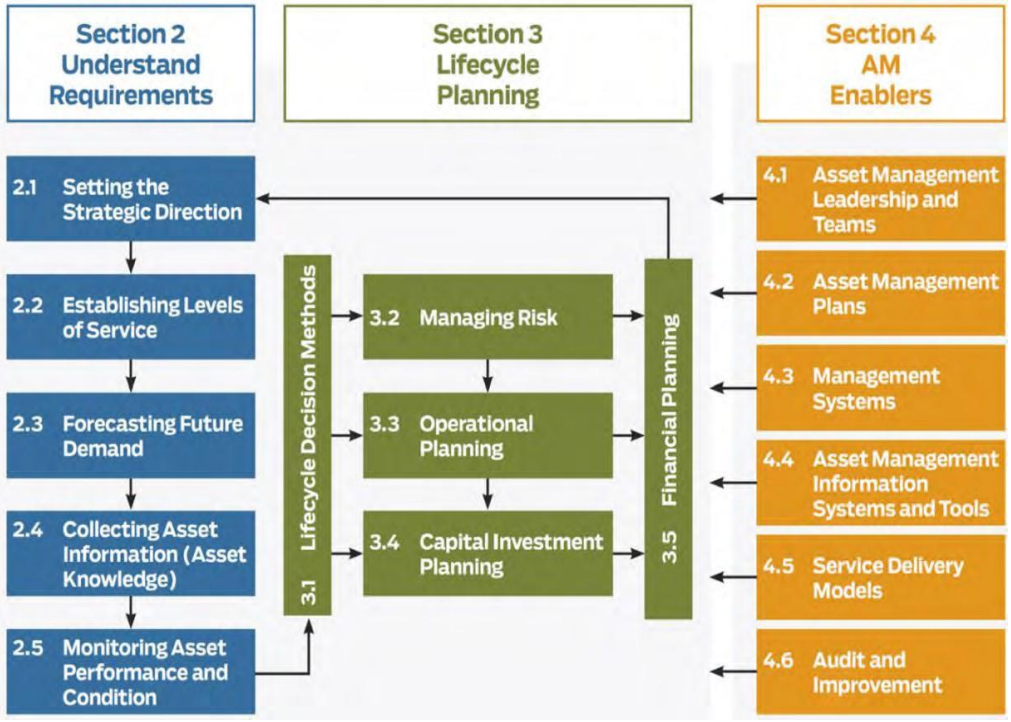
This AMP also recognises the context of other short-term and long-term government funding and approval processes, as summarised in the figure below.



As part of its Long-Term Planning process, HCC is revising its infrastructure strategy which will be completed in mid-2024. Therefore, this AMP is based on the 2021-31 version. This AMP will require updating, if appropriate, after this.

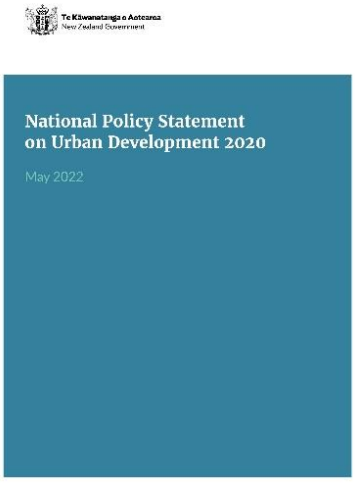
2.3.1 International Infrastructure Management Manual (IIMM) Guidance

Asset management systems illustrate the necessary procedures and interactions within an organisation that are required in order to achieve its objectives. The key benefits of adopting this approach include, but not limited to, improve effectiveness and efficiency, increase customer satisfaction and better manage risks. The figure below shows the core of the asset management process directly taken from the IIMM.



2.3.2 National Policy Statement on Urban Development 2020 (NPS-UD)

This document provides major policies which impact the nature of urban development, and which has a ripple effect on all related infrastructure, including transportation. The NPS-UD includes the following major policies:



Intensification

Council plans need to enable greater height and density, particularly in areas of high demand and access.

Car parking
Councils can no longer require developers to provide car parking through their district and city plans. Developers can still provide car parking if they want to. Mobility parking isn't affected by this direction.

This document provides major policies which impact the nature of urban development, and which has a ripple effect on all related infrastructure, including transportation. The NPS-UD includes the following major policies:

Responsiveness
Councils must consider private plan changes where they would add significantly to development capacity and contribute to well-functioning urban environments.

Wider outcomes
Councils are directed to give greater consideration to ensuring that cities work for all people and communities. Particular focus is given to access, climate change, and housing affordability.

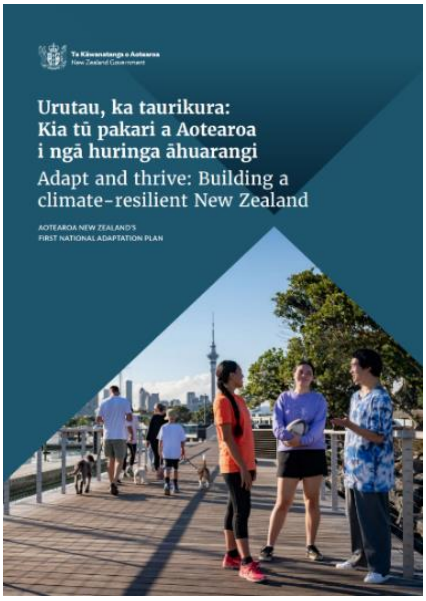
Strategic planning
Councils must work together to produce Future Development Strategies, which set out the long-term strategic vision for accommodating urban growth.

Evidence and engagement
Councils must use a strong evidence base for their decision making and engage with Māori, developers, and infrastructure providers.

2.3.3 Aotearoa New Zealand's First National Adaptation Plan (2022)

Adapting to the effects of climate change is a continuous process. We need to assess climate risks, plan and implement adaptation actions, then determine whether those actions were effective in reducing risks. For that reason, this plan is the first in a series of national adaptation plans that will be prepared every six years. Each plan will respond to a new national climate change risk assessment.

No two communities will experience climate change in the same way.



Inequity arises through multiple domains including income, housing, employment and accessibility. Climate change can also increase existing inequities. Some groups may be disproportionately affected by financial impacts or lack the resources to adapt. An equitable transition is core to our adaptation strategy and national adaptation plans must support New Zealanders in ways that recognise their unique needs, values and circumstances. The following goals underpin Aotearoa New Zealand's adaptation strategy:

- reduce vulnerability to the impacts of climate change
- enhance adaptive capacity and consider climate change in decisions at all levels
- strengthen resilience.

The National Climate Change Risk Assessment 2020 identified 43 priority risks that Aotearoa faces from climate change and outlines the 10 most significant risks across five domains (natural, human, economy, built and governance). The national adaptation plan must address the most significant risks. This first plan will help address all 43 risks, and the risk to the telecommunications network.

Four priorities underpin the plan:

- enabling better risk-informed decisions
- driving climate-resilient development in the right places
- laying the foundations for a range of adaptation options including managed retreat
- embedding climate resilience across government policy.

To address specific realms of risk, the plan includes actions that relate to:

- system-wide issues or
- five 'outcome areas' which broadly align with the domains identified in the risk assessment:
  - natural environment
  - homes, buildings and places
  - infrastructure
  - communities
  - economy and financial system.

The effort to drive climate-resilient development in the right locations includes seven critical actions, specifically including: '**Integrate adaptation into Waka Kotahi, NZTA, decision-making**'.

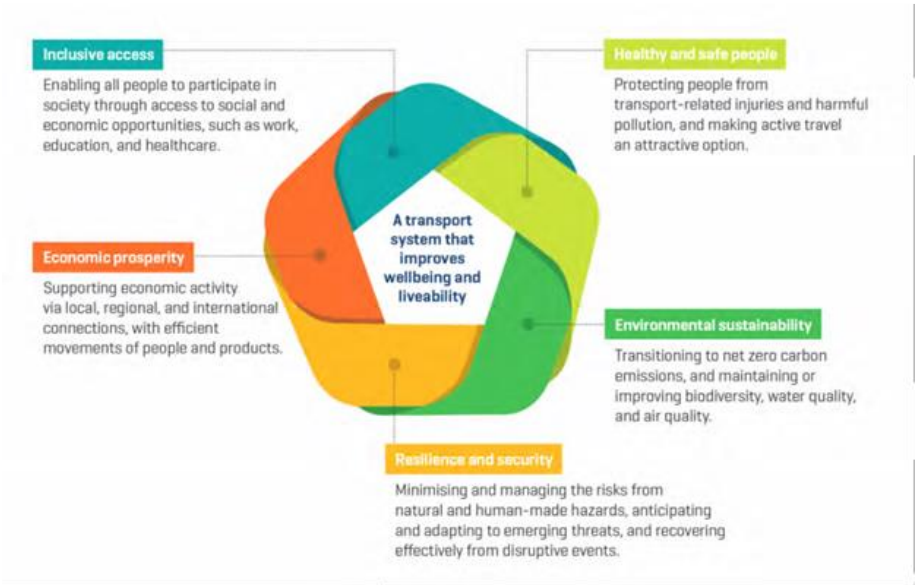
2.3.4 Government Policy Statement on Land Transport (GPS)

In November 2023, the Labour led Government was replaced by a coalition led by National. It is expected that the GPS will likely change to better align with the new government's priorities. The full extent of any potential changes are presently unknown.

The current draft of the 2024/25 – 2033/34 GPS outlines six strategic priorities:

- **Maintaining and operating the system** – The condition of the existing transport system is efficiently maintained at a level that meets the current and future needs.
- **Increasing resilience** – The transport system is better able to cope with natural and anthropogenic hazards.
- **Reducing emissions** – Transitioning to a lower carbon transport system.
- **Safety** – Transport is made sustainably safer for all.
- **Integrated Freight System –** Well-designed and operated Transport corridors and hubs that provide efficient, reliable, resilient, multi-modal, and low-carbon connections to support productive economic activity.
- **Sustainable urban and regional development** – People can readily and reliably access social, cultural, and economic opportunities through a variety of transport options. Sustainable urban and regional development is focused on increasing housing supply, choice and affordability, and developing resilient and productive towns and cities through effective transport networks that provide a range of low-emission transport options and low congestion.

The Transport Outcomes Framework is also shown below.



The government's investment approach will support a move towards a low-carbon, sustainable transport system. It also aims to improve resilience to climate change by protecting against physical risks and making better decisions in the face of uncertainty.

Investment will support changes and improvements that make walking, cycling and public transport easier and more attractive. The Emissions Reduction Plan (2022) has set four key transport targets that need to be met by 2035. They are:

- Reduce total vehicle kilometres travelled (VKT) by the light fleet by 20 percent (relative to projected growth) through improved urban form and providing better travel options.
- Increase zero-emissions vehicles to 30 percent of the light vehicle fleet.
- Reduce emissions from freight transport by 35 percent.
- Reduce the emissions intensity of transport fuel by 10 percent.

2.3.5 Ministry of Transport – Strategic Intentions 2021-25

As the Government's system lead on transport, the Minstry of Transport's (MoT) purpose is to enable New Zealanders to flourish. As such, they aim to be bold, invested and collaborative.

The Ministry of Transport's vision for New Zealand's transport system includes:

- inclusive access
- healthy and safe people
- economic prosperity
- environmental sustainability, and
- resilience and security.

To achieve this, the MoT functions include:

- leading system direction and strategy
- shaping regulatory stewardship mechanisms
- monitoring and evaluating system and government agency performance
- influencing to achieve broader government outcomes
- driving revenue raising and investment choices
- influencing development of international standards

For the next four years, the Ministry's priorities are as follows:

Transport is responsible for 39% of New Zealand's domestic carbon emissions, and the Ministry will continue to implement and monitor existing policies to encourage uptake of low and zero emissions vehicles.

More than 80% of transport deaths and serious injuries occur on our roads, and the target for 2030 is a 40% reduction.

The priority for liveable cities includes investment in cities, resource planning, and public transportation – with a goal of improving affordability.

The Ministry will, as a medium to long-term undertaking, develop a National Freight and Supply Chain Strategy. This will include a review of the future of rail.

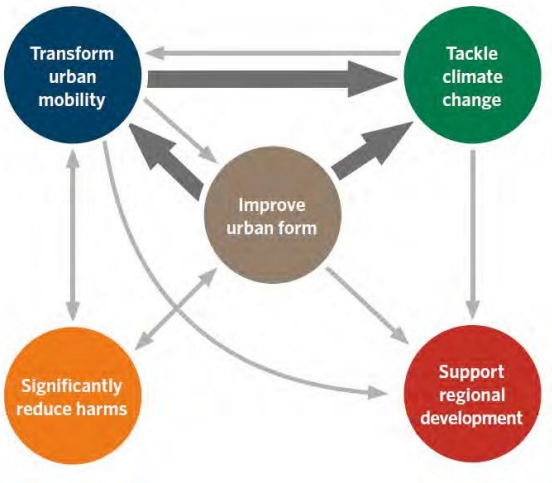
The fifth priority may not impact roads, other than potential decrease in trips in proportion to the increased use of drones.

2.3.6 Waka Kotahi, NZ Transport Agency – Arataki (2021-2031)

Arataki represents a 10-year view of what is needed to deliver on the government's current priorities and long-term objectives for the land transport system. The purpose of Arakaki acknowledges that a shift in thinking is required to meet future challenges, specifically:

From	To
No shared evidence base for decisions	Shared evidence and insights as a basis for engagement with partners
Uncertainty about where Waka Kotahi, NZTA proposes to invest nationally	A clear view of where we will target investment for the best national outcomes
Bottom-up planning and investment driven by what's ready now	Targeted and staged investment and other levers to deliver shared outcomes
Short-term focus driven by current priorities	Long-term approach to deliver government objectives and ensure the land transport system meets future needs
A land transport network perspective	A place-based approach that ensures integrated land-use and transport planning

Version 2 has been issued, showing 'Our plan for the Land Transport System 2021-31', as represented in the following figure:

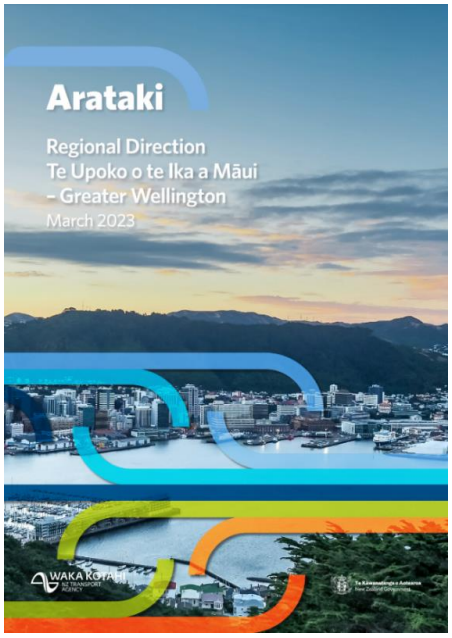


It is envisioned that Arataki will be implemented, in part, through integrated land- use and transport plans, combined with the investment plans of local and regional Councils. This will require a series of five step changes, as noted below:

1. Improve urban form
2. Transform urban mobility
3. Significantly reduce harms
4. Tackle climate change
5. Support regional development

The step changes are inter-related, giving an opportunity to prioritise responses that deliver across a range of outcomes with shared results in our cities and regions.

Focusing on the levers that deliver across a range of step changes will have the most effective results.



The Regional Direction Te Upoko o te Ika a Māui – Greater Wellington was published in March 2023. This document outlines how Te Upoko o te Ika a Māui is particularly vulnerable to seismic risk and other natural hazards. Sea level rise and more severe storms will increasingly impact on the region's coastal communities, roads, and rail infrastructure.

Future growth must build on high levels of public transport use, walking, and cycling to:

- create stronger communities
- connect people to employment, education, and essential services
- support lower-income communities in Porirua and Te Awa Kairangi Hutt Valley.

Despite many people using public transport, the region still must reduce private vehicle use and encourage lower emission transport options. Programmes like Let's Get Wellington Moving (LGWM) will help with this shift.

Te Upoko o te Ika a Māui is the third largest regional economy in Aotearoa New Zealand. The region also has the highest median household income. In the wider region though, there are still some areas of high deprivation.

The population of Te Upoko o te Ika a Māui will grow from 525,900 to about 612,000 by 2048, or 10% of the country's population.

Te Upoko o te Ika a Māui relies heavily on two north-south corridors, for the movement of people and freight by road and rail. This shapes the region's transport system. Current work is committed to addressing safety, resilience, and capacity issues.

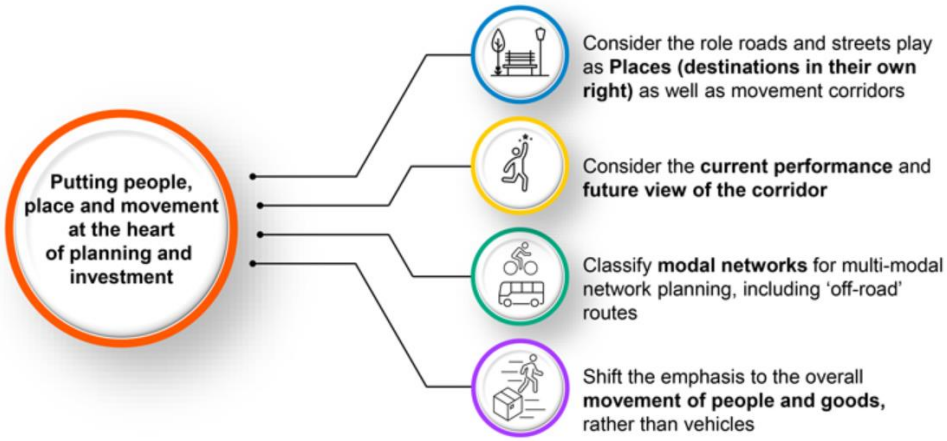
Over 30% of all journeys to work are by public transport, walking, or cycling. Ongoing investment in safe and attractive facilities can help the region build on already high rates of walking and cycling. Active modes are the primary way to reduce vehicle kilometres travelled (VKT). Increasing the share of freight moved by rail and coastal shipping will also have an important role to play in reducing emissions.

Other critical transport challenges facing the region over the next three decades include safety, resilience, and supporting the transition to a low-carbon economy.

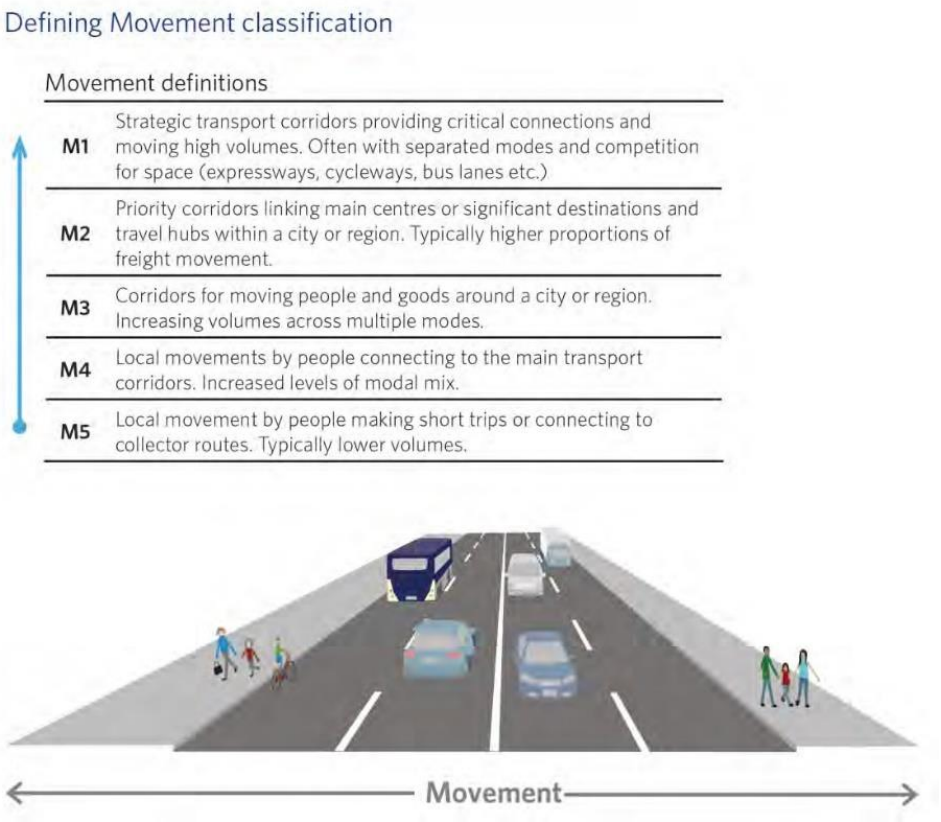
2.3.7 Waka Kotahi, NZ Transport Agency – One Network Framework (ONF)

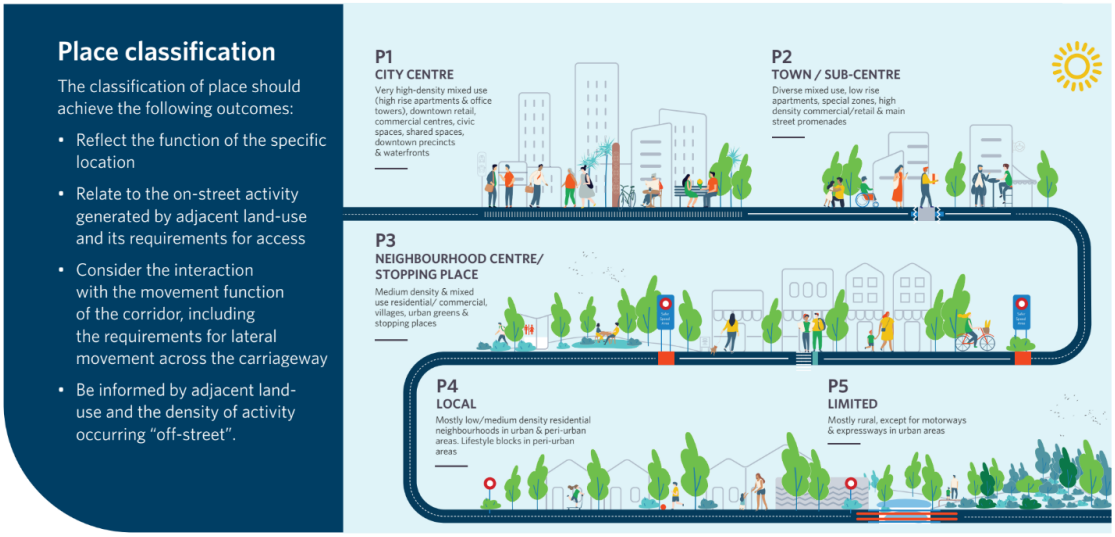
The ONF will introduce the importance of adjacent land use and place functions in defining how the network should look and feel at any location. The ONF provides an opportunity for more integrated delivery of regional outcomes. This is achieved through the incorporation of end-to-end business processes to support transport planning through to the delivery of agreed outcomes.

The ONF aims to shift focus to people, place and movement.



The more granular, multi-modal 'Movement and Place' classification and performance measures system aims to help achieve greater safety, wellbeing, and environmental outcomes. Movement and Place are broadly described by the classifications which are indicated in the following diagrams:





ONF Detailed Design - Five Point Scale for Classifying Place Function

Place function ranking	Level of on-street activity	Typical adjacent land-use	Level of on-street activity – pedestrian volume
P1	• Very high on-street activity – very high numbers of pedestrians • Very high numbers of people spending time in the location • Major movement across the carriageway	High rise office blocks and apartments, central city shopping and entertainment, major commercial centres, streets with this level of place are most likely to be located within the CBD of major cities	>1000 hour of peak >5,000 per day
P2	• High/very high on-street activity – high numbers of pedestrians • High numbers of people spending time in the location • Significant movement across the carriageway	Office blocks, low rise apartments, entertainment venues, retail, commercial business, community facilities	>2,500 per day
P3	• Medium to high on-street activity • Some people spending time in the location • Some movement across the carriageway	Office blocks and low-rise apartments, retail, entertainment venues, commercial/trade business, community facilities, industrial	>1,000 per day
P4	• Low to medium on-street activity related to people going about their lives • Limited movement across the carriageway	Residential, schools, community facilities, low intensity commercial/industrial	< 1,000 per day
P5	Little discemible on-street activity	Mostly rural except for State Highways (motorways/expressways) in urban areas	Negligible pedestrian movement

ONF Detailed Design – Characteristics of Movement Function

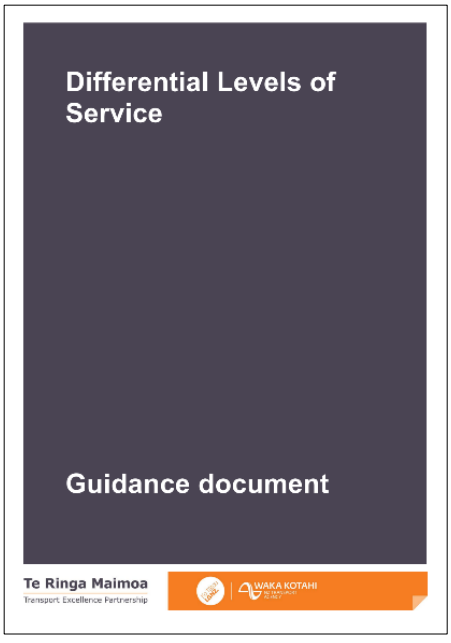
Considerations to determine Movement Significance		Nature of Movement	Scale of People Movement (all modes)
M1	Major	Mass movement of people and/or goods on roads or streets that are of major importance in urban areas, within and between regions or nationality	Typically >20,000 per day
M2	Significant	Movement of people and/or goods on inter-regional routes or primary roads and streets linking main centres or significant destinations and travel hubs within a city, town or region	10,000-25,000 per day
M3	Moderate	Movement of people and/or goods around a city, town or region	3,000-12,000 per day
M4	Minor	Local movement by people making short trips or connecting to connector roads	300-4,000 per day
M5	Low	Local movement by people going about their daily lives	Typically<500 per day

The application of this ONF framework will provide a more detailed perspective of New Zealand transport network, providing a better connection between people and places.

2.3.8 Waka Kotahi, NZTA / Te Ringa Maimoa – Differential Levels of Service

Levels of Service (LoS) are fundamental to delivering good asset management practice. The definition of asset management in the International Infrastructure Management Manual (IIMM) mentions LoS in the first line: 'Asset management is providing the required Level of Service in a cost-effective manner for present and future customers.'

Differential Levels of Service (DLoS) is simply taking a risk-based approach to managing assets within constrained budgets. Asset managers identify where higher or lower levels of service are appropriate across a portfolio of assets. This is often done on a risk basis but can also be driven by legislative or customer requirements.



Council understands that there is a constrained budget from both an affordability and cost-share standpoint. Therefore, Council is working towards ever-improving approaches for optimising the funding available by balancing the level of service being provided against the risk to both transport assets and community users.

2.3.9 National Land Transport Programme (NLTP)

The NLTP is a three-year programme of planned activities and a 10-year forecast of revenue and expenditure prepared by the Waka Kotahi, NZTA, to give effect to the GPS. The current NLTP is effective from 2021-2024.

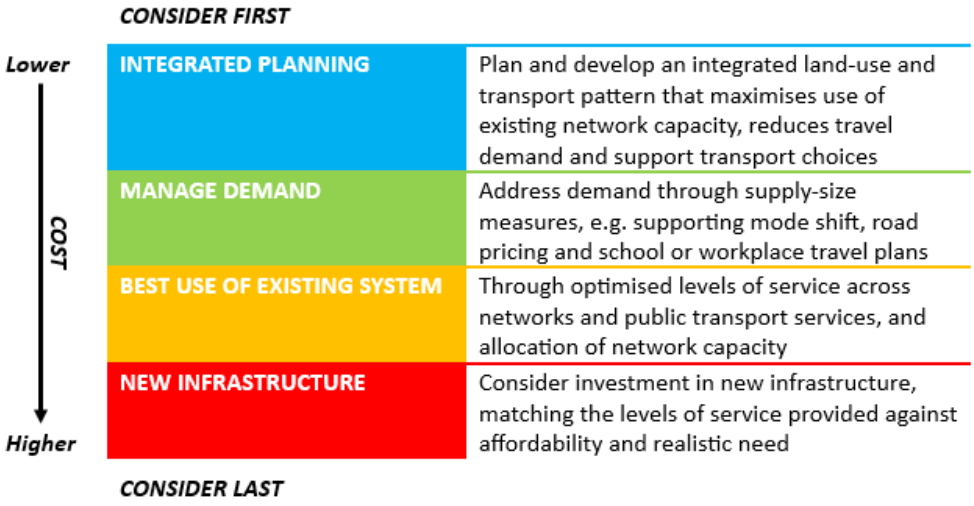
The latest NLTP 2024-34 is being developed which will only conclude in late 2024. This AMP informs the HCC submission to that process, if the NLTP 2024-34 materially differs or impacts this AMP, appropriate changes may be required.

The NLTP is a partnership between the Waka Kotahi, NZTA, (which invests NLTF funding on behalf of the Crown), and local government (which invests local funding on behalf of ratepayers).

Investment highlights in the 2021-2024 NLTP for the greater Wellington Region are as shown:

This AMP will indirectly feed into funding decisions that are made for the next NLTP. The NLTP does provide an intervention hierarchy as shown below.

INTERVENTION HIERARCHY



As noted in the intervention hierarchy above, new infrastructure is the last alternative considered, after lower cost alternatives are considered.

Where integrated planning or demand management are no viable, optimised use of the existing network is favoured.

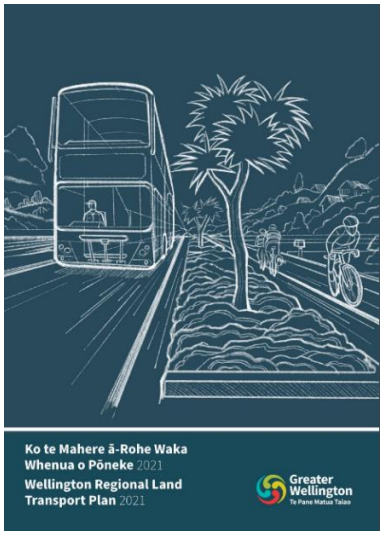
2.3.10 Wellington Regional Land Transport Plan (RLTP)

The Regional Land Transport Plan (RLTP) is a blueprint for a transport network that will keep the Wellington region vibrant, on the move and enable it to grow and meet future needs.

The RLTP 2021 sets out the strategic direction for land transport in the Wellington region over the next 10-30 years, and identifies the priority areas for investment:

- Public transport capacity
- Travel Choice
- Strategic Access
- Safety
- Resilience

It also includes a 10-year forecast of anticipated revenue and expenditure for 2021-31.



The latest RLTP 2024-2034 is being developed which will only conclude in early 2024 to inform the NLTP 2024-34. Once the NLTP 2024-34 is published and it materially differs or impacts this AMP, appropriate changes may be required.

The RLTP forms just one step in the overall funding process. The RLTP informs the development of the NLTP by identifying the priorities and key improvement projects for the Wellington region proposed to be funded or co-funded from the NLTF, should Waka Kotahi, NZTA agree.

The RLTP vision is to deliver a safe, effective, and efficient land transport network that supports the region's economic prosperity in a way that is environmentally and socially sustainable.

HCC is currently undertaking its 2023-2033 Long Term Plan (LTP) process which will only conclude in mid-2024. This AMP informs that process, but if the LTP materially differs or impacts this AMP, appropriate changes may be required.

2.3.11 Hutt City Infrastructure Strategy

Council is currently reviewing the 2024-2034 Infrastructure Strategy. Once approved, this document with be updated to reflect any material implications from the infrastructure strategy. Below is detail from the current version.

Council has an important stewardship role for city infrastructure over the long term. The vision is:

"Infrastructure that meets the needs of today and tomorrow"

The 2018-2048 Infrastructure Strategy outlines significant issues and opportunities, management practices, implementation, plus projections and assumptions.

The underpinning principles for guiding the strategic management of infrastructure are to:

- Protect people, property, and the environment.
- Ensure infrastructure is resilient in the long-term and adaptable to changing circumstances.
- Maintain an overarching community understanding and awareness of infrastructure services and issues facing them.
- Ensure robust information underpins long-term infrastructure decisions.
- Maintain strong collaboration with stakeholders and partners.
- Ensure infrastructure complies with all appropriate regulations and standards.

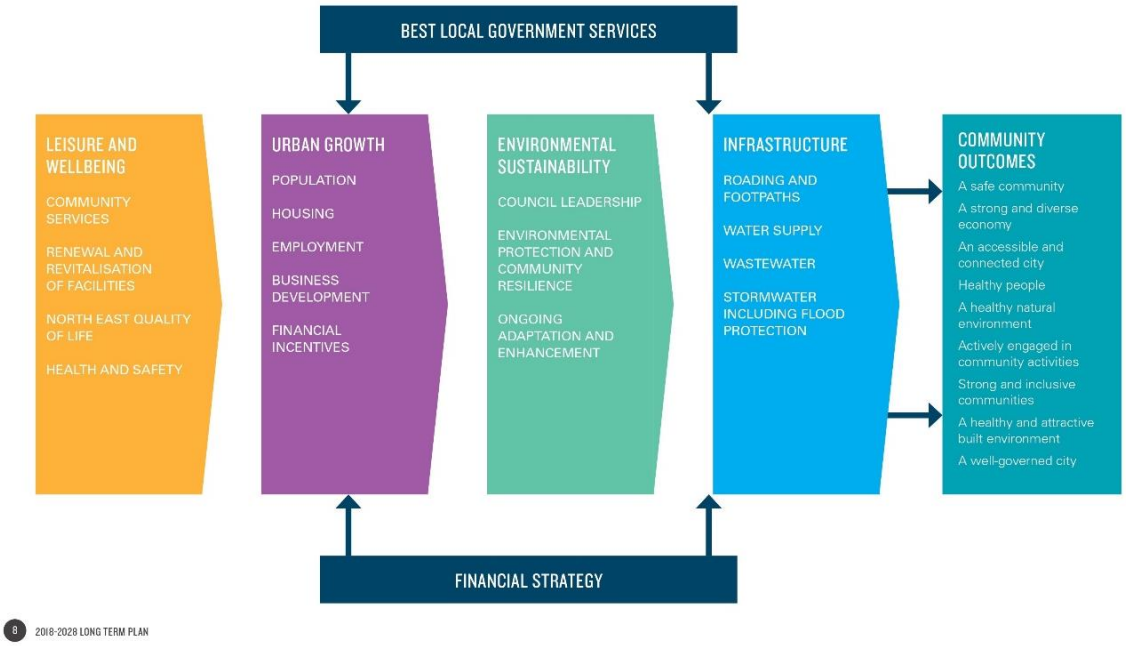
2.3.12 Hutt City Long Term Plan (including the Annual Plan)

HCC is currently undertaking its 2023-2033 Long Term Plan (LTP) process which will only conclude in mid-2024. This AMP informs that process, but if the LTP materially differs or impacts this AMP, appropriate changes may be required.

Council has published a combined document which provides detail on key strategies and significant activities within the following five areas:

- Leisure and Wellbeing
- Urban Growth
- Environmental Sustainability
- Infrastructure (Including roading), and
- Community Outcomes

Significant focus is made on providing the best local government services within the constraints of financial affordability, as can be inferred from the figure below.



Throughout this framework is an attention on the successful delivery of positive community outcomes, as listed.

2.3.13 Hutt City Council's Integrated Transport Strategy 2022

HCC has developed Whiria te muka tangata, whārikihia te Kaupapa, our Integrated Transport Strategy (ITS). The ITS has the following vision:

Te Awa Kairangi ki Tai Lower Hutt has a sustainable transport network that supports our net zero emissions goal, connects communities, and enables all our people to thrive.

The ITS has been prepared based on the following drivers:

- Huringa hangarau - changing technology of how people move about
- Tipu taupori – population growth
- Āhuatanga hapori – ensuring that demographic and sociographic considerations are factored into transport developments to best serve the communities that need them the most
- Āhuarangi Hurihuri - Climate Change
- Whanaketanga ki mua – creating better access and transport options to growth areas to support strong, resilient, vibrant, and connected communities.

The ITS identified that there are six key challenges that need to be addressed in future transport decision making and investment. These are:

- Environmental impact
- Community wellbeing
- Safety
- Limited travel choices
- Longer journeys
- Natural hazards

Our guiding principles

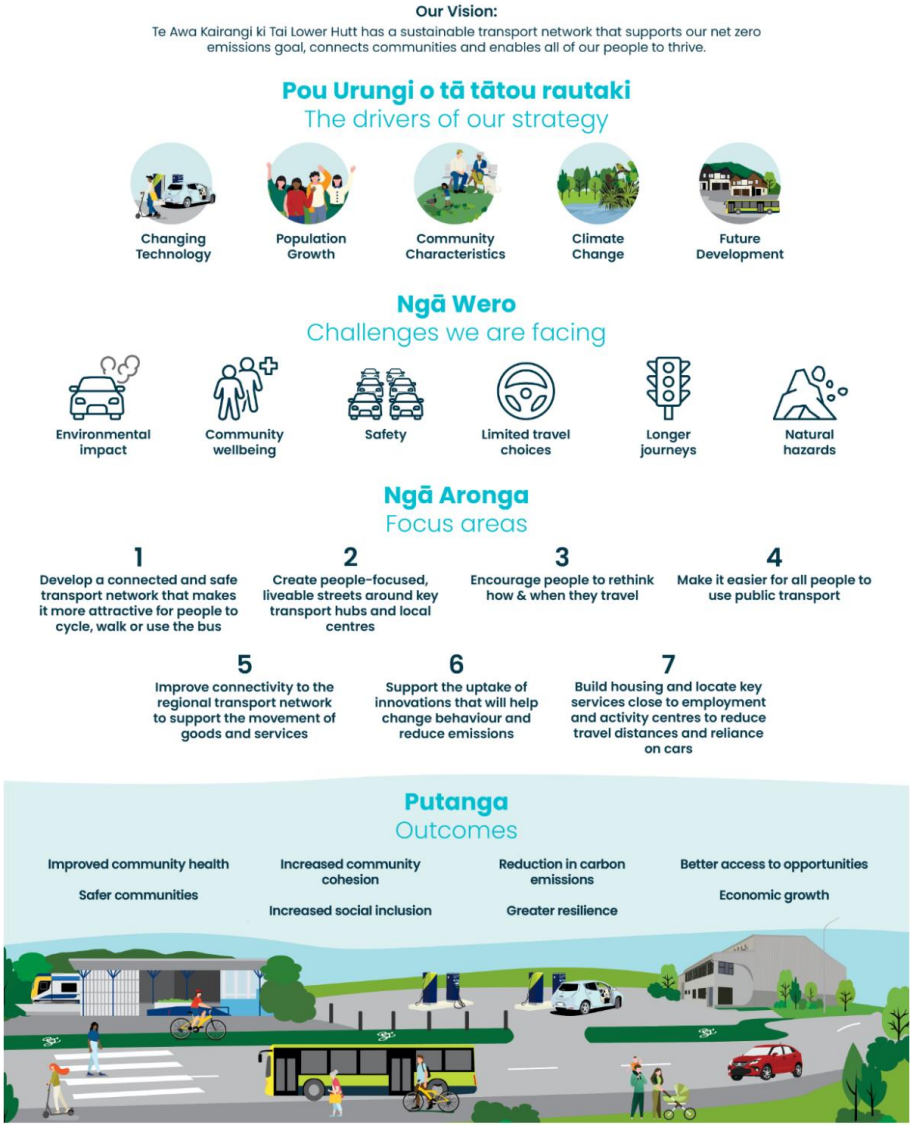
Through the ITS, we identified 6 guiding principles when determining how to address those challenges in our decision making and future planning. These are:

- Changes to our existing transport network should seek to make other modes of transport as appealing as traveling by private car.
- Improvements to our traffic network should not undermine the attractiveness of public transport.
- We should prioritise changes that make active modes, such as walking and cycling, a more attractive option for people making short journeys.
- Changes to our transport system, needed to service new development, should improve public transport and active mode networks before increasing road capacity.
- We should prioritise changes that make public transport a more attractive option for people travelling to the main work and education hubs.
- We should ensure that the access needs and challenges of everyone in the community are considered when planning for changes.

Focus areas and next steps

We have identified 7 key focus areas which have shaped the creation of this AMP. They are:

- Develop a connected and safe transport network that makes it more attractive for people to cycle, walk or use the bus
- Create people-focused, liveable streets around key transport hubs and local centres
- Encourage people to rethink how & when they travel
- Make it easier for all people to use public transport
- Improve connectivity to the regional transport network to support the movement of goods and services
- Support the uptake of innovations that will help change behaviour and reduce emissions
- Build housing and locate key services close to employment and activity centres to reduce travel distances and reliance on cars



2.4 Existing Network Conditions

HCC transport network consists of 507.4 km of formed, sealed road, and unclassified as:

	ONF Category	Lane (km)	Vehicle Journeys (vkt)
URBAN	Transit Corridors	9.2	14
	Urban Connectors	241.6	309.1
	Activity Streets	106.6	120
	Main Streets	3.9	5.8
	Local Streets	533.4	53.2
	Total Urban Network	**894.7**	**502**
RURAL	Rural Connectors	50.7	4.4
	Peri-urban Roads	3.1	0.1
	Rural Roads	17.9	0.8
	Total Rural Network	**71.7**	**5.3**
	Unclassified	0.6	0
	Total Network	**967**	**507.4**

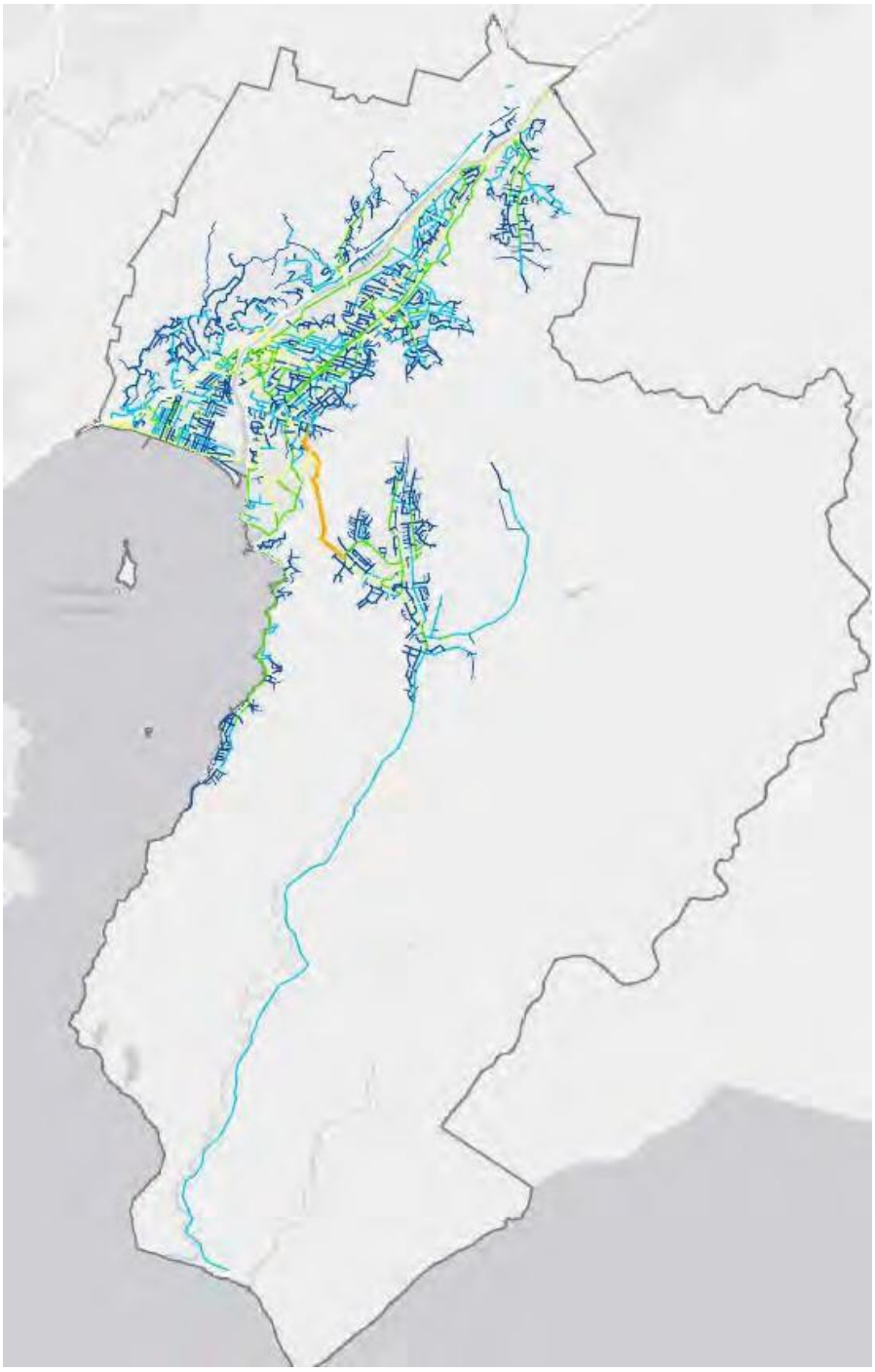
Source: Transport Insights web portal

These roads are augmented by:

- **683 km** of footpath
- **779 km** of kerb and channel
- **44** Road bridge/large culverts
- **5** Pedestrian subways
- **1** Tunnel
- **21** footbridges
- **151** retaining walls
- **48 (7.4km)**seawalls
- **14,158** streetlights
- **24** sites with traffic signals
- **154** Pay & Display meters
- **1,923** Pay & Display carparks
- **18,692 m** Safety guardrails

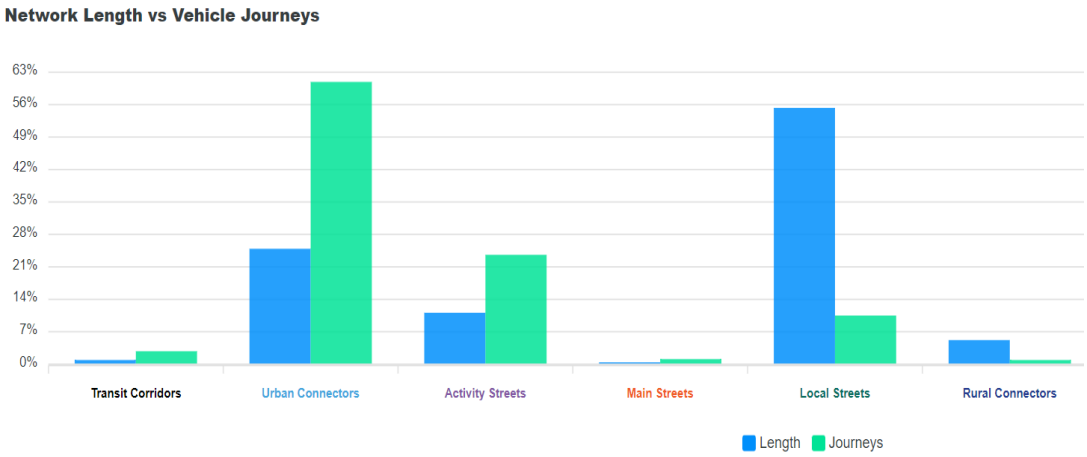
The transport network is further described in the sections below.

Although the most common roads are Local Streets (55.3%), most vehicle kilometres travelled (60.9%) are on Urban Connectors, as indicated in the following table:



Source: Transport Insights web portal

The difference between the length of road (km) and the road usage in vehicle journeys (m vkt), can also be seen in the graphic below:



Source: Transport Insights web portal

2.4.1 Active Travel (Cycleways and Shared Paths)

Council is working on multiple projects for shared walking and cycling routes around the Hutt, including:

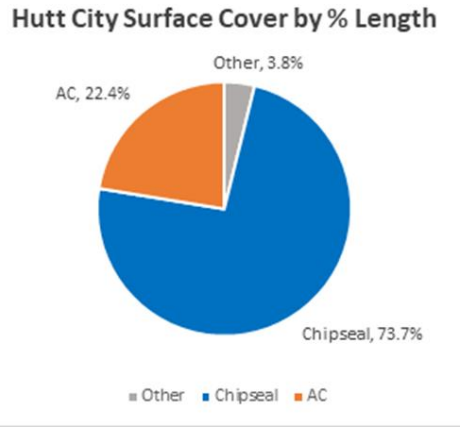
- Tupua Horo Nuku Eastern Bays Shared Path (4.4km) – under construction
- Community Connections – cycleways in Avalon and Taitā to join schools and paths to the Beltway
- Waterloo to Hutt CBD – a cycleway connection from the end of the existing Beltway cycleway and Waterloo Station to the Lower Hutt CBD is in the final stages of design
- CBD walking and cycling connections – a cycleway connecting the Waterloo to CBD to Te Awa Kairangi
- Maru Wainuiomata Schools Connections – a Streets for People-funded initiative to improve accessibility for walking, cycling, skating, and scooting – trials underway Micromobility programme – Jackson Street to Esplanade, Hospital Connections and Stokes Valley shared path are all in the design phase
- In 2024 – 27, Council will be looking to complete a strategic walking and cycling plan, which will aim to connect existing and soon-to-be completed projects such as Te Ara Tupua Ngā Ūranga ki Pito-One, Pito-One to Melling shared path and Tupua Horo Nuku. The plan will also look at connections from Waterloo to Woburn Station, the Wainuiomata shared path to Tupua Horo Nuku and Woburn Station and any other strategic links identified during the plan.
- As part of the Cross Valley Connections Programme, there are two shared paths or cycleways included in stage one. These are from Woburn Station to Te Awa Kairangi, and along Hutt Road from Petone to Te Awa Kairangi. Council is proposing to complete the business case and design work for these projects in 2024-27.


Current and Planned Cycleways
Name
Eastern Bays Shared Path
Hutt River Trail
Hutt River Trail (Manor Park to Silverstream Section)
Knights Road Cycleway (Innovating Streets Project)
Petone Esplanade Shared Path
Petone to Melling Cycleway (Te Ara Tupua) - NZTA
The Beltway (Central & Northern Sections)
The Beltway (Southern Section Secondary Route)
The Beltway (Southern Primary Route)
The Beltway (Waterloo Section)
Wainuiomata Hill Shared Path (Te Hīkoi Ararewa)
Wainuiomata Heartland Ride

2.4.2 Pavements and Surfacing

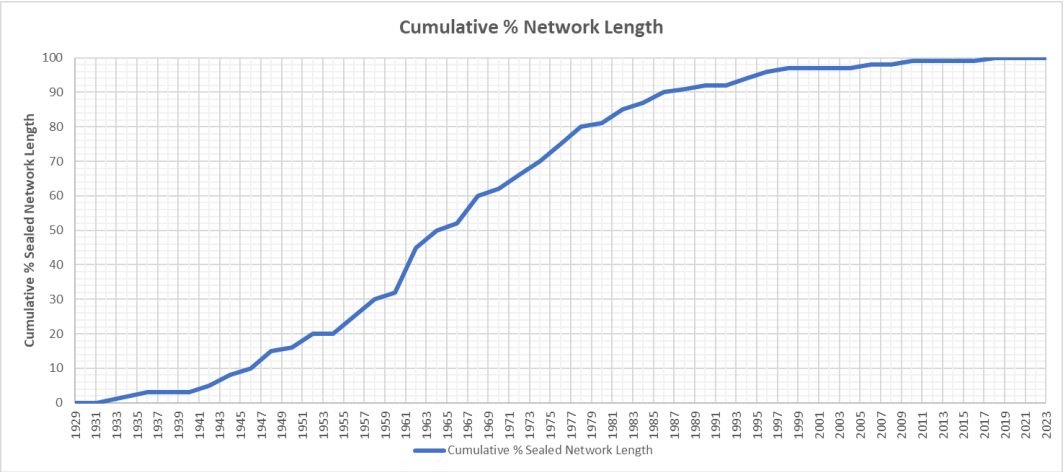
The HCC sealed network is an urban dominated network with the majority of the network being chipseal or asphaltic concrete (AC) surfacing.

The bulk of the pavements were constructed from the 1930's onwards, with significant additional construction from the 1950's through to the late 1980's. There have been minor developmental peaks since that time which is primarily due to subdivision developments and routine pavement renewals. The age profile of the pavements within the network can be seen in the figures below.



The cumulative plot, below, indicates that 80% were constructed before 1979 (40 years ago) and 50% were constructed before 1964 (56 years ago). Conventional pavement design assumes a conservative 25-year life, but reality is that lower demand pavement life assumptions are often more than 100 years. Change in traffic demands including heavy vehicle size, loadings, and frequency from what the original design was based on, will negatively impact the life of pavements.

HCC uses Deighton Total Infrastructure Management Systems (dTIMS) modelling to determine the best level of investment required to maintain the network over the next 30 years without creating a backlog of resurfacing or pavement rehabilitation. These investigations test the sensitivities of the different budget scenarios as to the differing effects on the Levels of Serviceand the associated risks.



Pavement strength, age, and condition are the main pavement rehabilitation triggers within the modelling, with age being the main resurfacing trigger. The latest modelling was completed in June 2019 by WSP-Opus.

2.4.3 Bridges / Large Culverts / Subways

Council has a comprehensive programme of regular bridge inspections in compliance with the Waka Kotahi Bridge and Maintenance Inspection Manual and has detailed and current information on bridge conditions.

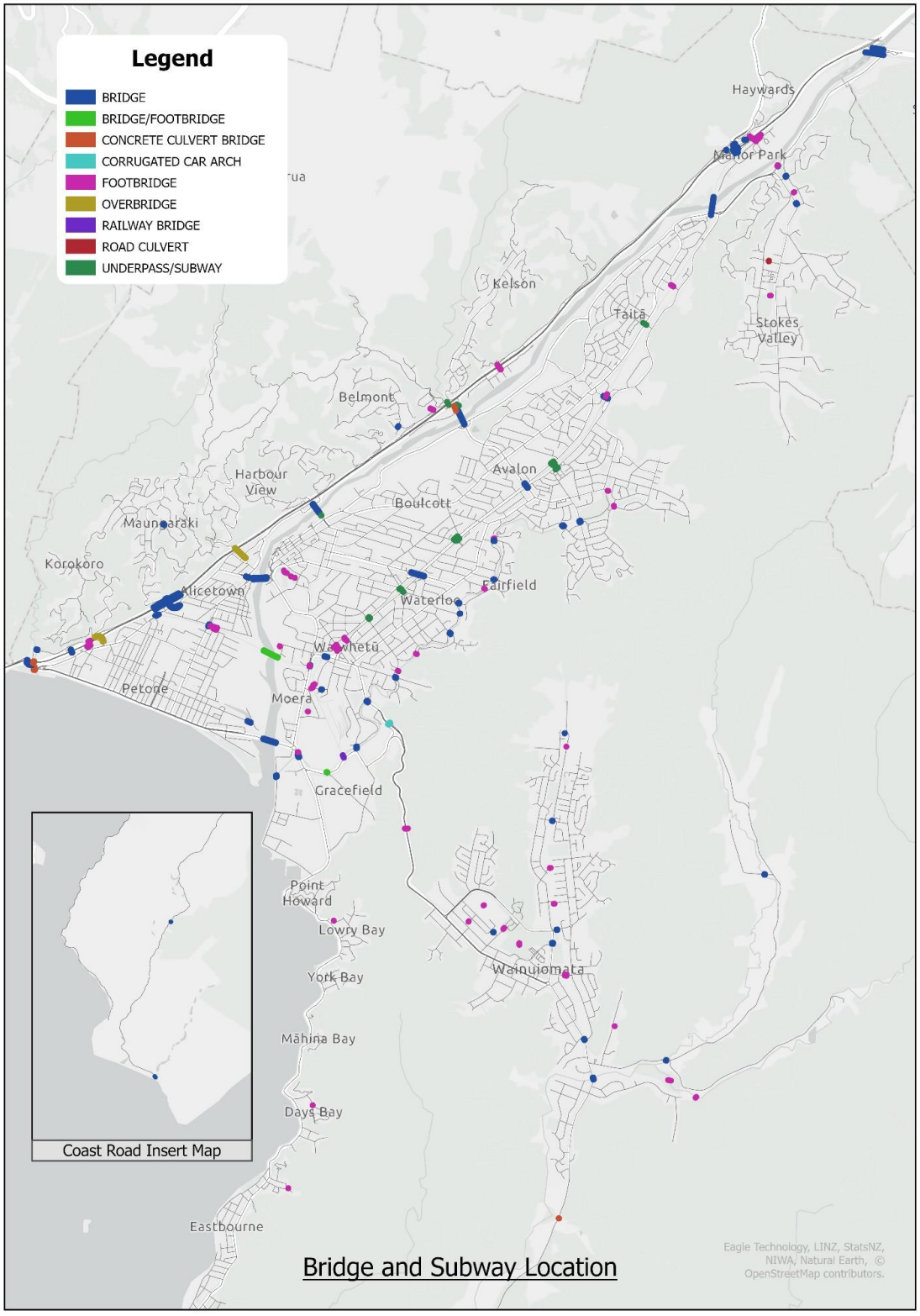
A seismic screening study of 53 bridges was carried out in 2001. From this study a prioritised bridge strengthening programme was developed and implemented with the final bridge scheduled to be strengthened.

With several key bridges being within proximity of the sea, special attention needs to be paid to inspections and protection against corrosion from the sea salt on these bridges.

Increased heavy vehicle loading demands on the network has necessitated the need for assessments of the design loadings of each bridge, as to the heavy vehicle capabilities:

- High Productivity Motor Vehicles (HPMV): 11 bridges have been assessed and are HPMV capable, which services access from SH2 to Seaview, from both north and south directions off SH2.
- 50 MAX vehicles: All bridges have been assessed as 50 MAX capable, except for the bridge on Main Road, Wainuiomata (#36)
- 45/46 tonne vehicles: All bridges have been assessed as 45/46 tonne vehicle capable, except for the bridge on Main Road, Wainuiomata (#36)
- 18 tonne double decker buses: All bridges on the current bus routes have been assessed as 18 tonne double decker bus capable

A map of bridge locations is shown in the figure below:



2.4.4 Sea Walls

There are approximately 5.3 km of seawalls of various types in the Eastern Bays area to provide protection for the roading network from the frequent wave action, high tides, and storms. These seawalls are along a sole connector road between the Eastern Bays and the rest of Lower Hutt, so are vitally important. The road is quite vulnerable to coastal erosion, sea level rise, tsunami, tidal surge, king-tide, landslip, or other road blockage, and efforts to strengthen the resilience of the connection are in progress. A map of the retaining seawall locations is shown below.

The Tupua Horo Nuku Eastern Bays Shared Path project includes the replacement/renewal of many of the seawalls along the Eastern Bays. The project has started construction and is due to be completed in 2026. Current maintenance work on the seawalls has been reduced to address only urgent, safety related or likely loss of accessibility repairs.

There is a need to develop an asset register and condition report of existing Seawalls, with a prioritised list of required maintenance, repair, or replacement. An initial assessment has been started (November 2023), with a focus on capturing data into RAMM.

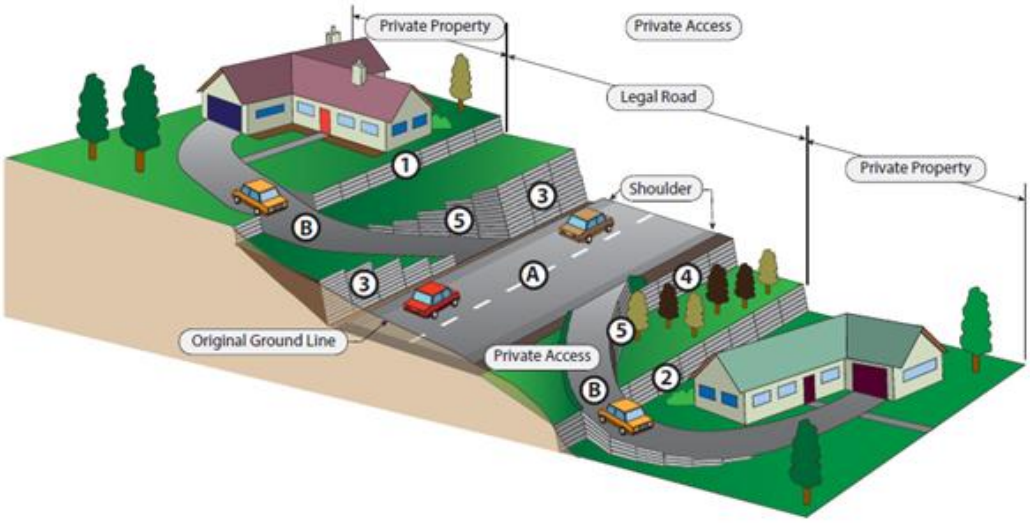
Penguin access is required in certain locations as there are Little Penguin/kororā based on Matiu/Somes Island and along Lower Hutt beaches. These are the world's smallest penguin (also known as the little blue penguin) at just over 25 cm tall and weigh in at around 1 kg. Their numbers are declining due to dogs, predators, and those that have been killed by motor vehicles when crossing a road.

Special bird protection areas are under construction along the coast between Seaview and Eastbourne. The current dog control bylaw is under review to provide a positive environment for seashore foragers such as penguins to thrive.

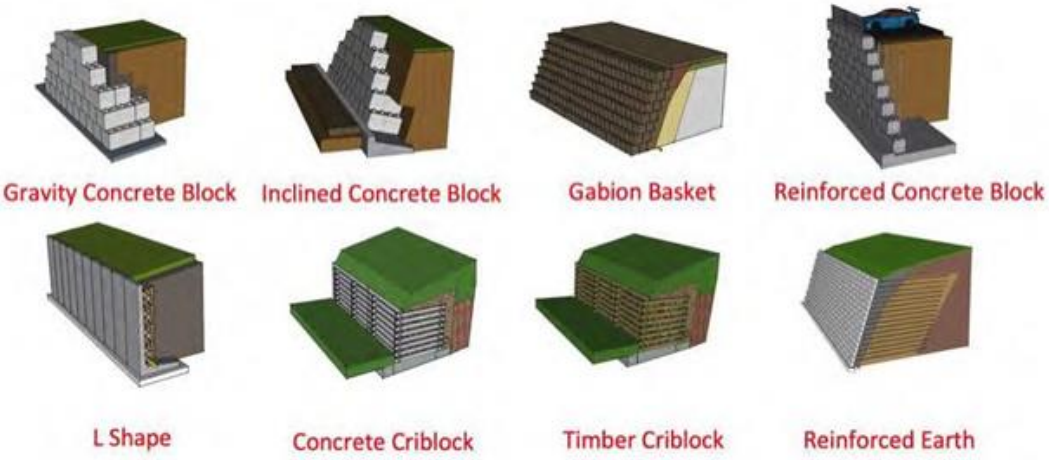
Source: Little penguin/kororā: Little blue penguin: New Zealand native sea and shore birds (doc.govt.nz)

2.4.5 Retaining Walls

Due to the steep hills surrounding the valley floors, there are many retaining walls within Hutt City. It is not known how many private retaining walls exist near the road corridors, and there is an Improvements Plan item for confirming the location, ownership, and composition of Council Retaining Walls. As can be seen in one indicative graphic from the Christchurch City Council booklet 'Determining responsibility for retaining walls', there are several factors to consider when determining ownership and the responsibilities for maintenance and repair.



HCC currently inspect known Council retaining walls on a regular basis, however, this list needs to be validated and expanded as required. Council has started some initial work to validate known assets, albeit further investigation is required to quantify the full extent of retaining walls that HCC may be responsible for. The types of retaining walls are highly variable as can be seen in the figures below, noting that other alternatives may also exist.



2.4.6 Transportation Assets

Council's Transportation Network relies on a wide range of assets to operate effectively and efficiently.

HCC generally define the transportation assets as being those that are from the surface of the road upwards, and within the entire road corridor width.

The pavements and surfacing that are the backbone of the transport network are described separately in Section 2.4.2, with the Transportation Assets described in the subsequent sections.

The Transport Assets which form this part of the system include:

- Traffic signals
- Traffic monitoring cameras
- Traffic counters
- Level crossing warning devices
- Safety barriers, bollards, and sight rails
- Pedestrian crossings and associated belisha beacons and pedestrian floodlights
- Cycle paths and shared paths
- Road markings and delineation devices
- On and off-road carparks, mobility car parks and pay and display meters
- Off road lighting for public areas such as car parks and alleyways
- Streetlight columns and streetlights
- Utility pole mounted streetlights
- Road signs: Directional signs, street name blades, regulatory, advisory, and parking signs
- School speed zone signs
- Active electronic signs and variable message signs
- Local area traffic management devices including speed calming and channelization islands and pedestrian refuge islands, and
- Other miscellaneous street furniture

These assets are managed using a combination of RAMM along with other discreet databases, spreadsheets, and GIS layers. Council is in the process of migrating all Transport Asset information into RAMM for more consistent monitoring and reporting as part of our Improvement Plan.

2.4.7 Traffic Signs, Delineation and Road Markings

Hutt City's transport network utilises the standard suite of regulatory, permanent warning and informational signage and road markings defined in the Waka Kotahi Manual(s) of Traffic Signs and Markings (MOTSAM).

The road sign inventory has now been entered into RAMM as part of our improvement plan. Our contractor is reviewing the data and cleaning while undertaking road sign maintenance.

The road sign inventory is generally in very good condition, and individual signs are repaired or replaced only when damaged, or when inspection shows them to be sufficiently faded or have poor reflectivity.

Remarking of regional, arterial, and primary collector roads is undertaken as part of pavement or resealing works, on an annual basis. Secondary collector, access and low volume roads are remarked bi-annually.

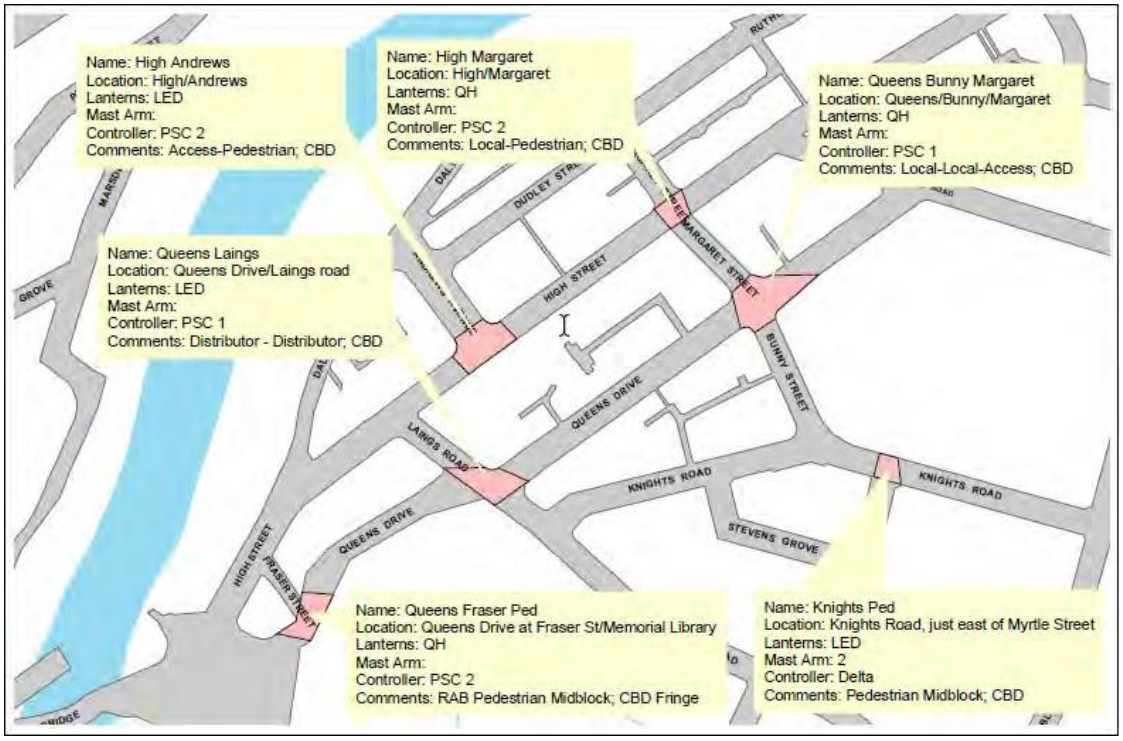
Annual night-time inspections are undertaken to audit network delineation, with the audit results defining the RRPM replacement programme, and the replacement of signs with poor reflectivity.

2.4.8 Traffic Signals

Hutt City currently operates 24 signalised locations including signalised intersections and signalised pedestrian crossings, each indicated by a red 'X' on the figure below.

A new set of signals will be installed on High Street in 2023/24 to coincide with the opening of the new Summerset Retirement Village. Further upgrades are expected to mitigate current congestion and safety concerns, along with managing urban growth.

An enlargement of the Central Business District (CBD) traffic signals is also shown.

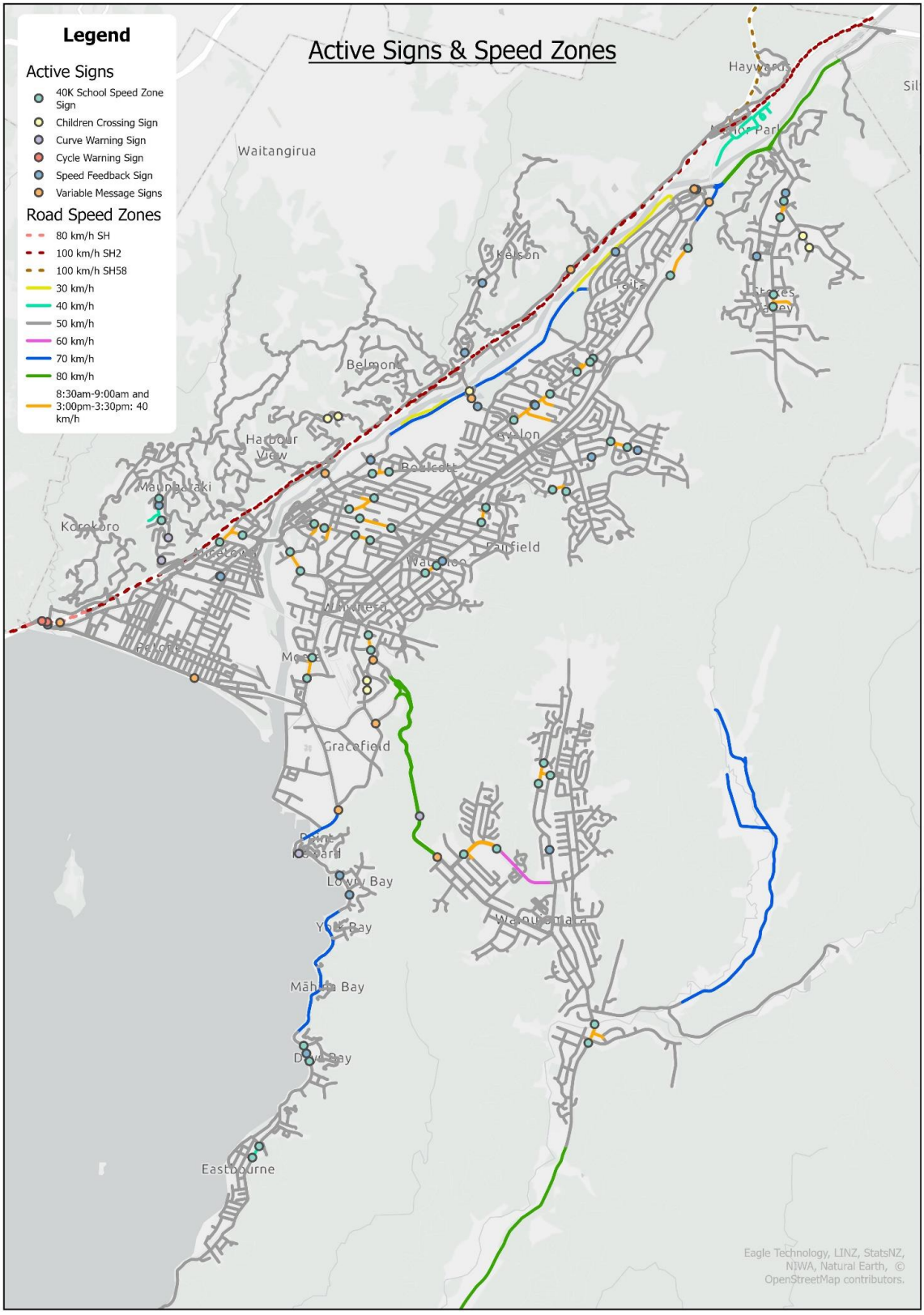


2.4.9 Active Electronic Signs

Electronic signs are used to activate reduced speed limits in School Speed Zones, advise drivers of their operating speed, and highlight hazards such as approaching tight bends which might be out of context with the speed environment or display higher than expected crash numbers.

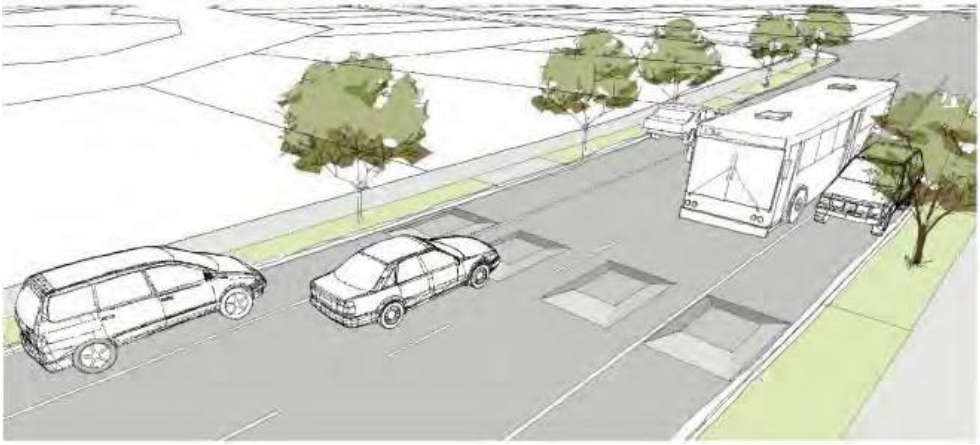
The current Speed Management Programme will reduce speeds to 30 km/h around schools. All schools in Lower Hutt have had their speed reviewed and approved changes will be rolled our progressively. Some schools require additional engineering intervention where traffic volume and speed have the most impact on pedestrian safety. Council have enough electronic signs to cover the streets with variable speed limits.

The map shows the locations where Active Electronic Signs are used:



2.4.10 Local Area Traffic Management

Local Area Traffic Management (LATM) is concerned with the planning and management of the usage of road space within a local traffic area, often to modify streets and street networks which were originally designed in ways that are now no longer considered appropriate to the needs of residents and users of the local area. It involves the use of physical devices, streetscaping treatments and other measures (including regulations and other non-physical measures) to influence driver behaviour, to create safer and more pleasant streets in local areas. It is consistent with approaches such as self-explaining streets and context-sensitive urban design.



Historically, HCC's LATM intervention program was identified through customer complaints and prioritised after collection of speed profile and crash history data. While this intervention avenue is still available, HCC is also now utilising the Waka Kotahi, NZTA, Pipeline Tool to identify intervention sites that maximise the return on investment.

Common LATM initiatives include the installation of speed humps and speed cushions (on bus routes), raised tables, central and kerb extension islands, horizontal chicanes, and static and electronic speed signage.

Council implements as many LATM schemes as possible in each financial year. The number of requests received annually for LATM is an order of magnitude larger than the budget available, and if all requests were to be implemented the waiting list for scheme implementation would be more than 20 years. This makes the prioritisation process even more important.

2.4.11 Streetlights

The Hutt City Streetlight inventory includes around 14,500 luminaires of varying type and age. The map below shows the location of streetlights around the CBD. HCC are part way through a programme to replace all luminaires with new LED luminaires to reduce overall energy and maintenance costs. To date around 10,000 luminaires have been replaced with LEDs with a significant upgrade programme carried out in the 2020/2021 financial year. Streetlight energy represents a significant annual cost for the city, currently around $1.5M, with significant increases projected in the NLTP through to 2027. The luminaire network is served by four main unmetered TOU (Time Of USE) streetlight circuits owned and operated by Wellington Electricity. The network is currently controlled by ripple switch; however, the new LED luminaires are smart-enabled which would allow for future implementation of a Central Management System, intended for implementation in the next 2–3 years, dependent upon approval.

A business case has been completed to transition the remaining streetlights to LED. This has been included for consideration in Council's LTP and the 2024-27 RLTP. The total cost to upgrade is $4.22m, however a hybrid approach may be the preferred outcome with some packages or upgrades implemented, with other locations replaced as failures occur.

2.4.12 Footpaths and Walkways

The city is well catered for with its footpath network. There are currently approximately 683 kms of footpaths which provides for:

- Improved safety for pedestrians
- Accessible routes for physically impaired
- Opportunities for active transport modes
- Reduced negative environmental impact

Many footpaths within the city are concrete, forming 75% of the network, with asphaltic concrete forming 22% and interlocking block footpaths making up only 2% of the network. Other than a small suburban area in Alicetown, interlocking blocks are generally located in the CBD and suburban shopping centres.

A fourth and very minor category is timber. This type of construction has been used occasionally in recent years to avoid the construction of retaining walls in difficult situations (e.g. Days Bay Walkway / Howard Road footpath / Normandale Road footpath / Castle Crescent steps / lower Hill Road / Pomare Road and Wairere Road).

Surface Material	Length (Km)
Asphaltic concrete	515
Concrete	150
Interlocking blocks and Other	18
TOTAL	**683**

2.4.13 Pedestrian Crossing Facilities

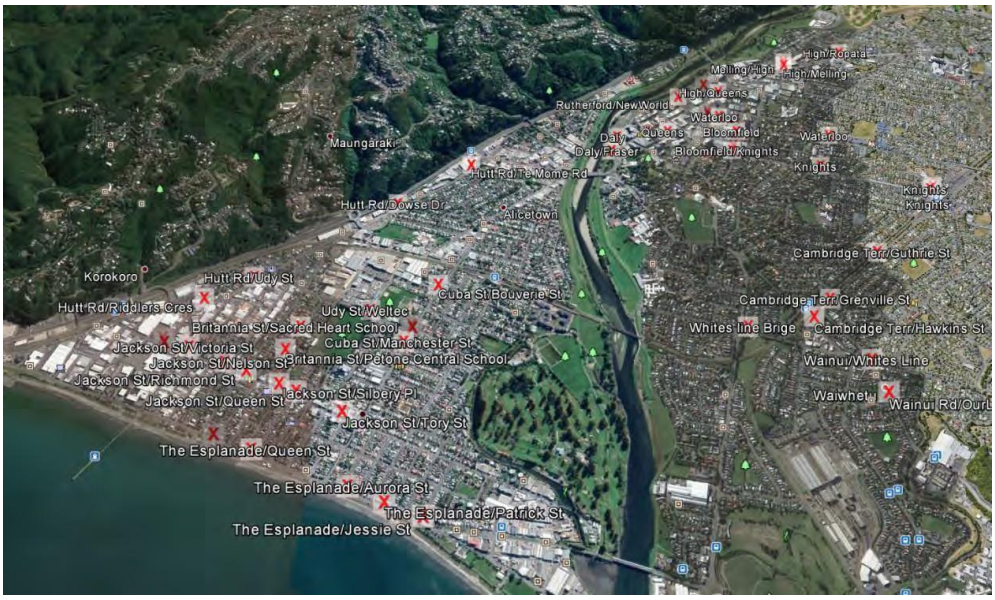
Hutt City has more than 125 pedestrian crossing facilities including zebra, kea and puffin crossings and numerous raised pedestrian tables and refuge islands.

An incomplete list of these facilities is managed in Council's GIS system; however, data completeness is lacking. Improvements in this area are included in the improvement plan.

Installation of new pedestrian facilities are carefully considered to consider the most up to date safety research and design standards. In general, installation of uncontrolled zebra crossings is rare. Pedestrian safety is better dealt with through refuge islands and signalised puffin crossings.

Improvements to existing zebra crossings include high friction surfacing on the approaches, different coloured crossings to make them more visible, improved lighting and the use of active LEDs to alert approaching motorists.

Pedestrian crossing facilities



2.4.14 Safety Barriers and Guardrails

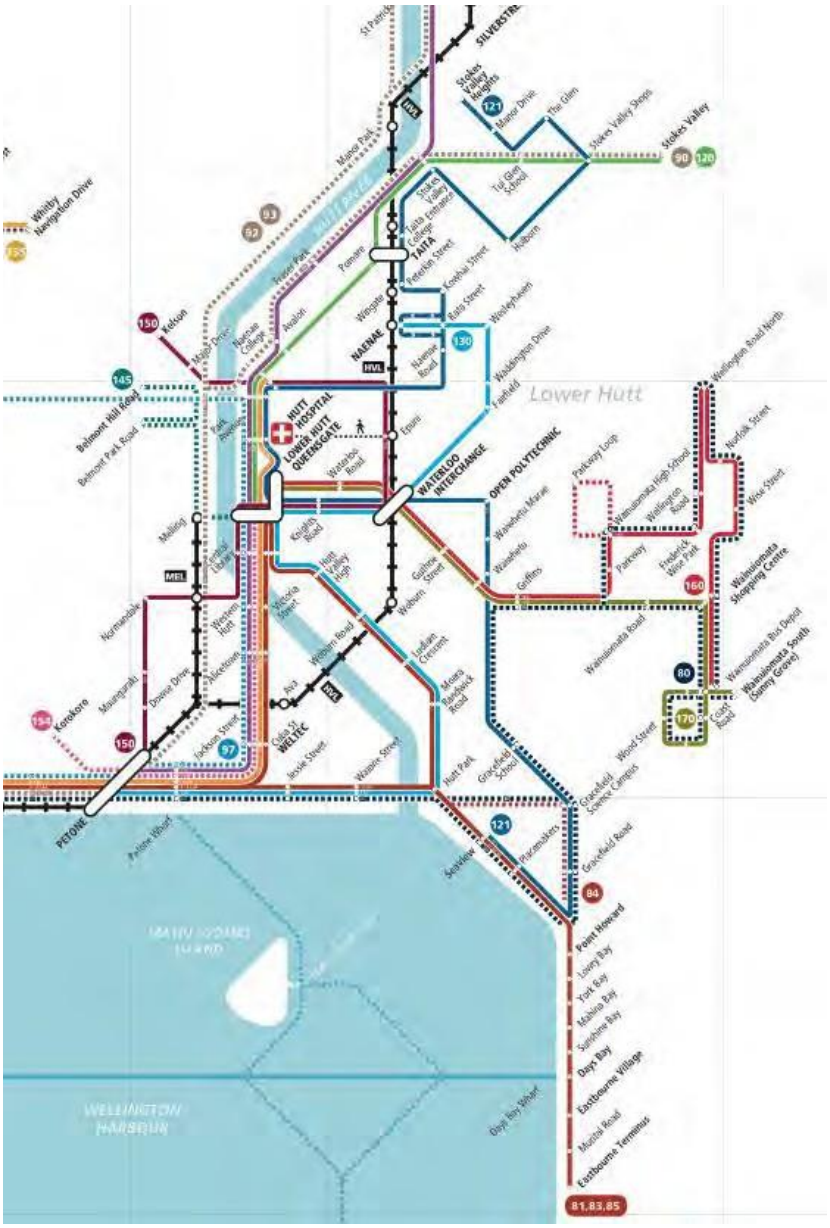
Hutt City manages around 19 km of barriers and guard rails as shown below.

Type	Length (m)
Wire Rope Barriers	1,300
Concrete Barrier	1,942
'W' Section Guard Rail	12,478
Hand Rail	452
Sight Rail	2,520
TOTAL	**18,692**

Regular inspections identify sections of barrier that need to be repaired or replaced in addition to an ongoing barrier terminal upgrade programme to ensure end terminals comply with modern safety standards.

2.4.15 Public transport

Hutt City has a good selection of Public Transport options, albeit there is so much choice that it is difficult to represent on a single map. The figure below provides an indicative configuration of the Hutt City network in the common international format for mass transport systems.



Source: content/uploads/2013/10/MetlinkM ap1.jpg

The Melling line will not operate for approximately 18 months while it gets upgraded as part of the Riverlink programme.

There are currently no bus priority lanes, but these will be considered in the future on all major routes.

2.4.16 Car parks and metering

HCC's parking policy provides a strategic direction and framework for the supply and management of Council regulated public parking in the city. Parking in the city is also provided by private parking companies, large retail business, as well as Greater Wellington Regional Council which provides park & ride facilities at all train stations. Council's approach to parking contributes to its long-term strategies in terms of:

- safe and efficient movement of people and goods;
- supporting economic performance – ensuring parking is well-used and regularly available;
- contributing to environmental sustainability and the resilience of our infrastructure;
- shifting transport choices;
- supporting Council's work to enhance walkability and a cycle-friendly environment; and
- delivering high-quality customer service.

Council is commencing work on a new parking policy in 2023/24 which will review all aspects of the existing policy. This will include looking at the current parking zones and whether they are still fit for purpose, residential parking in the CBD and in areas with significant housing intensification, whether the current parking setting are still relevant with the changing nature of retail and restaurants and a comprehensive review of the charging structure.

2.5 Risk Management

A cornerstone of sound asset management is the identification and management of risk. The LGA 2002 requires local authorities to provide for the resilience of their infrastructure by identifying and managing risks relating to natural hazards; however, there are many other risks which also need to be managed. There are different levels of risk that are identified and highlighted as affecting the transport service. Our strategic and corporate level risks are identified in a number of strategies and our direct business and operational risks are managed via Operational Risk Registers.

HCC is working to improve the risk management process, which broadly consists of five elements as shown.

Identify - Risks are potential barriers to us achieving our objectives. Risks can be identified any time - in team/project meetings, planning days or risk workshops.

Assess - A risk matrix is used to assess the likelihood of the risk occurring, and the potential impacts if it were to occur. The assessment puts the risk into context for the organisation and identifies the level to which the risk should be managed.

Treat - We treat risks by acknowledging and addressing them. We can treat a risk by avoiding the risky activity, reducing the risk with controls, transferring through insurance, outsourcing, accepting the risk, or sharing the risk – a combination of reducing and transferring. If we don't do this step, our default position is acceptance.

Monitor - When we monitor our risks, we review them to ensure they are still relevant and that our treatments are effective. Monitoring should be done regularly by risk owners and treatment owners.

Report - When we report our risks, we ensure they are communicated to the right level for escalation, decision-making and monitoring in general. It's important to communicate risk information in a format that is brief and easy to understand.

Additional information about specific risks are included in Section 3.8.6.

2.5.1 Critical Infrastructure

Council is a participant in the Wellington Lifelines Group (WeLG), who undertakes activities as noted below.

The Wellington Lifelines Group (or WeLG) was established in 1993 to coordinate the physical risk management activities of Wellington utility and transport service providers.

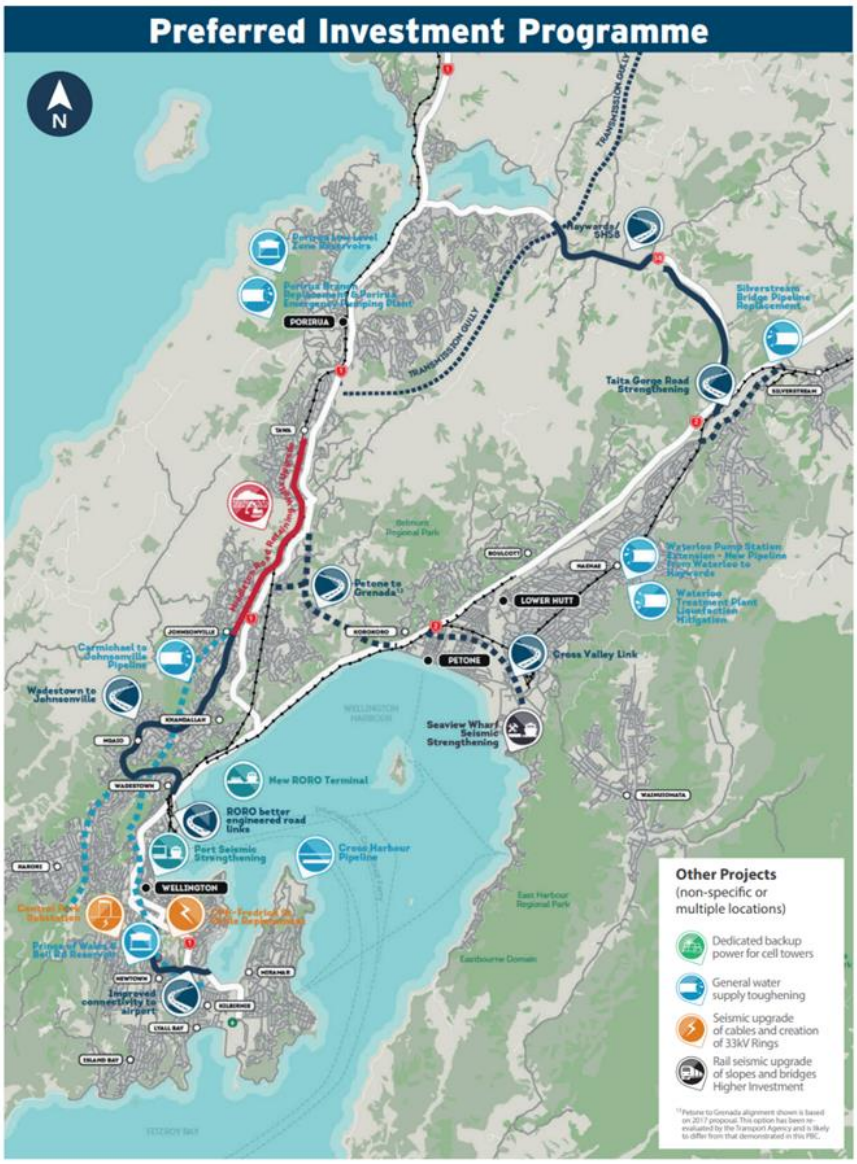
What the Wellington Lifelines Group does

The Wellington Lifelines Group works with its members to:

- Learn from each other and coordinate activities
- Facilitate discussion, particularly on hazard understanding and risk reduction measures on the Wellington Region's infrastructure
- Identify the effects of hazards on infrastructure, and to mitigate against those effects
- Facilitate increased understanding of the interdependencies between infrastructure organisations
- Develop best practice approaches to risk reduction, readiness, response and recovery for lifelines
- Maintain awareness of the importance of lifelines, and of reducing their vulnerabilities.

The WeLG has a vested interest in identifying any critical infrastructure, and has undertaken various initiatives to quantify and locate these important elements.

The Wellington Lifelines Regional Resilience Project prepared a Programme Business Case (4 Oct 2019) which outlined some of the reasoning behind the determinations of critical infrastructure. *"An adapted version of a NZ Transport Agency Resilience Decision Making Tool was used. The tool's assessment framework, initially developed for the purposes of assessing transport resilience, was modified to take into account the additional critical infrastructure types (water, fuel, electricity, wastewater, communications) as well as the agreed investment objectives and corresponding weightings".* The Preferred Investment Programme is shown graphically below.



Source: Wellington Lifelines -Regional Resilience Project

Further to the work of WeLG, an established priority for route reopening priority is shown, and which includes the results of regional collaboration about the criticality of certain roads.

HCC are planning to conduct further investigation into the scope, scale, and location of critical infrastructure within Hutt City, and have added this to the Improvements Plan. This planned investigation will include consideration of the process for identification and categorization as Critical Transportation Infrastructure. It is specifically noted that a holistic approach is required when evaluating infrastructure, which considers the following example elements:

- Choke Points
- Importance Levels (Buildings)
- Land Use
- Topography
- Natural Hazards
- Evacuation Routes and Civil Defense Guidance
- Other Infrastructure

2.5.2 Network Resilience

Risk management includes consideration of network resilience, the ability of the transport network to withstand, or quickly recover from, an outside event.

Based on evidence, Council recognises that:

- The Transport network is prone to earthquake and flood damage
- Rising sea levels reduce resilience of coastal transport routes
- Lack of alternate route options reduces resilience to traffic crashes

2.5.3 Geography and Geology

Risk management includes consideration of the existing geography and geology within which the transportation network is located.

Based on evidence, Council recognises that:

- Earthquakes are highly likely
- Landslides could be triggered by earthquakes
- Liquefaction could be triggered by earthquakes
- Co seismic subsidence could result in inundation
- Tsunami poses a risk to transport network in coastal areas.
- Ground conditions are highly variable

2.5.4 Environment

Risk management includes consideration of the wider natural environment, which provides context for the transportation network.

Based on evidence, Council recognises that:

- More frequent and intense precipitation events result in more frequent and severe flooding
- Landslides could be triggered by intense rain
- Sea level will change in response to climate changes, and storm surges could be more frequent / damaging
- Ice can form on roads during sub-freezing weather

2.5.5 Transport Demand and Level of Service

Risk management includes consideration of transport demand by different users, and the levels of services which are required, or desired.

Based on evidence, Council recognises that:

- Personal vehicle usage remains high due to the isolated nature of some of our communities, lack of public transport options in some areas and perceived unreliability of public transport
- Future vehicle technology effects are unknown (i.e. autonomous vehicles could drastically change vehicle use)
- Increased and more dense residential development increases congestion and decreases travel time reliability
- Changed traffic patterns resulting from regional transport projects (such as Petone to Grenada, Let's Get Wellington Moving) could alter local route traffic patterns
- Political aspirations and intervention require changes to improvement priority
- Government mandated planning rules increase demand for on-street parking space
- Lack of park n ride capacity impacts on local parking availability

Improvements are based on data analysis and are subject to funding approvals.

2.5.6 Existing asset management capacity

Risk management includes consideration of the existing asset management capacity. HCC is actively working to improve the quality of data pertaining to transport assets and also the proactive management of the data to optimise both the asset and the funding available for maintenance, operations, and renewals.

Council does not have a documented operational asset maintenance process which sets out how the work programme is determined, how optioneering, monitoring with a feedback loop to inform future works is undertaken.

In the sealed road rehabilitation and pavement surfacing area many aspects of a robust asset renewals process are being undertaken by WSP and Stantec. They provide the technical expertise HCC does not currently have in-house. Many elements of the process have been recently documented by Stantec and WSP to demonstrate credibility and robustness for the renewals work programme process. It is HCCs intention, as part of its improvement plan to develop more encompassing documentation to not only provide comfort that the work programmes developed are credible but deliver the benefits sought.

HCC will replicate this approach in developing the asset maintenance process.

It is the intent of HCC to set out what the end state for this documented process in either the renewals or maintenance areas and then through the Council approval of the AMP, have that end goal approved as a deliverable for the Transport area.

The Improvements Plan in this AMP will become the template for delivering on this approved end state. The improvement plan cannot at this point set out the specific details of the delivering the documented process. It would be intended that a subsequent more detailed plan is developed that details the required resourcing, approach, timings and delivery milestones.

HCC has already signalled to Waka Kotahi, NZTA, through a submission in the improvement's projects for NLTP 2024-27 that it intends to undertake a review of its AMP. This would include the delivery of the required documentation of the asset renewals and maintenance processes. Therefore, HCC has credibly signalled providing the resource to undertake this work.

This approach will provide comfort to funders, for setting funding for 2025/26 and 2026/27, that although the documented process may not be fully implemented, they can see the progress and what elements are implement and which are still be delivered.

For the overarching objectives of this AMP, HCC has engaged WSP and Stantec to provide a high-level overview of the requirements for the end state documented process. These set out the characteristics that the documented process should entail, rather than setting the specifics of the process itself.

HCC will need to undertake during the first part of 2024 a more detailed review and seek widely, best in class examples of asset management processes to leverage its process development and ensure it engages the appropriately operationally experienced resource to drive and deliver this output.

2.5.7 Community Aspirations

Risk management includes consideration of the aspirations and expectations of the community.

Based on evidence, Council recognises that:

- The community has grown with an influx of Wellington workers following the 2016 Kaikoura earthquake and the growth that has resulted from the Development Contribution Remissions Policy of 2018. The consequent increase in traffic volumes has compromised service levels on many local roads.
- Increased focus on accessible modes of transport requires city wide network upgrades

2.5.8 Transportation Affordability

Council, like everyone else in New Zealand, has experienced the impacts of cost escalation over the past three years, and anticipates that there is a risk about the level of service that can be provided if costs continue to increase faster than the level of funding which is available.

Inflationary forces are a result of global, national, and regional economics, and are outside the realm of HCC influence.

Affordability Risk:
The proposed programme cost for 2024-27 is significantly higher than in the 2021-24 period (93% higher) and there is a risk it will be unaffordable for either Waka Kotahi, NZTA, and/or HCC.

Cause of the risk:
The cause of increase is three-fold:

1. volume of work has increased (notably in renewals where pavement renewals has increase for a previous average of $7.4m pa to $10.8m due to both volume and price increases);
2. unit price increases (pavement renewal unit prices have increased (Pavement (GB) 25% increase, Surfacing chipseal 129% increase, Surfacing asphalt 110% increase), and
3. scope of work increase (additional asset to maintain such as cycleways, or increased storm damage clean-up or repair).

The affordability constraint for Waka Kotahi, NZTA, is two-fold:

1. Its funding source for the NLTF (national land transport fund) of FED (fuel excise tax) and RUC (Road user charges) have not increased at the same pace as cost inflation, and
2. Councils are competing for funding allocation (which potentially disproportionally re-allocates funding away from HCC) and all Councils have increased funding submissions.

The affordability constraint for HCC is also two-fold:

1. General budget increases (through wage inflation and interest costs) already put pressure on the rate increases before the MOR cost increases, and
2. Council has other committed funding obligations (which might have also increased due to cost inflation) or have other commitments in the community to fund.

Likelihood of the risk:
The likelihood of Waka Kotahi, NZTA, not fully funding the numbers set out in the AMP is high (informal feedback to date is that Waka Kotahi, NZTA, cannot meet all the funding requests made by all Councils in New Zealand). This may lead to a funding gap (the difference between the HCC total spend value and Waka Kotahi, NZTA, approved total spend value), but which is of unknown size at present, where the magnitude of this shortfall will determine the impact and consequential risk criticality.

Impacts of the risk:
The AMP values generally are determined by the main contracts in place (pavement and road renewals, street maintenance and street lighting). Therefore, any cut would impact the intended contracted programmes which are sized to maintain the stated service levels. (although the programmes are "cut and measure" without minimum volumes (but reducing volumes below certain levels makes them unviable for suppliers, so HCC does not have total flexibility).

Reducing maintenance costs compounds issues with asset condition to the point they turn from maintenance to more expensive renewals. Reductions in renewals will create a deferred renewal liability and impact overall network asset age. Further, this will directly lead to increased future costs for appropriate interventions, possibly to include roadway rehabilitations.

Mitigations Measures:
HCC has already mitigated some risk by aligning its DLTP values to the contracted values and including the cost increase to the rate increases it has at this point in the LTP process.

If the AMP values cannot be funded then cuts to contracts would be made (contracts are generally "cut and measure" without minimum volumes) however reducing volumes below certain levels makes them unviable for suppliers, so HCC does not have total flexibility (and there will be impacts on service levels).

Residual risk after mitigations:
Residual risk after mitigations depends on the funding gap if one or both parties cannot afford the AMP preferred programme.

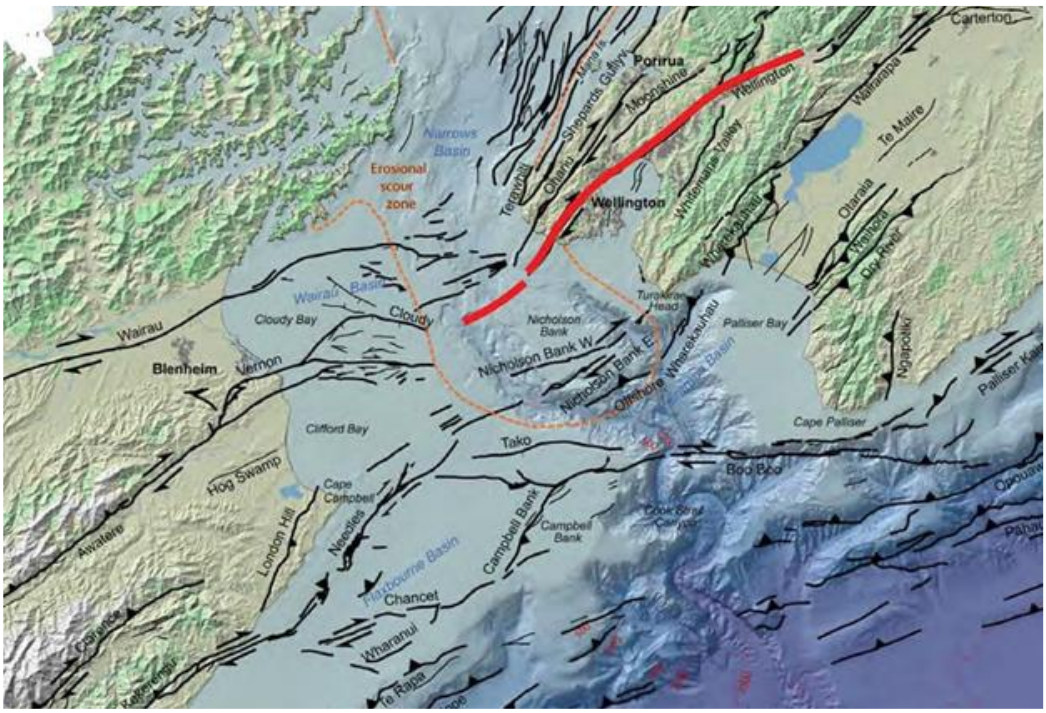
While changes to service levels may be possible, at a certain point, the funding gap is so large and required reductions are so large the MOR area cannot function.

2.6 Natural Hazards and Other Constraints

This section provides a summary of both natural hazards and other constraints that exist. These factors should be considered as part of any analysis of the existing Transport Network, or when evaluating proposed interventions.

2.6.1 Seismic Hazards

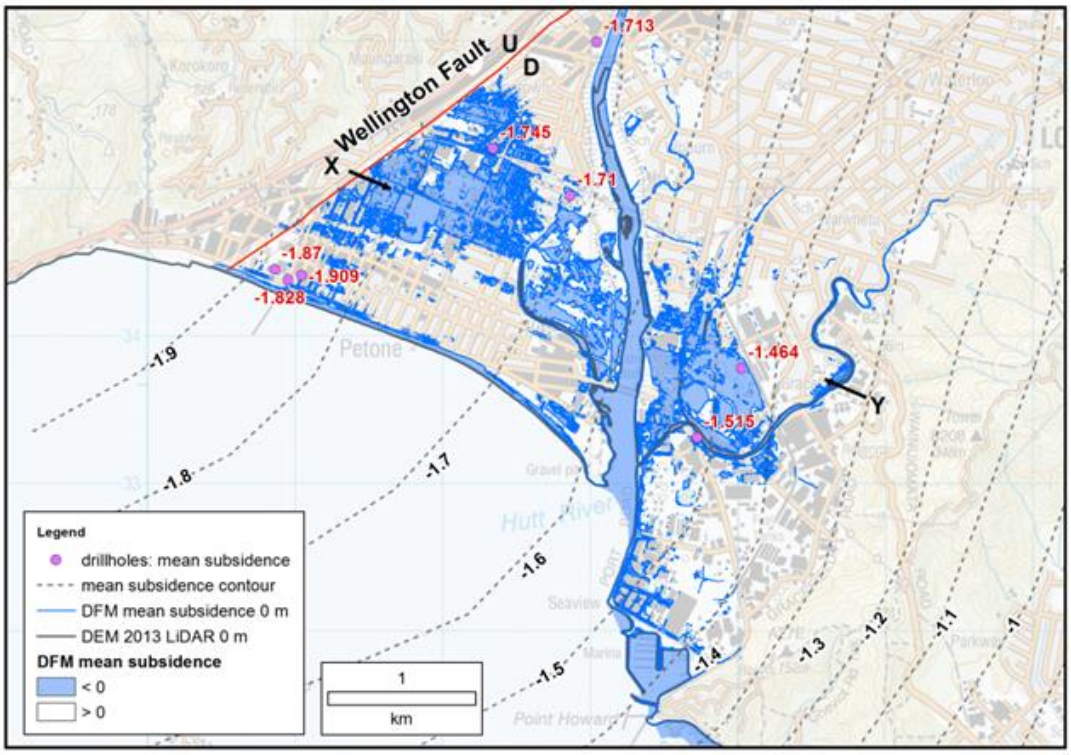
There are many fault lines through the greater Wellington region, as shown in the figure below, including two well within Hutt City – including the Wellington-Hutt Valley segment of the Wellington Fault, shown in red.



Source: GNS Science

Seismic Subsidence:

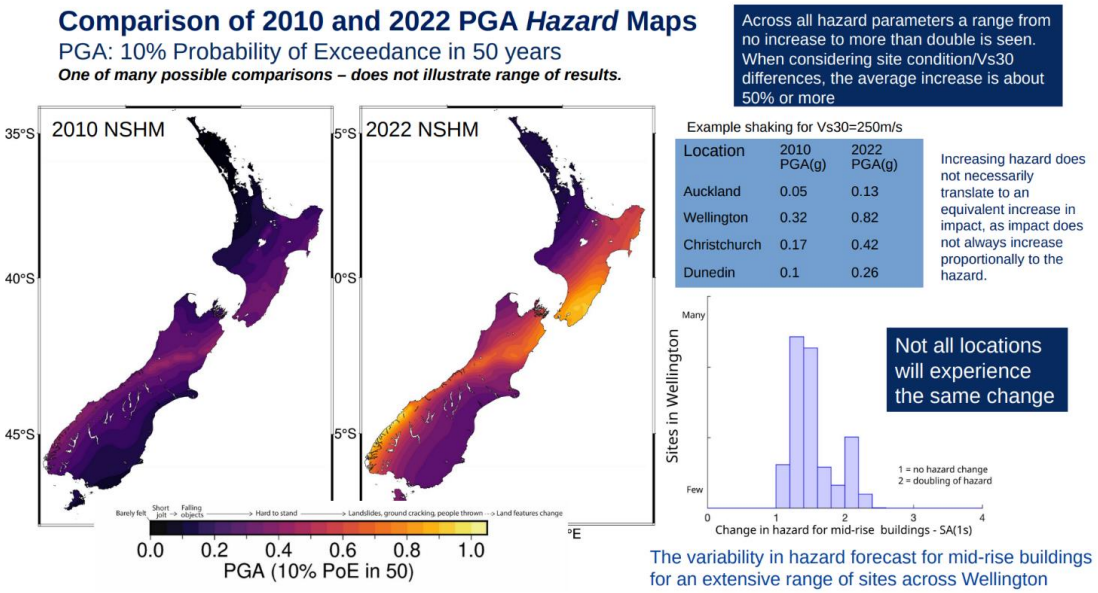
An earthquake rupture on the Wellington fault would likely result in co-seismic subsidence. The diagram below shows the mean credible area subject to inundation calculated by GNS for an "average" Wellington Fault rupture (noting that this modelling does not account for current estimates of sea level rise and therefore underestimates the hazard). This study indicates that roads near to the coast are at risk of inundation.



GeoNet has forecasted probabilities of a 10-60% chance of a M7.0 or greater earthquake occurring in Central New Zealand within the decade starting November 2017. (https://www.geonet.org.nz/earthquake/forecast/central_nz).

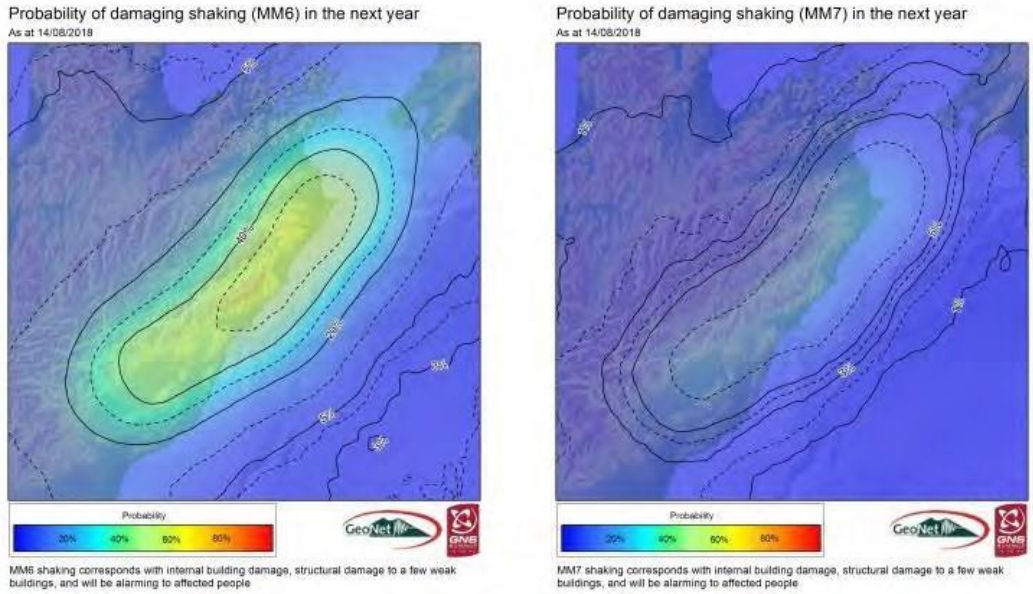
Peak Ground Acceleration (Shaking):

Practically, the Peak Ground Acceleration (PGA) and associated shaking is what impacts buildings, infrastructure, communities, and people. The following slide from GNS demonstrates how the addition of new data has increased our understanding of the probabilities of high PGA's from seismic events and highlights how the Hutt Valley is at higher risk of these events than previously thought.



Source: https://www.gns.cri.nz/assets/Research-projects/NSHM/NSHM-Presentation-slides.pdf

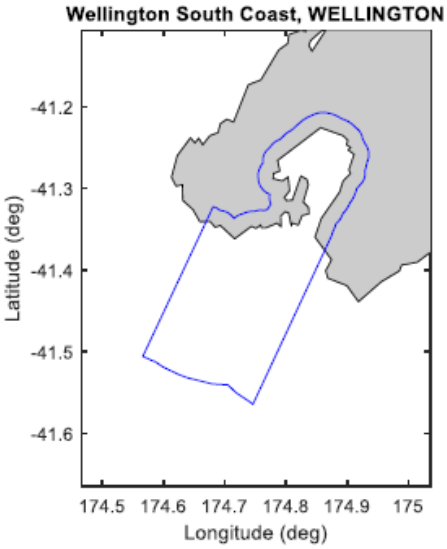
The 7.8 M_w Kaikoura earthquake of 2016 resulted in significant damage across a wide geographic area, including portions of the North Island. The following figures clearly demonstrate that there is a higher probability of smaller events than large ones.

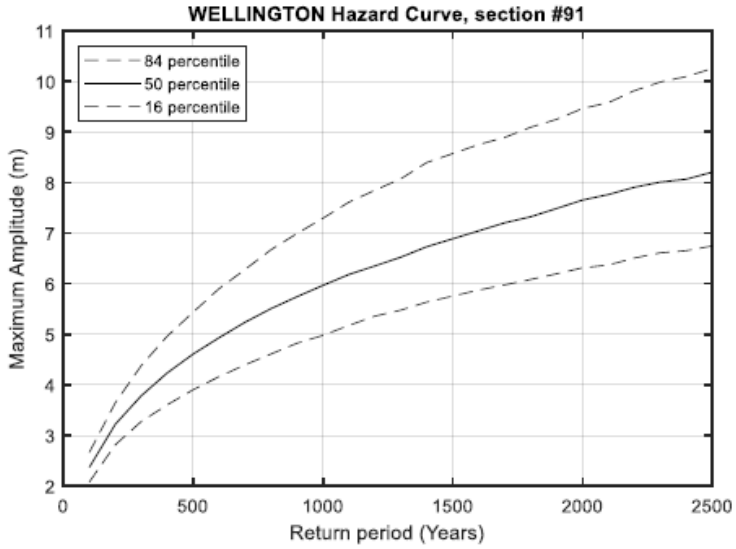


Source: https://www.geonet.org.nz/news/44YL5srSCc2wggQEUycmC8

Tsunami:

Seismic events in, or adjacent to large bodies of water, can result in tsunami's. Tsunami hazards have been assessed for Lower Hutt by GNS Science. The image below shows the maximum amplitude tsunami for the greater Wellington area, with probability curves for a range of return periods (up to 1 in 2,500 years).





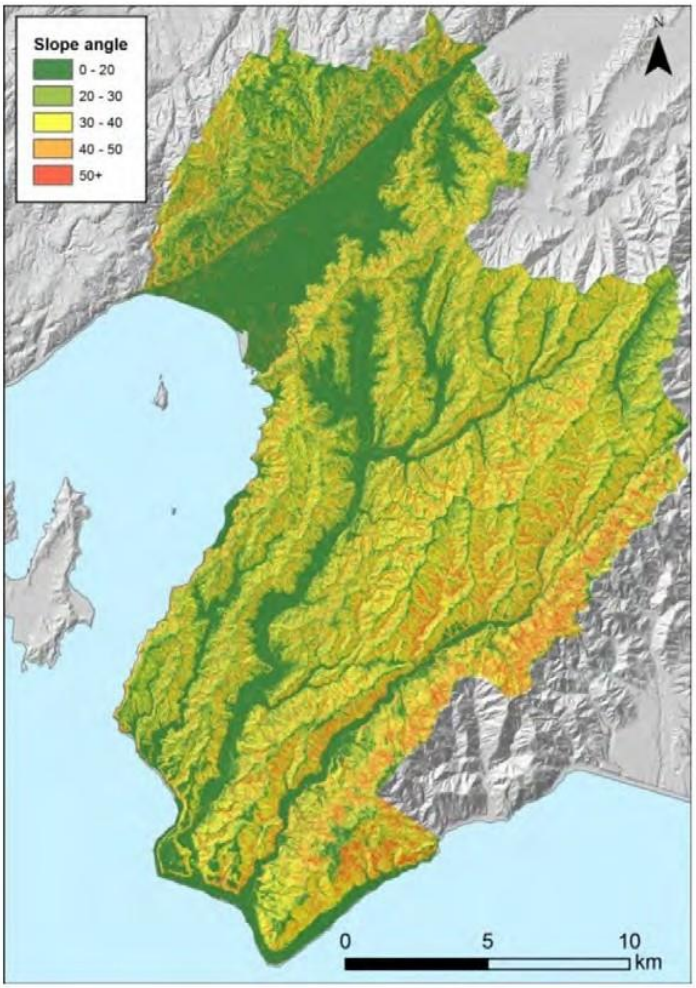
This data indicates that roads, buildings, and infrastructure in the area close to Wellington harbour are at risk of damage from a tsunami event, specifically including low-lying areas of Hutt City.

2.6.2 Landslides

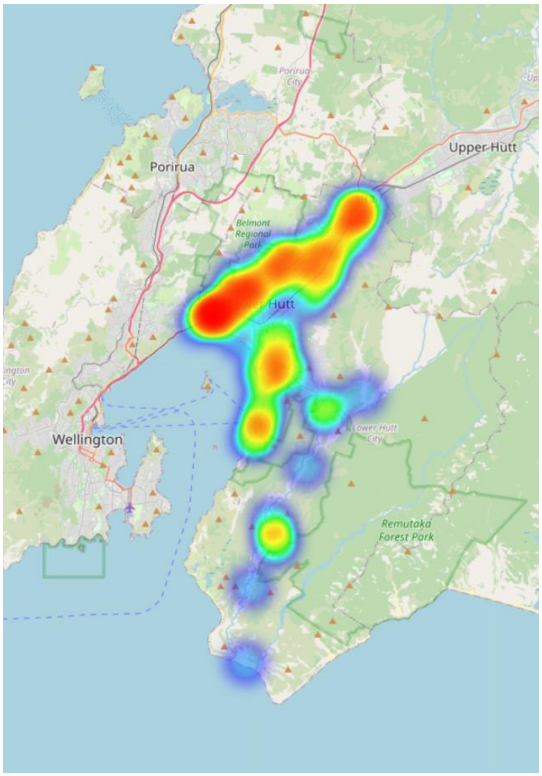
Hutt City is surrounded by the steep hills of the Remutaka Range, and smaller foothills, as can be seen on the below map of Lower Hutt, which shows the slope angles within the hills.

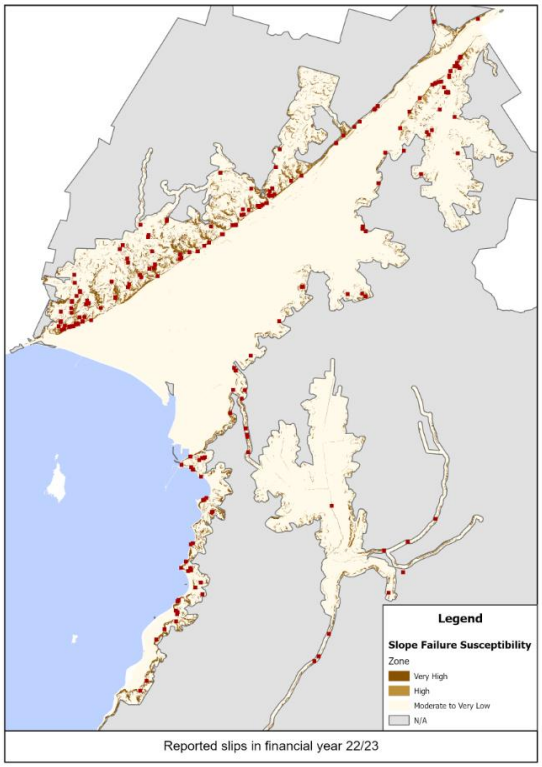
These steep slopes are susceptible to landslides after earthquakes or heavy rain. Erosion may also contribute to landslides.

Road cuttings, inadequate compaction, and poor drainage are contributing factors. Roads through cuttings or near steep slopes are more vulnerable.



In the 2022/23 year, there were 228 reported landslips in Lower Hutt. These ranged from small to significant. Council has prioritised the major Eastern Hutt Road slips due to the importance of the road and scale of the remedial works. The design for remediation of several other slips is currently being undertaken by experienced geotechnical engineers.



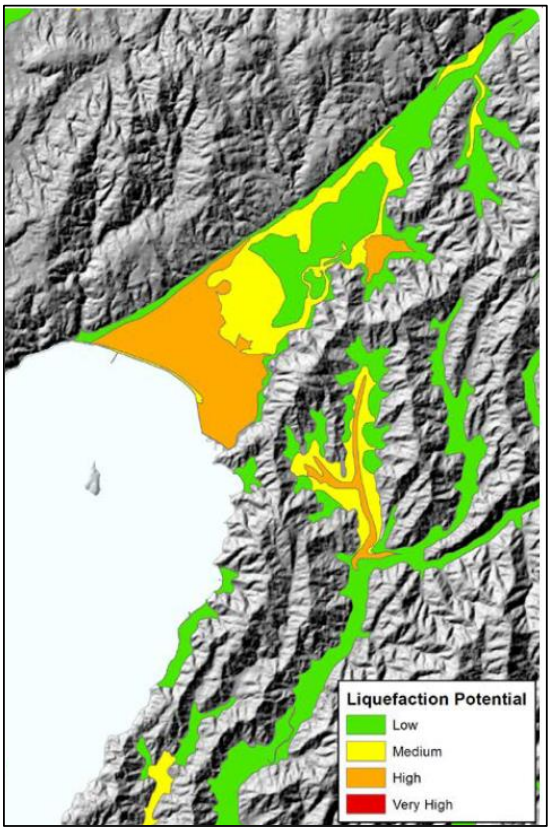


2.6.3 Liquefaction

Lower Hutt includes areas that have a high risk of liquefaction, as shown in the adjacent GNS figure.

According to GNS "before 2010, few New Zealanders had heard of liquefaction, but the Canterbury earthquakes were a sobering lesson of its potential to cause widespread damage. The areas of the Wellington region potentially susceptible to liquefaction during an earthquake have now been mapped … (and) vulnerable areas include parts of Lower Hutt and Wainuiomata".

Liquefaction can occur when seismic shaking agitates saturated ground material of certain types. Buildings and other surface structures supported by liquefied ground can subside or tilt over. Underground hollow structures, such as pipes and tanks, may rise to the surface due to buoyancy forces.



Source: GNS Science

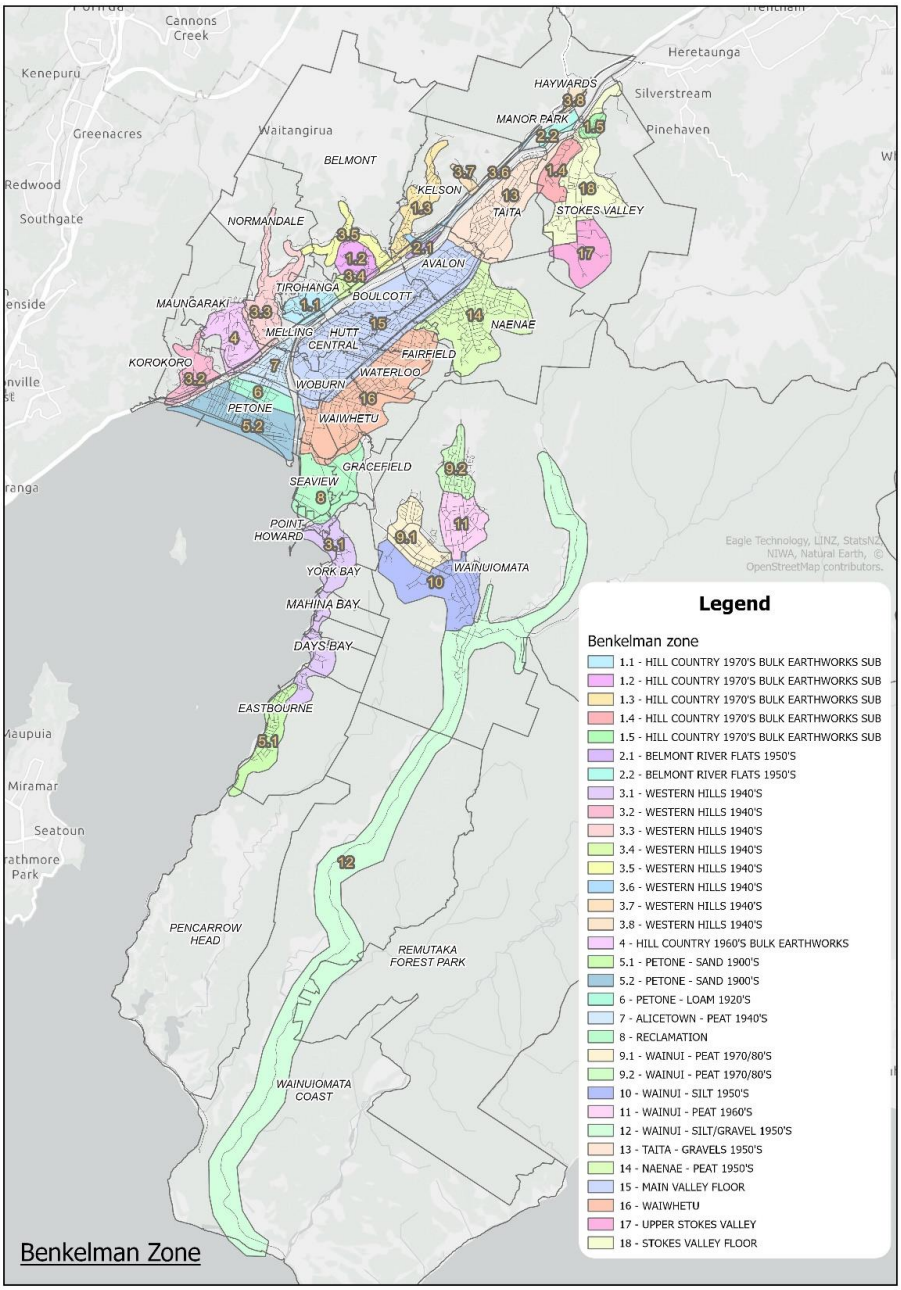
The following table shows the length of road that is exposed to liquefaction hazard within HCC. Of note, ~66% of Arterial Roads have medium or high potential liquefaction, as do ~50% of all Primary Collectors., of ~38% of all roads.

Road Type	Length in High Potential Area of Liquefaction (km)	% of Road Category in Liquefaction Area	Length in Medium Potential Area of Liquefaction (km)	% of Road Category in Liquefaction Area
Regional	0	0.0%	0.522	7.5%
Arterial	17.194	33.7%	16.439	32.2%
Primary Collector	12.111	18.1%	21.386	31.9%
Secondary Collector	18.347	15.3%	16.525	13.8%
Access	24.965	16.6%	33.747	22.5%
Low Volume	9.795	10.9%	11.985	13.3%
TOTAL	**82.412**	**17.0%**	**100.604**	**20.7%**

2.6.4 Ground Conditions

Hutt City is built on a variety of topography types ranging from the steep eastern and western hills to the flat areas of the valley floor and Wainuiomata and reclaimed land in Seaview.

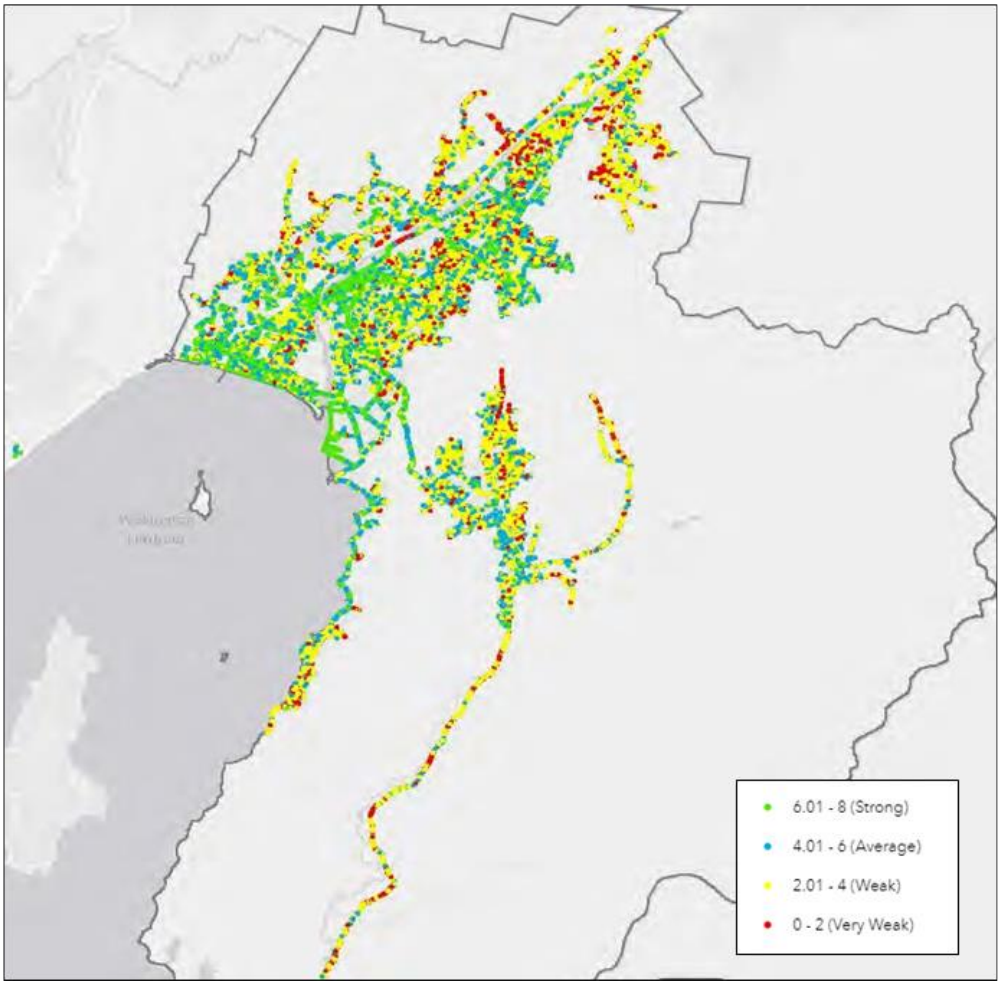
Pavement strength assessments were undertaken by HCC over 1999-2001 to allocate pavement strength values (SNP) to the network. This included utilising the 18 geographic ground condition areas identified, along with Falling Weight Deflectometer and Benkleman Beam testing to validate assumptions.



Subsequent dTIMS modelling has been based on these SNP values.

The variable ground conditions in Hutt City give rise to local areas of weak and flexible subgrade material on which the pavements are constructed. This is particularly evident in Petone/Alicetown /Waiwhetu, the corridor on the eastern valley edge (Oxford/Cambridge Terrace), and in the Naenae, Wainuiomata and Stokes Valley zones. This has caused variability in pavement flexibility, capacity and drainage which limits consistent maintenance treatment options and increases the need for more regular and extensive intervention.

To ensure accurate modelling and treatment selections, a review of the SNP values was undertaken in 2019-2020. Network-wide testing using Multi Speed Deflectometer technology was done, and the map below shows the results.



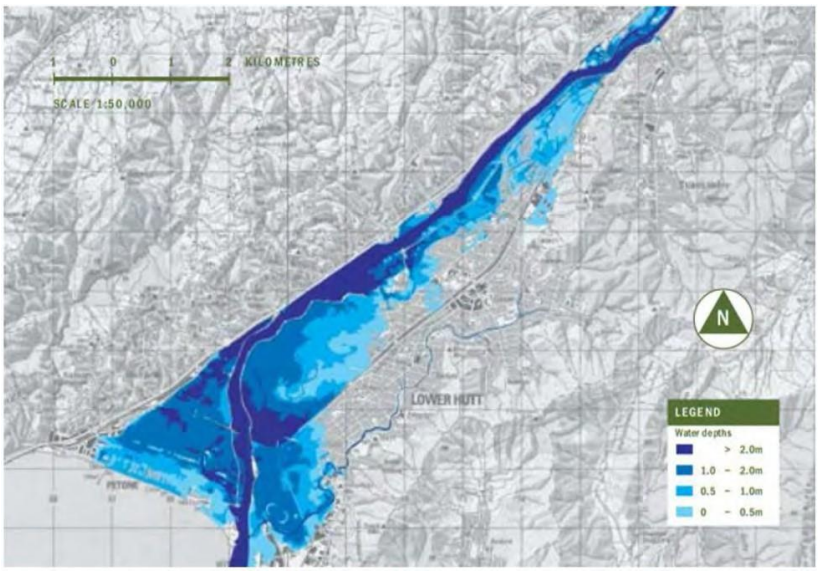
These results show a large portion of Hutt City's pavements being on very weak or weak subgrades and are consistent with the earlier pavement strength assessments done in 1999-2001. The following table shows the length of road that is exposed to weak or very weak pavements within HCC.

Subgrade Strength	SNP	Length of Network (km)	% of HCC network
Very Weak	0-2	57	12%
Weak	2.01-4	214	44%
Average	4.01-6	132	27%
Strong	6.01-8	82	17%
TOTAL		**485**	**100%**

The table above shows that 271 kms of network is on weak or very weak subgrades. As shown, **56% of the network is vulnerable to deterioration due to weak or very weak subgrades.**

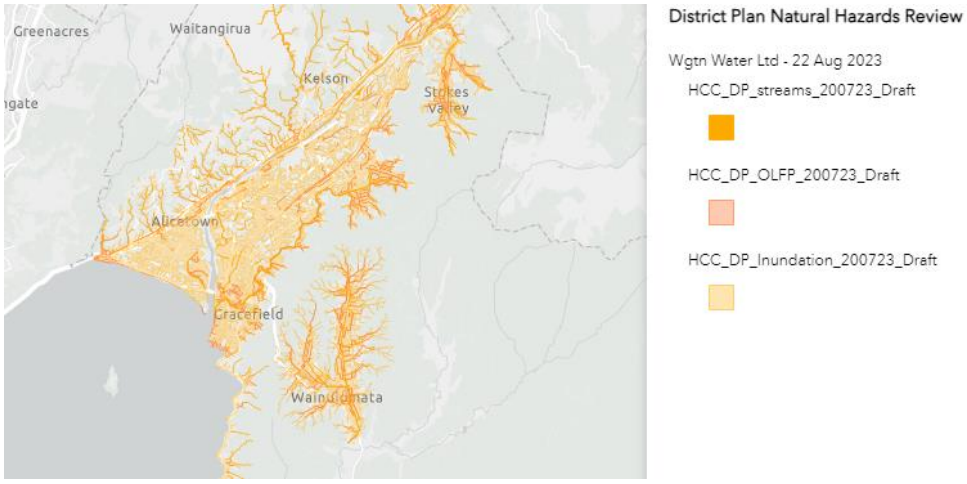
2.6.5 Flooding

Flooding frequency is likely to increase in response to increased rainfall. Rainfall is projected to increase in the West of the Wellington region and decrease in the East of the region. As such, it is unknown if the future flood risk will vary greatly from present day. This figure shows a 2,300 cumec flood (440-year event) inundation levels with stop bank breaches.



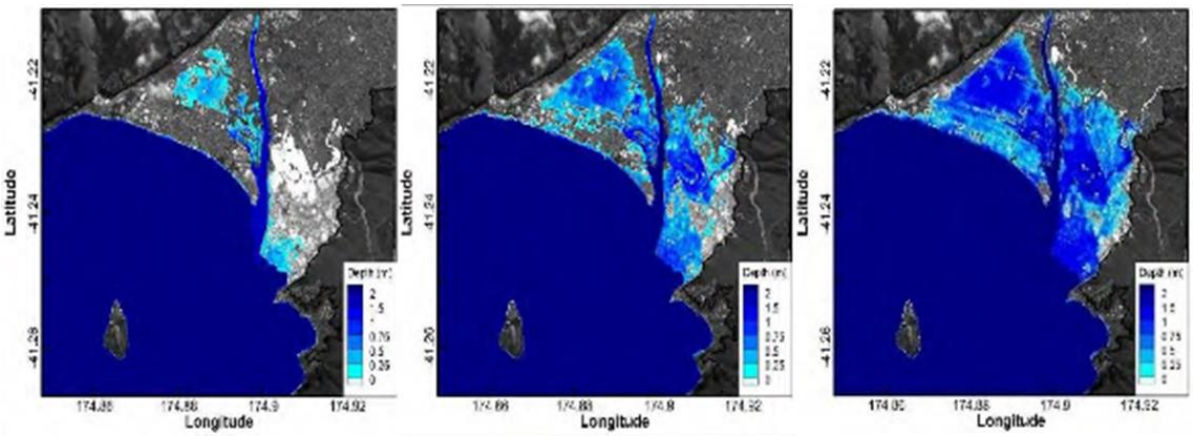
http://iportal.huttcity.govt.nz/Record/ReadOnly?Query=container:[uri:4685459]&Tab=31&Uri= 4686448&Page=1

Flooding associated with development and stormwater systems is also likely to increase. The map below shows the modelled stormwater runoff for a 1 in 100-year storm event. Hazards areas for inundations, overland flow paths and streams are identified. Modelling is not complete for southern Wainuiomata, as well as the Wainuiomata River and its tributaries below this point. This model identifies hazards identified with overland flow and flooded streams. This hazard is an additional risk for roads due to erosion and deposition.

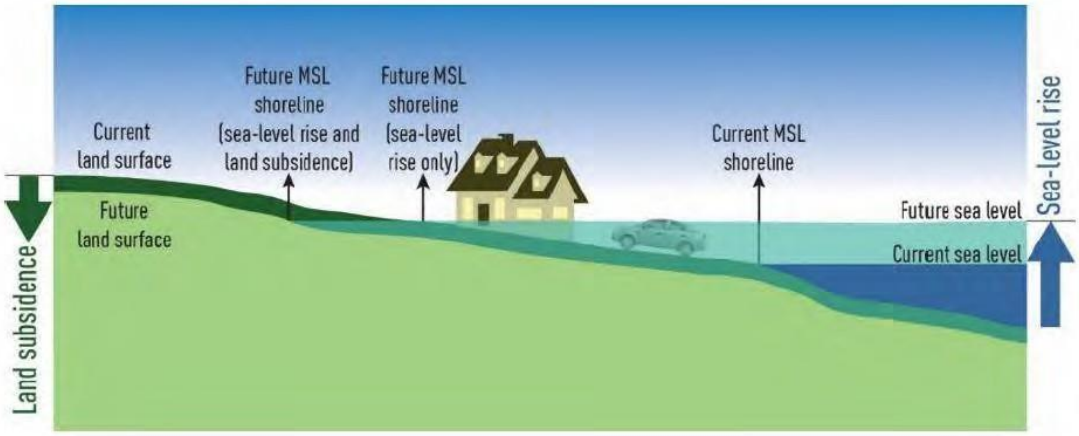


2.6.6 Sea level Rise

NIWA research provides inundation water levels resulting from storm-tide predictions at sea level rises of 0.5m, 1.0m, and 1.5m respectively.



The HCC Infrastructure Strategy notes that the sea level is expected to rise between 50 cm to 80 cm by 2090, which combined with storm surge, will result in coastal properties and infrastructure being swamped and submerged by water in the future, or face an increased likelihood of storms and tsunamis entering inland, and damaging seawalls, roads, wharves, and public and private properties. The extent of the impact on Lower Hutt could be larger than the global average, given local factors including projected erosion, liquefaction, and subsidence.



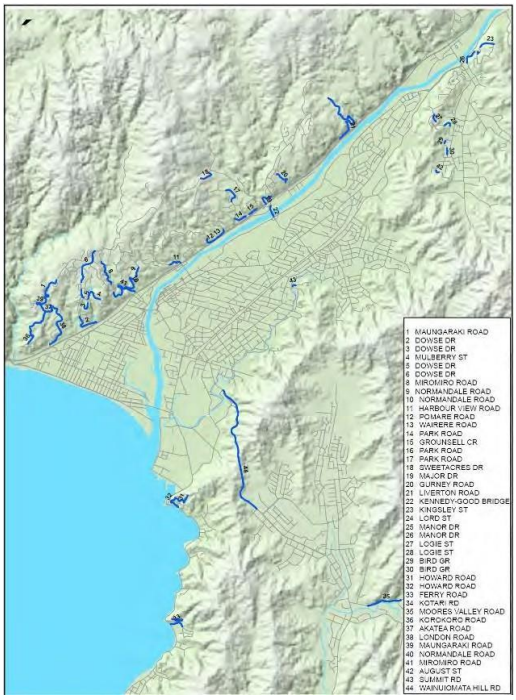
Source: https://niwa.co.nz/natural-hazards/hazards/sea-levels-and-sea-level-rise

While HCC has started work to address climate change, a definitive strategy for the most vulnerable areas is still to be developed.

2.6.7 Ice

Although average temperatures may be trending upward over recent years, it is still quite probable that extreme cold weather events will occur.

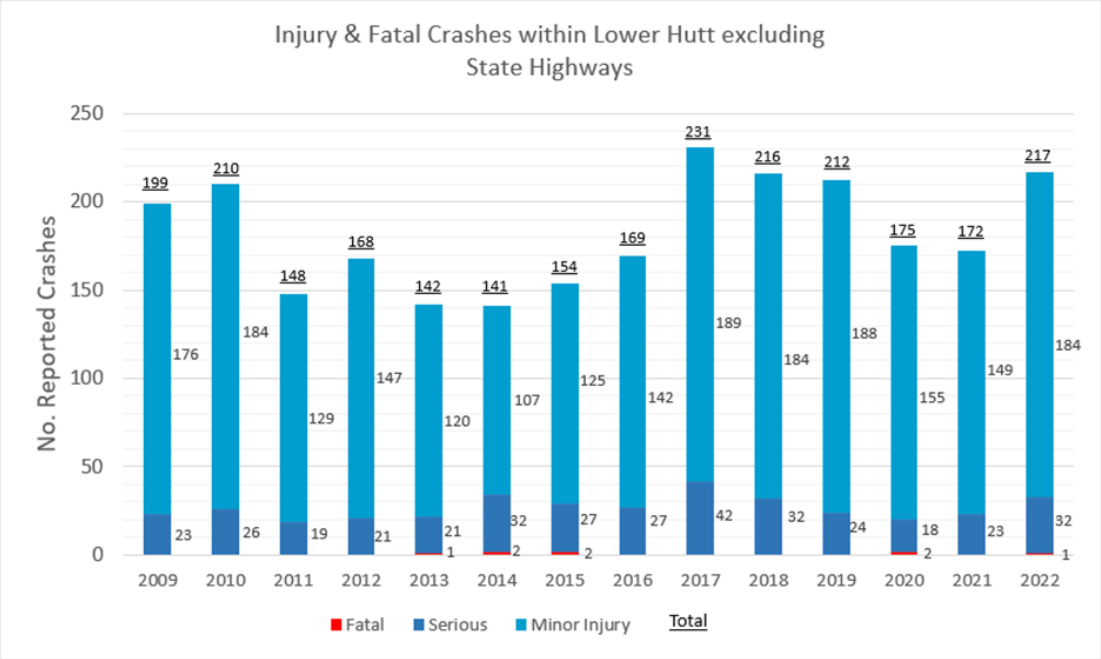
Council has identified and mapped those roads where ice has been a historical problem in adverse weather, and as shown in the adjacent figure. It should be noted that this features 43 road segments.



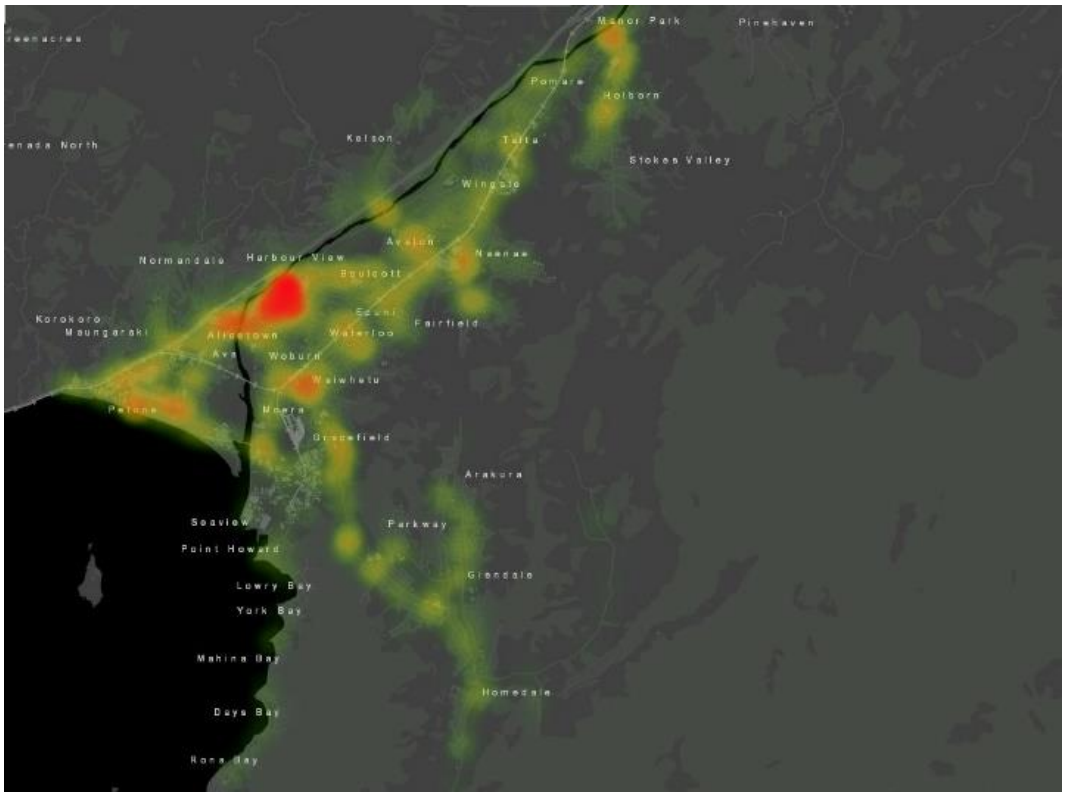
Reactive maintenance gritting is undertaken on these roads when ice is present, and at higher risk road segments surfacing with higher skid resistance is used.

Any new developments which include roads in hillside areas should be made aware of the potential risks for ice, and Council should update this map accordingly.

2.6.8 Road Safety

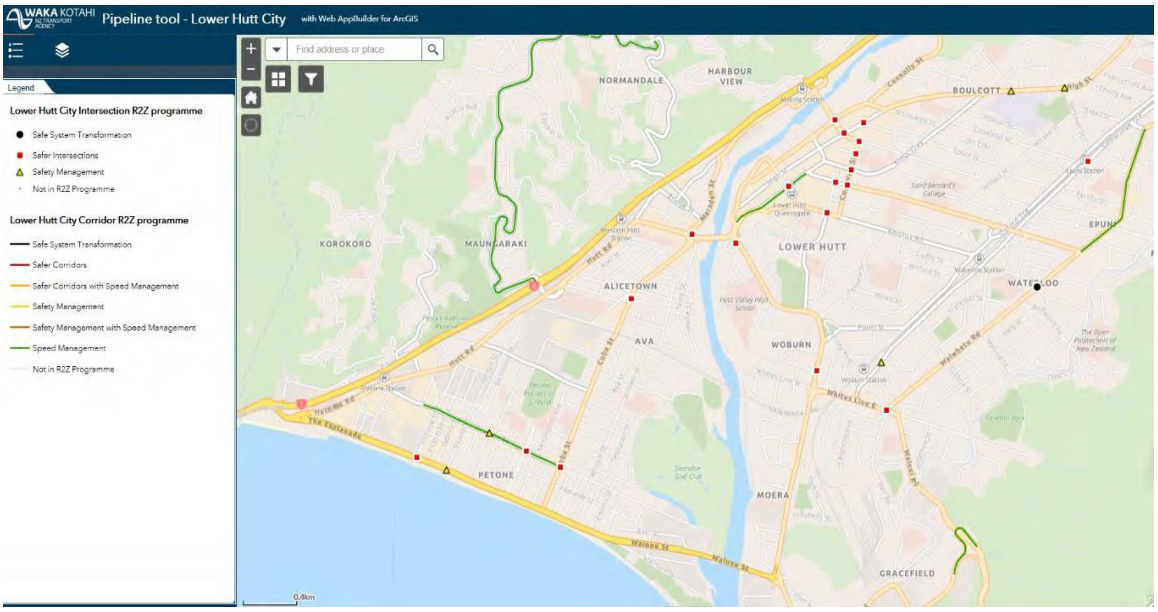


Road safety trends in Hutt City over recent years have mirrored the increasing trend seen across the country since 2014.



Although fatal crashes are rare, the increasing trend in minor crashes is a cause for concern. High vehicle operating speeds remain a concern and particularly affect vulnerable road users including pedestrians and cyclists.

Hutt City has developed its own prioritisation tool to identify and prioritise future safety improvement requirements.



2.6.9 Transport Demand

Transport demand is increasing with more rapid and intense residential development which leads to population growth. Increased vehicle use and parking demand affect network capacity and travel time reliability.

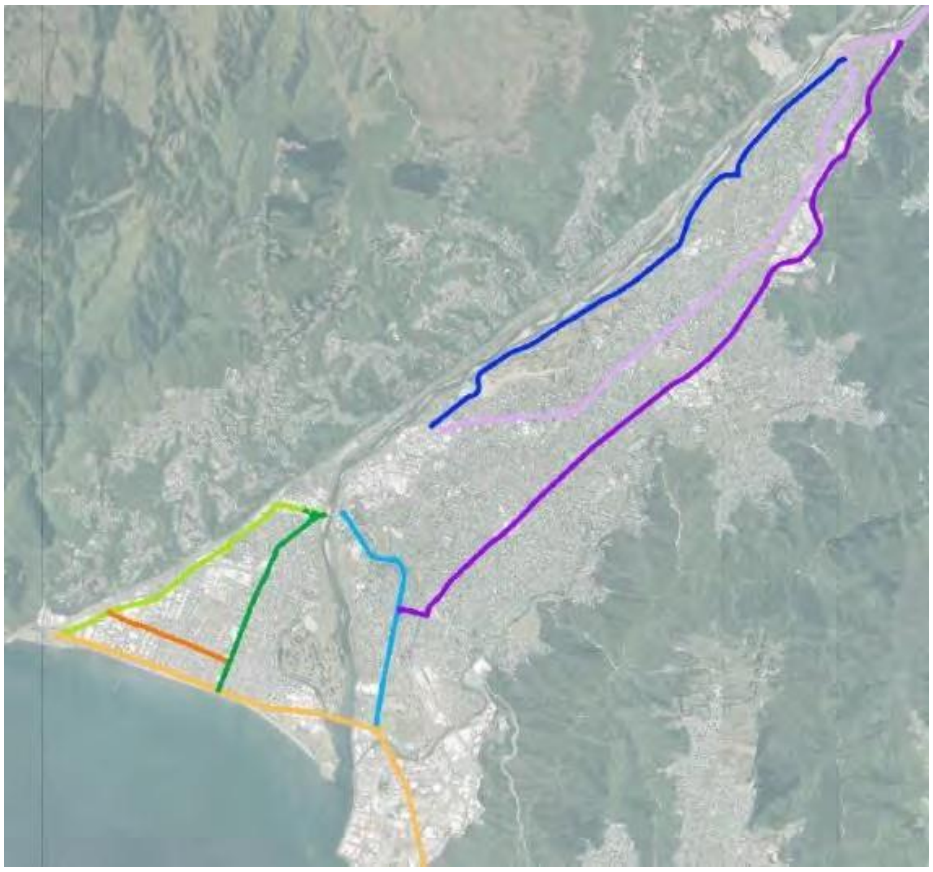
Land use planning changes are enabling far more dense residential development and removing parking minimums, places pressure on the existing transport network and reducing the level of service.

Traffic volume growth is likely to be closely aligned with population growth.

2.6.10 Travel time and delay

Council monitors vehicle travel time twice a year on key routes across the city using GPS data. This allows identification of routes where demand is approaching capacity, demonstrates peak spreading, and is used to identify and prioritise upgrades.

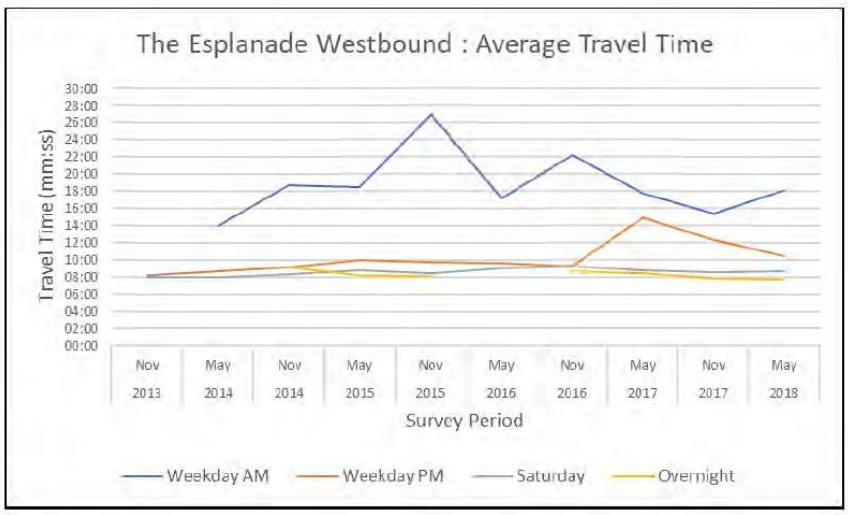
The figure below identifies the key routes that Council monitors:



Increased demand on the transport network results in increased congestion and reduced travel time reliability. Population growth over recent years has already resulted in increased delays on key routes, particularly during the AM and PM peak periods, and on some routes Interpeak delay is also increasing. More intense development will exacerbate congestion and delays requiring network upgrades for safety, efficiency, and active modes.

One of the most heavily travelled roads is the Esplanade, however there is not complete data on current travel time. Updated travel time monitoring is required, including an assessment of congestion and delays. HCC does also have dated information, but has included a renewed focus on collecting robust travel time data within the Improvements Plan.

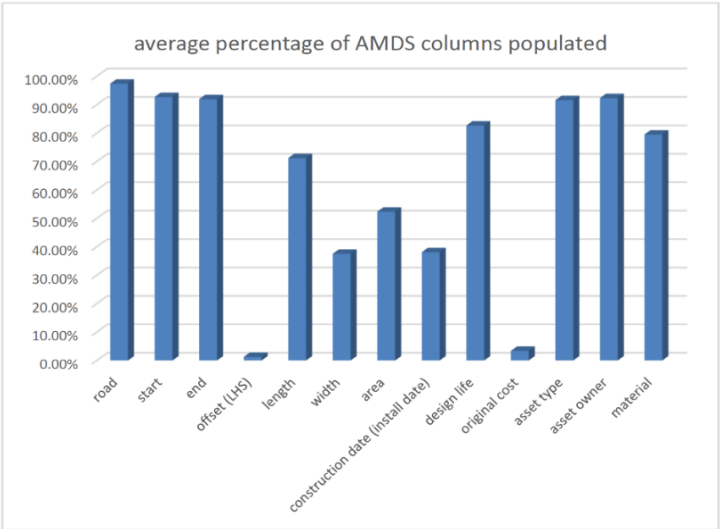
The figure below highlights the increased travel time required during the weekday AM peak as people begin their congested commute into Wellington.



2.6.11 Existing asset management capabilities and capacity

Transport asset management in Hutt City led by the Transport Asset Lead who has the responsibility of asset management of all transport assets. The management of streetlights is separately lead by an experienced streetlight asset expert.

Hutt City utilises the Road Assessment and Maintenance Management (RAMM) database to capture network asset profiles, statistics, and activity. While there is has been good base data within RAMM for some time, recent efforts have been made to capture all asset data, and ensuring its accuracy, so that we can fully utilise this tool in asset management decision making. A Draft Asset Data Improvement Plan was prepared in December 2022, and which outlined the average percentage of AMDS columns populated at that time, as shown below.



RAMM management is a specialised role. Council has recently recruited a dedicated, specialist RAMM resource and have recruited RAMM expertise in other roles which will improve the confidence and reliability of data quality.

There will be a big focus over the next three years of getting as much asset data into RAMM as is possible. Asset data that is not in RAMM is typically managed through separate GIS or spreadsheet systems.

2.6.12 Community Aspirations

Community consultation associated with the Infrastructure Strategy identified that the Hutt City "levels of service (should) be of a high standard in terms of quality, responsiveness and timeliness".

Resident Satisfaction surveys are conducted annually by HCC's Research and Evaluation Team.

The survey, conducted from 15 March to 25 April 2023, asked a sample of Lower Hutt City residents about their engagement and satisfaction with Council's services and facilities. A total of 1719 survey responses were used in the final analysis.

HUTT CITY TE AWA KAIRANGI

Satisfaction at a glance

Transport Infrastructures & Availability of Parking	Roads	Footpaths	Shared paths
	2023 35% ↓	2023 45% ↑	2023 45% ↔
	2022 42%	2022 37%	2022 43%
	Cycleways	Pedestrian Crossings	Parking availability
	2023 36%	2023 63% ↑	2023 45%
	2022 20% & 48% ***	2022 57%	2022 **

** Question not asked
***Change in question

↑ ↓ ↔ *The green arrow signifies an increase, while the red arrow indicates a decrease in satisfaction compared to the 2022 RSS results. ↔ Signifies an increase or decrease within the margin of error (-/+ 2%).*

This research aimed to determine levels of satisfaction with Council's services, facilities, and decision-making amongst Lower Hutt residents to identify possible improvement opportunities.

The community wants a city that is well maintained with an efficient transport system that makes Hutt City a better place to live, work and play.

The Satisfaction Survey-2023 recorded a 11% decline for Council maintained roads when compared to the 2022 survey.

Disabled residents expressed relatively low levels of satisfaction with pedestrian crossings.

The table on the following page provides the most recent key transport measures from the resident satisfaction survey, compared with data from previous years.

20122/2023 Residents Satisfaction Survey results

Measure	Target 2022-23	Achieved 2019-20	Achieved 2020-21	Achieved 2021-22	Achieved 2022-23
Resident satisfaction with the footpath condition	>80%	83%	78%	37%	45%
Resident satisfaction with the condition of their local roads	>80%	91%	86%	42%	35%
Resident satisfaction with on road cycleway condition	>80%	New measure 2021-22	64%	20%	36%
Resident satisfaction with shared path condition	>80%	New measure 2021-22	New measure 2021-22	43%	45%
Resident satisfaction with the availability of car parking to access services and facilities (does not include access to residences)	>75%	Not available	Not available	Not available	45%

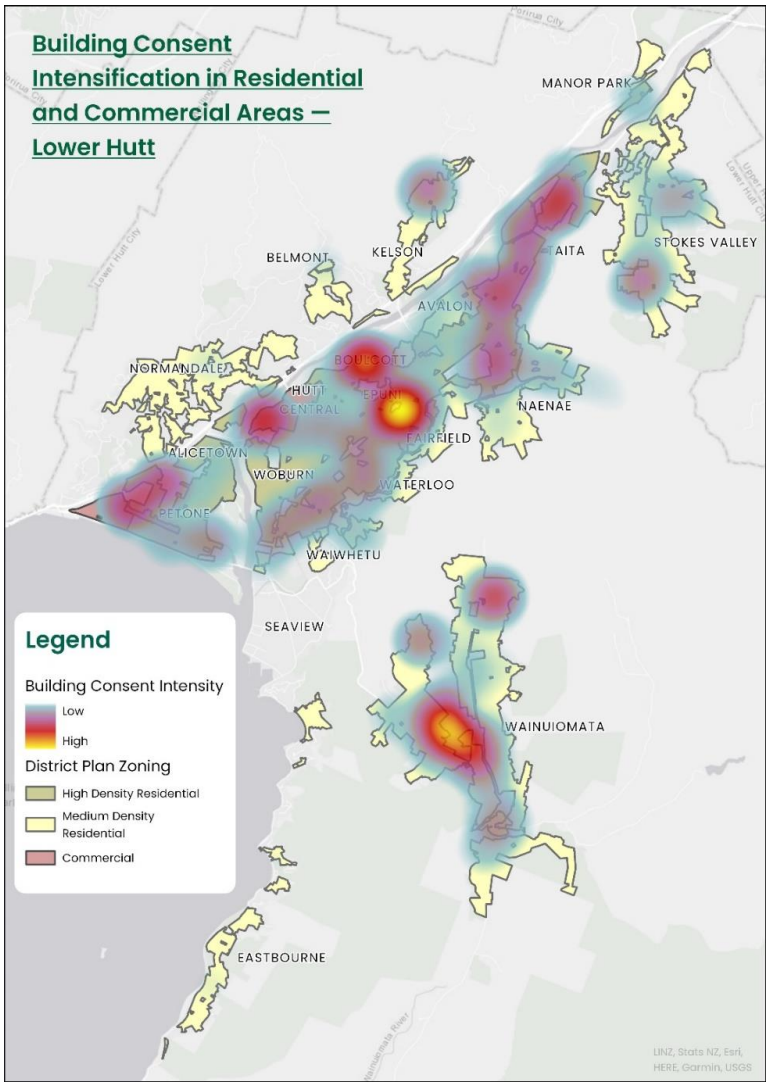
2.7 Forecasts and Assumptions

Population and demographic forecasts have been included previously and won't be repeated here. It is noted that all forecasts are based on assumptions with respect to growth or change. This section will outline some of the key assumptions that Council have made in the preparation of this AMP.

2.7.1 Growth

Te Awa Kairangi ki Tai is experiencing rapid housing intensification. With an increasing population this trend is likely to continue. In 2023, Council amended the District Plan to align with new Government rules to enable a greater level of intensification in Residential and Commercial Areas (Plan Change 56). This includes permitting three-storey buildings and three units per site in most residential areas and enabling buildings of six-storeys or more in areas near the city centre, Petone commercial centre and train stations. Plan Change 56 also introduced new restrictions on intensification in some areas, including for the purpose of managing natural hazard risks.

Under Plan Change 56, developments of four residential units or more in residential zones require resource consent. This will allow the capacity of water and transport infrastructure to service the development to be considered on a case-by-case basis. The Figure below illustrates the areas of Te Awa Kairangi ki Tai where building consent intensification has occurred in both residential and commercial areas, depicted by commercial, medium and high district plan zoning.



The Housing and Business Development Capacity Assessment is a collaboration of five Wellington councils to evaluate whether they have the potential to meet projected housing and business demand out until 2047. The assessment found:

- That to accommodate this growth, Lower Hutt will need between 6,105 and 11,256 new homes by 2047
- Currently, Lower Hutt has feasible greenfield land for 1,316 dwellings, with infill, redevelopment and residential intensification adding capacity for another 4,160 homes
- Under the population projections, the city will have a shortfall of development capacity of between 1,632 and 6,783 dwellings.

2.7.2 Cross-Valley Connection

The Programme Business Case for the Cross Valley Connections programme has been completed. The preferred programme is proposed to be staged to align with the expected timing of related projects and the Petone to Grenada Link Road project. The programme is expected to address the problems identified and achieve the investment objectives, whilst strategically supplementing the transport improvements that are already being developed – the do-minimum programme.

The programme has been split into three stages. Stage one (2024-2027) involves walking, cycling and accessibility improvements on Petone Esplanade, Hutt Road, and Ewen Bridge; bus priority improvements at key intersections and developing improved active mode and Micromobility access plans to the Petone, Ava and Woburn train stations. Stage two (2024-2027) will involve improvements to the Gracefield interchange, and stage three (2027 onwards) will look at a new east-west transport corridor that caters for all users.

The table below outlines the emerging preferred programme and its proposed staging.

Emerging Preferred Programme Staging

Stages	Timing	Key activities
Stage 1	2024/25 to 2026/27	Active mode improvements on The Esplanade, Hutt Road, and Ewen Bridge (Jacobs Micromobility SSBC) New active mode connection between Woburn and the new Petone to Melling section of the Te Ara Tupua Walking and Cycling Project
		Bus priority improvements at following key intersections: • The Esplanade / Hutt Road • Hutt Road / Jackson Street • Jackson Street / Cuba Street • Randwick Road / Waione Street • Randwick Road / Whites Line East
		Train station access plans to improve active mode and Micromobility access to the Petone, Ava and Woburn Train Stations

Stages	Timing	Key activities
Stage 2	2024/25 to 2026/27	Design for improvements to the existing Gracefield Interchange and the New east/west multi-modal transport corridor on a Wakefield Street to Whites Line/Randwick Road alignment
Stage 3	2028/29+	Construction of the Gracefield Interchange and new link road including: • An upgraded or replaced Ava Rail Bridge • New or upgraded road connections to Seaview / Gracefield • Cuba Street connections (e.g. on / off ramps) • Connections to the Dowse Interchange / Hutt Road • Bus priority (e.g. bus lanes) on The Esplanade (once the new east-west multi-modal transport corridor is in place).

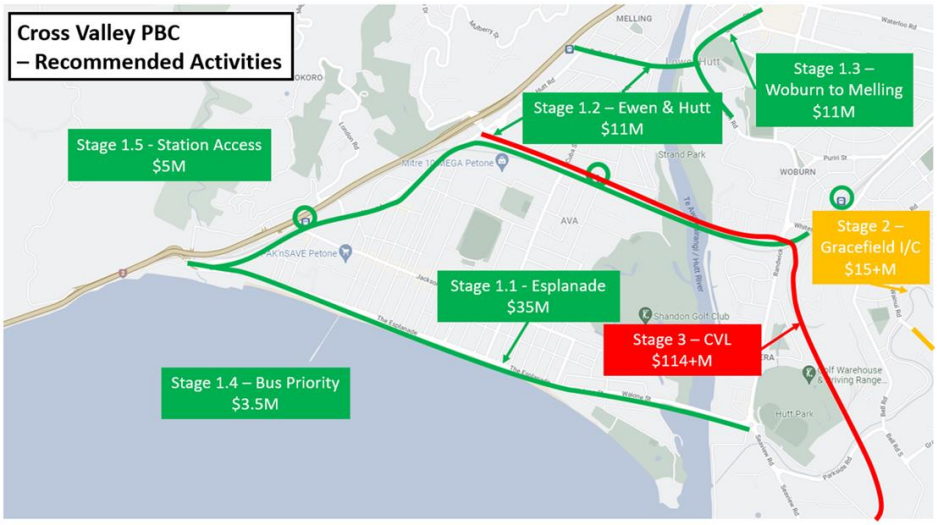
A key feature of Stage 3 is the recommendation that its implementation coincides with the implementation of major improvements to the "Ngauranga triangle state highway system"[1], such as, the P2G Link Road project. The key reasons for this recommendation are as follows:

- The transport benefits (resilience, access, and increased capacity) of the new east-west multi-modal transport corridor are not likely to be fully realised until the level of service improves on SH2, between the Melling and Ngauranga Interchanges, during peak traveling times
- Without a new east-west multi-modal transport corridor in place, east-west through traffic will continue to use The Esplanade, which in turn significantly limits the ability to implement major bus priority measures (or placemaking measures) in Petone.

Taking a staged approach allows for each phase of the programme to be evaluated / assessed by the investment partners before committing to the next stage (e.g. Stages 2 and / or 3).

Taking a staged approach also provides the investment partners with the option to bring forward a component of Stage 2 or 3 if required. For example, if Waka Kotahi, NZTA, decide to advance its business case for improving the Ngauranga Triangle state highway system, then the business case(s) identified for Stage 3 could also be brought forward. Despite generating standalone transport benefits, it is also noted that taking a staged approach provides the investment partners with the option of progressing both Stages 2 and 3 as a package rather than separately as currently proposed. Council is exploring the feasibility of doing the business case work for stages 2 and 3 at the same time in 2024–27.

The figures shown in the table below were indicative at the time the PBC was completed and are subject to change.

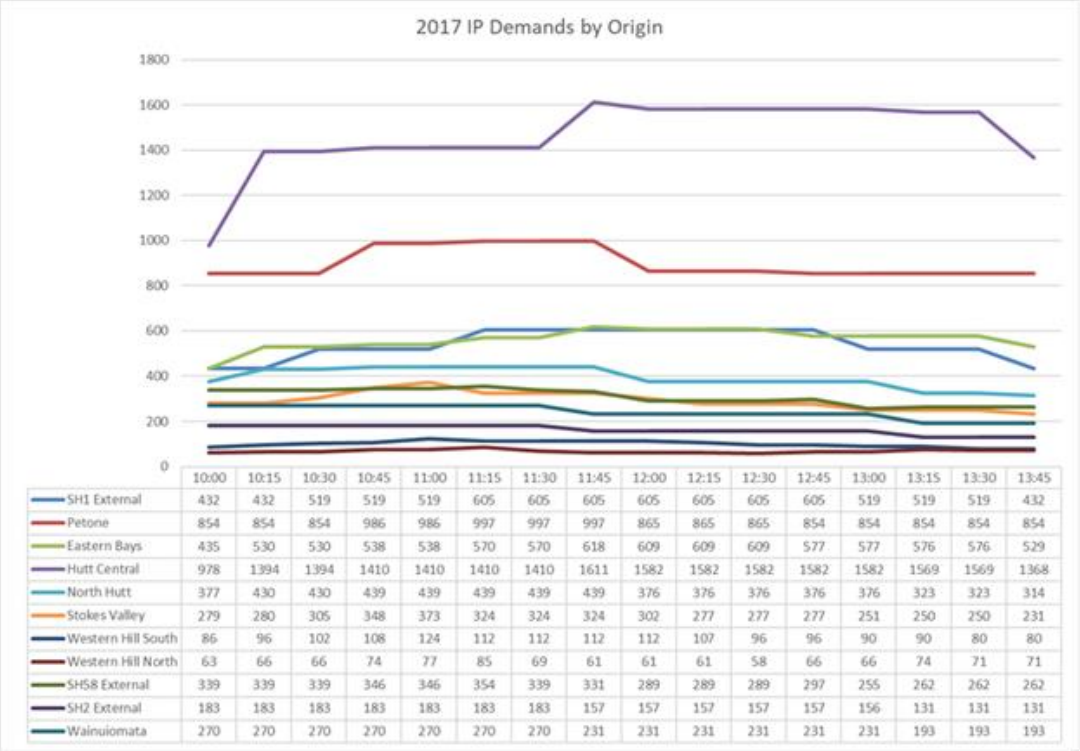


2.7.3 Traffic Forecasts and Modelling

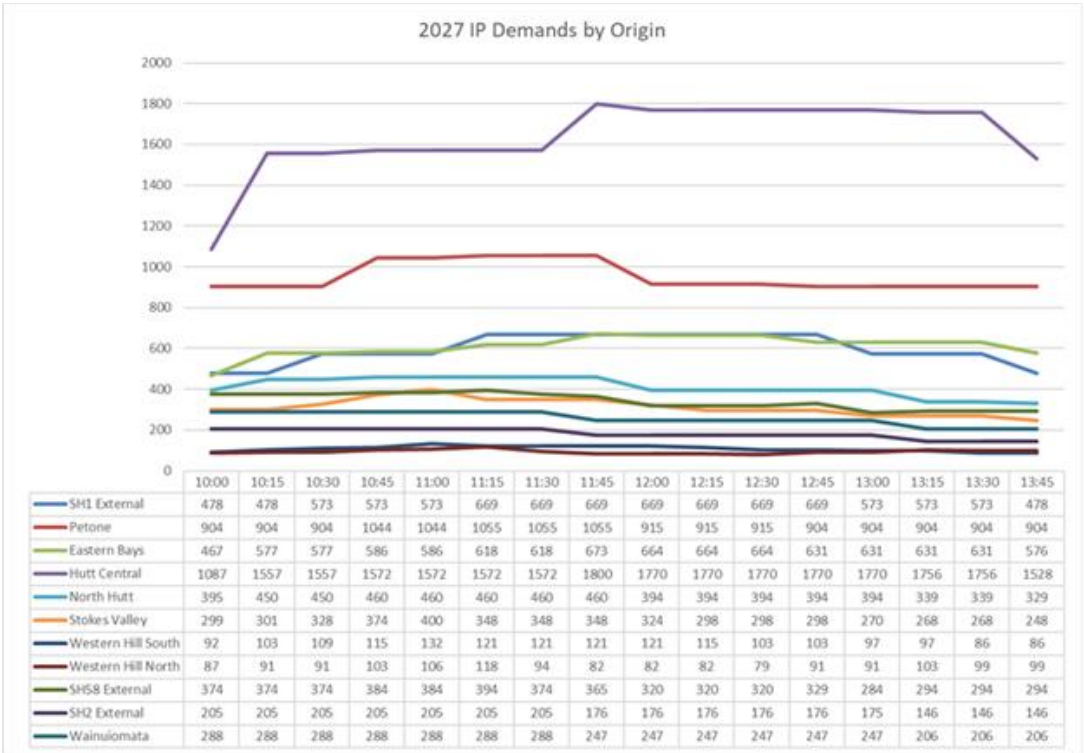
The Hutt Aimsun Model (HAM) has been developed to allow more robust evaluation of development effects and enable strategic future planning for the network. The model includes a base year (2017) and future year (2027) and is calibrated against an extensive array of traffic counts and travel time data.

Travel demand is obtained from the Wellington Transport Strategic Model (WTSM) operated by Greater Wellington, and the HAM has been developed in consultation with Greater Wellington to ensure the model provides robust output.

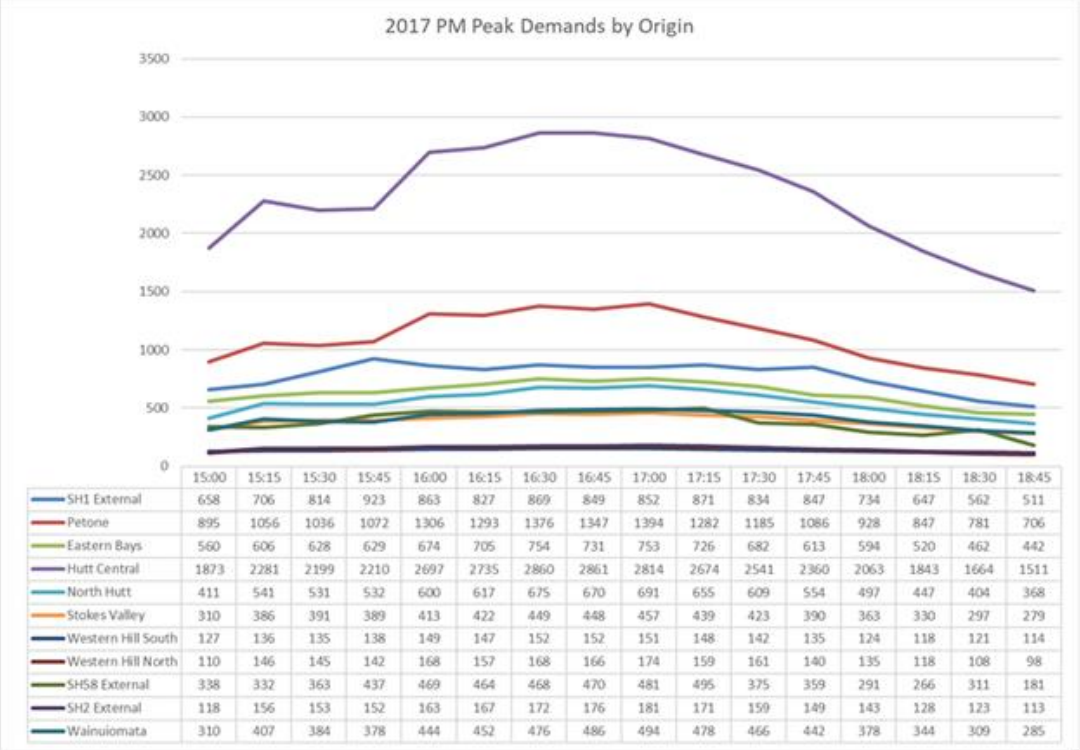
HCC has identified that this data and associated forecasting needs to be reviewed and updated. Subsequently, an item has been added to the Improvements Plan to update the travel forecasts and projections.



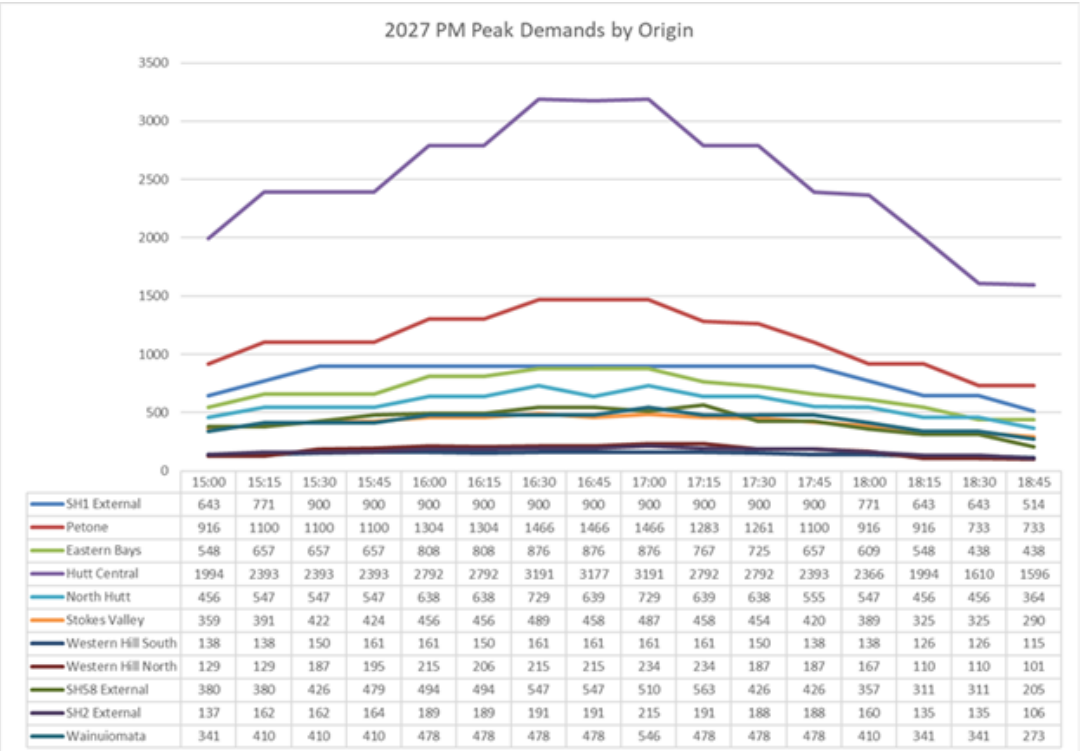
	10:00	10:15	10:30	10:45	11:00	11:15	11:30	11:45	12:00	12:15	12:30	12:45	13:00	13:15	13:30	13:45
SH1 External	432	432	519	519	519	605	605	605	605	605	605	605	519	519	519	432
Petone	854	854	854	986	986	997	997	997	865	865	865	854	854	854	854	854
Eastern Bays	435	530	530	538	538	570	570	618	609	609	609	577	577	576	576	529
Hutt Central	978	1394	1394	1410	1410	1410	1410	1611	1582	1582	1582	1582	1582	1569	1569	1368
North Hutt	377	430	430	439	439	439	439	439	376	376	376	376	376	323	323	314
Stokes Valley	279	280	305	348	373	324	324	324	302	277	277	277	251	250	250	231
Western Hill South	86	96	102	108	124	112	112	112	112	107	96	96	90	90	80	80
Western Hill North	63	66	66	74	77	85	69	61	61	61	58	66	66	74	71	71
SH58 External	339	339	339	346	346	354	339	331	289	289	289	297	255	262	262	262
SH2 External	183	183	183	183	183	183	183	157	157	157	157	157	156	131	131	131
Wainuiomata	270	270	270	270	270	270	270	231	231	231	231	231	231	193	193	193



	10:00	10:15	10:30	10:45	11:00	11:15	11:30	11:45	12:00	12:15	12:30	12:45	13:00	13:15	13:30	13:45
SH1 External	478	478	573	573	573	669	669	669	669	669	669	669	573	573	573	478
Petone	904	904	904	1044	1044	1055	1055	1055	915	915	915	904	904	904	904	904
Eastern Bays	467	577	577	586	586	618	618	673	664	664	664	631	631	631	631	576
Hutt Central	1087	1557	1557	1572	1572	1572	1572	1800	1770	1770	1770	1770	1770	1756	1756	1528
North Hutt	395	450	450	460	460	460	460	460	394	394	394	394	394	339	339	329
Stokes Valley	299	301	328	374	400	348	348	348	324	298	298	298	270	268	268	248
Western Hill South	92	103	109	115	132	121	121	121	121	115	103	103	97	97	86	86
Western Hill North	87	91	91	103	106	118	94	82	82	82	79	91	91	103	99	99
SH58 External	374	374	374	384	384	394	374	365	320	320	320	329	284	294	294	294
SH2 External	205	205	205	205	205	205	205	176	176	176	176	176	175	146	146	146
Wainuiomata	288	288	288	288	288	288	288	247	247	247	247	247	247	206	206	206



	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	18:30	18:45
SH1 External	658	706	814	923	863	827	869	849	852	871	834	847	734	647	562	511
Petone	895	1056	1036	1072	1306	1293	1376	1347	1394	1282	1185	1086	928	847	781	706
Eastern Bays	560	606	628	629	674	705	754	731	753	726	682	613	594	520	462	442
Hutt Central	1873	2281	2199	2210	2697	2735	2860	2861	2814	2674	2541	2360	2063	1843	1664	1511
North Hutt	411	541	531	532	600	617	675	670	691	655	609	554	497	447	404	368
Stokes Valley	310	386	391	389	413	422	449	448	457	439	423	390	363	330	297	279
Western Hill South	127	136	135	138	149	147	152	152	151	148	142	135	124	118	121	114
Western Hill North	110	146	145	142	168	157	168	166	174	159	161	140	135	118	108	98
SH58 External	338	332	363	437	469	464	468	470	481	495	375	359	291	266	311	181
SH2 External	118	156	153	152	163	167	172	176	181	171	159	149	143	128	123	113
Wainuiomata	310	407	384	378	444	452	476	486	494	478	466	442	378	344	309	285



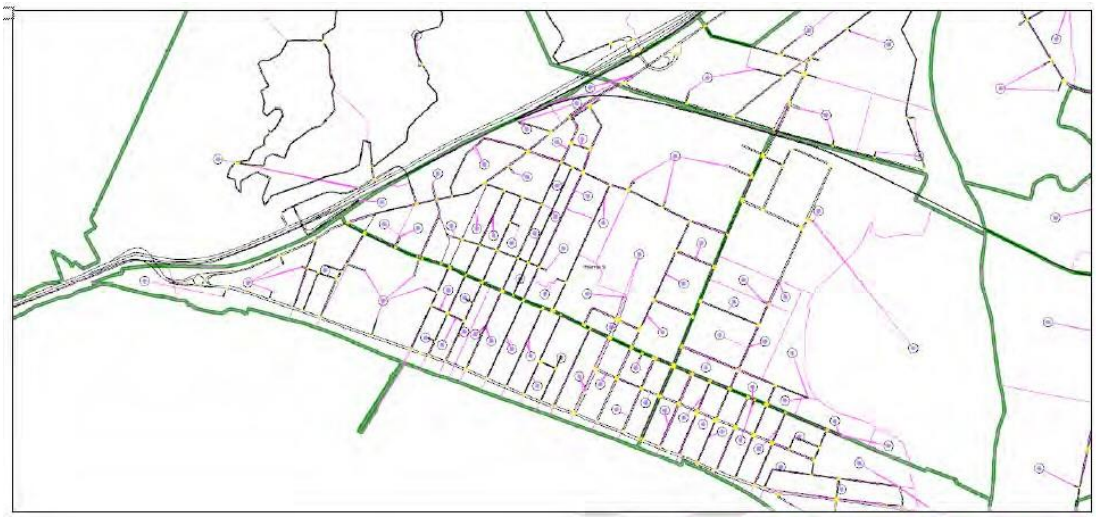
	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	18:30	18:45
SH1 External	643	771	900	900	900	900	900	900	900	900	900	900	771	643	643	514
Petone	916	1100	1100	1100	1304	1304	1466	1466	1466	1283	1261	1100	916	916	733	733
Eastern Bays	548	657	657	657	808	808	876	876	876	767	725	657	609	548	438	438
Hutt Central	1994	2393	2393	2393	2792	2792	3191	3177	3191	2792	2792	2393	2366	1994	1610	1596
North Hutt	456	547	547	547	638	638	729	639	729	639	638	555	547	456	456	364
Stokes Valley	359	391	422	424	456	456	489	458	487	458	454	420	389	325	325	290
Western Hill South	138	138	150	161	161	150	161	161	161	161	150	138	138	126	126	115
Western Hill North	129	129	187	195	215	206	215	215	234	234	187	187	167	110	110	101
SH58 External	380	380	426	479	494	494	547	547	510	563	426	426	357	311	311	205
SH2 External	137	162	162	164	189	189	191	191	215	191	188	188	160	135	135	106
Wainuiomata	341	410	410	410	478	478	478	478	546	478	478	478	410	341	341	273

To demonstrate the level of growth in the model, the below table shares the overall growth by vehicle type, period, and year. This shows growth in cars of 7% in the AM and PM peaks and 9% in the interpeak. Truck growth is higher, ranging from 13-17%.

		AM	IP	PM
2017	**Cars**	89766	90786	122625
	Trucks	5845	6681	4393
2027	**Cars**	95954	99146	130935
	Trucks	6619	7793	5034
Growth	**Cars**	6188	8361	8310
	Trucks	774	1112	641
% Growth	**Cars**	7%	9%	7%
	Trucks	13%	17%	15%

To provide insight to where growth is occurring, below is an extract by origin sector. In terms of absolute numbers, the Hutt Central sector shows the most growth with over 1,800 additional trips starting in this sector in the AM and PM peak and over 2,700 in the Interpeak.

Sector	2017			2027			Growth			% Growth		
	AM	IP	PM	AM	IP	PM	AM	IP	PM	AM	IP	PM
SH1 External	8298	8646	12648	9376	9557	12986	1078	910	338	13%	11%	3%
Petone	9827	14391	17973	10341	15230	18165	514	839	192	5%	6%	1%
Eastern Bays	7335	8990	10318	7723	9794	10944	388	804	626	5%	9%	6%
Hutt Central	18332	23436	37990	20135	26180	39860	1802	2744	1870	10%	12%	5%
North Hutt	6676	6274	8976	6959	6573	9125	283	299	149	4%	5%	2%
Stokes Valley	6238	4671	6320	6340	5019	6602	101	348	282	2%	7%	4%
Western Hill South	3598	1604	2243	3667	1722	2339	68	119	96	2%	7%	4%
Western Hill North	1763	1090	2342	2253	1497	2818	490	407	476	28%	37%	20%
SH58 External	8567	4939	6247	8870	5479	6855	303	541	608	4%	11%	10%
SH2 External	5063	2611	2476	5520	2927	2706	457	316	230	9%	12%	9%
Wainuiomata	3869	3855	6664	4100	4118	6829	231	263	165	6%	7%	2%

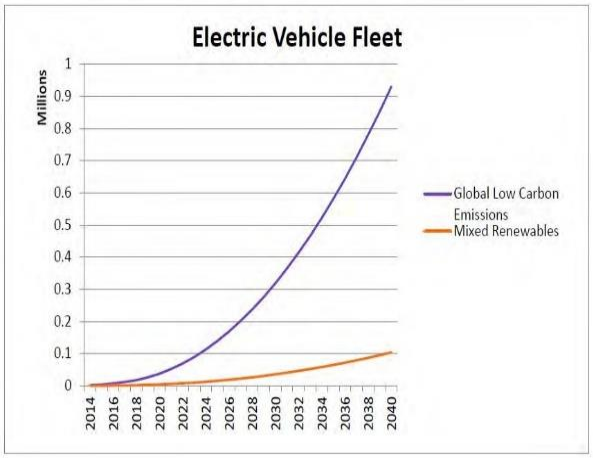


2.7.4 Electric Vehicles

Hybrid and fully electric vehicles are becoming more popular and prevalent on the roads. Future growth is expected, albeit the rate is unknown.

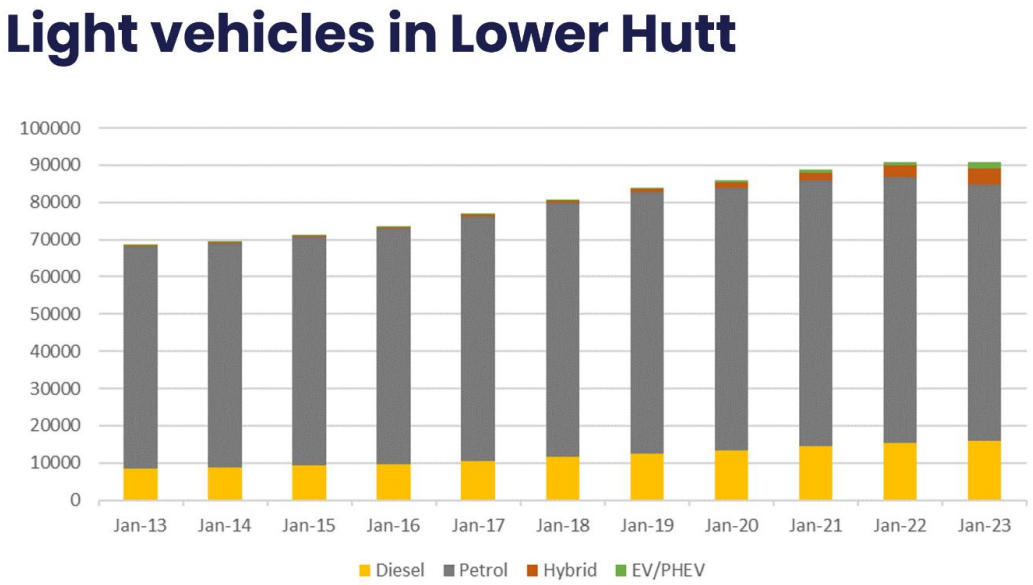
Perception factors that may influence uptake include, but are not limited to:

- Lower operational cost
- Lower maintenance
- Quieter operation
- Improving range
- Better purchase prices
- Environmental benefits
- Government support
- Refuel (charge) at home



Source: *https://www.mbie.govt.nz/dmsdocument/4257- projections-of-electric-vehicle-fleet-size*

In addition to the projections shown above, the following graph shows the changing composition of light vehicles in Lower Hutt. This graph reveals a noticeable increase in the number of Hybrid vehicles over the span of this chart – and similarly there is an emerging growth in EV/PHEV vehicles.



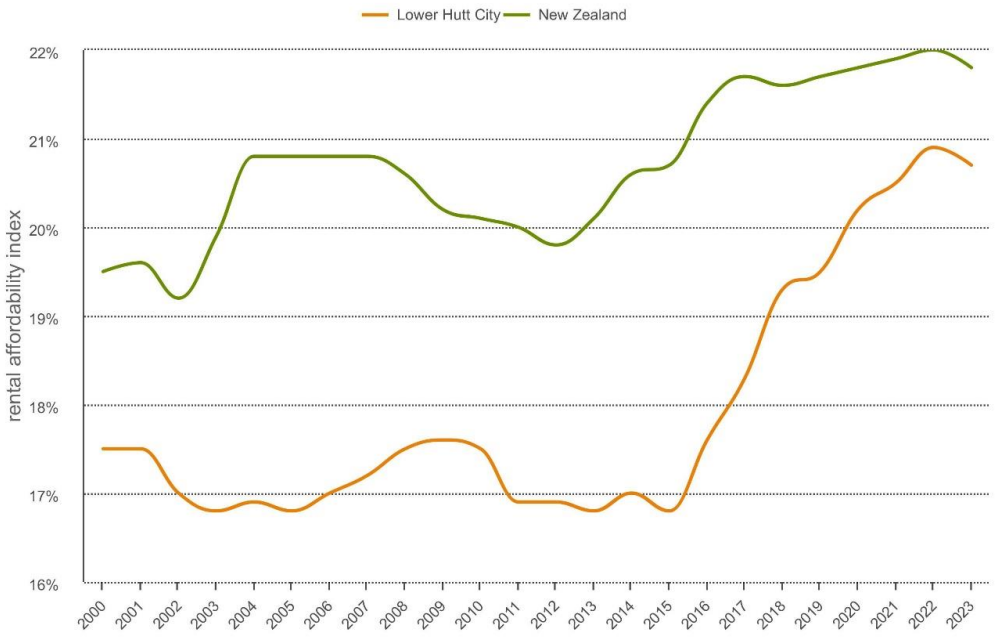
2.7.5 Working from home

In the wake of the global COVID-19 pandemic there has been a shift in traditional work paradigms. The once-communal office spaces shifted to the rise of hybrid working, positively impacting on the country's transport-related carbon emissions. This transformation in work culture not only altered the daily routines of employees but also initially contributed to a reduction in the demand for public transport. While the immediate benefits of remote work on emissions and transport demand were evident, the longer-term impact on traffic forecasts and emissions remains uncertain as societal preferences around travel continue to evolve.

2.7.6 Housing Affordability

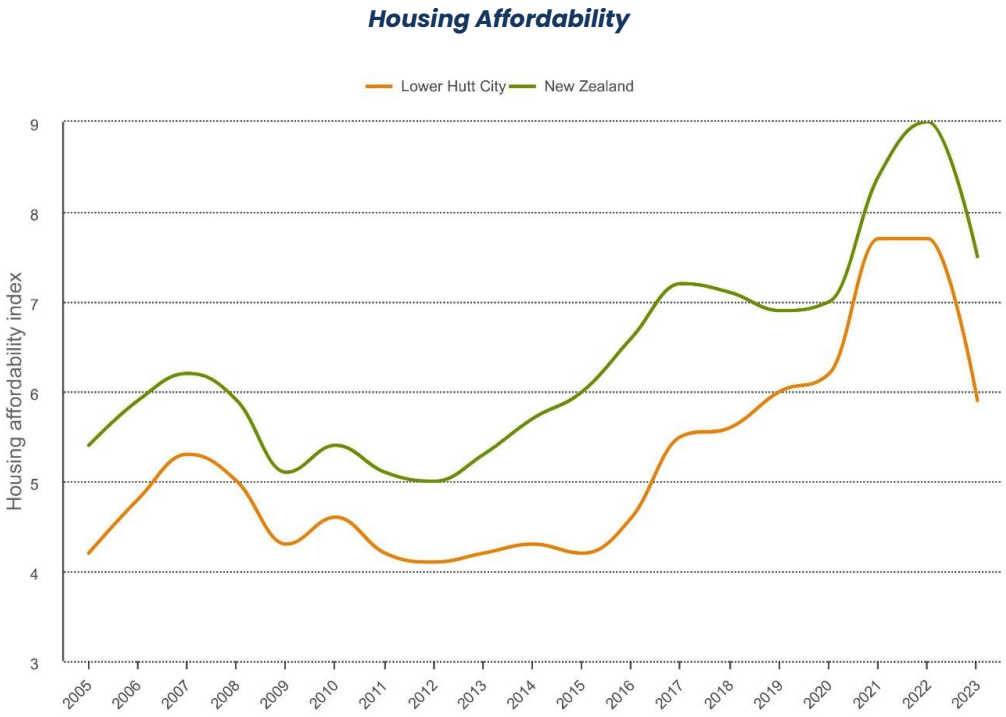
Compared with the New Zealand average, rental housing has been more affordable in Hutt City over the years 2000-2023. It is projected that despite the gap closing over the last 7-8 years, this trend will continue into the future.

Rental Affordability



Source: Infometrics

Further, an data on housing affordability shows a similar trend, with Hutt City consistently more affordable than the New Zealand average. The affordability of Hutt City is contributing to population growth, and is expected to continue into the future.



Source: Infometrics

2.7.7 Lifecycle of Transport Assets

While the Romans build roads that have lasted for millennia, the level of service has degraded over time. Transport assets in New Zealand are not specifically designed to last for millenia due to the costs that would be involved, and the uncertainty about future changes in the environment, technology, and the community. Many HCC transport assets are designed for a 25-year useful life.

The intended state for transportation assets within HCC is that they are subject to a proactive asset lifecycle management approach. Asset lifecycle management is a technique of asset management that maximises the usable life of assets through planning, purchasing, using, maintaining and disposal of assets. The aim of lifecycle management is to manage assets in a way that optimises the balance of costs pertaining to the various lifecycle stages of asset ownership – and then determine appropriate response options to minimise risks, or potential risks, to Council assets. Council is working towards these changes, as an overarching objective behind all items included in the Improvements Plan.

Data and Modelling

This activity is a supporting function to help inform the risk-based decision-making framework that is used to deliver on the strategies below. The activity covers annual surveys of footpath and road condition, road roughness, biennial skid resistance and structures surveys on a rotating basis over five years.

The development of dTIMS pavement deterioration modelling, used to predict future network condition and assess budget requirements is the key element of our pavement strategy.

Regular collection of traffic count data allows us to build an essential database to quantify volume and loading on the network and ensures reliable, up-to-date data is used in renewals programming.

This activity also includes the administration of RAMM which is used by our engineers and contractors to program network maintenance, manage the cost estimation, claims and payment process for our three road maintenance contracts and the street lighting maintenance contract.

Strategic Planning

HCC has numerous strategies and plans, each of which are developed through a robust process. The Transport AMP is the key plan for the management of transport activities and transport assets, where key drivers include:

- **Demand Management** – regular review of demand forecasts and changes
- **Risk Management** – regular review of risks and mitigation measures
- **Service Levels** – Review of service standards and customer feedback
- **Decision Making** – Use of prioritisation tools to optimise solutions
- **Sustainability** – Confirm resource management results align with principles

Project Development

Asset development needs (projects) are identified from an analysis of:

- Network performance monitoring against levels of service
- Network modelling
- Demand forecasts

Development projects are justified and prioritised using criteria that is consistent with the investment objectives derived from our strategic drivers. This is accomplished through the use of decision-making tools utilising multi-criteria analysis.

A long term development programme is prepared from projects meeting the assessment criteria. An annual development programme is approved through the Investment Decision Framework process, with business cases required for all significant projects. All asset development works will be designed and constructed in accordance with current adopted industry standards and system design loading.

Operations and Maintenance

HCC use performance-based, competitively-bid, contracts to achieve defined service standards for the operation and maintenance of the transport network at lowest whole-of-life cost. These contracts include incident managment features that allow council to effectively respond to, and manage incidents – and to ensure service continuity by mitigating adverse effects.

Renewals Strategy

HCC understand that an effective renewals strategy can have a positive impact on the cost of operations and maintenance, albeit this is a balancing act to optimise limited funding while maximising the useful life of the asset. Council ensures that renewal needs are justified, prioritised, and quantified through analysis of the following data:

- Age and material type
- Condition assessments
- Maintenance records/history
- Physical observation

An annual renewals programme is prepared, prioritised, and approved through the council's Investment Decision Framework process. All asset renewal works are designed and constructed in accordance with current adopted industry standards. Project delivery is through performance-based, competitively-bid contracts to achieve defined service standards.

Recycling and/or Disposal

At the end of life, assets are often removed. Some structures and many other assets such as the pavement are recycled when this is appropriate. Each proposal for asset disposal is assessed on an individual basis, subject to the requirements of any relevant legislation and considering resilience issues.

2.8 Sustainability and Environment

HCC has set a goal of reducing emissions to net zero by no later than 2050. The goal also applies to Council-Controlled Organisations, such as the Seaview Marina.

We've produced an action plan that sets out our intentions to reduce carbon emissions across the city. Some of these focus on reducing Council's own emissions, but also include actions to change to city-wide emissions, like expanding our cycle ways.

Council has in place various plans and strategies to address climate change impacts. These include the Interim Carbon Reduction and Climate Resilience Plan 2021-2031, the Climate Action Pathway, and the Integrated Transport Strategy.

2.9 Financials

Council adopted an updated financial strategy as a part of the 10-year plan 2021-2031. This financial strategy has similar broad aims to those adopted in the past:

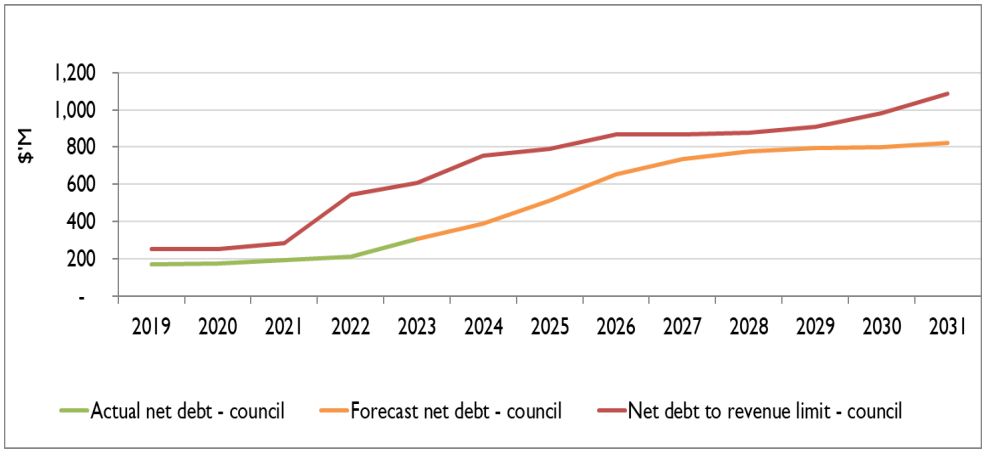
- strengthening Council's financial position in anticipation of projects and programmes that may need funding in the next 20-30 years
- ensuring rates were affordable for our community and competitive when compared to local authorities with a similar population and a significant urban centre
- delivering services more efficiently

In addition, the strategy adopted also sets some principles around:

- consideration of our environment and sustainability
- growth pays for growth
- consideration of the distribution of benefits
- consideration of good financial governance and stewardship.

Refer to Section 2.9.1 below for full details of these principles.

The following figure outlines the Council's actual and projected net debt compared to the limits. The limit is set at 250% which is below the Local Government Financial authority limit of 270%. This allows us additional debt headroom in the event of a major emergency.



2.9.1 Council's Financial Strategy

Vision: The financial strategy enables Council's contribution to the vision for Lower Hutt

The guiding principles to support the Council's financial strategy are as follows:

1. Fairness and Equity

The funding of expenditure is equitable across both present and future ratepayers.

a) Intergenerational equity – the cost of long-term assets should be met by ratepayers over the life of that asset. This is reflected by debt funding new assets and funding the replacement or renewal of assets from rates.

b) Balanced Budget – projected operating revenues over the lifetime of the LTP is set at a level sufficient to meet projected operating expenses, ensuring that current ratepayers are contributing an appropriate amount towards the costs of the services they receive or can access i.e. 'everyday costs are paid for from everyday income'.

2. Prudent Sustainable Financial Management

Budgets are managed prudently and in the best interests of the city in the long term. Debt must be maintained at prudent levels and be affordable.

3. Ability to Pay (Affordability)

Affordability is an important consideration as it ensures that the ability of our diverse community to pay rates is transparently considered as part of the decision-making process. Consideration will be given at both the macro-level (i.e. generally affordable to most) and at the micro-level (i.e. for a specific individual where rates rebates, remissions or postponement policies may be required).

4. Value for Money

Any proposals must contribute to the strategic outcomes agreed with the community and the total cost must be reasonable. The cost effectiveness of the funding mechanism must be considered.

5. Prioritisation of Investment Choices

Careful consideration is given to investment choices and options, with priority given to core infrastructure investment and 'invest to save' options.

6. Environmental sustainability

Funding decisions will consider community outcomes Council seeks, including wider environmental and climate change impacts.

7. Distribution of benefits

Consideration is given to the distribution of the benefits from Council activities over identifiable parts of the community, the whole community or individuals (users). Where there are identifiable direct benefits, the proportion of costs associated with these benefits should be covered by the user(s).

8. Growth pays for growth

The capital costs incurred to develop infrastructure that supports growth within the city should be primarily covered by those causing the growth and increasing the demand on Council infrastructure.

HCC has an exisiting Development Contributions Policy which is being reviewed through the current LTP process.

9. Good financial governance and stewardship

Good stewardship of Council's assets and finances requires Council to ensure that its actions now do not compromise the ability of future councils to fund future community needs. Under this principle:

a) assets must be maintained at least at current service levels to avoid placing a financial burden on future generations

b) debt must not be used to fund operating expenditure other than in specific exceptional circumstances

c) the level of debt is regularly reviewed to ensure that it is at a level that will not restrict a future council's ability to fund new assets through debt

d) the consequential operational expenditure implications of capital expenditure decisions are considered.

2.9.2 Waka Kotahi, NZTA / Council Cost Share

Most of the planned work will be conducted in a cost-share partnership between Waka Kotahi, NZTA and HCC.

Core programme

As part of the development of each NLTP, Waka Kotahi, NZTA, reviews and sets the Funding Assistance Rate (FAR) for each local authority. This is in line with the requirements under the Land Transport Management Act 2003.

The FAR subsidy rate for HCC is 51%. This is paid to Council from the National Land Transport Fund (NLTF) for local land transport activities approved for funding within the NLTP, such as local road maintenance and improvements, public transport services and cycling improvements.

Waka Kotahi, NZTA, shares the costs of the land transport network, recognising there are national and local benefits from investment in the network.

There are some elements of work that do not qualify for Waka Kotahi, NZTA subsidy, and these are funded 100% by HCC.

Additional funding requests

Where appropriate, additional funding requests may be made to assist the delivery of activities encouraged by Waka Kotahi, NZTA, via an enhanced FAR. Further, Government funding assistance will be sought for relevant expenditure as and when the opportunities arise, as exampled by the recent economic stimulus package offered by Government following the Covid 19 shutdown.

Development Contributions

Development contributions are used to fairly allocate the costs of growth to ensure equity between developers and ratepayers. Financial contributions are required where individual developments give rise to a requirement for capital expenditure that is not included in the Long-Term Plan and for reserves. Council is looking into this given the volume of investment in the city and the impact it has on traffic and road assets.

2.9.3 Asset valuation and depreciation

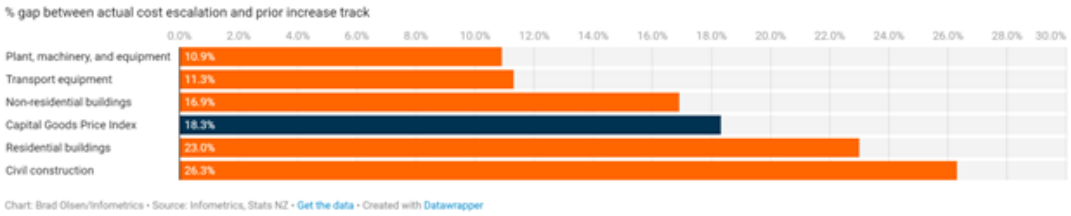
HCC's Transport assets are revalued every three years with the next valuation scheduled in the 2023/24 year. Depreciation is then calculated based on the updated asset valuation using the relevant asset depreciation rate.

Revaluations are audited by Audit NZ to ensure they are complete and accurate.

2.9.4 Escalation and Inflation

Despite any rhetoric to the contrary, costs for civil works have increased over the past three years, and as evidenced by the following excerpt from Infometrics:

Increases in civil works (relative to baseline)



CGPI data goes back to 1989, with some other, more detailed series going back further to 1979. One such index is the "Transport Ways" index, which examines road and other transport infrastructure capital costs. Recent cost escalation for transport ways peaked at 19.1%pa at the end of 2022, the largest annual increase since 1982.

Source: *https://www.infometrics.co.nz/article/2023-08-rapid-cost-escalation-makes-for-difficult-choices*

HCC have first-hand experience as the unit-rate prices for competitively-bid contracts have taken a marked increase over previous rates. One of the many contibuting factors is the increased cost of fuel, with the referenced Infometrics article noting that Diesel has increased by 47.5% from March 2020 to June 2023.

Recent examples of unit cost inflation, from contracted rates, can be seen in the table of Representative Unit Rate Changes below.

Representative Unit Rate Changes

Treatment	% Rate Change ($/m2) from 2019 to 2022	2022 Rates ($/m2)	2019 Rates ($/m2)
Surfacing Chipseal (CS)	+129%	14	6
Surfacing Asphalt (AC)	+110%	74	35
Pavement (GB)	+25%	169	135
Pavement (SAC)	n/a	241	N/A

These unit rate changes, which extend across the board, have a direct impact on the cost for completing work within different Work Categories. The increased cost from 2018-21 to 2023-26 for street maintenance is as follows:

- WC 111 carriageway pavement repairs – 415%
- WC 113 Kerb and Channel repairs and stormwater drainage - 420%
- WC 125 Footpath and berm repairs – 277%
- WC 215 barriers and guard rails – 160%

It is further noted that the significant increase in these rates since the last modelling run has had an impact on treatment selection and the value of investment required. Based on current rates, surfacing is significantly favoured over pavement treatments.

2.10 Comparables

In recent years Waka Kotahi, NZTA, has set up a comparison of each Road Controlling Authority's costs for the Maintenance, Operations and Renewals of their roading network. This comparison is calculated by the total MOR budget divided by the total kilometre length of the network.

HCC notes that there are many individual and unique features of each network which makes such a direct cost comparison problematic. Individual features include, but are not limited to:

Geology – as referenced elsewhere in this AMP the ground conditions beneath the roading surface influence the treatment selection and the life of the various treatments throughout our network.

Geography – the terrain also influences treatment selection, and in particular surface treatments, to achieve the requisite safety performance with respect to friction. Our network has a mix of flat areas on the valley floor with hills on both sides, including the particularly long and steep Wainuiomata Hill.

Traffic Asset Density – to maintain the required service level for the various transport modes there are several traffic assets throughout the city which require maintenance and renewal. These are required to facilitate the safe and efficient operation of the network and include assets such as traffic signals, roundabouts, traffic signage, streetlighting, speed calming measures, road markings, pedestrian crossings, pedestrian refuges.

Traffic and Heavy Traffic Volumes – the number and type of vehicles using the network influence the treatment selection and treatment life.

Materials – the cost of materials used in maintaining and renewing our roading and traffic assets is determined by market influences in the Wellington region. While this should equalise costs across the local Councils, there are some significant disparities with other regions.

Contractor Market – as with materials, contractor costs are influenced by the local market and there are disparities with other regions.

Service Level Expectation – while 51% of our costs come from Waka Kotahi, NZTA, the other 49% comes from our rate payers and they have a service level expectation for their contribution. As a national service level has not yet been set, local expectations influence local investment which in turn distorts comparisons.

Age of the assets – higher levels of maintenance will be needed for older assets.

Affordability – while Hutt City's financial position is sound and the other Council assets competing for funds are in reasonable condition, some Councils are not in the same position and sacrifice transport investment to meet short term needs in other areas. This practice distorts comparisons, especially those made over a much shorter term than the asset life.

Peer Group – despite the differences identified above, Section 3.7 includes example KPI's for HCC, with comparison to Hamilton, Tauranga, and Wellington Councils – each with sizeable populations and >90% urban roads.

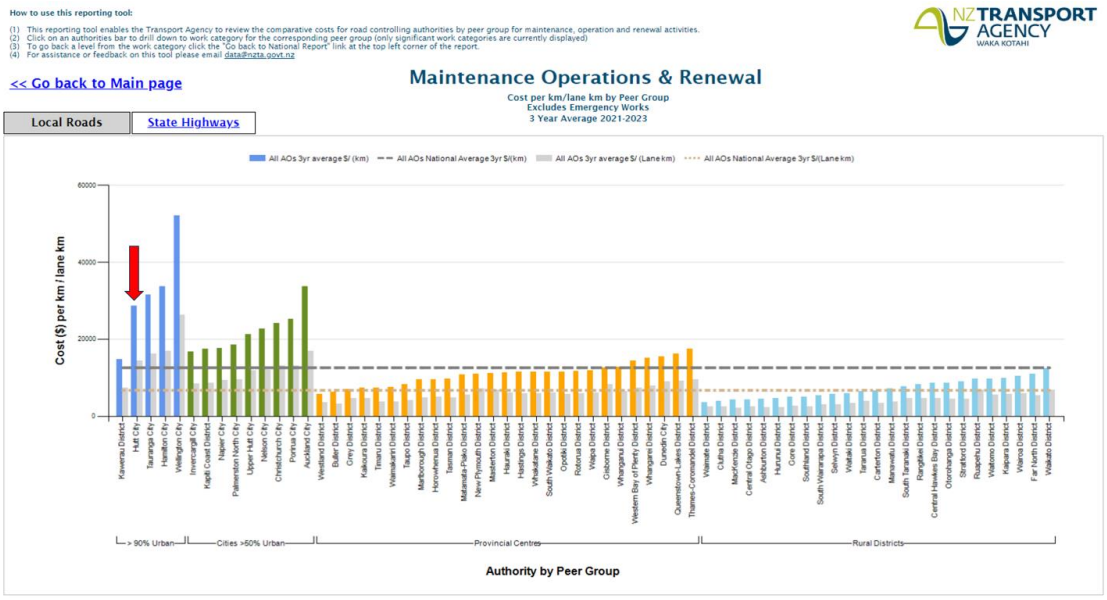
HCC does have a number of challenging features of the network which do require a higher level of intervention, which are outlined in more detail within the AMP.

To evaluate our achievement of value for money and optimised whole of life costs, HCC has recently undertaken an independent review of our higher cost treatment options, the findings of which are documented in WSP New Zealand's Economic Analysis of Higher Cost Renewal Treatments Report – 29 May 2020

Council recognise that Waka Kotahi, NZTA, holds information about costs, measurements, performance, and other data for every Council. While this data can be easily used to benchmark between Councils, it does not always recognise the unique differences in Hutt City, or other locations.

However, it is also recognised that benchmarking is an easy way for Waka Kotahi, NZTA, to see differences but note that high/low standing does not necessarily relate to good/bad performance or management in any given location.

The bar chart below shows how Hutt City features lower Maintenance Operations & Renewal costs than their peers (excluding Kawerau District) with >90% Urban roads. It is clear that the HCC costs are higher than any other provincial centre or rural district, and also most of the small cities (with >50% Urban roads) - however, these costs are clearly in line with other centres with predominantly urban roads.



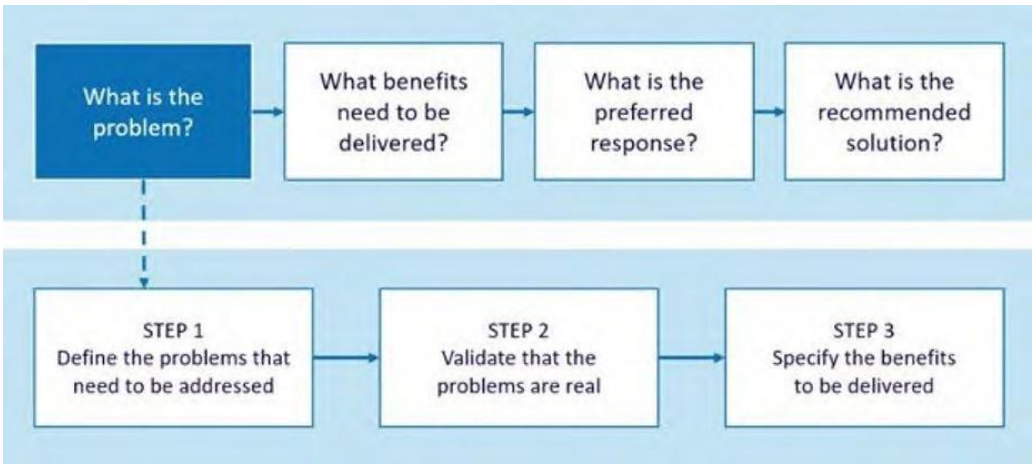
It is specifically noted that the HCC peer group includes: Wellington City; Tauranga City; Hamilton City; and Kawerau District. The group of peers look reasonable except for Kawerau District which appears to be a quirk of the grouping definition, as the population and size is much less than the others. Their inclusion may have a deflating impact on peer averages.

2.11 Strategic Assessment

This section will identify the key transport problems that exist within the City, based on evidence. The section will then confirm the benefits which are being sought, in alignment with other governing body documents. In addition, this portion of the AMP will provide a high-level overview of the alternatives, before providing confirmation of the case-for-change – or for HCC, the status quo.

2.11.1 Problem Statements

The outcomes from a 2020 Investment Logic Mapping (ILM) Problem Definition workshops were reviewed and updated for this 2023 AMP. A new set of ILM workshops will be conducted for the next AMP cycle, and has been included within the Improvements Plan. The objective of the ILM Problem Definition is to understand each problem, following the flow diagram in the figure below.

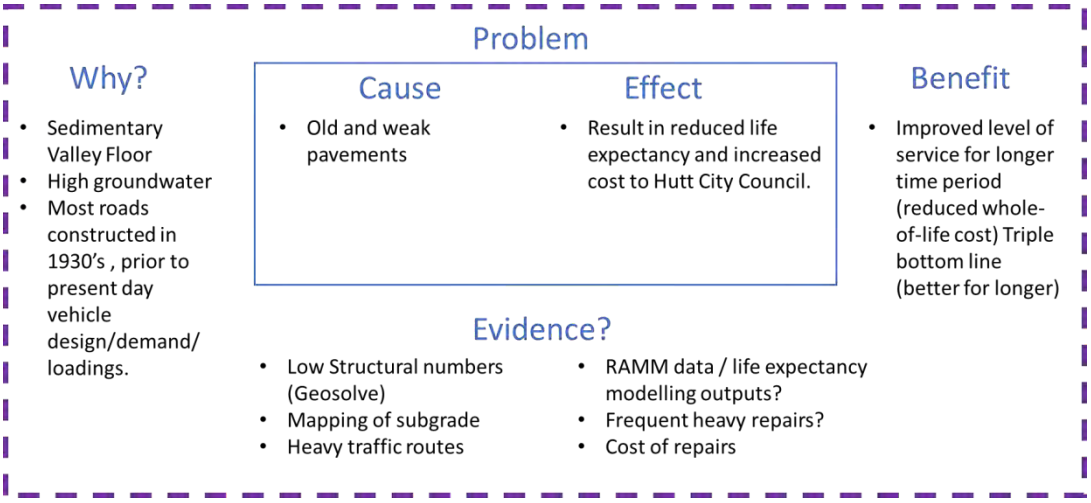


The outcomes from the ILM review, are outlined in the subsections below. They are summarised together at the end of this section:

Network Compliance (Sealed Roads)

Problem Statement: *"Old and weak pavements result in reduced life expectancy and increased cost to HCC"*

This problem statement has been developed from the problem trajectory shown below, featuring the primary Cause and Effect relationship, expanded to include the root cause (why?), evidence, and likely benefit of resolution.



Much of the network is constructed on weak subgrades. Consequently, HCC needs to implement a higher level of intervention in pavement maintenance to maintain the network as reliable, efficient, and effective. This includes more pavement rehabilitations, proactive chipsealing to maintain waterproofing of the pavements, and at times, more expensive treatment options such as the addition of polymers to chipseals and AC to provide flexibility to accommodate weak and flexible subgrades.

Reasons

The reason why this is a problem is primarily due to the construction of roads many years ago, primarily on the sedimentary valley floor. Road subgrades were not designed for present day traffic loading.

Evidence

The investigation into Ground Conditions, as previously described, provides evidence of the weak subgrades.

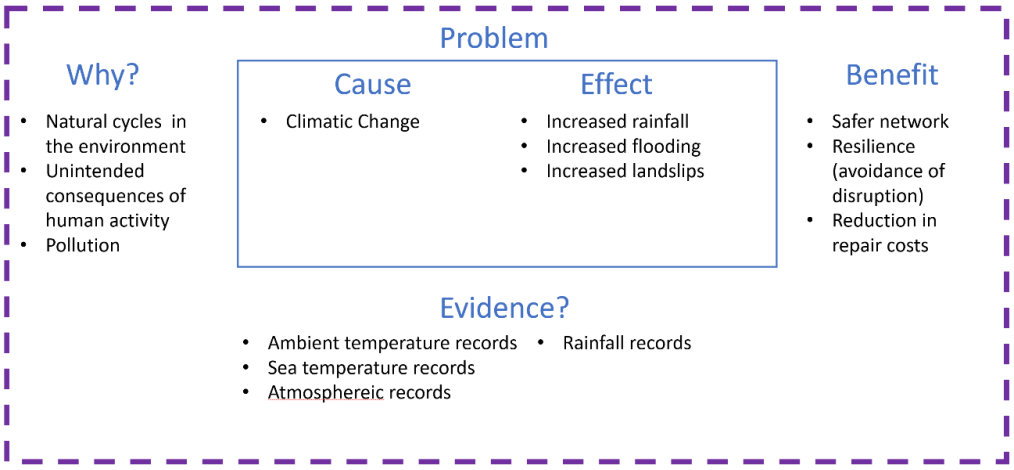
Benefits

An improved level of service was identified as the likely benefit, with a corresponding improvement in cost, quality, and time.

Network Resilience (Resilience / Environmental)

Problem Statement: *"Climate change increases extreme weather events which increases the frequency of flooding and landslips"*

This problem statement has been developed from the problem trajectory shown below, featuring the primary Cause and Effect relationship, expanded to include the root cause (why?), evidence, and likely benefit of resolution.



The number and severity of flood events around New Zealand appear to be increasing, as are the number and severity of landslips – specifically including Lower Hutt City.

Reasons

The reason why this is a problem is primarily due to changing climatic conditions, specifically including increased rainfall.

Evidence

There is clear evidence to support both the cause and effect.

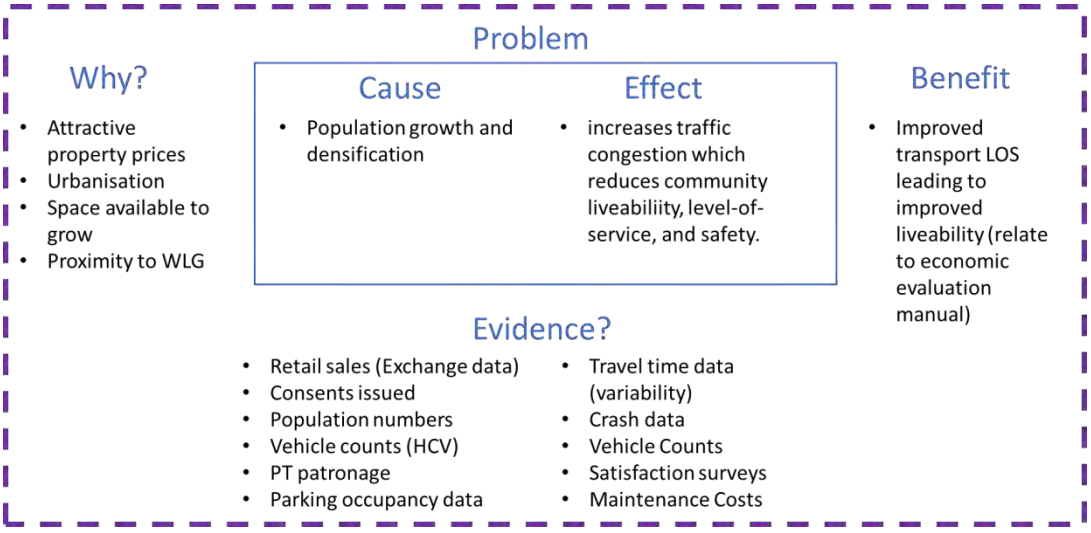
Benefits

Reducing flooding events and/or landslip events, plus the avoidance of disruptions identified as likely benefits. Resilience is clearly a projected benefit, plus improved travel times during heavy rainfall events.

Network Future Capacity (Network and Asset Management)

Problem Statement: *"Population growth and densification increases traffic congestion which reduces community liveability"*

This problem statement has been developed from the problem trajectory shown below, featuring the primary Cause and Effect relationship, expanded to include the root cause (why?), evidence, and likely benefit of resolution.



The population of Hutt City has increased over recent years as people have discovered this affordable location to purchase a house and Council has evolved the District Plan to allow more dense housing development. Situated near Wellington City, an increasing population has started to congest the roadways and public transport systems, which is having a negative effect on the level of service and liveability.

Reasons

The reason this problem has arisen is primarily due to the national housing shortage, lower prices in Hutt Valley, high amenity levels, District Plan development rules and close proximity to Wellington City.

Evidence

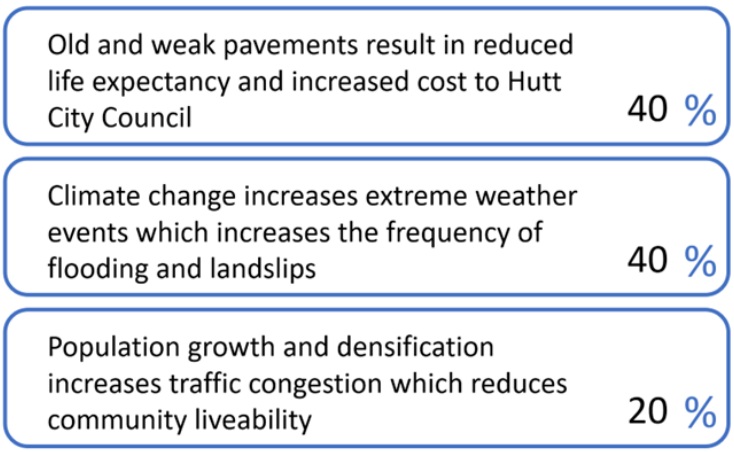
There is evidence of both the cause and effect. These reasons and evidence will be more fully described in the Programme Case.

Benefits

An improved level of service has been identified as the most likely benefit. Ties to the economic evaluation manual were also flagged as a means to quantify these benefits. A formal Benefits Definition workshop was conducted, as described further below.

Problem Priority / Weighting

HCC staff evaluated the three primary problem statements, and assigned the following weighting priorities out of a possible 100%:



These problem statements and prioritisation represent the view of HCC at the time of writing. In addressing current problems, it is expected that future events, changes, information, or understanding will result in the emergence of different priority problems.

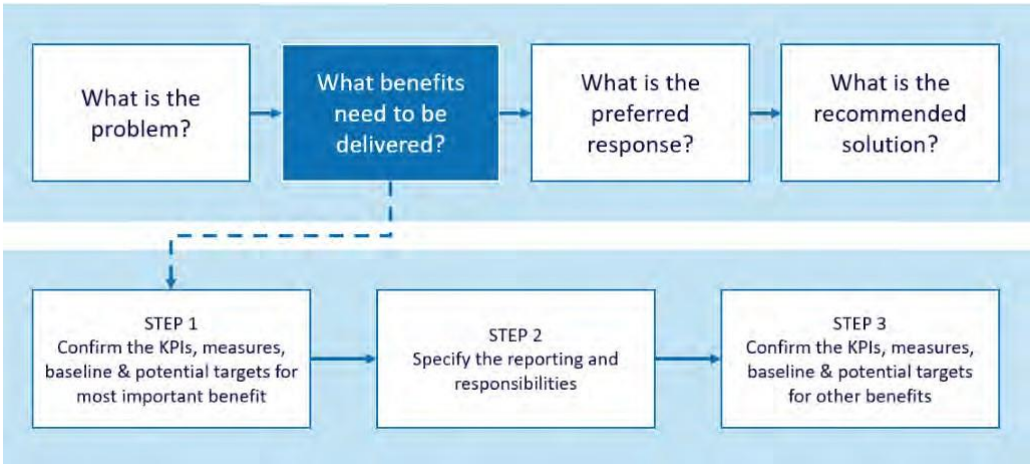
Each of these three problem statements are addressed throughout this AMP, within the Sections that follow these three themes respectively:

- Network Compliance (Sealed Roads)
- Network Resilience (Resilience / Environmental)
- Network Future Capacity (Network and Asset Management)

2.11.2 Benefits

Similar to the Problem Definition process described above, the Investment Logic Mapping (ILM) Benefit Definition outcomes from 2020 were reviewed and confirmed for 2023.

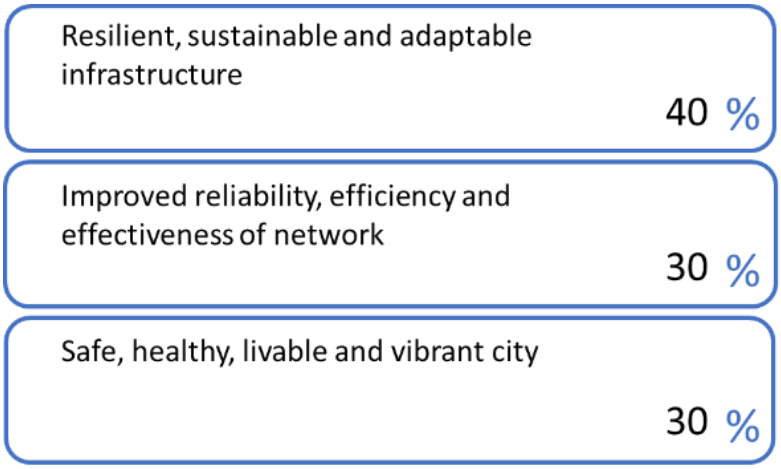
The objective of this process was to understand the key benefits, following the flow diagram in the figure below.



The outcomes after subsequent review, are outlined in the subsections below.

Benefit identification and priority weighting

Adapted from the Goals of the Hutt City Infrastructure Strategy, HCC staff evaluated these three benefits, and assigned the following weighting priorities out of a possible 100%:



Resilient, sustainable, and adaptable infrastructure

HCC developed this objective to include KPI's, measures, baselines, and targets.

Resilient, sustainable and adaptable infrastructure 40 %

KPIs	%	Measures	Baseline	Target
• Reduced length of vulnerable pavements	• 15%	• Decreasing km of vulnerable roads	• 271 km Vulnerable now	• Reduce by 3.5 km / yr
• Optimised financial whole-of-life costs	• 25%	• Positive NPVs on rehab's	• Positive	• Maintain Positive
		• Road Condition Index	• 3.2	• Maintain or Improve

Improved reliability, efficiency, and effectiveness of network

The process described above was similarly applied to this defined benefit.

Improved reliability, efficiency and effectiveness of network 30 %

KPIs	%	Measures	Baseline	Target
• Travel time on key transport routes (defined in Lower Hutt Travel Times Data Report January 2019)	• 20%	• Avg. travel time on Esplanade • Avg. travel time on Hutt Rd • Avg. travel time on High St • Avg. travel time on Cambridge Tce	• 17 min • 8 min • 20 min • 14 min	• < 19 min • < 10 min • <= 20 min • <= 14 min
• Improved travel options	• 10%	• Total volume of cyclists at established count sites • Total length of cycle/shared paths • Total length of e-scooter travel	• Varies • TBC • 0 km	• +3% / yr • +20% (2024) • 0.4 Mkm / yr

Safe, healthy, liveable, and vibrant city

This third identified benefit was also evaluated in the same manner.

Safe, healthy, livable and vibrant city 30 %

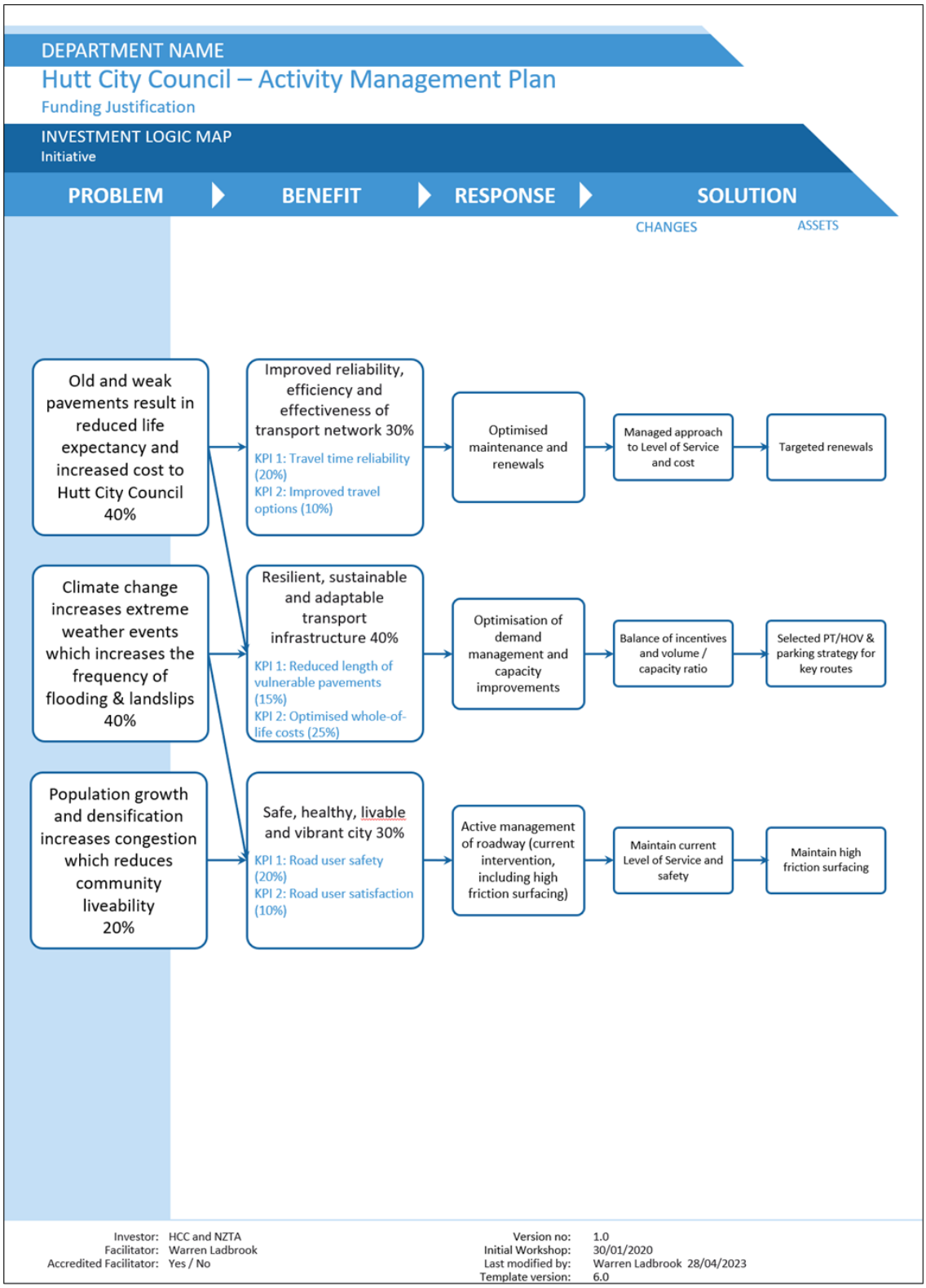
KPIs	%	Measures	Baseline	Target
• Road User Safety	• 20%	• Total fatal and serious injuries	• 34 / yr	• < 30 / yr
• Road User Satisfaction	• 10%	• Maintain smooth travel exposure • Maintain engagement survey satisfaction	• 80% • 92%	• Maintain or Improve • >= 82 %

Value for Money

This is an overarching benefit and requirement. It is an expectation based on government procurement rules and should be applied to all investment decisions by all Councils, including HCC.

2.11.3 ILM Problem and Benefit Definition

The two prior sections can be summarised in the ILM diagram shown below:



2.12 The Case for Change / Status Quo

Council is investing in the transport network to provide the following customer outcomes:

- Reliability
- Resilience
- Safety
- Accessibility
- Aesthetics and comfort (Amenity)

Council is focussed on providing these outcomes, while concurrently providing value for money, and as an affordable service for the community.

The Programme Business Case provides an evaluation of differential levels of service, with correspondingly different levels of investment:

- Do nothing
- Reactive Intervention
- Preferred Level of Intervention (Optimised maintenance and renewals)
- Very Proactive Level of Intervention

This AMP advocates for continuation of investment at the Status Quo – providing a preferred level of intervention and having shown that the current level interventions are appropriate for the HCC situation.

This Transport Activity Management Plan has clearly outlined the situation facing Hutt City, and has demonstrated the problem, benefits, and alignment of existing interventions with government directions and priorities at every level. Council is not embarking on a major capital programme, nor requested funding that is disproportionate to the demonstrated need. This Transport AMP advocates that the evidence included in this document is consistent with continued funding of scoped works at existing levels of service, which are appropriate and justified, but which will cost more due to escalation and inflation.

Further, this AMP is in alignment with other HCC initiatives, plans and strategies.

The HCC ITS graphic below provides a balanced outline of the relationship between the Vision, Drivers, Challenges, Focus Areas, and Target Outcomes for Hutt City. Items that directly related to the indicative GPS 2024 priorities are circled in red – although many other items also relate to one priority or another.

Whiria te muka tangata, whārikihia te kaupapa
Better Connections
Hutt City Council's Integrated Transport Strategy

Our Vision:

Te Awa Kairangi ki Tai Lower Hutt has a sustainable transport network that supports our net zero emissions goal, connects communities and enables all of our people to thrive.

Pou Urungi o tā tātou rautaki
The drivers of our strategy

Ngā Wero
Challenges we are facing

Ngā Aronga
Focus areas

Maintaining and Operating the System

1. Develop a connected and safe transport network that makes it more attractive for people to cycle, walk or use the bus
2. Create people-focused, veable streets around key transport hubs and local centres
3. Encourage people to rethink how & when they travel
4. Make it easier for all people to use public transport
5. Improve connectivity to the regional transport network to support the movement of goods and services

Integrated Freight System

6. Support the uptake of nnovations that will help change behaviour and reduce emissions
7. Build housing and locate key services close to employment and activity centres to reduce travel distances and reliance on cars

Sustainable Urban Development

Putanga
Outcomes

Improved community health

Safer communities

Increased community cohesion

Increased social inclusion

Reduction in carbon emissions

Greater resilience

Better access to opportunities

Economic growth

3.0 Programme Business Case

The Programme Business Case provides the strategic response of the planned future state. It identifies a programme of works or activities that deliver on the Strategic Case.

An AMP can fulfil the role of the business case (up to and including the PBC) for continuous programmes such as road maintenance. Specifically, the AMP needs to analyse network alternatives and options in developing a preferred programme and demonstrate how the options considered as part of the programme address these issues.

3.1 Framework and Alignment to Strategic Case

This Programme Business Case (PBC) is an integral part of the Transport AMP, and immediately follows the Strategic Business Case. These two elements are paired in their objective to evaluate the best investment decision – a case for change, or as evidence that the status quo is indeed the optimal approach.

There are several sections within this PBC, as noted below:

- **Target Levels of Service** – which are what they sound like, with an understanding that there is a range of possibilities. Within each category, these generally consider the following:
  - Community Outcomes
  - Service Outcomes
  - Levels of Service
  - Service Level
  - Performance Measure

- **Performance and Gap Analysis (Evidence)** – where HCC demonstrate the current status and compare with the target level of service.
- **Resilience** – which presents the plan for withstanding, or quickly recovering from, adverse impacts or interruptions resulting from potential hazards.
- **Level of Service Options** – this considers alternatives to the targets outlined previously.
- **Alternative Outcomes** – this outlines the consequences of following the alternative levels of service options.
- **Preferred Programme** – the proposed work programme for this next period, to achieve target levels of service and resilience.
- **Implementation** – how HCC will achieve the preferred programme.
- **Audit** – includes information about the most recent Waka Kotahi, NZTA, procedural and technical audits of HCC.
- **Organisation** – a brief discussion about how HCC plan to structure staff to implement the programme and achieve said targets.

3.2 Target Levels of Service

The overall Level of Service targets for Hutt City are shown in the table below:

Customer Group	Service Provider
Pedestrian and mobility assisted users	Footpaths that are smooth and free of hazards.
Crossings that are safe and easy to negotiate for all users	Medium term – but important to start now.
Cyclists	Cycling lanes that give separation from heavy traffic and safer access for cyclists around the city.
Motorists	A roading network that enables easy and comfortable movement for vehicles throughout the city with a high level of safety and a low level of delays.
Heavy vehicle drivers	Roads suitable for heavy transport including routes for over-dimensional vehicles.
Utility users	The allocation of alignment and the coordination of works for utilities within the road corridor.
Residents and businesses	A roading network that provides convenient access to property and discourages inappropriate traffic activity in residential areas. Planned maintenance work that minimises the impact of road works on residents and business.
Developers	Advice on servicing of developments.
All users	A streetscape that is attractive, safe, clean, and well-lit at night. Parking that is conveniently available throughout the city to meet the needs including those of retailers, shoppers, commuters and visitors.

These Levels of Service have been published in previous Long Term Plans, as a Council view on overarching targets for ongoing work. These do not represent the detailed specifics with respect to individual elements, nor specific KPI's which may be targeted for various work categories or asset types.

Council recognises that there is a need to review and reconcile target Levels of Service between overarching HCC goals and detailed Waka Kotahi KPI's, and has included this work in the Improvements Plan.

3.2.1 Network Compliance (Sealed Roads)

The following Level of Service Elements have been considered for this focus area, with targets as shown.

LoS Element	Targets
Community Outcomes	Healthy and Safe People, Inclusive Access, Economic Prosperity
Service Outcomes	Safe and efficient movement of people and freight.
Levels of Service	No unplanned closures. No weight or speed restrictions on transit corridors, urban connectors, activity streets, or rural connectors.
Service Level	A roading network that enables easy and comfortable movement for vehicles throughout the city with a high level of safety and a low level of delays. Roads suitable for heavy transport over all main routes.
Performance Measure	Safe Travel Infrastructure Risk Rating. Smooth Travel Exposure. Peak Roughness. Unplanned Road Closures. Heavy Vehicle Accessibility. Maintenance Costs. Sealed Road Pavement Rehabilitation & Resurfacing.

The bar chart below provides an example of the Safe Travel Infrastructure Risk Rating for HCC, and as compared with some of the peer group Councils, for Urban Connectors and Local Streets in 2022. As can be seen, HCC is generally consistent with their peers.

Surveys are undertaken each year to determine the condition, roughness, and skid resistance of the roading network. The results of these surveys are entered into RAMM.

The initial candidate sites list for inclusion in the forward works programme, for both the resurfacing and pavement rehabilitation works, is determined through analysing data from RAMM. This includes a combination of surface/pavement age, number of failures, roughness, level of skid resistance, traffic levels, HCV, condition rating and expected life.

This initial programme will be further validated through site inspections, investigations, and economic evaluations for justification.

Cross referencing with other HCC projects and external organisation's forward works programmes is undertaken, to identify any efficiencies that can be gained through co-ordinating work, and to ensure that sequencing of work for any conflicting areas is established, so that the following work does not damage or devalue the first area of work.

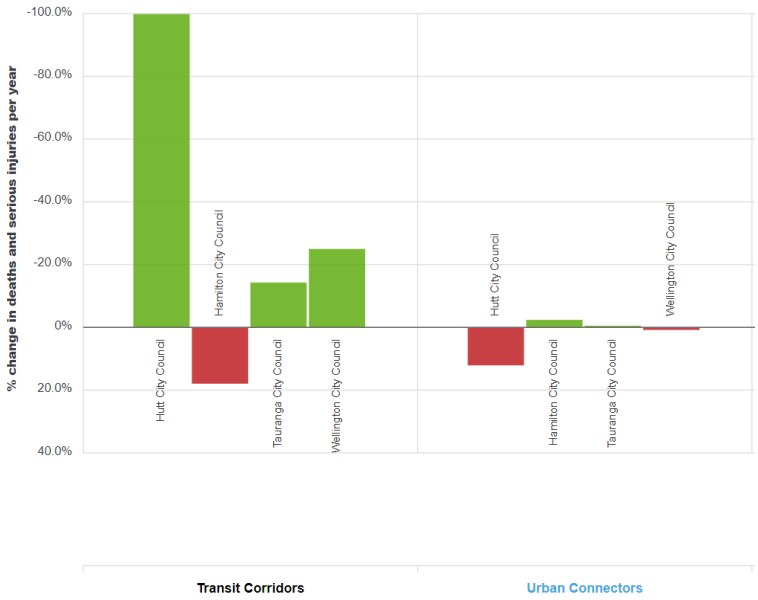
From there a final forward works programme is created, and treatment selection and designs can be undertaken.

3.2.2 Network Resilience (Resilience/Environmental)

The following Level of Service Elements have been considered for this focus area, with targets as shown.

LoS Element	Targets
Community Outcomes	Healthy and Safe People, Inclusive Access, Economic Prosperity.
Service Outcomes	Safe and efficient movement of people and freight.
Levels of Service	No unplanned closures.
Service Level	A roading network that provides convenient access to property and enables easy and comfortable movement for vehicles throughout the city with a high level of safety and a low level of delays.
Performance Measure	Safe Travel - Deaths, and Serious Injuries. Safe Travel Infrastructure Risk Rating. Unplanned Road Closures. Heavy Vehicle Accessibility. Maintenance Costs.

An example assessment of the Safe Travel – Deaths and Serious Injuries for 2022 is shown below. As can be seen, HCC has greater improvement than peers on Transit Corridors, but somewhat worse results on Urban Connectors. When considering the other ONF categories, it is clear that HCC is generally consistent with their peers.

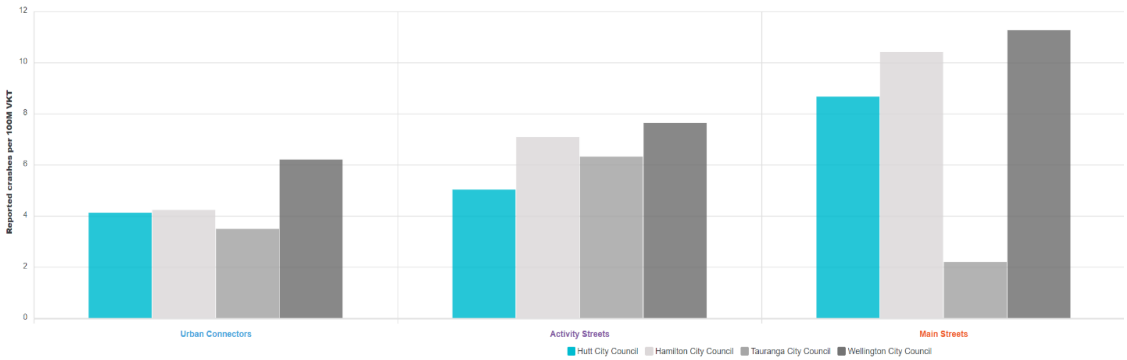


3.2.3 Network Future Capacity (Network & Asset Management)

The following Level of Service Elements have been considered for this focus area, with targets as shown.

LoS Element	Targets
Community Outcomes	Healthy and Safe People, Inclusive Access, Economic Prosperity
Service Outcomes	Safe and efficient movement of people and freight.
Levels of Service	No unplanned closures.
Service Level	A roading network that enables easy and comfortable movement for vehicles throughout the city with a high level of safety and a low level of delays.
Performance Measure	Safe Travel, Deaths, and Serious Injuries. Safe Travel - Personal/Collective Risk. Safe Travel Vulnerable Users. Unplanned Road Closures. Heavy Vehicle Accessibility. Maintenance Costs.

When considering Safe Travel – Personal / Collective Risk, the following bar chart reveals that HCC compares consistent with their peers for reported crashes per 100M VKT, based on Personal Risk in 2022 on Urban Connectors, Activity Streets, and Main Streets.



Intensive suburban residential development in recent years has resulted in population increases which also drive increased travel demand and congestion. District Plan changes which allow and encourage densification are expected to further increase travel demand.

This increased demand leads to congestion, increased delay, reduced travel time reliability and reduced safety outcomes. These all contribute to reduced city liveability and community outcomes. These problems can be mitigated through a mixture of demand management and capacity improvement techniques.

The extent to which each technique is adopted becomes a question of philosophical approach, and Hutt City prefers to adopt a balanced approach including incentives to use public transport and active modes, disincentives to vehicular travel and capacity improvements as justified and economically viable.

Incentives to use public transport and active modes include:

- Provision of on street park n ride facilities;
- Leasing of land to GWRC for off street park n ride facilities;
- Provision of accessible bus stops in conjunction with GWRC;
- Provision of bus priority lanes;
- Facilitating network changes to accommodate higher capacity buses;
- Provision of on and off-street cycling facilities;
- Installation of cycle priority features at traffic signals;
- Improvement of pedestrian safety and accessibility;
- Making urban streets more friendly to walkers and cyclists;
- Reducing vehicle operating speeds and making the roads safer to use.

Travel demand management techniques include:

- Strategic use of parking policy including parking supply, pricing and restrictions;
- Planning rules removing minimum parking provisions;
- Workplace Travel Planning.

Future facilities and techniques may include:

- Additional bus priority lanes;
- Bus priority at signalised intersections;
- High Occupancy Vehicle Lanes.
- Road space reallocation;
- Road pricing.

3.2.4 Structures

The following Level of Service Elements have been considered for this focus area, with targets as shown.

LoS Element	Targets
Community Outcomes	Healthy and Safe People, Inclusive Access, Economic Prosperity
Service Outcomes	Safe and efficient movement of people and freight.
Levels of Service	No unplanned closures. No weight or speed restrictions on transit corridors, urban connectors, activity streets, or rural connectors.
Service Level	A roading network that enables easy and comfortable movement for vehicles throughout the city with a high level of safety and a low level of delays. Roads suitable for heavy transport over all main routes, including routes for over-dimensional vehicles.
Performance Measure	Safe Travel - Deaths, and Serious Injuries. Safe Travel - Personal/Collective Risk. Unplanned Road Closures. Heavy Vehicle Accessibility. Maintenance Costs.

The HCC target includes structural integrity of all structure assets, without any failures that result in death, serious injury, detour, or delay. This specifically includes a focus on preventative maintenance.

There is limited information for Unplanned Road Closures within ONF categories for HCC and their peers.

3.2.5 Drainage Facilities

The following Level of Service Elements have been considered for this focus area, with targets as shown.

LoS Element	Targets
Community Outcomes	Healthy and Safe People, Economic Prosperity
Service Outcomes	Effective drainage to protect the transport network.
Levels of Service	No unplanned closures due to storm events.
Service Level	The allocation of adequate space for stormwater drainage, with planned maintenance work that minimises the impact on residents, businesses, and road users.
Performance Measure	Maintenance Costs.

There is limited information for maintenance costs within ONF categories for HCC and their peers.

3.2.6 Traffic Services

The following Level of Service Elements have been considered for this focus area, with targets as shown.

LoS Element	Targets
Community Outcomes	Healthy and Safe People, Inclusive Access, Economic Prosperity
Service Outcomes	Safe and efficient movement of people and freight.
Levels of Service	No unplanned closures.
Service Level	A streetscape that is attractive, safe, clean, and well-lit at night.
Performance Measure	Safe Travel - Deaths, and Serious Injuries. Safe Travel - Wet Roads / Night / Intersections. Safe Travel - Vulnerable Users. Unplanned Road Closures. Heavy Vehicle Accessibility.

The Safe Travel – Wet Roads / Night / Intersections data for 2022 shows that HCC compares well against their peers, regional Councils, and National averages for Loss of Control on Wet Roads, as can be seen below for Urban Connectors and Activity Streets.

3.2.7 Operational Traffic Management

The following Level of Service Elements have been considered for this focus area, with targets as shown.

LoS Element	Targets
Community Outcomes	Healthy and Safe People, Economic Prosperity
Service Outcomes	Safe and efficient movement of people and freight.
Levels of Service	No unplanned closures.
Service Level	A roading network that enables easy and comfortable movement for vehicles throughout the city with a high level of safety and a low level of delays.
Performance Measure	Safe Travel - Deaths, and Serious Injuries. Safe Travel - Personal/Collective Risk. Safe Travel - Wet Roads / Night / Intersections. Safe Travel - Vulnerable Users. Unplanned Road Closures. Heavy Vehicle Accessibility. Maintenance Costs.

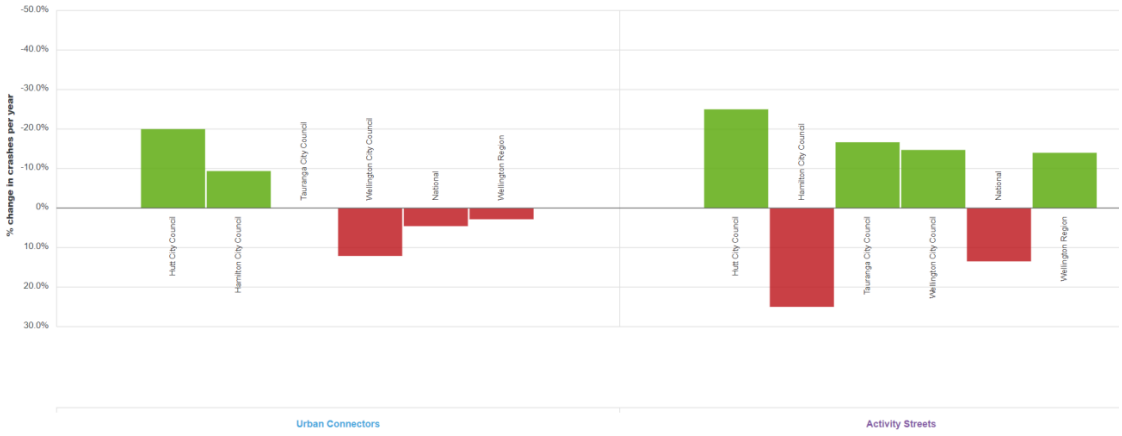
The performance measure for Safe Travel – All Vulnerable Users (2022), shows that while HCC has very positive results for Transit Corridors and Local Streets, there is less positive results for Urban Connectors and Activity Streets, and as compared to their peers, regional Councils, and national averages.

3.2.8 Cycleways / Shared Paths

The following Level of Service Elements have been considered for this focus area, with targets as shown.

LoS Element	Targets
Community Outcomes	Healthy and Safe People, Economic Prosperity
Service Outcomes	Safe and efficient movement of people and freight.
Levels of Service	No unplanned closures.
Service Level	A roading network that enables easy and comfortable movement for vehicles throughout the city with a high level of safety and a low level of delays.
Performance Measure	Safe Travel - Deaths, and Serious Injuries. Safe Travel - Personal/Collective Risk. Safe Travel - Wet Roads / Night / Intersections. Safe Travel - Vulnerable Users. Unplanned Road Closures. Heavy Vehicle Accessibility. Maintenance Costs.

The performance measure for Safe Travel – Bicycle Vulnerable Users (2022), shows that while HCC has very positive results for Urban Connectors and Activity Streets, and as compared to their peers, regional Councils, and national averages.

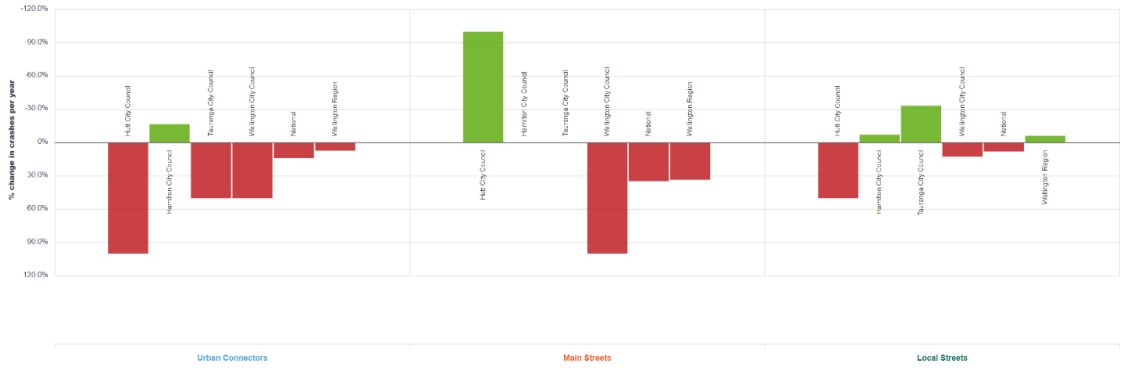


3.2.9 Footpaths

The following Level of Service Elements have been considered for this focus area, with targets as shown.

LoS Element	Targets
Community Outcomes	Healthy and Safe People, Inclusive Access
Service Outcomes	Safe and efficient movement of people and freight.
Levels of Service	No unplanned closures.
Service Level	Footpaths that are smooth and free from hazards.
Performance Measure	Safe Travel - Deaths, and Serious Injuries. Safe Travel - Vulnerable Users. Unplanned Road Closures. Maintenance Costs.

The performance measure for Safe Travel – Pedestrian Vulnerable Users (2022), shows that while HCC has very positive results for Main Streets, the data is worse for Urban Connectors and Local Streets, and as compared to their peers, regional Councils, and national averages.



3.2.10 Low Cost / Low Risk Safety Improvements

The following Level of Service Elements have been considered for this focus area, with targets as shown.

LoS Element	Targets
Community Outcomes	Healthy and Safe People, Inclusive Access, Economic Prosperity
Service Outcomes	Safe and efficient movement of people and freight.
Levels of Service	No unplanned closures.
Service Level	Planned maintenance work that minimises the impact of road works on residents and businesses.
Performance Measure	Safe Travel - Deaths, and Serious Injuries. Safe Travel - Personal/Collective Risk. Safe Travel - Wet Roads / Night / Intersections. Safe Travel - Vulnerable Users. Unplanned Road Closures. Heavy Vehicle Accessibility. Maintenance Costs.

3.2.11 Parking

The following Level of Service Elements have been considered for this focus area, with targets as shown.

LoS Element	Targets
Community Outcomes	Inclusive Access, Economic Prosperity
Service Outcomes	Safe and efficient movement of people and freight.
Levels of Service	No unplanned closures.
Service Level	Parking that is conveniently available throughout the city to meet the needs including those of retailers, shoppers, commuters and visitors.
Performance Measure	Safe Travel - Personal/Collective Risk. Unplanned Road Closures.

3.3 Performance and Gap Analysis (Evidence)

HCC is in the process of improving the data, which is collected, and which can be used as evidence of performance. While this body of data has steadily improved over the past year or two, there are still some areas which require focus – and which are outlined within the Improvements Plan portion of this AMP.

In most cases, HCC can demonstrate the current status, and provide comparison against the target level of service. This will either confirm that the level of service is being achieved or will show that there is a gap – which warrants further work, and further investment.

3.3.1 Network Compliance (Sealed Roads)

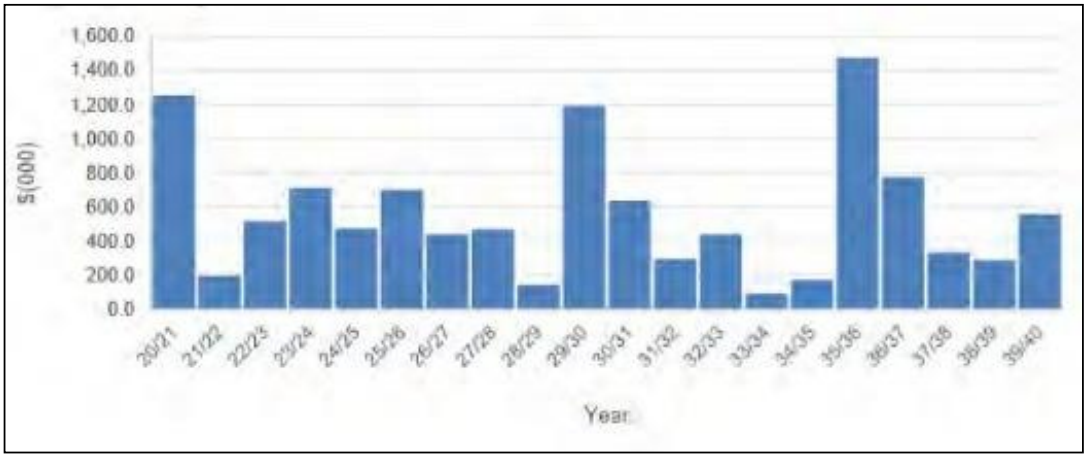
This section is in four parts

1. Wainuiomata Hill analysis utilising older, yet still valid, reports.
2. Generalised comments on performance metrics
3. Findings from 2023 dTIMS report which underpins the requirement for the increase in funding allocation to maintain network condition
4. Methodology to determine annual work programme - summarised information from a Stantec report which sets out the robust methodology used.

Wainuiomata Hill Road

A 20-year modelling exercise was undertaken, in 2020, to the forecasted investment level required for the Wainuiomata Hill Road. These levels have been determined by modelling undertaken on the expected resurfacing and rehabilitation requirements based on historical achieved life.

Wainuiomata Hill Road Forecast Annual Investment Distribution



Source: Wainuiomata Hill Road – 20 Year Resurfacing Programme 2020 – Calibre Consulting

The Stantec report, referenced later in this section, sets out the work programme setting process.

Wainuiomata Hill road context

Wainuiomata Hill Road is HCC's only "Regional" road because of the high AADT (approx. 19,000 vpd), and that the road is a sole connector between two main urban areas, with no alternative route.

The road is approx. 6.9 lane kilometres with a steep gradient (≥ 10%) and continuous tight radius curves. Both directions have two lanes, except for a portion of the uphill Wainuiomata bound section which has three lanes, with different directions of traffic being separated by barriers.

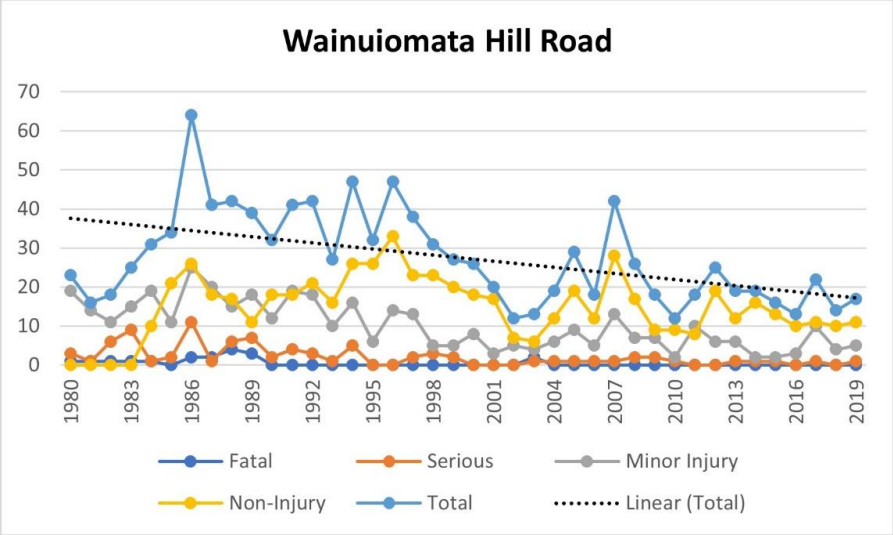
Wainuiomata hill characteristics impacting surfacing requirements

Historically this road had a very high crash rate (on average one crash a week), so in 1998 a study was carried out on the Wainuiomata Hill Road to identify the causes of the high crash rate and determine what interventions could aid in reducing this. The details and findings can be reviewed in full in the report "Wainuiomata Hill Road Cyclic Resurfacing Report" by Duffill Watts & Tse Ltd.

The findings and recommendations of that report was that the introduction of a surfacing with a high level of skid resistance is needed to reduce the level of loss of control crashes. Due to the topography of the road and the resulting traffic stresses, it was determined that calcined bauxite high friction surfacing over an asphalt layer would provide the necessary skid resistance with the most whole of life cost value.

This report was reviewed by Opus International Consultants in 1999, as per their report "Wainuiomata Hill Resurfacing Report Review" with their findings being "in general agreement" with Duffill Watts' recommendations.

As a result, this study led to the current safety resurfacing programme on the Wainuiomata Hill, which is driven primarily by safety considerations.



Prior to the commencement of this programme, traffic accident statistics indicated a threefold increase in the number of wet road accidents on the hill over a 10-year period. This increase was attributable to a reduction in the skid resistance of the surface due to poor texture and low Polished Stone Value. The introduction in 2000 of a high friction surfacing (calcined bauxite) in the most critical areas has proven very effective, with crash reductions in the order of 80%. This reduction has been sustained since 2000 through to today.

In view of the safety aspects, the road received a separate investigation for renewal needs in 2010. This included a full walkover, analysis of crash trends and analysis of SCRIM results.

Setting a long-term work programme

From this review, a five year forward works programme was developed, which was implemented in the 2011/2012 season and was the basis of the annual work programme. An increased budget for the early stages of the five year works programme, combined with a sustained drive on the worst areas of the road meant that the bulk of the pressing work was completed during the 2014/2015 season. A standardised maintenance programme was established for future years.

The maintenance programme is validated each year which includes a full visual inspection, analysis of crash trends and analysis of SCRIM results (because of the importance of skid resistance on the road to sustain the reduced crash rate, a SCRIM survey is undertaken every year, with results analysed). The programme is then validated for discrete sections to be maintained as required.

This approach is confirmed by Stantec in the section on detailed treatment approach.

Following the introduction of the safety resurfacing programme, frequent reviews were undertaken early on throughout the programme on the surfacing and the crash statistics, to monitor the performance and benefits, which has justified the continuation of the safety resurfacing programme. These reports include:

- Wainuiomata Hill Accident Trends, June 2003, Duffill Watts & Tse Ltd
- Wainuiomata Hill Calcined Bauxite Seals Crash Trends to 2004, September 2005, Duffill Watts & Tse
- Wainuiomata Hill S-Bends Friction and Accident Trends, February 2006, Duffill Watts & Tse
- Wainuiomata Hill Bauxite: Friction and Accident Trends, March 2007, Duffill Watts & Tse

Calibre Consulting Ltd (now EGIS) completed a report on the maintenance and renewal needs for the road's pavements and resurfacing over a 20-year period from 2020/21, Wainuiomata Hill Road – 20 Year Resurfacing Programme.

In addition to an onsite inspection to identify immediate requirements (1-5 years), the review took into consideration:

- The age and expected life of surfacing,
- Achieved surfacing lives,
- Skid resistance and macrotexture i.e. areas not meeting minimum requirements, and
- Treatment selection algorithm to incorporate road condition.

A 20-year programme of works and budget requirements was identified.

The key findings from the review which indicated that the asphalt and high friction surfacing is performing better than originally anticipated:

- The road has numerous asphaltic concrete treatment lengths have exceeded their expected life, and with the newer asphaltic concrete surfaces having polymer bitumen, that is likely to further extend the life.
- The measurements of the road surface (high friction surfacing) mainly exceed the investigatory level threshold for skid resistance and macrotexture with isolated areas falling below, however there were areas of chip loss due to its age.

These findings were further confirmed by WSP New Zealand during their Economic Analysis of the Wainuiomata Hill Road. WSP New Zealand undertook an economic analysis of the surfacing options of the road in 2020, Economic Analysis of Higher Cost Renewal Treatments Report – 29 May 2020.

The findings determined that calcined bauxite over an asphalt layer provided the longest design life and highest on-road skid resistance, resulting in crash cost savings:

Wainuiomata Hill Road detailed treatment approach

Stantec, who advise HCC on final work programme treatments and priorities set out the approach to the Wainuiomata Hill Road.

In contrast with the other programs discussed in the last section on how work programmes are developed, the preliminary program developed for Wainuiomata Hill Road is primarily developed through Sideways-force Coefficient Routine Investigation Machine (SCRIM) testing coupled with a visual inspection. The purpose of the inspection to identify where the surface condition requires renewal and to try and identify the cause of the surface failure. The defects observed and the potential root cause of failure are considered before adding the site to the preliminary design list.

This road resurfacing is primarily a safety program to maintain a high friction surface. Therefore, the treatments available are renewal of the calcined bauxite, replacement of the top 60 mm of asphalt and the calcined bauxite, and replacement of 120 mm of asphalt and the calcined bauxite. The first treatment is infrequently used as the underlying asphalt normally needs to be replaced but will be used when the calcined bauxite has debonded from the asphalt without damaging the asphalt. The second treatment is used when there are no obvious pavement defects, but the asphalt has been damaged. The third treatment is used when there are signs of pavement failure which require treatment.

All the asphalt mixes are designed according to the NZTA M10 (2020) and M1A (2022) specifications to ensure the asphalt performs under the high stress conditions. Given the stress environment, it is expected that this will result in polymer modified binder which will improve the elastic performance of the asphalt and reduce the likelihood of shear stresses debonding the epoxy from the asphalt.

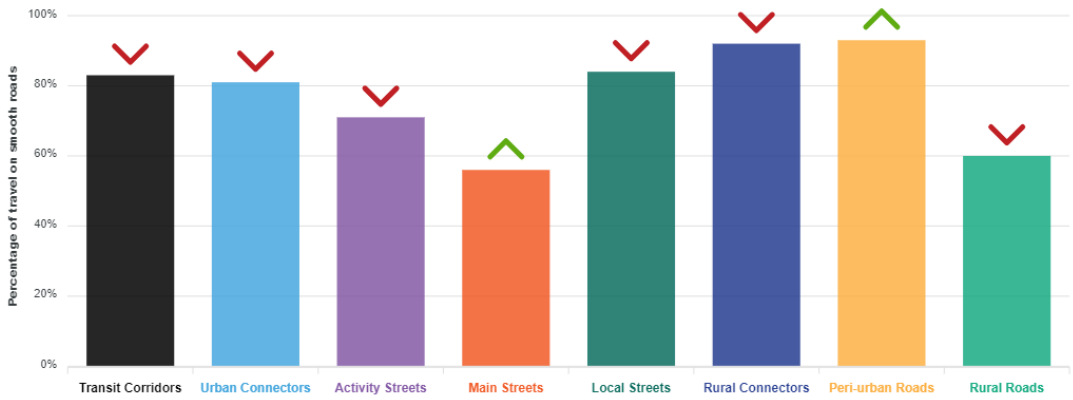
Where a pavement renewal is required the pavement design will follow the methodologies identified in Austroads Parts 2 and 5 and the New Zealand Guide to Pavement Evaluation and Treatment Design (NZTA 2018) and the New Zealand Guide to Pavement Structural Design (NZTA 2018). The pavement will be a structural asphalt on the Lower Hutt side of Wainuiomata Hill Road as this whole section is surfaced with calcined bauxite. Pavement renewals on the Wainuiomata side will depend on the acceptable surfacing, where calcined bauxite is required, the underlying pavement will be structural asphalt. Where chipseal is acceptable, then a granular pavement will be considered.

Generalised comments on performance metrics

The percentage of travel on roads smoother than the threshold.

The chart below shows the percentage of travel in each ONF Street Category that is smoother than the threshold. The graph shows the smooth travel percentage for the selected year. The trend arrow above each bar shows whether the trend is improving (green & up) or getting worse (red & down).

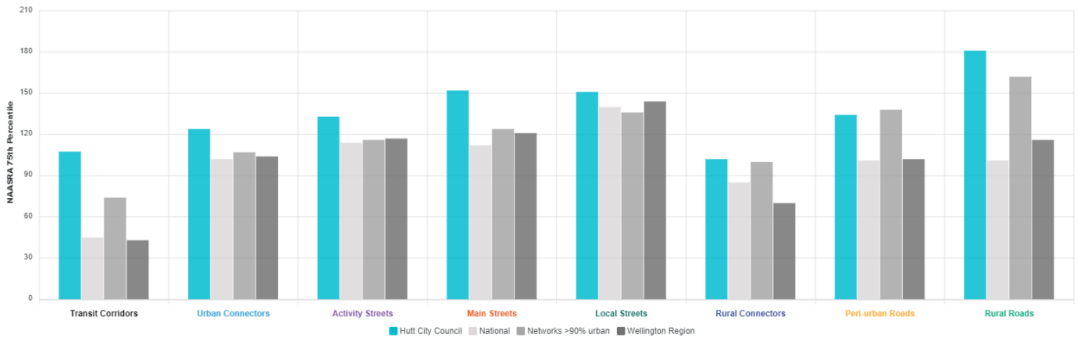
Of note, the Peri-Urban Roads and Main Streets are showing improvement.



Peak Roughness compared to other networks

The following graph shows the peak roughness on the roads in each ONF Street Category for the chosen percentile, compared to the peak roughness for the other relevant networks.

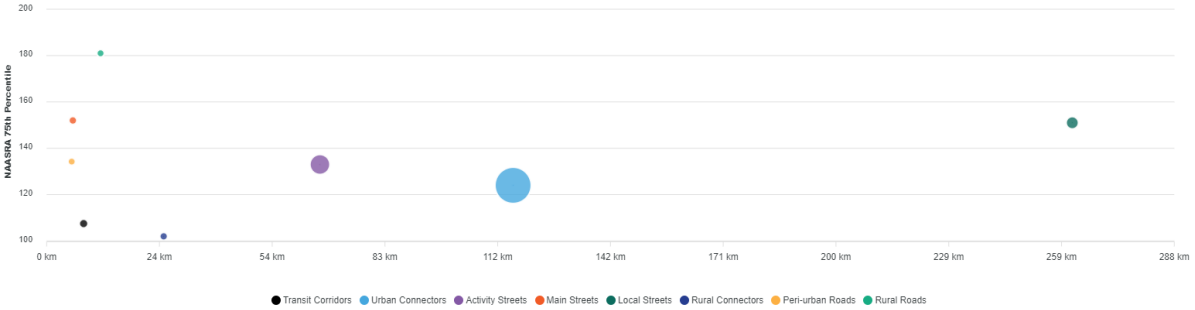
The higher the roughness number, the rougher the ride, which indicates HCC has lower than peer performance.



The following graphs show the annual change of peak roughness at 75th percentile, where a red trend line shows a declining level of service, while a green trend line indicates an improvement. As such, only rural connectors and rural roads are showing an improvement.

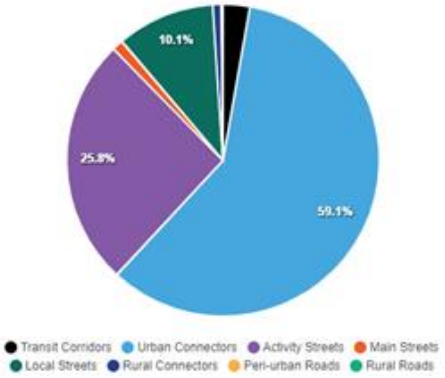
Peak Roughness compared to VKT and Network Length

This chart shows the peak NAASRA Roughness Count at the 75th percentile for each ONF Street Category. The higher the bubble, the rougher the ride on the worst roads in that category. The size of the bubble indicates the vehicle journeys (VKT) for each category. The bottom axis is the network length of the Street Categories.



VKT % per ONF Street Category

The following chart shows the percentage of VKT per ONF Street Category, in the network.



Treatment types

HCC uses numerous different treatment options when rehabilitating pavements, which include:

- Granular overlays
- Pavement Stabilisation
- Pavement reconstruction
- Structural asphaltic concrete rehabilitation

Considerations for determining treatment options include:

- Subgrade – what is the existing and surrounding subgrade
- Drainage requirements – is additional drainage required to address the cause of failure
- Traffic loadings – is there a high number of HCV, high AADT, channelised traffic, bus routes
- Land use – residential / industrial areas have different loadings/stresses on the pavement
- Public / Business disruption – is there a need for speed in construction to minimise disruption.

Pavement designs are then undertaken using industry best practice.

HCC uses two different treatment options when resurfacing roads:

- **Chipseal** – which consists of a layer of sprayed bitumen followed by one or two layers of stone chips and provides a flexible, waterproof, skid-resistant surface.
- **Asphaltic concrete (AC)** – mineral aggregate bound together with asphalt and applied hot to the road surface in layers and compacted.

The default treatment for all roads is chipseal, as it provides best value for money, a water proofing layer to protect the pavement, skid resistance, and a flexible layer to handle the weak subgrades that the Hutt City network is constructed on.

There are roads/areas that require an alternative treatment to chipseal to achieve cost efficiency, safety, and amenity value, such as:

- Intersections/roundabouts/corners/parking areas that have high levels of traffic stresses.
- CBD and shopping centres, because of the high amount of both traffic and pedestrians.
- When a significant amount of shape correction is required to provide smoothness of ride for vehicles and bicycles, which reduces vehicle maintenance costs.
- When a structural surface is required from high AADT or heavy vehicle usage, i.e. The Esplanade with an average of 30,000 vehicle per day.

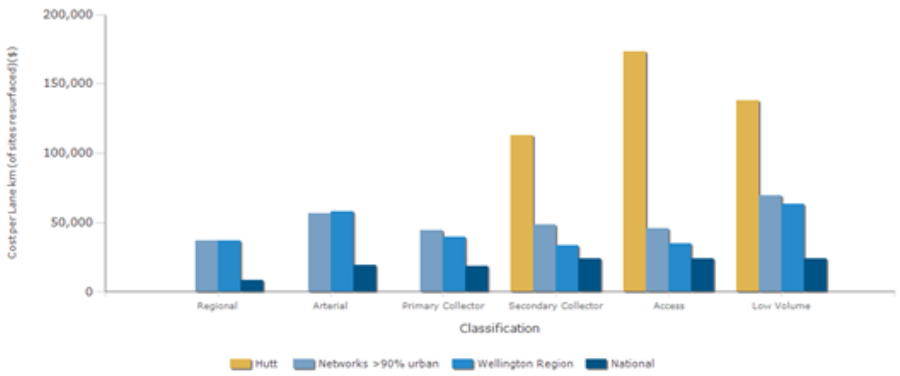
Alternative treatments include:

- **Asphalt (various dense graded mixes used)** to provide structural strength, shape correct, amenity values such as noise reduction, and reduction of bitumen pick up on pedestrians causing tracking/damage to private property. It is also used when a chipseal surface would not handle traffic stresses.
- **Stone Mastic Asphalt (SMA)** to provide greater durability and life expectancy than dense graded asphalt, as well as higher skid resistance.
- **High Friction surfacing** to provide greater skid resistance than dense graded asphalt, SMA and chipseal.
- **Slurry Seal** to provide a smooth surface similar to asphalt but able to maintain flexibility.

Chipseal

The default treatment for all roads is chipseal, as it provides best value for money, a water proofing layer to protect the pavement, skid resistance, and a flexible layer to handle the weak subgrades within the Hutt City network.

The total cost / lane km of chipseal resurfacing undertaken in 2022/23

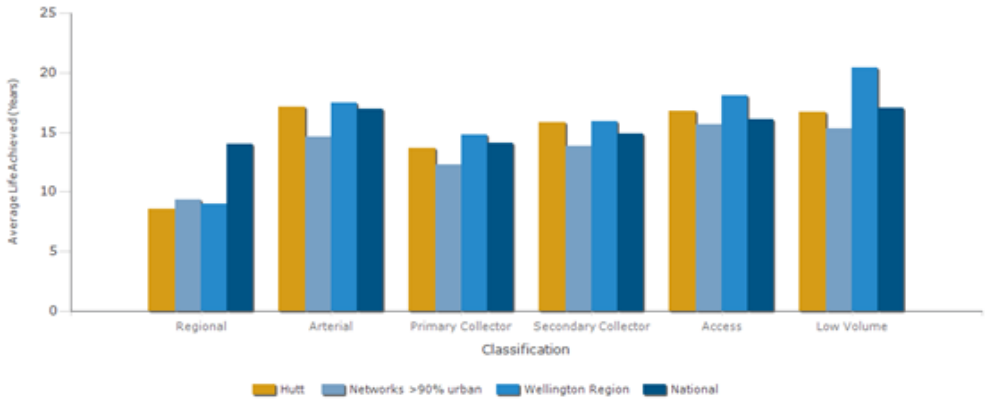


Using ONRC data, the table above shows that HCC is an outlier for costs in the 2022/23 period in cost per lane km for chip sealing when compared with our “peer group” councils.

Using ONRC data, the graph above compares the cost per lane km of chip sealing for HCC with our “peer group” councils during the 2022/2023 financial year. The data reveals that HCC had higher costs in three categories.

The average achieved life of a chipseal surface in Hutt City is generally better than other networks with >90% urban roads, as can be seen in the table below.

Chipseal resurfacing average life achieved, four-year average to 2022/23



Additional flexibility, and therefore resilience, can be achieved by using a polymer modified emulsion (PME) rather than standard bitumen which helps maintain the waterproofing and achieve a longer life of the chipseal.

Asphaltic Concrete (AC)

With such a significant portion of Hutt City's network being on weak subgrades and therefore having high deflections, the use of rigid, non-flexible asphalt is not suitable in many areas, as it results in premature failures and reduced life.

However, there are roads/areas that require an alternative treatment to chipseal to achieve cost efficiency, safety, and amenity value, and therefore an asphalt surfacing is used. Such situations include:

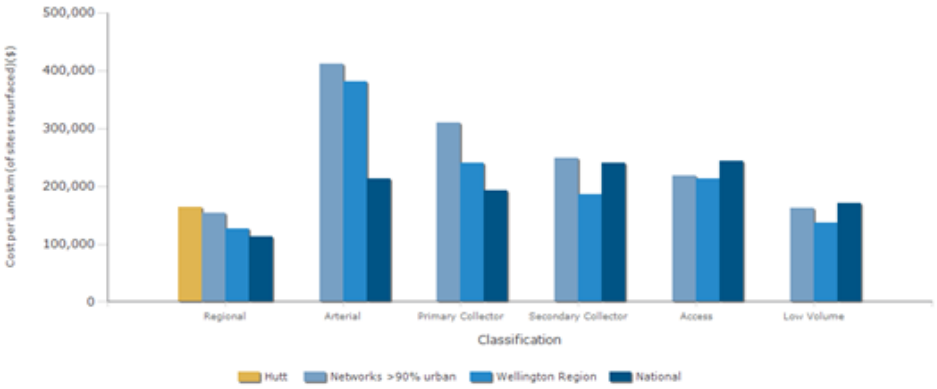
Areas that have high levels of traffic stresses

- Intersections, including roundabouts
- Corners
- Cul-de-sac turning heads

Parking areas

- CBD and shopping centres, due to volume of both traffic and pedestrians.
- When a significant amount of shape correction is required to provide smoothness of ride for vehicles and bicycles.
- When a structural surface is required from high AADT or heavy vehicle usage, i.e. The Esplanade with an average of 30,000 vehicles per day

The total cost / lane km of asphalt resurfacing undertaken in 2022/23



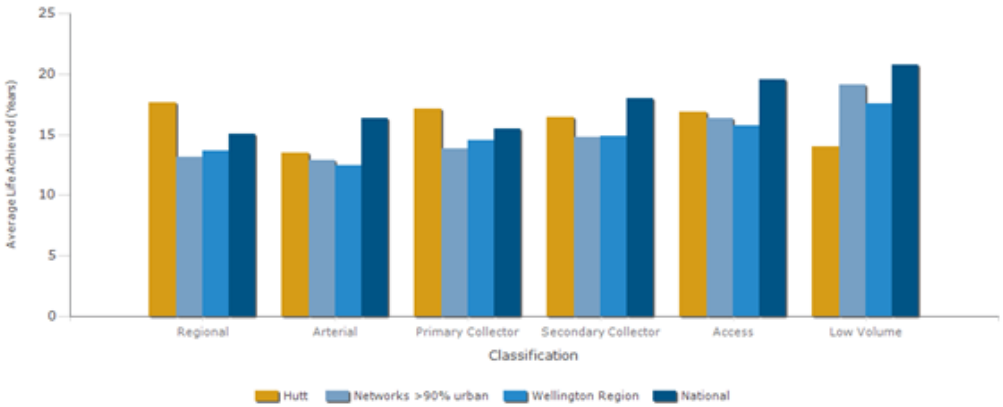
Despite the weak pavements that are predominant within Hutt City, the total cost / lane km, where available at a regional level is slightly higher.

For areas on particularly weak subgrades or high stress areas, alternative asphalt types are used to achieve longer life, as well as providing additional benefits such as safety and skid resistance. Some of these options include:

- Polymer additives to provide flexibility and resilience to the asphalt.
- Stone Mastic Asphalt to provide durability and surface texture for skid resistance

The average achieved life of an asphalt surface in Hutt City is good in comparison with other urban areas >90% urban roads – other than low volume roads. HCC will work toward incorporating this data into an ONF framework once there is adequate information to present useful trends.

Asphalt resurfacing average life achieved, four-year average to 2022/23



Findings from 2023 dTIMS report

WSP undertook a dTIMS analysis in June 2023 which underpins the requirement for the increase in funding allocation to maintain network condition. The following section sets out the modelling outcomes, key assumptions and risks.

The modelled sealed network was 467 km (917 lane kilometres (ln.km), with the following key characteristics:

Item	Sealed Network 467 km (917 ln.km)					
Urban	94%					
Surface Type	Chipseal 79%	AC 21%				
Vol > 1,000 veh/day	40%					
Vol > 5,000 veh/day	14%					
ONRC Cat	Regional 2%	Arterial 10%	Primary Collector 14%	Secondary Collector 26%	Access 31%	Low Volume 17%

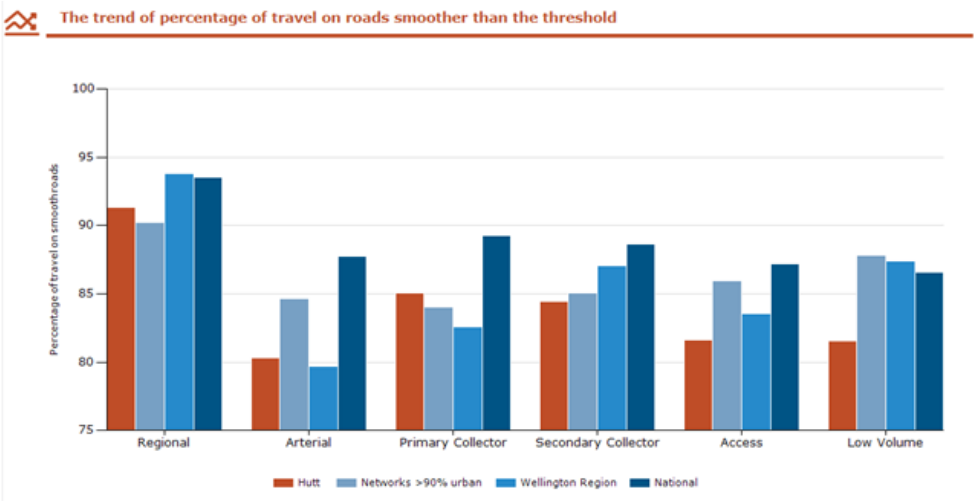
Past Investment Overview

The sealed pavement records show from 2019 to 2022 investment increased. For 2020/21 the combined investment for WC 212 and WC 214 was $5,819,719, an increase from 2019/2020 of $3,551,638.

- The average investment for the past 3 years has been $4.15M per annum, significantly less than required, creating a deferred backlog of renewals.

Performance Overview

Based on the past 5-year RAMM condition the network condition is deteriorating for four hierarchies, Regional, Secondary Collector, Access and Low Volume classes and improving for two, Arterial and Primary Collector. From a ride comfort perspective, the network when compared nationally.



Smooth Travel Exposure (STE) Comparison

Treatment Sensitivity Factors

Two key factors have a significant impact on the sensitivity of this investment justification going forward

- **Treatment selection:** The surface options Chipseal (CS) and Asphalt (AC) from 2022 ranges from $13.75/m2 to over $73.65/m2, respectively. The modelling adopted a like for like treatment selection on future treatment candidates.
- **Treatment rates:** The cost of delivering renewals, based on planning treatment rates provided, has increased for surfacing and for pavement renewals since 2019 to 2022. No additional cost provision has been made for continued cost increases/ decreases beyond 2022. Therefore, should rates continue in increase then the quantity of work able to be delivered will reduce, and increase the current deferred backlog of work.

Model Objective

The model follows a preservation strategy to protect as much of the network as possible with the most cost-effective option e.g., chip sealing. Then as more investment is available pavement renewal quantities increase. For funding constrained environments this strategy is applied. Surface condition is preserved in the optimal model with low-cost surfacing for all investment scenarios.

The Figures below shows increasing pavement renewal quantities as the investment increases, when comparing current to recommended budget.

Unit rate inflation

It is noted that the significant increase in unit costs since the last modelling run has had an impact on treatment selection and investment need. Based on current rates, surfacing is significantly favoured over pavement treatments. However, a significant increase in rates overall since the previous modelling run has been noted. The gap between surface rate and pavement rate has increased as shown in the following Table.

Unit Rate Changes

Treatment	% Rate Change ($/m2) from 2019 to 2022	2022 Rates ($/m2)	2019 Rates ($/m2)
Surfacing Chipseal (CS)	+129%	14	6
Surfacing Asphalt (AC)	+110%	74	35
Pavement (GB)	+25%	169	135
Pavement (SAC)	n/a	241	N/A

Unit Rate Ratios

Cost Comparison	2022 Analysis Ratio	2019 Analysis Ratio
CS vs RHAB	(12.27 chipseal = 1 rehab)	(23 chipseal = 1 rehab)
AC vs RHAB	(2 ac = 1 rehab)	(4 ac = 1 rehab)

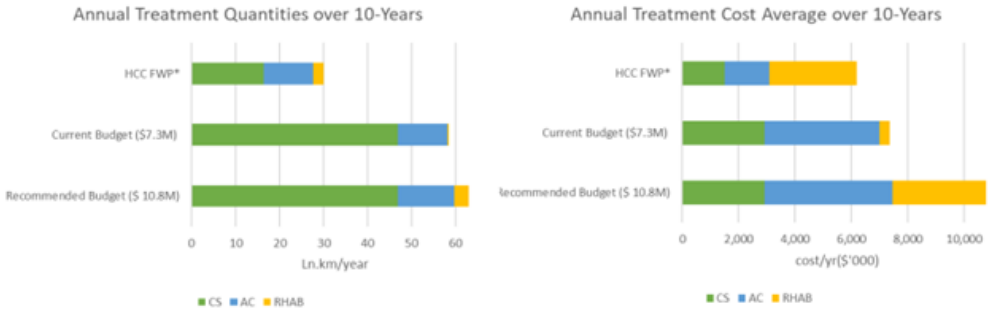
Required Minimum Investment

A minimum investment of $10.8M pa. over the next 10-year period is required based on the modelling outcomes. This is an increase of 20% from the 2019 minimum investment of $8.9M. The treatment rates have increased for surfacing since 2019, therefore increasing deferred renewals (backlog). If this continues then backlog quantities will cumulatively increase. The achieved work quantum is what needs to be measured and reported for sustainable asset management.

- The minimum network sustainable surfacing renewal rate required is approximately 6.5% per annum (~60 ln.km) – providing an average seal life of 15.5 years This equates to a current cost of ~$7.5M per annum.
  - Annual surfacing quantities are slightly less than those recommended in 2019 analysis. This corresponds to 47 ln.km chip seal and 13 ln.km asphaltic concrete.
  - Risk is that increased rates will reduce the quantity achieved in future.
- The minimum network sustainable pavement rehabilitation rate required is 0.4% per annum (1.8 km) – providing an average pavement life of around 277 years. This equates to a current cost of~$3.3M per annum.
  - Slightly higher investment than 2019, however increased rates mean 2019 quantities are unable to be delivered.
  - A high risk of continued deterioration exists as achieved quantities are low. Representative FWD testing is required to confirm certainty in pavement residual life.

Treatment Quantity Comparison

Comparison of required versus achieved quantities per annum provides an insight into the accumulation of deferred renewals. As shown in the Figures below for resurfacing the historic HCC FWP averaged ~28 ln.km/yr, with the current budget~58 ln.km/yr, and the recommended budget around 60 ln.km/yr. Current sustainable practice would suggest a minimum resurfacing renewal rate of around 6.5% of the sealed network. This equates to 60 ln.km/yr, as stated above. Therefore, for example if the HCC FWP quantities are compared to this, a deficit of 30 ln.km/yr exists. Extending this out for three years accumulates a deferred renewal length of 90 ln.km, on top of that already existing. It assumes over that period there is no increase in; unit rates, and/or no budget reductions occur. Both of which occurred during the COVID pandemic affected period.



Required and Current Investment Comparisons

Identified Risks

The direct modelling impacts of the proposed increased funding for surface renewals and pavement rehabilitation is that it will be fully utilised on the network. The risk that remains is if the quanta are not fully delivered, or funding reduced, the current level of service will be reduced, and the benefits of the long-term plan gains will not materialise on the roading network. Other risks that could be reduced from the proposed renewal rates are:

- Reduced number of failures of the road – fewer traffic management sites
- Less road user disruptions
- Reduced significant future costs
- Improved road safety, smoother roads through increased strength and slower deterioration rates
- The network becoming less vulnerable to the immediate impacts of climate change
- Increased pavement strength for transport mode changes on the networks (i.e., electric vehicles including buses, trucks etc)

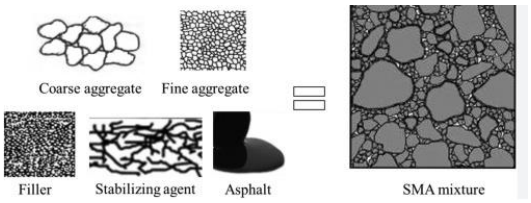
Methodology to determine annual work programme.

This section summarises information from a Stantec report which sets out the robust methodology used, including prioritisation, optioneering and treatment choice.

Stantec, was asked to document the decision-making process for pavement and surfacing renewals and HCC has a separate report explicitly documenting this process.

The report and process it documents is underpinned by the purpose of road pavements which is to provide a network that is suitable for the effective and efficient movement of vehicles and people. The pavement includes a suitable all-weather surface that is appropriate for its intended function in terms of skid resistance and smoothness.

The report notes the particular climatic risk HCC roads face, having a risk of icing in winter and causing loss of control accidents, and therefore the required NZTA T10 specification requirements in terms of skid resistance and texture they are required to meet. Generally, this requires surfacing with Stone Mastic Asphalt.



The report reflects that renewal of pavements and surfacings needs to consider safety and resilience while at the same time considering cost efficiency. The work programme focus is on higher volume roads to reduce the deterioration of pavement and surfacing.

Based on the One Network Road Classification, Regional, Arterial, and Primary Collector roads are prioritised for renewal, however, lower classification roads are prioritised if the defects constitute a safety risk or the asset is likely to deteriorate rapidly.

Generally, the approach for resurfacing treatments is to replace like for like. That is, a chipseal replaces a chipseal unless there is justification for upgrading to a thin asphalt. Similarly, a thin asphalt will be used to replace a thin asphalt; the exception is when the previous thin asphalt has not performed due to an underlying weak pavement.

The report sets out the stages progressed through to agree the final work programme:

A preliminary set of treatment lengths potentially requiring renewal is generated using the RAMM Treatment Selection Algorithm (TSA).

The sites are then prioritised based on the level of defects recorded during the condition inspection. The defects considered are rutting, shoving, scabbing, flushing, alligator cracking, longitudinal cracking, joints, potholes, patches, edge break, and edge break patches.

Other sites are frequently identified over the course of the year and are added to the preliminary program. This includes sites carried forward from the previous program that were not renewed the previous season. Once the list is compiled then priority is given to Regional, Arterial, and Primary Collector roads, however, lower classification roads are prioritised if the defects constitute a safety risk or the asset is likely to deteriorate rapidly.

The final list is reviewed by HCC.

Covered in the report are:

- Pavement renewal program development
- Pavement design

Both thin asphalt and chipseal renewals are addressed separately by covering how the renewal programme is developed and design aspects.

3.3.2 Network Resilience (Resilience/Environmental)

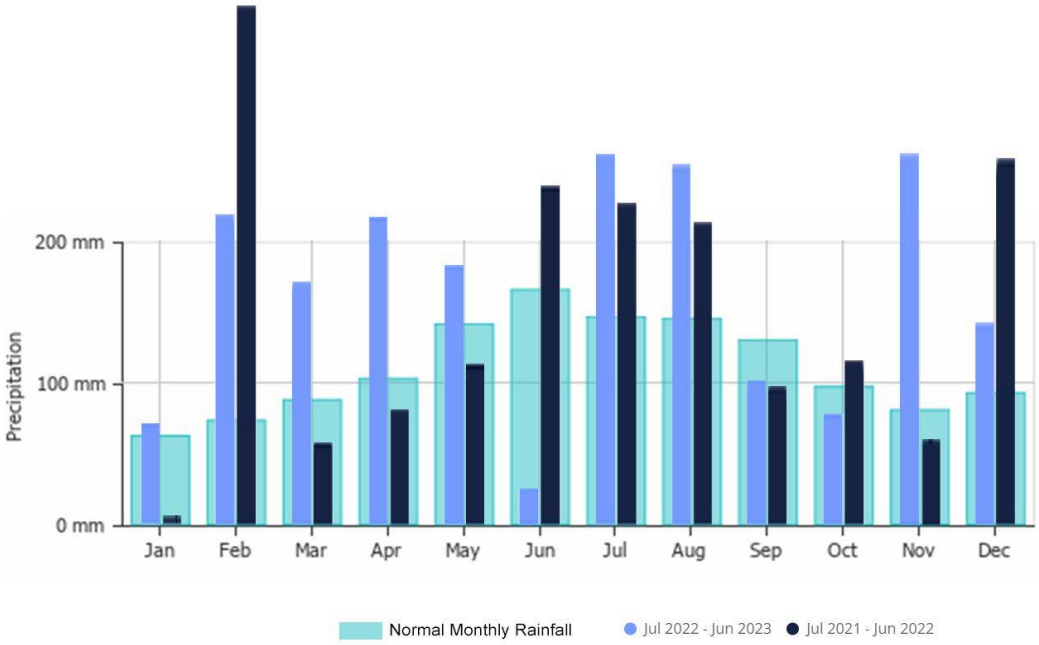
This work item involves the Maintenance of roadside vegetation control, road corridor mowing, storm damage and associated clean-up and repairs including slip retention.

Vegetation and mowing are typically seasonal (spring flush) but are still inspected monthly and treated accordingly. Budget levels are presently adequate to sustain levels of service at an acceptable standard.

Storm damage and slips are an unknown element so budget requirements for unforeseen events are unknown. Hutt River levels can, and do, impact on our roading network in the vicinity. Sea level rise has also increased the amount of damage to our Coastal areas like Eastern Bays Foreshore, this also impacts on the drainage capability of these areas.

Rainfall is unpredictable and highly variable. It can be either widespread or very heavy localised which can result in flooding and slips. Hutt City is vulnerable to flooding and slips due to the geographical setting against both Western and Eastern Hills, both sides inhabited.

However, 2021-23 have featured numerous months with significantly higher rainfall than historical norms, as can be seen in the graph below:



An HCC publication from 30 Aug 2022 provided this update (on the consequences of the July-August rainfall event(s) in 2022.

Newly compiled data confirms consistent and heavy rainfall over the past four weeks which has caused significant slips and flooding across Lower Hutt.

Since 21 July, downpours have caused extensive slips onto Eastern Hutt Road in Stokes Valley and forced two homes to be evacuated. Hutt City Council has received (up to 22 August):

- 143 reports of slips, mostly onto roads and footpaths, with 15 onto private property; and
- 90 reports of flooding, mostly stormwater overflowing onto roads.

These reports are thought to be a low estimate as some incidents go unreported. Some get reported directly to contractors, or contractors find additional incidents as they go about their work.

The 2022 HCC Integrated Transport Strategy addresses climate change in the following way:

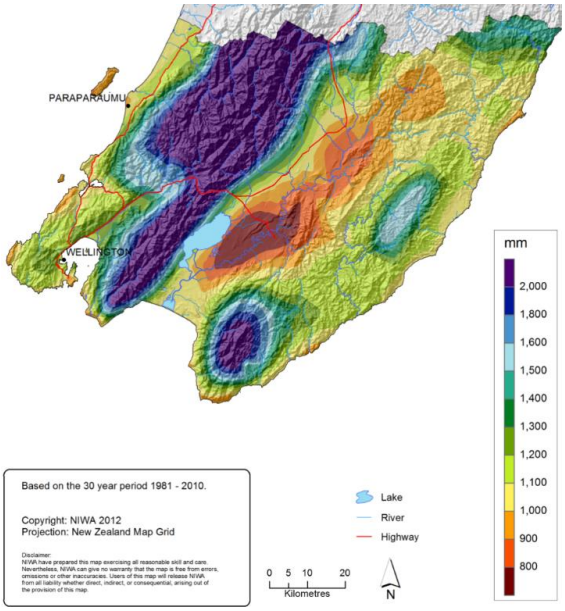
Āhuarangi Hurihuri
Climate Change

Transport is the primary source of greenhouse gas emissions in Te Awa Kairangi ki Tai Lower Hutt and future developments have a crucial role in responding to our climate change challenges.

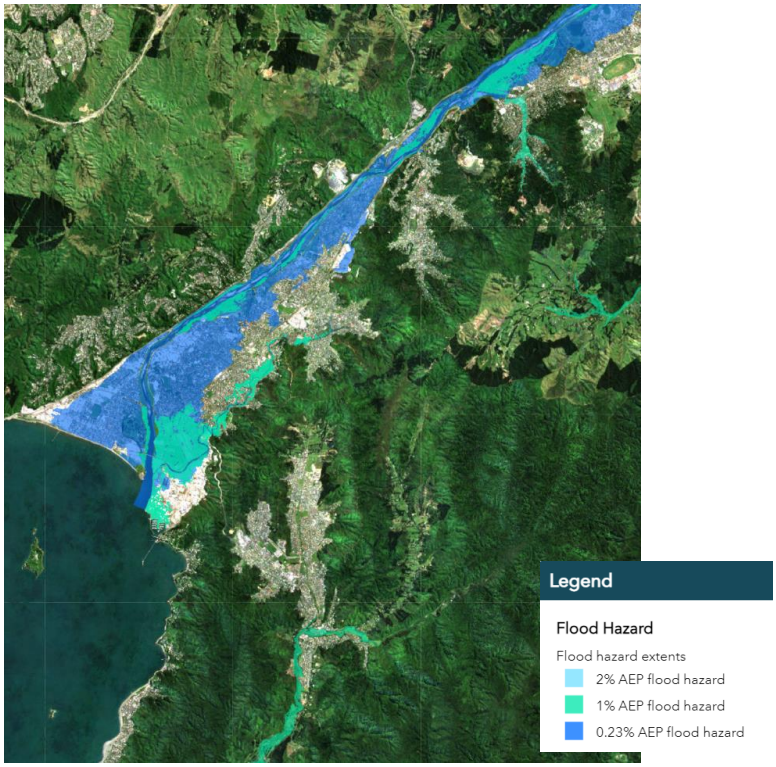
In June 2019 Hutt City Council declared a climate emergency to raise awareness and prioritise reducing council and city-wide emissions to net carbon zero, in line with the Government's Climate Change Response (Zero Carbon) Act, targeting for New Zealand to be net carbon zero by 2050.

Net emissions in Te Awa Kairangi ki Tai Lower Hutt have reduced over time (a 9% reduction between 2001 and 2019, despite 10% population growth in that time), however the city needs to reduce emissions at a much higher rate to achieve a 50% reduction by 2030 and carbon neutrality by 2050.

The NIWA 2012 map of Median Annual Total Rainfall for the Wellington region shows how the hills and mountains in the upper catchments to the West of Hutt City, routinely receive over 2m of rain each year. With climate change, and based on rainfall within Hutt City directly, it is expected that the actual rainfall could significantly increase – and exacerbate areas already vulnerable to flooding or landslip.

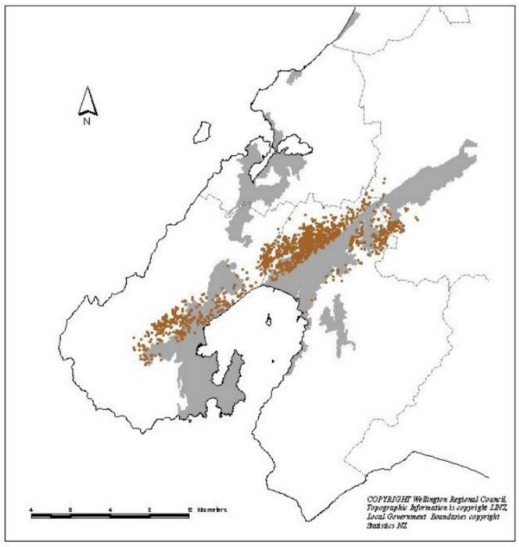


The current Greater Wellington Regional Council map of 'Flood hazard extents for the Greater Wellington Region appears as show below:



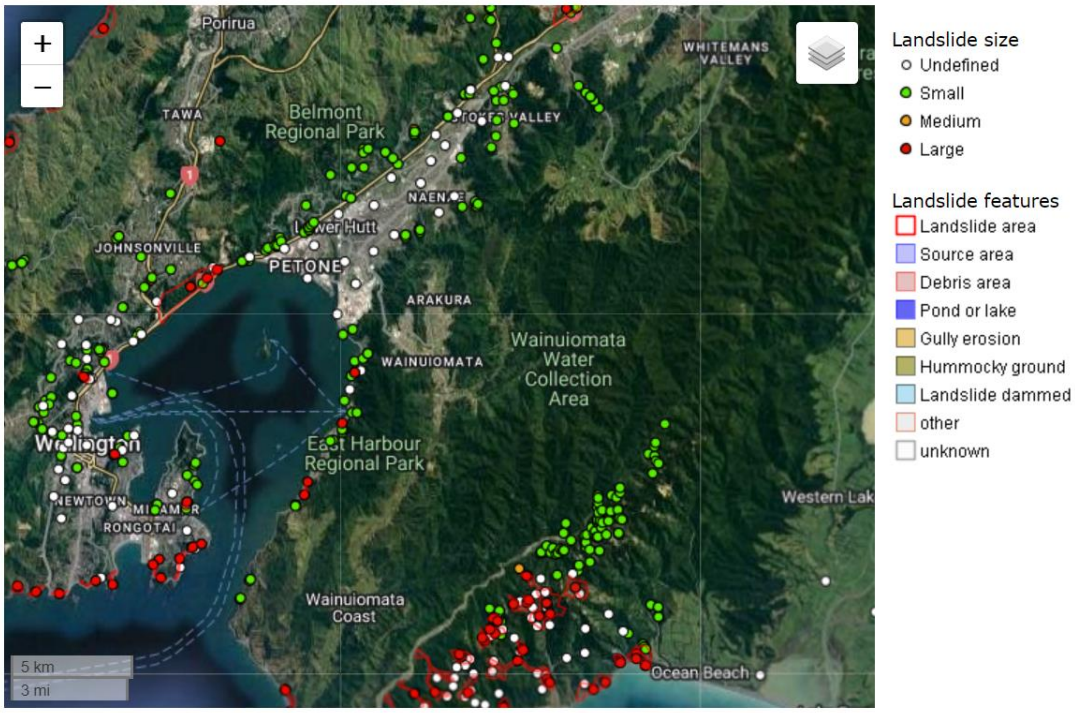
https://mapping.gw.govt.nz/GW/Floods/

Further, there have been many landslips because of rainfall events over many years. The Wellington Regional Council published a map in 1977 showing landslips that resulted from intense rainfall that year, as recorded from aerial imagery. As can be seen, Hutt City is highly susceptible to landslips after intense rainfall events, with a similar scale shown from 1977 to what was reported in 2022.



While there are many landslips' areas shown, a GNS Science Landslides Map appears to classify most landslides as small or undefined, with some large slips along the Eastern Bays. It is uncertain if the 1977 or 2022 landslips have been incorporated into the GNS map.

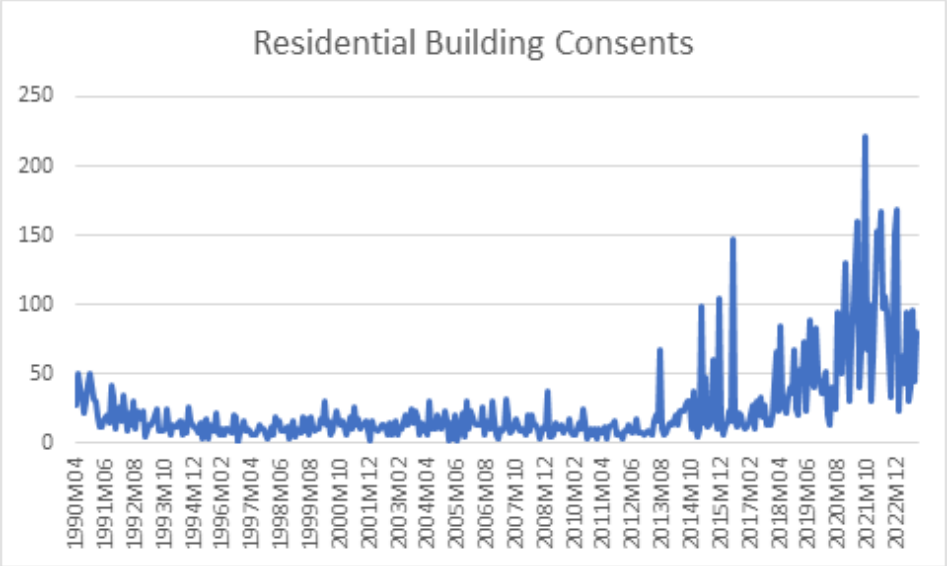
Landslides Map



While a landslip may be small or undefined, they can still cause significant disruption. These disruptions are compounded by the sheer numbers of incidents that can occur from a single rainfall event. The following photo is of one slip on Korokoro Road in August 2022.

3.3.3 Network Future Capacity (Network & Asset Management)

Hutt City has experienced sustained growth for several years, with a steady increase in the number of building consents which have been issued. The following data from Stats NZ shows a steady increase in monthly residential building consents issued in Lower Hutt, starting in 2013. The growth in building consents is, unsurprisingly, generally consistent with population growth.



Source: https://infoshare.stats.govt.nz/SelectVariables.aspx?pxID=10dc65f3-4134-4580-947b-de2c72a49c20

The HCC Integrated Transport Strategy has a focus area to 'create people-focused, liveable streets around key transport hubs and local centres'. The map below illustrates proposed locations.

The quality and safety of our streets affect how much people want to cycle, walk, and use public transport. People enjoy walking in interesting streets.

Creating people-focused environments increases feelings of safety and makes it more attractive and convenient to access activity centres by walking and cycling.

More people-focused environments encourage visiting and dwell-time, increasing quality of life for communities and economic benefits for local businesses.

The Housing and Business Development Capacity Assessment (2017) made the following notes about congestion, as part of the 30-year projection (to 2047).

- traffic flows into and out of the Hutt CBD are distributed across at least 12 different routes.
- some queuing occurs on the approaches to the High Street intersection with Daysh Street and Fairway Drive during both the weekday morning and evening and Saturday midday peaks.

- some congestion occurs within the CBD on Saturday associated with traffic accessing Queensgate and the Riverbank Market.
- some queuing of vehicles turning right into and out of Waiwhetu Road at the intersection with Whites Line East occurs during the weekday morning peak.
- Some queuing occurs during the evening peak for traffic accessing the Ewen Bridge, particularly from Queens Drive and High Street.
- State Highway 2 provides the major roading connection between the Hutt Valley and Wellington. The intersections between the local road network and State Highway 2 all experience congestion during the morning and evening peaks.

It is expected that the Melling interchange upgrade will improve access between SH-2 and Hutt City.

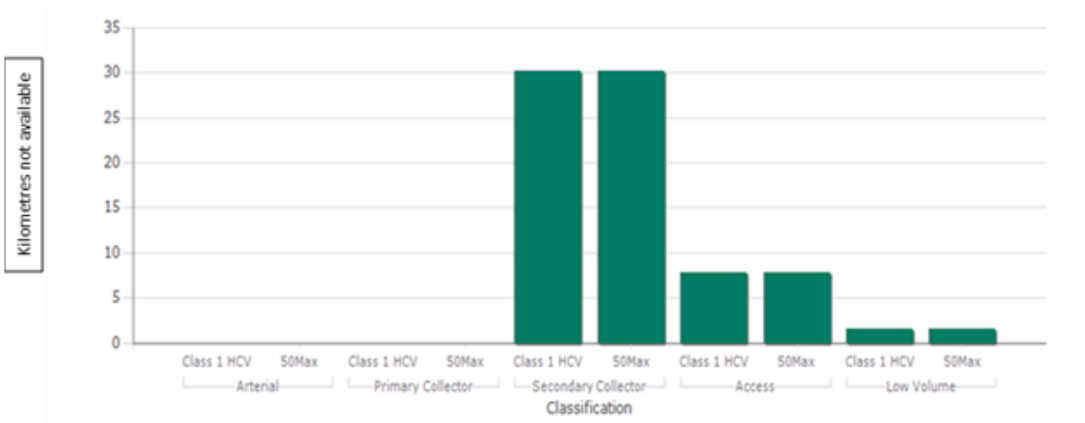
Network Accessibility

- **Class 1 Heavy Commercial, 50MAX and 45/46 vehicles**

  A total of 92% of network is available to Class 1 Heavy Commercial Vehicles, 50MAX and 45/46 tonne vehicles. All key destinations such as the Seaview Industrial area, Lower Hutt CBD, Petone CBD and Wainuiomata CBD are accessible to these vehicles, which enables economic growth and alternative transport choices within Hutt City and the wider Wellington region.

  Of the 8% of the network that is not available to these vehicles, the restrictions are limited to lower use roads, which are in areas that are not considered to impede economic growth or reduce alternative transport options.

All high use roads are accessible to these vehicles.



Network (kms) not accessible to HCV, 50 MAX or 45/46 tonne vehicles

- **High Productivity Motor Vehicles (HPMV)**

  With the introduction of HPMV throughout NZ, HCC reviewed the City for areas and routes that HPMVs would need regular access to, such as industrial areas. These routes and any bridges on them were assessed for their suitability and loading capacity to accommodate HPMVs. This included the assessment of 11 bridges which were determined as HPMV capable. A list of HPMV approved routes has been created, which services access from SH2 to Seaview, from both north and south directions off SH2 as well as other key industrial and commercial areas.

- **Oversize Buses**

  With Greater Wellington City Council introducing double decker buses into the Wellington Region to gain public transport efficiencies and environmental benefits, HCC undertook assessments of all routes and bridges that are currently on the current Metlink bus routes. This was to determine which bridges were capable of accommodating the loadings of the 18-tonne double decker bus configurations as well as the suitability of these routes.

  All bridges on the current bus routes have been assessed as 18 tonne double decker bus capable, and alterations were made as necessary to the routes, such as vegetation removal, realignment of bus stops and placement of new hazard signage.

3.3.4 Structures

The structures maintenance and replacement programmes undertake the regular inspections of all bridges, seawalls, retaining walls, barriers, guardrails and debris fences, and the resulting maintenance and replacement of these structures and components.

These structures provide key connections and safe access for both road users and cyclists/pedestrians across the network and provide a resilient network from natural events such as storms, heavy rainfall, and earthquakes.

Four major bridges span the Hutt River, with several lesser bridges crossing the Wellington to Wairarapa railway line and other smaller rivers and streams. Council has five subways which provide safe access for pedestrians to railway stations.

The seawalls in the Eastern Bays area provide protection for the roading network from the frequent wave action, high tides, and storms. These seawalls are along a sole connector road between the Eastern Bays and the rest of Lower Hutt, so resilience of that road is vitally important.

The loss of serviceability of these structures would have a major impact on the roading network, in terms of disruption to accessibility, high costs for reinstatement work, and reduction in mobility.

Regular inspections are undertaken on structures:

- Bridges and Subways - General inspection every two years and Principal inspection every five years
- Seawalls - Inspection every two years
- Retaining Walls - Inspection every five years
- Special inspections – as necessary following significant events such as earthquakes or flood.

Additional or more frequent inspections will be done if specific monitoring is identified as necessary.

All inspections are done as part of the annual inspection programme, which is undertaken by the consulting Structural Engineer and are inspected in accordance with the NZTA "Bridge Inspection and Maintenance Manual" and the "Bridge and Other Significant Highway Structures Inspection Policy".

Supporting evidence includes an annual report which is produced and outlines structures that were inspected, their general condition, remedial work that is required, prioritisation of the repairs, rough order costs, and any additional investigation requirements.

The remaining structures (barriers, guardrails etc.) as part of the general maintenance contract, with minor remedial work prioritised as needed.

3.3.5 Drainage Facilities

Drainage assets provide a stormwater carrying capacity for runoff from the carriageway, footpaths, berms, and adjacent properties to an outfall point to:

- Minimise flooding
- Improve safety by removing water from the carriageway and footpaths
- Extend the life of the pavement structure by removing water from under the carriageway
- Provide protection to pedestrians by delineating the carriageway

The drainage asset group includes the following assets:

- Kerb and Channel
- Sumps/cess pits/soak pits
- Sump leads to discharge point e.g. manhole or waterway
- Water tables
- Road culverts and headwalls
- Subsoil drains

The network's drainage assets are inspected regularly for deterioration and necessary remedial repairs, through the maintenance contract inspections and the annual RAMM Condition Rating Survey inspections.

Maintenance

Smaller discrete sections of damage are repaired through the general maintenance contract. This is typically damage caused by heavy vehicles or tree roots disturbing the kerb and channel. Repairs are undertaken immediately where there is an issue of public safety.

Short sections of kerb to re-establish grade (any change in channel grade is likely to cause ponding because of the city's flat topography) are prioritised based on the following considerations:

- Public safety
- Flood nuisance
- Significant further deterioration is likely
- Future costs if the work is not done
- Visual impact of defect

Street Sweeping

Sweeping is undertaken to remove debris from the channels and sump grates to allow for free flow of storm water to the sumps to prevent flooding and water ponding. All urban streets are swept with the following frequency:

- All urban streets - every 6 weeks
- High priority / seasonal leaf streets - every month
- Problem streets – fortnightly
- CBD's - daily
- Reactive sweeping – as required if a problem is identified (loose metal, excessive debris, or rubbish)

High/Problem streets are those that have been identified and listed on a schedule as street requiring more frequent sweeping due to factors such as higher levels of vegetation/leaves in the area which block sumps.

Sumps

Regular sump cleaning is undertaken to ensure that sump capacity is kept at the optimal level to prevent flooding and water ponding. The cleaning frequency is as follows:

- All sumps – once a year
- High priority sumps – monthly (weather dependent)
- Reactive – as required if a problem is identified (blocked sump)

Sumps are inspected at the time of the cleaning, with any damage or deterioration noted and prioritised for repair/replacement.

Asset Renewal

Historically HCC targeted drainage asset renewal through the road and footpath reconstruction programme, which more recently saw one street per year being reconstructed (approx. 1 km of kerb and channel per year). Now, with very few streets warranting a full-scale reconstruction, it has been identified that greater value can be gained from more discrete drainage renewals across the entire network, rather than in one focussed area.

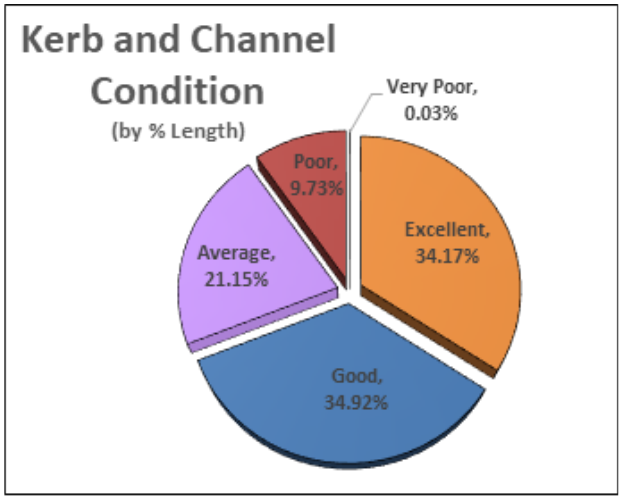
A kerb and channel renewal programme has been created using the RAMM Condition Rating data and considers additional considerations such as the ONF categories to provide priority. Also, as part of the annual resurfacing and pavement rehabilitation programme validation, drainage assets are further inspected and prioritised for renewal, if necessary, to ensure than new pavement and surfacing assets are not compromised by sub-standard drainage.

Very little kerb and channel constructed prior to 1950 remains in Hutt City. This is reflected in the condition profile, which shows approximately 90% of the network being in average condition or better. The kerb and channel in poor or very poor condition are generally in older areas of the City or are in areas where local conditions mean the life expectancy is less than normal. The assessed kerb and channel condition is summarized in the following graph, shown the percentage of network at each condition level.

Investment Level

The current maintenance investment level has been determined through:

- Contract rates for routine maintenance requirements such as street sweeping and sump cleaning.
- Forward works programme for kerb and channel renewal.
- Proven history over the years has shown that this level of investment adequately covers all reactive remedial work requirements, and with no notable change in the network's drainage condition there is no known need to increase or decrease the current level of investment.



The condition of existing assets is a primary consideration in the prioritization process, and helps inform the forward works programme.

3.3.6 Traffic Services

The Traffic Services activity includes electricity for streetlights, including off street facilities such as pedestrian crossings, accessways and bus shelters. This is a mixture of subsidised (streetlights and pedestrian crossings) and unsubsidised cost (for off-street lighting, accessways and bus shelters).

The activity also covers damages to streetlights (from motor crashes etc.), maintenance of pedestrian crossings, advance directional signage, raised pavement markers and street signs.

Operational maintenance of the streetlight network and replacing old streetlight luminaires with LED luminaires is also included.

This activity class also includes maintenance of the road markings and signs across the city.

Subsidies are covered under WC 122, except for the accelerated LED renewals which uses WC 324.

Damaged services are repaired as soon as they are identified or reported, however the annual cost can fluctuate due to factors beyond Council's control. Leaving assets in a damaged state would increase future investment costs and reduce customer levels of satisfaction.

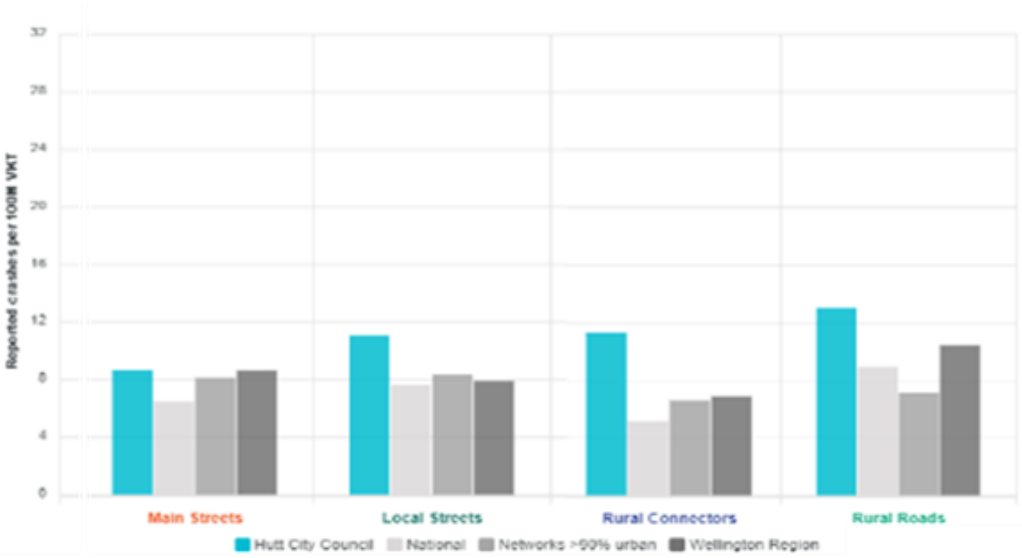
Road marking maintenance includes remarking arterial routes annually and roads and below on a two-yearly cycle. All roads in the network have been inspected to prioritise the remarking programme. We are investigating the benefits of long-life markings for some high traffic volume routes.

Road sign maintenance is both planned and reactive based on damage and deterioration or the results of annual inspection reporting. Current investment levels are adequate to maintain the assets at a satisfactory level. Lower investment would result in signs being left in place for longer before replacement. These risks reduce road safety outcomes.

Data is available from the ONF shows the number of serious injuries and fatalities (DSI) at intersections each year. However, there is an increase for Urban connectors and Activity streets over the calendar year 2022, as shown below.

Similarly, ONF data on vulnerable users shows that there are consistently DSI's that involve Pedestrians Crossing Roads (2022) and an increase in the latest periods, particularly on Urban Connectors and Activity Streets, as can be seen below.

Data from ONF showing Safe Travel – Personal/Collective Risk shows that Hutt City is fairing worse than expected on Main Streets, Local Streets, Rural Connectors, and Rural Roads – although Main Streets, Rural Connectors and Rural roads are skewed by low VKT. Local Streets may warrant some additional attention going forward.



3.3.7 Operational Traffic Management

This activity includes traffic signal maintenance and electricity subsidised under Work Category 123.

Maintenance typically includes replacement of ageing or failed componentry, poles, outreaches, signal aspects and controllers as well as pedestrian call boxes. This maintenance is managed through the regional traffic signals contract through collaboration with Porirua and Kapiti Coast Councils.

Our focus is on maintaining existing levels of service by minimising signal outages. This requires proactive replacement of ageing signal infrastructure before it fails.

Our current funding levels have allowed us to achieve this level of service, however it is expected that there will be more signalised intersections in the future due to the need to manage demand and congestion and to accommodate specific development projects.

Evidence about the number of deaths and serious injuries at intersections are shown in the previous section. A progressive decrease is very good, however, the data on Urban Connectors shows that additional attention is warranted on these road types.

3.3.8 Cycleways / Shared Paths

Council is responsible for the upkeep of several shared pathways, including the Wainuiomata Hill, the northern segment of the Beltway, and sections of the Hutt River Trail. Furthermore, the maintenance of the Petone to Melling shared path, as well as Tupua Horo Nuku, will be under HCC's authority upon their completion. Any additional cycleways constructed in the next three years will need to be maintained during the 2024–27 period.

Council has included in its NLTP 2024-27 submission funding for the following: Waterloo to CBD cycleway, CBD walking and cycling connection, and other projects.

In 2024–27, Council will be looking to complete a strategic walking and cycling plan, to compliment the Micromobility Business Case which will aim to connect existing and soon-to-be completed projects such as Te Ara Tupua Ngā Ūranga ki Pito-One, Pito-One to Melling shared path and Tupua Horo Nuku. The plan will also look at connections from Waterloo to Woburn Station, the Wainuiomata shared path to Tupua Horo Nuku and Woburn Station and any other strategic links identified during the plan.

Tupua Horo Nuku Eastern Bays Shared Path

Tupua Horo Nuku is a 4.4 kilometre walking and cycling path that will run along Marine Drive in two sections covering a total of six bays. The project includes new seawalls that will offer enhanced storm and wave protection to the road compared to the current seawalls. Construction of the shared path will offer a safer route for pedestrians and cyclists, promoting increased utilisation of active transport modes, and contribute to congestion alleviation. It will also enhance environmental aspects, where possible, and serve as a foundation for future resilience work on the road and underground services.

The path additionally seeks to establish connections with various segments of the network, catering for recreation and tourism needs, such as the Remutaka Cycle Trail and Te Ara Tupua. Spanning between 2.5m to 3.5m in width, the shared path encompasses reclamation efforts and the creation of new shared pathway. The total cost for the project is $79.9M with Crown Infrastructure contributing $30M, Waka Kotahi, NZTA, $25.474m and Council $24.475. The project is due to be completed in 2026.

Micromobility Programme

The Hutt City Cycling and Micromobility Business Case is focused on the identification and development of local cycling and Micromobility connections which link the core routes with key employment, education, and transport hubs to encourage more people to cycle and scooter more often.

Delivering safer and better transport is part of a significant investment in Lower Hutt, to revitalise the CBD, strengthen our infrastructure and expand opportunities for business to make Hutt City a better place to live.

By building better transport infrastructure, HCC is creating a city for the future, which is safe, accessible, and connected for all people, where business can thrive, and families can grow.

We need to set up Lower Hutt's transport needs for the future, making it safer and easier for people to get around without needing to rely on cars, which is better for our health, our communities, and our environment.

The output of this work will be the development of a programme of investment for the network through the following agreed investment objectives:

- Increase the number of Hutt City residents that use bikes and Micromobility as a mode of transport
- Increase the potential for Hutt City school students to use active transport to and from school
- Improve safety for people who use bikes and Micromobility in Hutt City

Micromobility Programme FY23/24

The following projects are in progress and will be delivered in FY23/24.

It should be noted that coming to the end of the NLTP 2021-24 NLTP project deliverability is dynamic with HCC having no mircromobility projects approved beyond the 2023/24 period. However, HCC has submitted a range of projects for the NLTP 2024-27 and whether they progress Is subject to both the NLTP process for Waka Kotahi, NZTA, and HCCs LTP process.

Project	Funding Source	Purpose
Community Connections (Avalon and Taitā)	Transport Choices	To improve safety and encourage more sustainable forms of transport from Taitā and Avalon by linking to the Beltway Cycleway.
Maru Streets for People	Streets for People	To partner with the Wainuiomata community to evolve the Maru Street area together to create a people friendly space
Wayfinding Guidelines	Transport Choices	To develop guidelines for wayfinding signage to make all the signage for all Micromobility consistent across the city.
Riverlink to City Centre walking and cycling improvements	Transport Choices (Pre-imp only)	To improve the walking and cycling linkages in the city centre to complement the Riverlink project. *Note: This project was only funded for pre-implementation. The design will be finalised, and the scheme will be put forward for consideration in the FY24-27 NLTP.*

Micromobility Future projects for consideration

Project	Comment
Riverlink to City Centre walking and cycling improvements	This project was funded for pre-implementation only in FY23/24. The design will be submitted for funding in FY24-27 NLTP.
Waterloo to City Centre Cycleway	This project was funded for pre-implementation only in FY23/24 and a funding submission was made for FY24-27 NLTP.

Connectivity Study

Inspection Results

Using ONRC data from 2021/22, the following table confirms that 25.8km of cycle paths were inspected, with no hazards noted.

Classification	Urban			Rural		
	Number of cycle path hazards	Length Inspected km[1]	Hazards per km[1]	Number of cycle path hazards	Length Inspected km[1]	Hazards per 10 km[1]
Regional	0	0	0	No data	No data	No data
Arterial	0	2.9	0	No data	No data	No data
Primary Collector	0	3.7	0	No data	No data	No data
Secondary Collector	0	4.7	0	0	0	0
Access	0	7.5	0	0	1	0
Low Volume	0	4.5	0	0	1.5	0

3.3.9 Footpaths

The city is well catered for with its footpath network, at 652 kms in length.

There are three main types of footpath surfacing; asphaltic concrete, concrete, and interlocking paving blocks. While of different structure, material, type and lifespan, the essential nature of deterioration is the same and the same asset condition table has been used to describe all three types.

The main reasons for footpath deterioration are:

- Inadequate reinstatement by service authorities.
- Vehicle damage.
- Break-up by root and weed intrusion.

Most of the concrete footpaths within the City can be aged from the adjoining kerb and channel. It should be noted however, that significant proportions of these paths, were constructed during the State Housing Development of 1944-55 and are expected to have lower lives than modern concrete paths.

Asphalt or sealed paths are in general resurfaced when they deteriorate due to age or because of excessive defects. There are few paths older than 20 years.

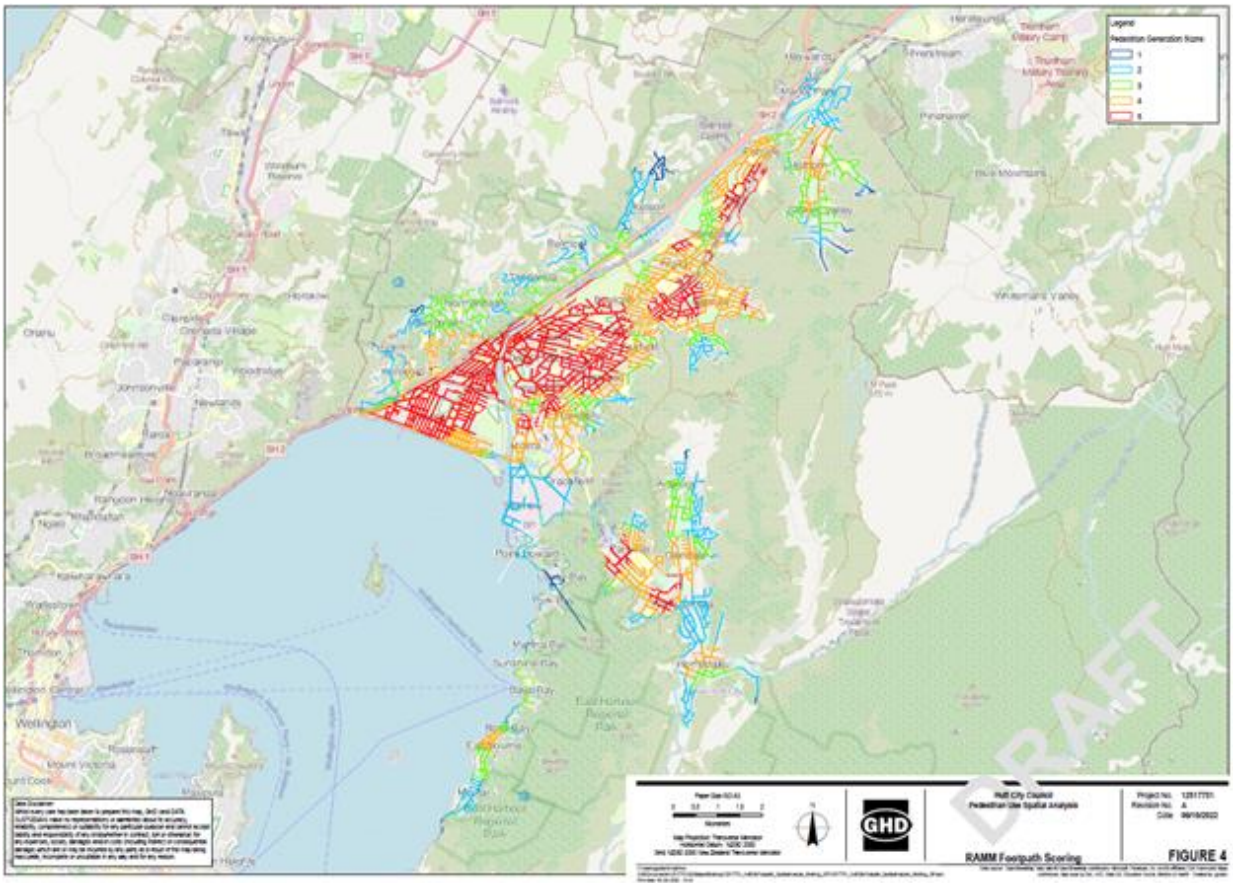
Footpath condition rating surveys are carried out in conjunction with the RAMM road condition surveys. Each year one third of the footpaths are surveyed. The three areas are:

- Wainuiomata and Harbour Wards
- Western and Central Wards
- Northern and Eastern Wards

Additionally, the footpath survey block lengths are scored on a scale from 1 to 5, where 1 equates to Excellent (no defects) and 5 equates to Very Poor (potentially dangerous):

Category	Description	Maintenance status
Excellent	No defects.	No maintenance required
Good	As previous condition but showing some weathering and minor cracking.	
Moderate	Functionally sound but showing some minor uplift or settlement, cracking, and surface fretting. May cause pedestrians to trip.	Maintenance required
Poor	Asset usable but showing significant uplift or settlement, cracking, or surface ravelling. Likely to cause pedestrians to trip.	
Very poor	Asset potentially dangerous to use with major uplift or settlement, areas of cracking, or surface ravelling. Very likely to cause pedestrians to trip.	Major rehabilitation or replacement

A draft RAMM Footpath Scoring map is shown below, from 6 October 2022. This shows that a large portion of the footpath network has been scored as a 4 or a 5 (poor, or very poor).



To maintain the footpath network to expected levels of service, HCC has three programmes of work:

- Routine maintenance
- Cyclic renewals
- Construction of new footpaths

Routine Maintenance

Routine maintenance covers reactive and planned work to repair small sections of footpath due to faults such as:

- Trip hazards
- Cracking/broken surfaces
- Depressions
- Tree root disturbance

Planned maintenance is programmed by the maintenance contractor which has been identified through their routine inspections and public complaints, as well as through the annual footpath condition rating surveys.

Cyclic Renewals

A footpath renewal programme has been created using the RAMM Condition Rating data and considers additional considerations such as the ONRC categories to provide priority.

Construction of New Footpaths

Areas for new footpaths are usually highlighted through customer requests.

Council has a very small discretionary annual fund for smaller discrete sections of new footpath, so requests for smaller sections are assessed for construction based on safety, lack of available alternative footpath i.e. across the road, and likely foot traffic numbers.

Requests for larger sections of new footpath will require additional funding from Council and need to be addressed through Council's annual/long term planning process.

Council has a Substandard Roads Programme which has identified roads which are below the standard specified in the District Plan. The main deficiencies are that they are under width and without footpaths. Council has an on-going long-term programme to upgrade these roads.

Level of Investment

To provide confidence to Council that the current level of investment into the footpath network is at a suitable level, an annual customer service survey (via Key Research, previously Communitrak) is carried out which indicates the satisfaction of our ratepayers with the level of service provided in respect to footpaths. While this shows an increase from 2022/23 to the score in 2021/22, each of the last three survey results are lower than the 80% target set by Council.

	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
Residents' satisfaction with footpath conditions	85%	80%	82%	83%	83%	83%	78%	37%	45%

= Greater than 80% *= Les than 80%*

These survey results clearly indicate that the level of investment for the next three years needs to exceed the level of investment over the past three years. Consequentially, Council is proposing an increase in funding for the 2024-27 period.

3.3.10 Low Cost / Low Risk Safety Improvements

Vehicle operating speed has a direct correlation to the likelihood and severity of motor vehicle crashes. The faster you travel, the bigger the mess.

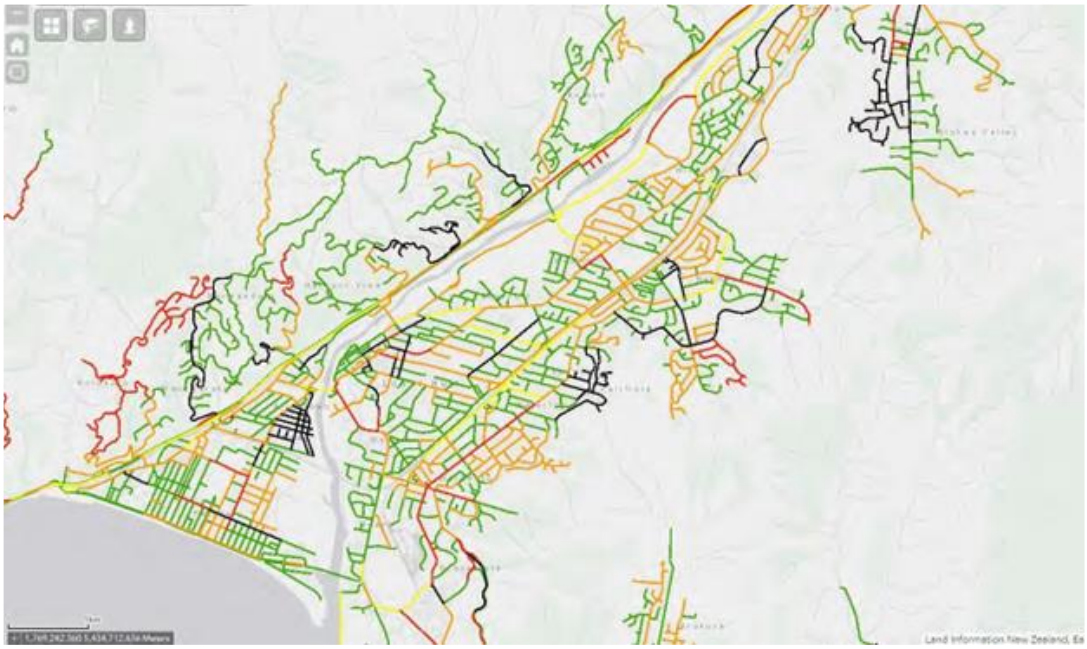
In addition to the Wainuiomata Hill Road, both intersection and mid-block treatments are needed across the city to maximise safety outcomes for all road users.

Increased congestion and delay also contribute to poor driver decision making which results in higher crash rates, particularly at urban intersections. Our network needs to be designed and upgraded to maximise efficiency and encourage good road user decision making. The evidence shows that there has been a slight increase in deaths and serious injuries on Urban Connector intersections over the past five years, in contrast to reductions on Activity Street, Main Street and Local Street intersections.

Source: https://portal.transportinsights.nz/onf/transport-outcomes/hsp3

Waka Kotahi, NZTA's Megamaps Tool indicates several high and medium high Personal Risk areas within the Hutt valley, as shown in the figure below. Along with Collective Risk indicators and DSI saving indicators these tools are used to identify and prioritise speed management treatments across the network.

Urban Intersections and Mid-Block



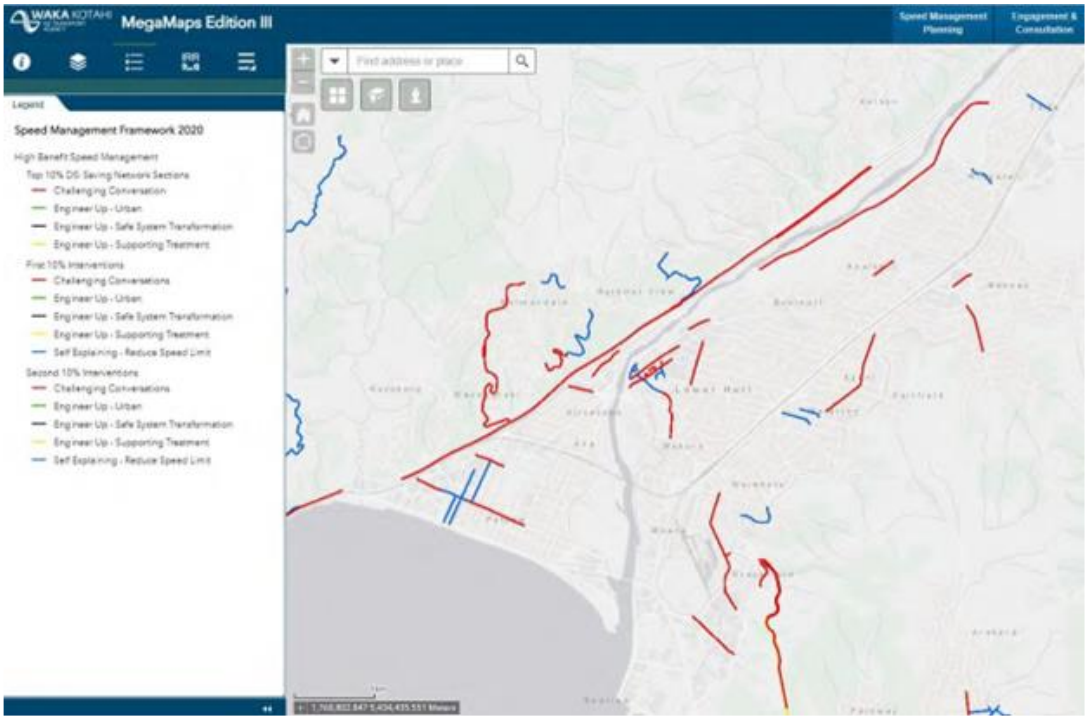
Typical treatments include Local Area Traffic Management such as horizontal and vertical deflection devices, raised tables, channelisation and intersection control changes (such as roundabouts or signalisation).

Treatment selection is based on several factors including predicted DSI savings and IRR, engineering judgement and behavioural factors.

Our preferred approach is to adopt a proactive programme of improvement works rather than manage safety in a reactive way (although the latter is also required at times). Maintaining the existing level of service for road safety must be the bare minimum – the Road to Zero strategy requires a more proactive approach.

3.3.11 Parking

The parking activity class covers the operation and maintenance of Council's on and off-street parking facilities. This is an unsubsidised activity class. The most significant cost is the engagement of Council's parking Services Division who manage the enforcement of parking restrictions throughout the city.

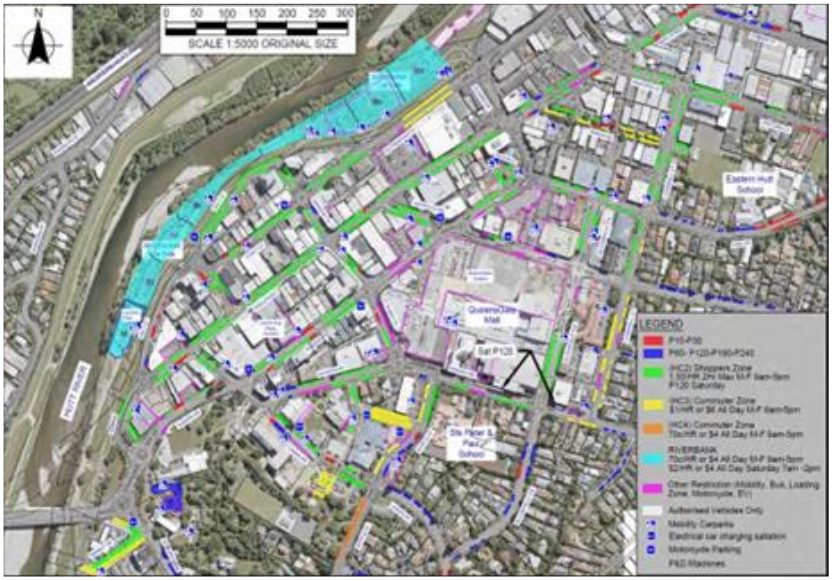


Commission and Court fees vary year on year depending on the quantity of infringements issued, and the number of infringements which are unpaid. Unpaid infringements are passed onto the courts.

Electricity, lease, and rates costs are generally consistent year on year, although delays in receiving invoices for lease costs can lead to underspending in a given year and overspending in the subsequent year. Lease costs cover the rental of land owned by external parties on which Council operates car park facilities. This includes the Anglican Church (Library Carpark), and Greater Wellington Regional Council (Harvey Norman and Riverbank Car parks).

Annual costs for the operation and maintenance of parking meters includes collection of cash, maintenance of machines, replacement of end-of-life machines and replacement of damaged machines. Machine damage is typically related to theft and can vary year on year. Council is gradually replacing the meters with cashless meters to reduce the likelihood of damage, however there is some public resistance to the removal of cash parking fees.

Council upgraded to 'pay by plate, parking meters in the 2018/2019 financial year to reduce paper pollution and reduce maintenance costs (the printers tend to be the highest maintenance item). Maintenance costs were subsequently lower in the 2019/2020 financial year, however further financial performance data is required before a budget reduction can be confirmed.



To balance parking demand and overall availability, HCC uses mechanisms such as pricing or time restrictions where required. Understanding parking needs across the city is seen as an inclusive approach to enabling access to employment, retail and leisure facilities.

The parking type differentiates according to demand – pricing is generally effective in areas with higher demand, whereas time restrictions are normally implemented in areas with low/medium demand. As demand increases, the time limits can be reduced as an alternative to promote parking turnover or in some situations (i.e.: mixed-use) Council can consider the implementation of Residential parking schemes.

Compliance with the parking schemes is undertaken by HCC Parking Services, who play an important role in encouraging the turnover of parking spaces. Council's ability to provide enforcement of parking restrictions across the city and respond to requests for more effective enforcement is currently limited in some areas. HCC is investigating the implementation of new technology to provide an integrated approach to parking in the city which will improve the efficiency of enforcement and provide in-depth data to inform future interventions and improve customer service.

HCC will undertake a review of the parking policy in the next 12 months which will look at residential parking and time restricted parking.

3.4 Resilience

This section outlines the overarching plan for withstanding, or quickly recovering from, adverse impacts or interruptions resulting from potential hazards.

3.4.1 Network Compliance (Sealed Roads)

Withstanding Interruption

Flexible pavements are not designed to withstand natural disasters, but rather are designed to withstand projected traffic loading and wear.

Quickly Recovering from Interruption

In the event of pavement failure, temporary measures can quickly be put in place until such time as a permanent repair can be installed. While this may temporarily result in reduced speed restrictions or short-term detours, traffic should not be impeded long-term.

3.4.2 Network Resilience (Resilience/Environmental)

Withstanding Interruption

Due to recent events, extreme weather is a poignant topic. While it is preferable to withstand every potential event, and eliminant any interruption due to flooding or landslip, this may not be possible for all future events. However, there are certain steps which can be taken to prevent, or minimize these possible interruptions – as noted below:

- Quantify potential hazards. Review and update known hazards, including projected probabilities and the potential consequences.
- Assess and/or model transport assets against potential hazards.
- Identify and prioritise consequential vulnerabilities within the transport network. The prioritisation should also take cost-benefit into consideration.
- Develop a plan for eliminating or mitigating vulnerabilities.
- Implement the plan, by progressively funding those measures which are necessary to address prioritised vulnerabilities.
- Repeat this process on a regular basis.

Quickly Recovering from Interruption

While the process of eliminating or mitigating vulnerabilities is taking place, it would be prudent to develop a plan for detours and alternative routes for each known area which is subject to flooding and/or landslips. These plans should be made available to Emergency Management as a resource during declared emergencies.

3.4.3 Network Future Capacity (Network & Asset Management)

Withstanding Interruption

Congestion can create delays, or interruption. While this isn't generally the intent of conversations about resilience, it does support ongoing efforts to promote modal shift to public transport or active transport. By reducing the number of single-occupancy vehicles on the road, the road corridors can operate much more efficiently, thus reducing interruptions due to congestion.

Quickly Recovering from Interruption

Council Operations staff will proactively respond to interuptions as part of Operational Traffic Management.

3.4.4 Structures

Withstanding Interruption

Structures such as bridges are designed with withstand forces such as seismic loading and should not fail under any loading condition within the design parameters. A periodic review of the design parameters should be conducted, to ensure that any changes are evaluated against the existing structures in place. Regular inspections are required, as is preventative maintenance.

Quickly Recovering from Interruption

In the unlikely event that a structure fails, it is expected that it could take a long time for repairs and/or replacement. As such, detour plans should be prepared for each structure. In the case of catastrophic failure of multiple structures, then Emergency Management will exercise control over transport closures and detours – mindful that normal traffic demand is unlikely under such conditions.

3.4.5 Drainage Facilities

Withstanding Interruption

Drainage facilities will operate as intended if they are maintained to necessary standards. Facilities that are blocked with silt or debris will not have the capacity to convey design flows. Therefore, adequate operational expense must be allocated to this work category such that ongoing maintenance can be performed.

Further, based on the assessment of potential hazards as previously discussed, it is necessary to confirm that existing drainage facilities are adequately sized, and can convey projected flows.

Quickly Recovering from Interruption

Further work is required to determine the optimal approach for this situation.

3.4.6 Traffic Services

Withstanding Interruption

Streetlights are the most likely item to consider, with signs, pavement markings and bus shelters of lesser concern during a potential disaster – excepting any warning signs which are placed in response to the specific event. Security for the power grid is the primary method to prevent interruption of electricity to streetlights – but is outside the remit of HCC to control. While backup power is considered a necessity for higher Importance Level buildings, this is unlikely to extend to streetlights.

Quickly Recovering from Interruption

When there is an event which interrupts, obstructs, or otherwise damages Traffic Services assets, then contracted resources will be engaged to provide remedial actions once safe, and appropriate to do so.

3.4.7 Operational Traffic Management

Withstanding Interruption

Physical poles and cabinets are design in accordance with best practice, to prevent damage during most disasters.

However, electricity cuts, flooding, and other events may impact the operation of lights at signalised intersections. In these cases, it is intended that signals flash red in every direction, if it is still possible to provide any signal. Battery backup systems shall be reviewed and updated as necessary.

Quickly Recovering from Interruption

It is recognised that these intersections are the most frequently used within Hutt City, and in the event of any interruption – the restoration of service should be prioritised at these locations.

3.4.8 Cycleways / Shared Paths

Withstanding Interruption

Cycleways and shared paths are not designed to withstand natural disasters.

Quickly Recovering from Interruption

In the event of cycleway failure or obstruction, temporary measures can quickly be put in place until such time as a permanent repair can be installed. While this may temporarily result in closures and detours, cyclists and pedestrians should not be impeded long-term.

3.4.9 Footpaths

Withstanding Interruption

While footpaths can consist of both flexible and rigid pavements, they are generally lightweight, and not designed to withstand forces greater than standard loading and use.

Quickly Recovering from Interruption

In the event of footpath failure or obstruction, temporary measures can quickly be put in place until such time as a permanent repair can be installed. While this may temporarily result in closures and detours, pedestrians should not be impeded long-term.

3.4.10 Low Cost / Low Risk Safety Improvements

There are no specific measures to apply under this category. However, it is noted that 'Resilience' should be a consideration for any work that is designed or constructed as part of this work category.

3.4.11 Parking

Withstanding Interruption

On street parking is not designed to withstand natural disasters.

Quickly Recovering from Interruption

On street parking may be reduced if the road pavements are subject to any failures. In most cases, the repair and/or replacement of damaged road pavements will also include the reinstatement of parking that had been lost.

3.5 Level of Service Options

This section provides a description of the differential level of service options that have been considered for use within each area. Generally, there are four, or more, options that have been considered for each topic, broadly as described below (with indicative interventions). These high level response options are then applied throughout the balance of this Section.

Differential Level of Service Alternatives	
Do Nothing	
	This option would result in the rapid degradation of the transport network, and is inconsistent with all stakeholder expectations and statutory obligations. This option was not considered further.
Reactive Intervention	
	For each work category, this option represents a 'do-minimum' approach. This option is intended to maximise the useful life by 'sweating the asset', but will also include reduced Levels of Service. This may lead to significant future costs (example being the 'Three Waters' infrastructure across New Zealand).
Preferred Level of Intervention	
	The preferred approach is a balanced one, whereby all work categories are optimised – maximizing both asset life and Levels of Service with adequate funding for the proposed interventions. This represents a holistic, value-for-money approach.
Very Proactive Level of Intervention	
	This option represents an early, aggressive approach for each work category. This option is intended to maximise the Levels of Service by early intervention. This usually results in much higher ongoing costs, and the reduction of significant future interventions.

HCC has considered this range of response options for each work category, generally representing a long list of alternatives, as shown in each of the sections below.

For each possible response, Council has identified the likely interventions. Interventions have been grouped as relating to either physical assets or required changes. The scale of response considered long-term, intergenerational impacts and system outcomes.

The differential level of service evaluations have also considered the Target Level of Service, as previously described within this AMP.

3.5.1 Network Compliance (Sealed Roads)

The following level of service options were considered for this work category:

Optional Level of Service		Interventions	
		Changes	Assets
Renew all pavements >30 yrs old in HCC		Early renewal, accept abbreviated life	Extensive renewals
Renew all pavement with weak subgrades		Early renewal, accept abbreviated life	Extensive renewals
Optimised maintenance and renewals (based on Visual Inspection, NPV's, and ONF)		Managed approach to LOS and cost	Targeted renewals
Renewals upon pavement failure		Accept lower LOS and higher Whole-of-life costs	Sweating the asset / increasing maintenance
Reactive maintenance only		Accept lower LOS and higher Whole-of-life costs	Sweating the asset / increasing maintenance interventions

While these are high-level alternatives with indicative changes and asset interventions, the three most likely alternative outcomes are evaluated within Section 3.6.

The three most likely alternative outcomes, as described in Section 3.5 – Level of Service Options.

3.5.2 Network Resilience (Resilience/Environmental)

The following level of service options were considered for this work category:

Level of Service		Interventions	
		Changes	Assets
Upgrade all vulnerable infrastructure		High cost (unaffordable)	Extensive upgrades
Assess vulnerabilities and prioritise targeted upgrades		Managed approach	Upgrade vulnerable assets
Reactive maintenance only		Accept lower LOS and higher Whole-of-life costs	Sweating the asset / increasing maintenance
Accept progressive degradation		Accept lower LOS	Sweating the asset to failure

While these are high-level alternatives with indicative changes and asset interventions, the three most likely alternative outcomes are evaluated within Section 3.6.

3.5.3 Network Future Capacity (Network & Asset Management)

The following level of service options were considered for this work category:

Level of Service		Interventions	
		Changes	Assets
Aggressive transport demand management		Regulate road usage	Toll facilities, congestion charging equip.
Prioritised transport demand management		Incentives	PT Priority Network, HOV Network
Optimisation of demand management and capacity improvement		Balance of incentives and volume / capacity ratio	Selected PT/HOV & Parking Strategy for key routes
Increase transportation capacity		Improve volume / capacity ratio	Additional traffic lanes / intersection controls
Accept existing LOS and deterioration over time		Accept lower customer satisfaction	None

While these are high-level alternatives with indicative changes and asset interventions, the three most likely alternative outcomes are evaluated within Section 3.6.

3.5.4 Structures

The following level of service options were considered for this work category:

Level of Service		Interventions	
		Changes	Assets
Aggressive replacement strategy		High cost (unaffordable)	Extensive upgrades
Prioritised maintenance and replacement strategy		Managed approach	Upgrade vulnerable assets and develop a replacement plan
Reactive maintenance only		Accept lower LOS and higher Whole-of-life costs	Sweating the asset / increasing maintenance
Accept existing LOS and deterioration over time		Accept lower customer satisfaction	None

While these are high-level alternatives with indicative changes and asset interventions, the three most likely alternative outcomes are evaluated within Section 3.6.

3.5.5 Drainage Facilities

The following level of service options were considered for this work category:

Level of Service		Interventions	
		Changes	Assets
Aggressive upgrade strategy		High cost (unaffordable)	Extensive upgrades
Assess capacities and develop a prioritised maintenance and upgrade strategy		Managed approach	Focus on vulnerable assets
Reactive maintenance only		Accept lower LOS and higher Whole-of-life costs	Sweating the asset / increasing maintenance
Accept existing LOS and deterioration over time		Accept lower customer satisfaction	None

While these are high-level alternatives with indicative changes and asset interventions, the three most likely alternative outcomes are evaluated within Section 3.6.

3.5.6 Traffic Services

The following level of service options were considered for this work category:

Level of Service		Interventions	
		Changes	Assets
Aggressive upgrade and/or replacement strategy		Accept high cost	Frequent upgrades
Prioritised maintenance and replacement strategy		Managed approach	Focus on vulnerable assets
Reactive maintenance only		Accept lower LOS and higher Whole-of-life costs	Sweating the asset / increasing maintenance
Accept existing LOS and deterioration over time		Accept lower customer satisfaction	None

While these are high-level alternatives with indicative changes and asset interventions, the three most likely alternative outcomes are evaluated within Section 3.6.

3.5.7 Operational Traffic Management

The following level of service options were considered for this work category:

Level of Service		Interventions	
		Changes	Assets
Aggressive upgrade and expansion strategy		High cost (unaffordable)	Extensive upgrades
Prioritised maintenance, upgrade, and expansion strategy		Managed approach	Expand network in accordance with prioritised need
Reactive maintenance only		Accept lower LOS and higher Whole-of-life costs	Sweating the asset / increasing maintenance
Accept existing LOS and deterioration over time		Accept lower customer satisfaction	None

While these are high-level alternatives with indicative changes and asset interventions, the three most likely alternative outcomes are evaluated within Section 3.6.

3.5.8 Cycleways / Shared Paths

The following level of service options were considered for this work category:

Level of Service		Interventions	
		Changes	Assets
Aggressive expansion strategy		Accept high cost	Rapid expansion
Prioritised maintenance, upgrade, and expansion strategy		Managed approach	Expand network in accordance with prioritised need
Reactive maintenance only		Accept lower LOS and higher Whole-of-life costs	Sweating the asset / increasing maintenance
Accept existing LOS and deterioration over time		Accept lower customer satisfaction	None

While these are high-level alternatives with indicative changes and asset interventions, the three most likely alternative outcomes are evaluated within Section 3.6.

3.5.9 Footpaths

The following level of service options were considered for this work category:

Level of Service		Interventions	
		Changes	Assets
Aggressive upgrade and/or replacement strategy		Accept high cost	Frequent upgrades
Prioritised maintenance and replacement strategy		Managed approach	Focus on vulnerable assets
Reactive maintenance only		Accept lower LOS and higher Whole-of-life costs	Sweating the asset / increasing maintenance
Accept existing LOS and deterioration over time		Accept lower customer satisfaction	None

While these are high-level alternatives with indicative changes and asset interventions, the three most likely alternative outcomes are evaluated within Section 3.6.

3.5.10 Low Cost / Low Risk Safety Improvements

The following level of service options were considered for this work category:

Level of Service		Interventions	
		Changes	Assets
Aggressive upgrade and/or intervention		High cost (unaffordable)	Extensive upgrades
Prioritised maintenance, upgrade, and replacement strategy		Managed approach	Intervene in accordance with prioritised need
Reactive maintenance only		Accept lower LOS and higher Whole-of-life costs	Sweating the asset / increasing maintenance
Accept existing LOS and deterioration over time		Accept lower customer satisfaction	None

While these are high-level alternatives with indicative changes and asset interventions, the three most likely alternative outcomes are evaluated within Section 3.6.

3.5.11 Parking

The following level of service options were considered for this work category:

Level of Service		Interventions	
		Changes	Assets
Add new parking structures		High cost (unaffordable)	New facilities
Prioritised maintenance, upgrade, and replacement strategy		Managed approach	Intervene in accordance with prioritised need
Reactive maintenance only		Accept lower LOS and higher Whole-of-life costs	Sweating the asset / increasing maintenance
Accept existing LOS and deterioration over time		Accept lower customer satisfaction	None

While these are high-level alternatives with indicative changes and asset interventions, the three most likely alternative outcomes are evaluated within Section 3.6.

3.6 Alternative Outcomes

This section outlines the potential consequences of alternative options, based on known information, modelled forecasts, and informed estimates.

Council identified the three most viable response and intervention options in the form of a short-list, and then evaluated each option against the KPI's associated with the Benefits which are being sought. The preferred response also considered the ability to adapt in the future, due to changing technology, demand, or other unexpected events. The result of this evaluation is shown in the table below.

3.6.1 Network Compliance (Sealed Roads)

The following table evaluates the short-listed alternatives from the previous section, with the following results:

Scale of Response		**Benefit 1:** Resilient, sustainable and adaptable infrastructure		**Benefit 2:** Improved reliability, efficiency and effectiveness of network		**Benefit 3:** Safe, healthy, liveable and vibrant city	
		KPI 1: Reduced length of vulnerable pavements	**KPI 2:** Optimised financial whole-of-life costs	**KPI 1:** Travel time reliability	**KPI 2:** Improved travel options	**KPI 1:** Road User safety	**KPI 2:** Road User satisfaction
Renew all pavement with weak subgrades		Yes	No	Partial	No	Yes	Partial
Optimised maintenance and renewals (based on Visual Inspection, NPV's, and ONF)		Yes	Yes	Partial	No	Yes	Yes
Renewals upon pavement failure		Partial	No	No	No	Partial	No

The consequence of a higher investment

A higher level of investment will maintain the network to the same level, but will also reduce the amount of time required to resolve the historical resurfacing legacy. The forecast work programme seeks to take account of this historical under investment through a higher level of investment over the 2024-27 period.

General reactive maintenance of the sealed roads plays a critical part in the overall condition of the network and achieving a positive whole of life cost of the network.

Timely intervention ensures that small failures do not deteriorate into larger issues that require more extensive and costly work.

The consequence of a lower investment

Having a lower investment level will extend the time required to satisfy the resurfacing needs and will see significantly less rehabilitation undertaken each year. The consequences of this will be:

- Loss of waterproofing seal will result in more pavement failures. This will require frequent and more extensive maintenance intervention, or full pavement rehabilitations earlier than necessary.
- A related worsening of the network surface and pavement condition indexes over approximately 50% of the network.
- A backlog of necessary resurfacing and pavement rehabilitation work will be created. This will create an intergenerational cost, with significant spend required in future years to catch up on deferred work.
- There will be a loss of network safety, resilience, amenity value, and travel time reliability.

3.6.2 Network Resilience (Resilience/Environmental)

The following table evaluates the short-listed alternatives from the previous section, with the following results:

Scale of Response		Benefit 1: Resilient, sustainable and adaptable infrastructure		Benefit 2: Improved reliability, efficiency and effectiveness of network		Benefit 3: Safe, healthy, liveable and vibrant city	
		KPI 1: Reduced length of vulnerable pavements	KPI 2: Optimised financial whole-of-life costs	KPI 1: Travel time reliability	KPI 2: Improved travel options	KPI 1: Road User safety	KPI 2: Road User satisfaction
Upgrade all vulnerable infrastructure		Yes	No	Yes	Yes	Yes	Yes
Assess vulnerabilities and prioritise targeted upgrades		Yes	Yes	Yes	Partial	Yes	Yes
Reactive maintenance only		Partial	No	Partial	No	Partial	No

The consequence of a higher investment

Upgrading all the vulnerable infrastructure will come at a significant expense, some of which may be unnecessary.

The consequence of a lower investment

Reactive maintenance will not provide any resilience to future events, and will increase costs over the long-term, without providing significant benefit.

3.6.3 Network Future Capacity (Network & Asset Management)

The following table evaluates the short-listed alternatives from the previous section, with the following results:

Scale of Response		Benefit 1: Resilient, sustainable and adaptable infrastructure		Benefit 2: Improved reliability, efficiency and effectiveness of network		Benefit 3: Safe, healthy, liveable and vibrant city	
		KPI 1: Reduced length of vulnerable pavements	KPI 2: Optimised financial whole-of-life costs	KPI 1: Travel time reliability	KPI 2: Improved travel options	KPI 1: Road User safety	KPI 2: Road User satisfaction
Prioritised transport demand management		No	Partial	Yes	Partial	Yes	Partial
Optimisation of demand management and capacity improvement		No	Yes	Yes	Yes	Yes	Yes
Increase transportation capacity		No	No	Yes	Partial	Partial	Partial

The consequence of a higher investment

Prioritising demand management is challenging in that it requires the support of many stakeholders and could take a significant effort over a long time to build the engagement necessary for this to be realised. Demand management is an ideal solution, and any opportunities to implement these changes should be supported – even if only on a small scale. Success on a small scale could create momentum that leads to greater change.

The consequence of a lower investment (benefit)

Increasing lane capacity is an easy solution to jump to, however, typically this does not necessarily solve the problem of congestion – it often moves the problem from one place to another.

While this is noted as providing a lower benefit, this option has a significant capital cost as the construction of physical infrastructure is very expensive.

3.6.4 Structures

The following table evaluates the short-listed alternatives from the previous section, with the following results:

Scale of Response		Benefit 1: Resilient, sustainable and adaptable infrastructure		Benefit 2: Improved reliability, efficiency and effectiveness of network		Benefit 3: Safe, healthy, liveable and vibrant city	
		KPI 1: Reduced length of vulnerable pavements	KPI 2: Optimised financial whole-of-life costs	KPI 1: Travel time reliability	KPI 2: Improved travel options	KPI 1: Road User safety	KPI 2: Road User satisfaction
Aggressive replacement strategy		Partial	No	Yes	Yes	Yes	Yes
Prioritised maintenance and replacement strategy		Partial	Yes	Yes	Yes	Yes	Yes
Reactive maintenance only		No	No	Partial	No	Partial	No

The consequence of a higher investment

An aggressive replacement strategy will certainly cost a lot more, a lot sooner than otherwise. While replacement of infrastructure should be done prior to the end of its useful life, it does not appear to add any significant value when existing infrastructure still has remaining life.

The consequence of a lower investment

To reduce the budget will reduce the programme, and with the programme primarily made up of remedial work prioritised as either "urgent" or "high", a reduction in the programme would delay remedial work beyond the Engineer's recommendation. The consequences of this will be a risk to whole of life costs, accessibility, safety, and resilience.

3.6.5 Drainage Facilities

The following table evaluates the short-listed alternatives from the previous section, with the following results:

Scale of Response		Benefit 1: Resilient, sustainable and adaptable infrastructure		Benefit 2: Improved reliability, efficiency and effectiveness of network		Benefit 3: Safe, healthy, liveable and vibrant city	
		KPI 1: Reduced length of vulnerable pavements	KPI 2: Optimised financial whole-of-life costs	KPI 1: Travel time reliability	KPI 2: Improved travel options	KPI 1: Road User safety	KPI 2: Road User satisfaction
Aggressive upgrade strategy		Partial	No	Partial	Partial	Yes	Yes
Assess capacities and develop a prioritised maintenance and upgrade strategy		Partial	Yes	Partial	Partial	Yes	Yes
Reactive maintenance only		No	Partial	No	No	Partial	No

The consequence of a higher investment

An aggressive upgrade strategy will incur increased costs over the short-term, some of which may be unnecessary.

The consequence of a lower investment

Reactive maintenance will not allow for upgrades to increase capacity in locations where this is necessary.

3.6.6 Traffic Services

The following table evaluates the short-listed alternatives from the previous section with the following results.

Scale of Response		Benefit 1: Resilient, sustainable and adaptable infrastructure		Benefit 2: Improved reliability, efficiency and effectiveness of network		Benefit 3: Safe, healthy, liveable and vibrant city	
		KPI 1: Reduced length of vulnerable pavements	**KPI 2:** Optimised financial whole-of-life costs	**KPI 1:** Travel time reliability	**KPI 2:** Improved travel options	**KPI 1:** Road User safety	**KPI 2:** Road User satisfaction
Aggressive upgrade and/or replacement strategy		No	No	Partial	Partial	Yes	Yes
Prioritised maintenance and replacement strategy		No	Yes	Partial	Partial	Yes	Yes
Reactive maintenance only		No	Partial	No	No	Partial	No

The consequence of a higher investment

An aggressive upgrade and/or replacement strategy will come with greater costs over the short-term, but without significant benefits.

The consequence of a lower investment

Reactive maintenance can save costs in the short-term, but often results in higher costs over the long-term on account of deferred works (which almost always cost more in the future).

3.6.7 Operational Traffic Management

The following table evaluates the short-listed alternatives from the previous section, with the following results:

Scale of Response		Benefit 1: Resilient, sustainable and adaptable infrastructure		Benefit 2: Improved reliability, efficiency and effectiveness of network		Benefit 3: Safe, healthy, liveable and vibrant city	
		KPI 1: Reduced length of vulnerable pavements	KPI 2: Optimised financial whole-of-life costs	KPI 1: Travel time reliability	KPI 2: Improved travel options	KPI 1: Road User safety	KPI 2: Road User satisfaction
Aggressive upgrade and expansion strategy		No	No	Yes	Partial	Yes	Yes
Prioritised maintenance, upgrade, and expansion strategy		No	Yes	Yes	Partial	Yes	Yes
Reactive maintenance only		No	Partial	No	No	Partial	No

The consequence of a higher investment

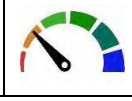
An aggressive upgrade and expansion strategy sounds good at first blush. However, expansion projects are usually integrated within many phases of development, and often have significant complexities with respect to related works which must be completed first. As such, even if the funding was available, does not mean that all projects could proceed at once.

The consequence of a lower investment

Reactive maintenance can save costs in the short-term, but often results in higher costs over the long-term on account of deferred works (which almost always cost more in the future).

3.6.8 Cycleways / Shared Paths

The following table evaluates the short-listed alternatives from the previous section, with the following results:

Scale of Response		Benefit 1: Resilient, sustainable and adaptable infrastructure		Benefit 2: Improved reliability, efficiency and effectiveness of network		Benefit 3: Safe, healthy, liveable and vibrant city	
		KPI 1: Reduced length of vulnerable pavements	KPI 2: Optimised financial whole-of-life costs	KPI 1: Travel time reliability	KPI 2: Improved travel options	KPI 1: Road User safety	KPI 2: Road User satisfaction
Aggressive expansion strategy		Partial	No	Partial	Yes	Yes	Yes
Prioritised maintenance, upgrade, and expansion strategy		Partial	Yes	Partial	Yes	Yes	Yes
Reactive maintenance only		No	Partial	No	Partial	Partial	Partial

The consequence of a higher investment

An aggressive upgrade strategy will incur increased costs over the short-term. but would help reduce VKT's and promote mode shift. Higher investment would come at the expense of other priorities, however.

The consequence of a lower investment

Reactive maintenance can save costs in the short-term, but often results in higher costs over the long-term on account of deferred works (which almost always cost more in the future).

3.6.9 Footpaths

The following table evaluates the short-listed alternatives from the previous section, with the following results:

Scale of Response		Benefit 1: Resilient, sustainable and adaptable infrastructure		Benefit 2: Improved reliability, efficiency and effectiveness of network		Benefit 3: Safe, healthy, liveable and vibrant city	
		KPI 1: Reduced length of vulnerable pavements	KPI 2: Optimised financial whole-of-life costs	KPI 1: Travel time reliability	KPI 2: Improved travel options	KPI 1: Road User safety	KPI 2: Road User satisfaction
Aggressive upgrade and/or replacement strategy		Partial	No	No	Yes	Yes	Yes
Prioritised maintenance and replacement strategy		Partial	Yes	No	Yes	Yes	Yes
Reactive maintenance only		No	Partial	No	Partial	Partial	Partial

The consequence of a higher investment

An aggressive upgrade and/or replacement strategy may not provide the best value for money, nor realise the life that is remaining within existing assets.

The consequence of a lower investment

Reactive maintenance can save costs in the short-term, but often results in higher costs over the long-term on account of deferred works (which almost always cost more in the future).

3.6.10 Low Cost / Low Risk Safety Improvements

The following table evaluates the short-listed alternatives from the previous section, with the following results:

Scale of Response		Benefit 1: Resilient, sustainable and adaptable infrastructure		Benefit 2: Improved reliability, efficiency and effectiveness of network		Benefit 3: Safe, healthy, liveable and vibrant city	
		KPI 1: Reduced length of vulnerable pavements	**KPI 2:** Optimised financial whole-of-life costs	**KPI 1:** Travel time reliability	**KPI 2:** Improved travel options	**KPI 1:** Road User safety	**KPI 2:** Road User satisfaction
Aggressive upgrade and/or intervention		Partial	No	Partial	Partial	Yes	Yes
Prioritised maintenance, upgrade, and replacement strategy		Partial	Yes	Partial	Partial	Yes	Yes
Reactive maintenance only		No	Partial	No	Partial	Partial	No

The consequence of a higher investment

Aggressive upgrade and/or interventions is an ideal solution for low-cost and low-risk projects, providing that there is adequate funding available. However, it is expected that funding is limited, and therefore a more managed and prioritised approach is warranted.

The consequence of a lower investment

Reactive maintenance can save costs in the short-term, but often results in higher costs over the long-term on account of deferred works (which almost always cost more in the future).

3.6.11 Parking

The following table evaluates the short-listed alternatives from the previous section, with the following results:

Scale of Response		Benefit 1: Resilient, sustainable and adaptable infrastructure		Benefit 2: Improved reliability, efficiency and effectiveness of network		Benefit 3: Safe, healthy, liveable and vibrant city	
		KPI 1: Reduced length of vulnerable pavements	KPI 2: Optimised financial whole-of-life costs	KPI 1: Travel time reliability	KPI 2: Improved travel options	KPI 1: Road User safety	KPI 2: Road User satisfaction
Add new parking structures		No	No	No	Partial	Yes	Yes
Prioritised maintenance, upgrade, and replacement strategy		No	Yes	No	Partial	Yes	Yes
Reactive maintenance only		No	Partial	No	No	Partial	No

The consequence of a higher investment

Adding new parking structure(s) comes with a significant cost and is not a Council priority.

The consequence of a lower investment

Reactive maintenance can save costs in the short-term, but often results in higher costs over the long-term on account of deferred works (which almost always cost more in the future).

3.7 Preferred Programme

This section includes a summary of the preferred programme of activities for each work category.

3.7.1 Network Compliance (Sealed Roads)

Based on the evaluation in Section 3.6, HCC has determined that the appropriate scale of response and intervention is to optimise maintenance and renewals based on visual inspection, NPV's, and ONF class.

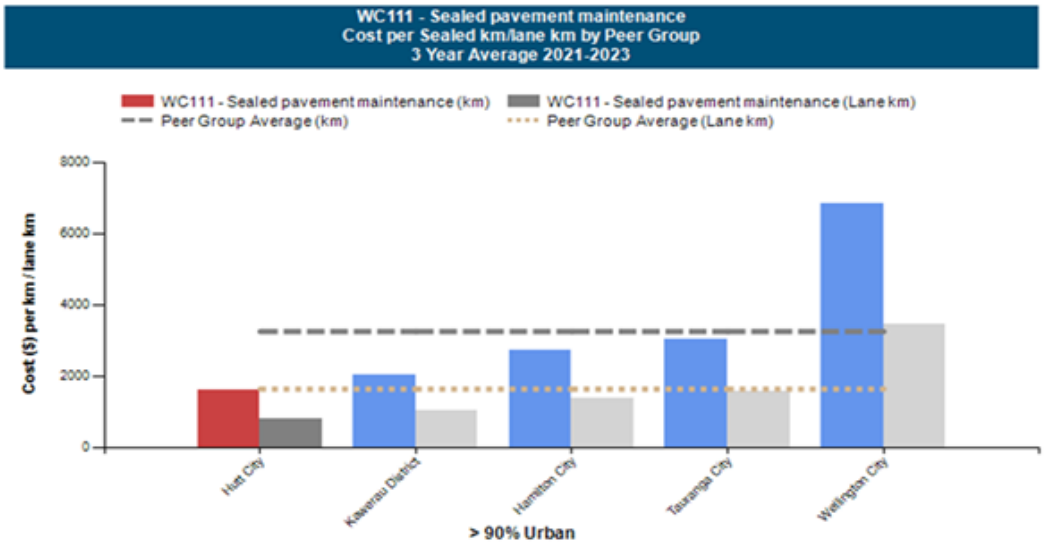
The funding for the past three years is shown below, together with the projected costs for 2024-2027. The funding increase for Work Codes 111, 212 and 214 are due to the new, increased contract rates set in July 2023. These generally represent an increase in cost, and not an increase in quantity.

		2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
MAINTAIN							
111	Sealed Pavement Maintenance	$852,800	$852,800	$6,041,545	$4,751,788	$4,856,328	$4,967,995
OPERATE							
RENEW							
212	Sealed road resurfacing	$2,926,739	$3,461,573	$3,448,775	$3,414,371	$3,489,487	$3,569,724
214	Sealed road pavement rehabilitation	$1,554,341	$1,828,872	$1,801,885	$7,467,544	$7,631,830	$7,807,317
SAFETY							
SUBTOTAL (Sealed Roads):		$5,333,880	$6,143,245	$11,292,205	$15,633,703	$15,977,644	$16,345,036

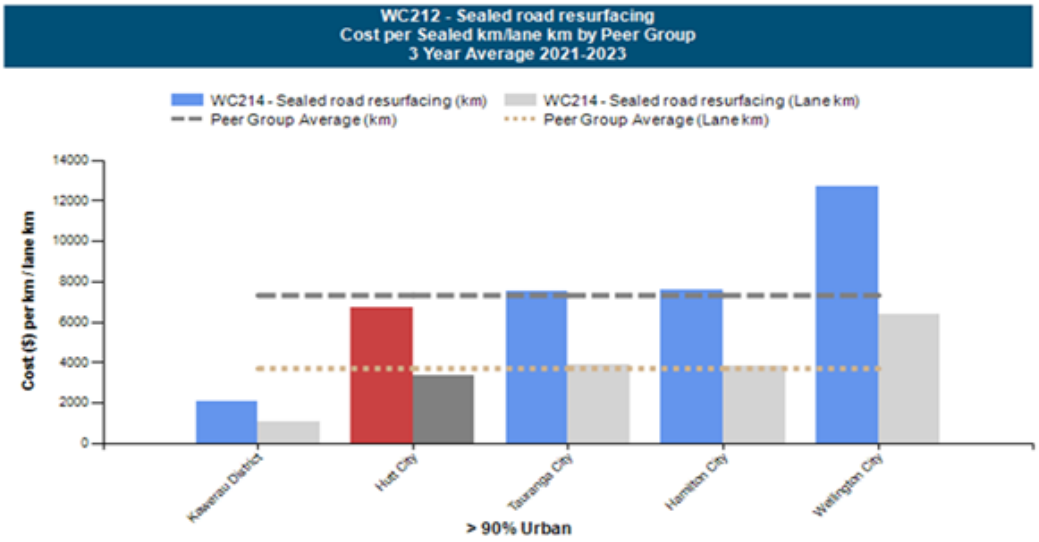
The increased cost is significant, but essential for the ongoing performance of the sealed road network. Funding cuts will reduce the quantity of pavement maintained or renewed, and will markedly increase the future cost of the network.

Work Code 212 includes the Wainuiomata Hill, which poses significant safety risks if the pavement is allowed to deteriorate.

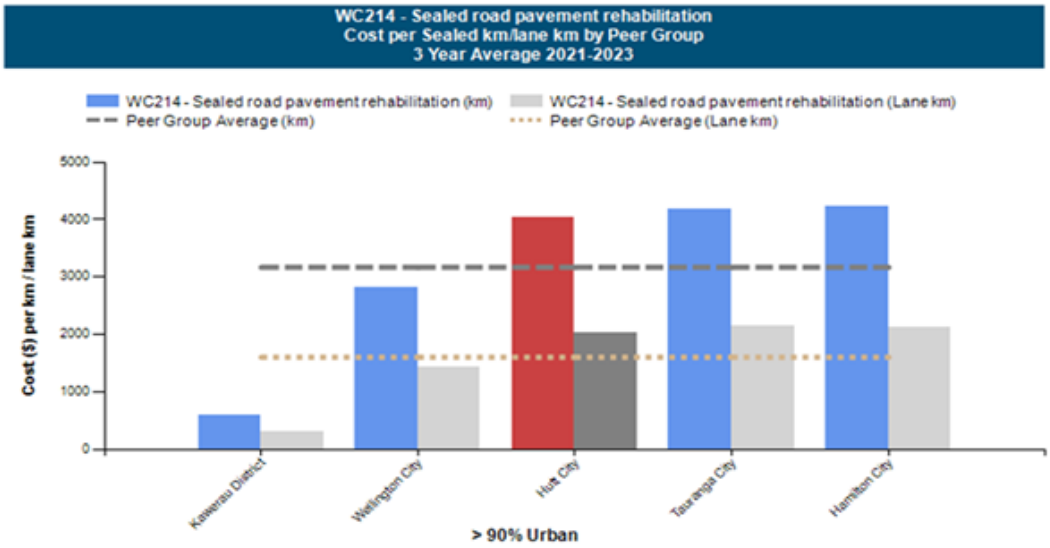
The Waka Kotahi, NZTA, data for WC111, below, shows that HCC has costs per km which are consistent with their peers.



The Waka Kotahi, NZTA, data for WC212, below, shows that HCC has costs per km which are consistent with their peers.



The Waka Kotahi, NZTA, data for WC214, below, shows that HCC has costs per km which are consistent with their peers.



3.7.2 Network Resilience (Resilience/Environmental)

Based on the evaluation in Section 3.6, HCC has determined that the appropriate scale of response and intervention is to assess vulnerabilities and prioritise targeted upgrades.

The priority for Council is improving the resilience of Eastern Hutt Road, which is a major lifeline and heavy vehicle route, as well as being the only entry and exit for Stokes Valley residents. Council will also be looking at increasing the height of the Lowry Bay seawall by an additional 0.75 metres to increase future resilience by protecting the road which is often severely impacted by southerly storms and king tides.

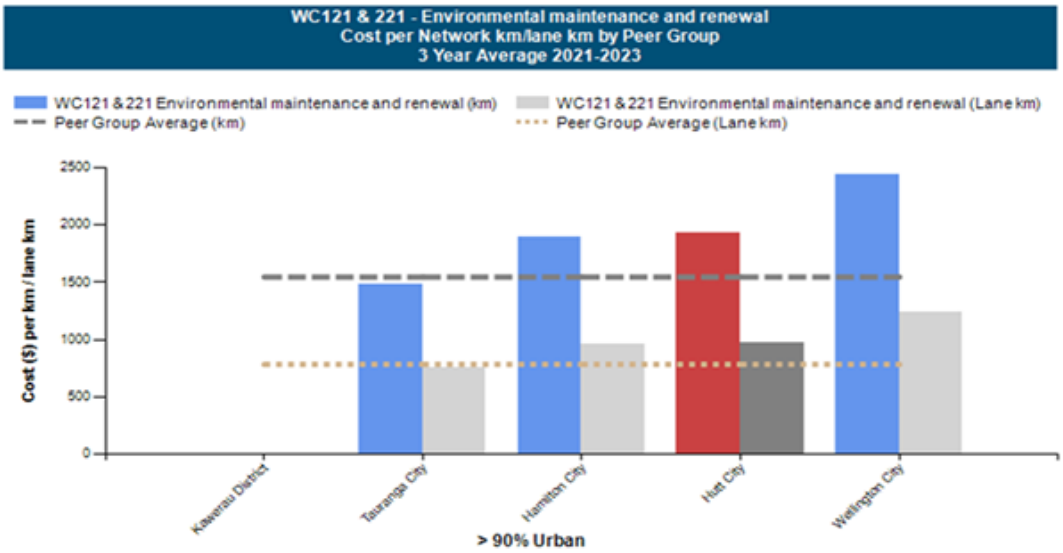
The design for this additional height will be incorporated into the design work for the Tupua Horo Nuku shared pathway. The capital works, not immediately required, will be scheduled when funding is available.

The funding for the past three years is shown below, together with the projected costs for 2024-2027.

Work Code 121 includes actuals from 2022/23 due to the significant storm damage and associated costs. Further, Council has added Work Code 140 to signal an expectation of urgent funding being available to more quickly to respond to the immediate stabilisation response for extreme storm and slip events.

The costs associated with Eastern Hutt Road are not captured in the table below, but it was subject of a separate Business Case and funding where the first tranche of $8.36M was provided by the Government's Better Off Fund (March 2023).

		2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
MAINTAIN							
140	Minor events	$0	$0	$0	$100,000	$100,000	$100,000
OPERATE							
121	Environmental maintenance	$871,890	$860,510	$666,887	$1,365,416	$1,395,455	$1,427,542
RENEW							
221	Environmental renewals	$0	$0	$0	$0	$0	$0
SAFETY							
SUBTOTAL (Environment & Resilience):		$871,890	$860,510	$666,887	$1,465,416	$1,495,455	$1,527,542



The Waka Kotahi, NZTA, data for WC121 & 221, below, shows that HCC has costs per km which are consistent with their peers.

3.7.3 Network Future Capacity (Network & Asset Management)

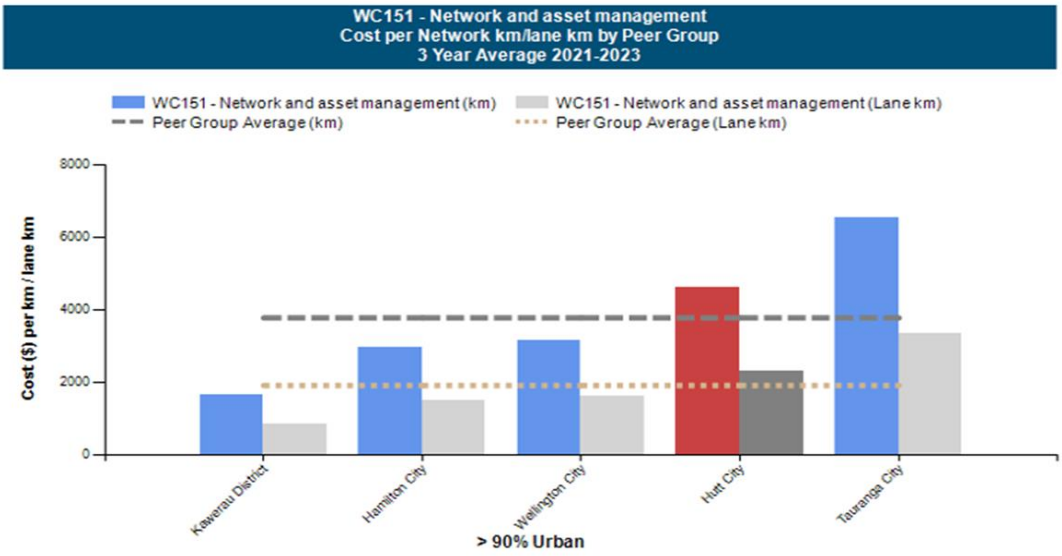
Based on the evaluation in Section 3.6, HCC has determined that the appropriate scale of response and intervention is to optimise demand management and capacity improvement.

The funding for the past three years is shown below, together with the projected costs for 2024-2027. This represents an increase from 2023/24, but more consistent with costs from 2022/23. Council is investing in professional services, advice and studies, to ensure an evidenced based approach to activity management and funding for the transportation network.

Council requires funding to support demand management interventions, and to optimise capacity improvements.

		2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
MAINTAIN							
OPERATE							
151	Network and asset management	$2,136,891	$2,406,442	$1,745,931	$2,178,879	$2,200,467	$2,264,065
RENEW							
SAFETY							
SUBTOTAL (Network & Asset Management):		$2,136,891	$2,406,442	$1,745,931	$2,178,879	$2,200,467	$2,264,065

The Waka Kotahi, NZTA, data for WC151, below, shows that HCC has costs per km which are generally consistent with their peers.



3.7.4 Structures

Based on the evaluation in Section 3.6, HCC has determined that the appropriate scale of response and intervention is to develop and prioritise a maintenance and replacement strategy.

The funding for the past three years is shown below, together with the projected costs for 2024-2027.

The proposed funding for Work Code 114 is based upon the existing levels of service for 2023/24, with escalation to allow for inflation of costs, and to prevent a reduction in the level of maintenance and renewal. Work code 215 has been reduced, although it is expected there will be ad hoc work and may need to be revisited.

Work Code 216 includes delayed bridge work which was approved in the NLTP 21-24.

		2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
MAINTAIN							
114	Structures maintenance	$91,402	$444,776	$419,596	$593,210	$606,260	$620,201
OPERATE							
RENEW							
215	Structures component replacements	$190,000	$84,315	$146,281	$0	$0	$0
216	Bridge and structures renewals	$0	$0	$1,300,000	$0	$0	$0
SAFETY							
SUBTOTAL (Structures):		$281,402	$529,091	$1,865,877	$593,210	$606,260	$620,201

3.7.5 Drainage Facilities

Based on the evaluation in Section 3.6, HCC has determined that the appropriate scale of response and intervention is to assess capacities and develop a prioritised maintenance and upgrade strategy.

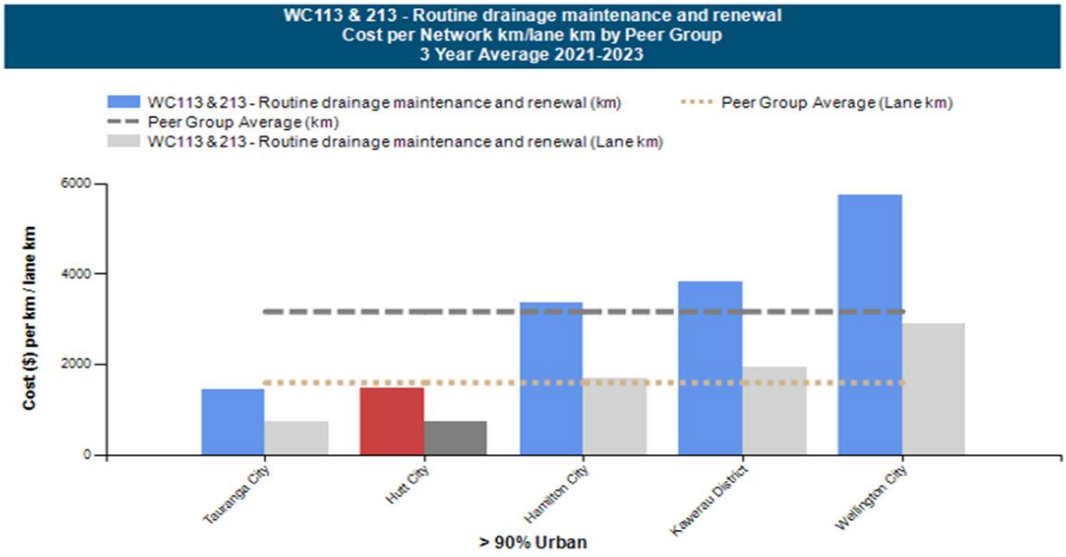
The funding for the past three years is shown below, together with the projected costs for 2024-2027.

The increase in Work Code 113 is due to the cost escalation associated with the new contract for services. This cost escalation is primarily due to increased rates, and not to increased quantities of work.

The slight increase in Work Code 213 is based on the level of service provided in 2023/24 plus an escalation for inflation of costs. It is noted that the allowance for inflation is based on historical rates, and may be less than required (based on the increases in contracted works).

		2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
MAINTAIN							
113	Routine drainage maintenance	$478,464	$424,519	$446,003	**$1,509,142**	**$1,542,343**	**$1,577,808**
OPERATE							
RENEW							
213	Drainage renewals	$280,024	$319,976	$230,970	**$326,537**	**$333,721**	**$341,395**
SAFETY							
SUBTOTAL (Drainage):		$758,488	$744,495	$676,973	**$1,835,679**	**$1,876,064**	**$1,919,202**

The Waka Kotahi, NZTA, data for WC113 & 213, below, shows that HCC has costs per km which are generally lower than their peers.



3.7.6 Traffic Services

Based on the evaluation in Section 3.6, HCC has determined that the appropriate scale of response and intervention is to develop and prioritise a maintenance and replacement strategy.

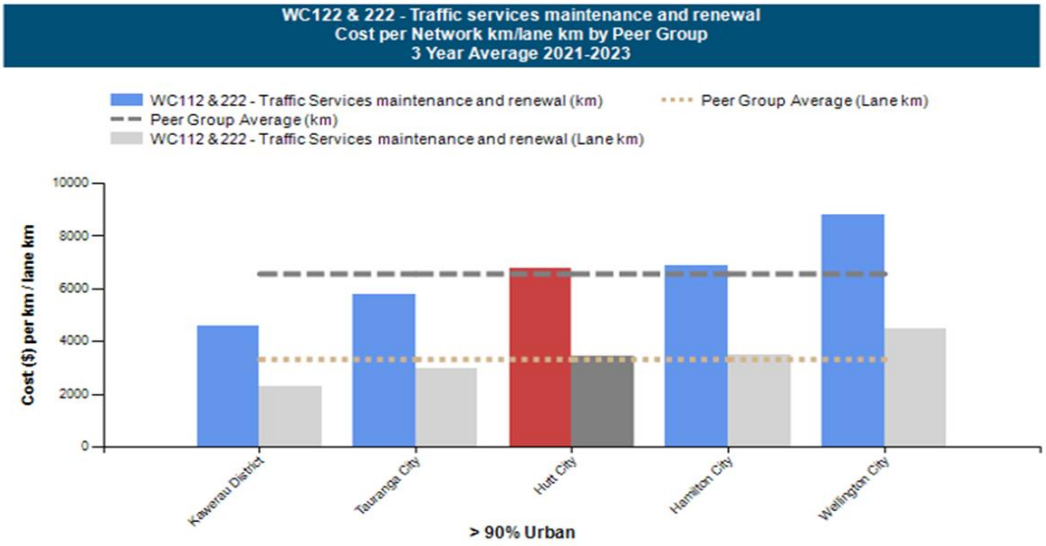
The funding for the past three years is shown below, together with the projected costs for 2024-2027.

Currently the allocation between 122 and 222 is incorrect (due to the contract allocation), and approximately $2m pa of costs in work category 122 should be allocated to 222 (this is the street lighting replacement capex). With that correction, work category 122 would be more in line with the prior period, but with significant inflation in the new contract prices and increases in electricity prices.

Work category 222 has shown significant increases due to inflation in the new contract prices.

		2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
MAINTAIN							
OPERATE							
122	Network service maintenance	$3,029,406	$2,864,594	$2,278,128	$5,754,780	$5,838,592	$5,941,805
RENEW							
222	Traffic services renewals	$757,000	$161,491	$576,041	$924,311	$946,547	$969,629
SAFETY							
SUBTOTAL (Traffic Services):		$3,786,406	$3,026,085	$2,854,169	$6,679,091	$6,785,139	$6,911,434

The Waka Kotahi, NZTA, data for WC122 & 222, below, shows that HCC has costs per km which are consistent with their peers.



3.7.7 Operational Traffic Management

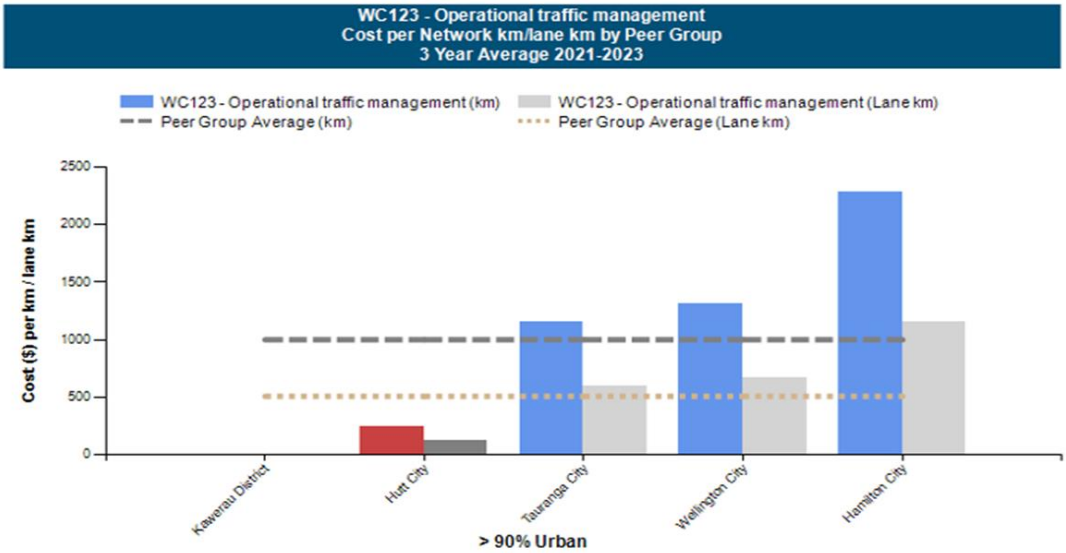
Based on the evaluation in Section 3.6, HCC has determined that the appropriate scale of response and intervention is to develop and prioritise a maintenance, upgrade, and expansion strategy.

The funding for the past three years is shown below, together with the projected costs for 2024-2027.

These costs are generally based on the 2022/23 year level of service, with an escalation to allow for cost inflation. It is noted that the allowance for inflation is based on historical rates, and may be less than required (based on the increases in contracted works).

The Waka Kotahi, NZTA, data for WC123, below, shows that HCC has costs per km which are lower than their peers.

		2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
MAINTAIN							
OPERATE							
123	Network operations	$117,242	$136,758	$111,627	$162,659	$166,281	$169,534
RENEW							
SAFETY							
SUBTOTAL (Operational Traffic Management):		$117,242	$136,758	$111,627	$162,659	$166,281	$169,534



3.7.8 Cycleways / Shared Paths

Based on the evaluation in Section 3.6, HCC has determined that the appropriate scale of response and intervention is to develop and prioritise a maintenance, upgrade, and expansion strategy.

The funding for the past three years is shown below, together with the projected costs for 2024-2027.

Council has included an increase in the maintenance cost to allow for the new Tupua Horo Nuku and the Petone to Melling cycleways. While these are relatively new assets, it is imperative to include an effective maintenance programme to ensure the longevity of the cycleways.

		2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
MAINTAIN							
124	Cycle path maintenance	$11,800	$34,380	$23,481	$158,096	$170,058	$171,209
OPERATE							
RENEW							
224	Cycle path renewal	$0	$0	$0	$0	$0	$0
SAFETY							
SUBTOTAL (Cycleways & Shared Paths):		$11,800	$34,380	$23,481	$158,096	$170,058	$171,209

3.7.9 Footpaths

Based on the evaluation in Section 3.6, HCC has determined that the appropriate scale of response and intervention is to develop and prioritise a maintenance and replacement strategy.

The funding for the past three years is shown below, together with the projected costs for 2024-2027.

The new maintenance contract includes a sizeable increase in fees, which is reflected in Work Code 125. This additional fee is primarily a reflection of increased cost, and not an increase in quantity.

Work Code 225 is based on 2022/23 costs, with an escalation to allow for cost inflation. It is noted that the allowance for inflation is based on historical rates, and may be less than required (based on the increases in contracted works).

		2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
MAINTAIN							
125	Footpath maintenance	$538,635	$681,365	$469,639	$1,556,194	$2,021,805	$2,068,295
OPERATE							
RENEW							
225	Footpath renewal	$234,659	$338,474	$311,810	$446,268	$456,086	$466,573
SAFETY							
SUBTOTAL (Footpaths):		$773,294	$1,019,839	$781,449	$2,002,461	$2,477,890	$2,534,867

3.7.10 Low Cost / Low Risk Safety Improvements

Based on the evaluation in Section 3.6, HCC has determined that the appropriate scale of response and intervention is to develop and prioritise a maintenance, upgrade, and replacement strategy.

The funding for the past three years is shown below, together with the projected costs for 2024-2027.

Unsealed pavements are shown in the table below, on account of no funding, and in the case that low cost / low risk maintenance or renewal costs are incurred.

Work Code 131 provides for operational costs associated with rail level crossings, and Work Code 432 provides for Safety Promotion, education, and advertising.

		2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
MAINTAIN							
112	Unsealed pavement maintenance	$0	$0	$0	$0	$0	$0
OPERATE							
131	Rail level crossing warning devices	$6,221	$0	$5,543	$7,837	$8,010	$8,194
RENEW							
211	Unsealed road metalling	$0	$0	$0	$0	$0	$0
SAFETY							
432	Safety promotion, education, and advertising	$154,900	$144,396	$165,404	$215,000	$215,000	$215,000
SUBTOTAL (Low Cost Low Risk):		$161,121	$144,396	$170,947	$222,837	$223,010	$223,194

3.7.11 Parking

Based on the evaluation in Section 3.6, HCC has determined that the appropriate scale of response and intervention is to develop and prioritise a maintenance, upgrade, and replacement strategy.

Car parking is unsubsidised by Waka Kotahi, NZTA and therefore funding is not being sought, HCC funds this 100%.

3.8 Implementation

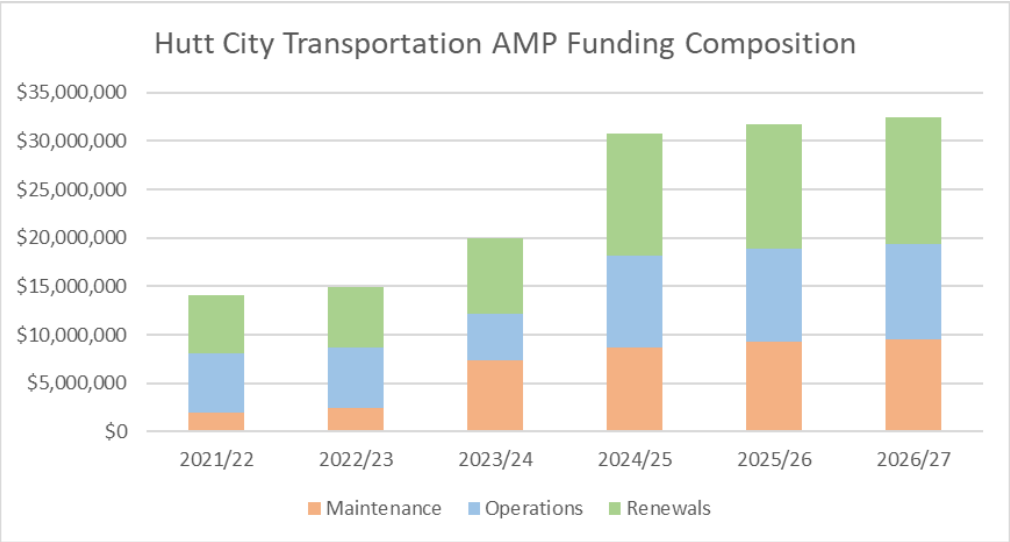
HCC has had numerous changes in staff within the Transport group over the past few years. In preparation for this next triennial funding cycle, Council management will be prioritising the regular review and status reporting of actions, risks, and improvements which are outlined in this AMP. This additional focus, monthly, is intended to ensure that all staff are cognizant of these plans – and do not lose sight of required actions.

3.8.1 Summary of the Programme

The table below shows the aggregate totals from the previous section, and reflects the significant increase in cost to maintain, operate, and renew the transportation asset. These increases are primarily due to the increase in contracted costs and are not a reflection of additional works.

		2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
MAINTAIN							
111	Sealed Pavement Maintenance	$852,800	$852,800	$6,041,545	$4,751,788	$4,856,328	$4,967,995
112	Unsealed pavement maintenance	$0	$0	$0	$0	$0	$0
113	Routine drainage maintenance	$478,464	$424,519	$446,003	$1,509,142	$1,542,343	$1,577,808
114	Structures maintenance	$91,402	$444,776	$419,596	$593,210	$606,260	$620,201
124	Cycle path maintenance	$11,800	$34,380	$23,481	$158,096	$170,058	$171,209
125	Footpath maintenance	$538,635	$681,365	$469,639	$1,556,194	$2,021,805	$2,068,295
140	Minor events	$0	$0	$0	$100,000	$100,000	$100,000
OPERATE							
121	Environmental maintenance	$871,890	$860,510	$666,887	$1,365,416	$1,395,455	$1,427,542
122	Network service maintenance	$3,029,406	$2,864,594	$2,278,128	$5,754,780	$5,838,592	$5,941,805
123	Network operations	$117,242	$136,758	$111,627	$162,659	$166,281	$169,534
131	Rail level crossing warning devices	$6,221	$0	$5,543	$7,837	$8,010	$8,194
151	Network and asset management	$2,136,891	$2,406,442	$1,745,931	$2,178,879	$2,200,467	$2,264,065
RENEW							
211	Unsealed road metalling	$0	$0	$0	$0	$0	$0
212	Sealed road resurfacing	$2,926,739	$3,461,573	$3,448,775	$3,414,371	$3,489,487	$3,569,724
213	Drainage renewals	$280,024	$319,976	$230,970	$326,537	$333,721	$341,395
214	Sealed road pavement rehabilitation	$1,554,341	$1,828,872	$1,801,885	$7,467,544	$7,631,830	$7,807,317
215	Structures component replacements	$190,000	$84,315	$146,281	$0	$0	$0
216	Bridge and structures renewals	$0	$0	$1,300,000	$0	$0	$0
221	Environmental renewals	$0	$0	$0	$0	$0	$0
222	Traffic services renewals	$757,000	$161,491	$576,041	$924,311	$946,547	$969,629
224	Cycle path renewal	$0	$0	$0	$0	$0	$0
225	Footpath renewal	$234,659	$338,474	$311,810	$446,268	$456,086	$466,573
SAFETY							
432	Safety promotion, education, and advertising	$154,900	$144,396	$165,404	$215,000	$215,000	$215,000
TOTAL BY YEAR:		$14,232,414	$15,045,241	$20,189,546	$30,932,032	$31,978,269	$32,686,286
TOTAL BY AMP CYCLE:			$49,467,201			$95,596,587	

In addition, the composition of Council funding is shown below. This table shows the increased cost of renewals, with lesser changes in maintenance and operational costs.



3.8.2 Cash Flow

Based on a FAR of 51% the funding requirements for Waka Kotahi, NZTA, and HCC would be as set out below.

AMP cashflow

	2024/25 proposed	2025/26 proposed	2026/27 proposed	total
Maintain	8,668,429	9,296,794	9,505,507	**27,470,729**
Operate	9,469,571	9,608,805	9,811,141	**28,889,517**
Renew	12,579,031	12,857,671	13,154,638	**38,591,340**
Total	**30,717,032**	**31,763,269**	**32,471,286**	**94,951,587**
Waka Kotahi	15,665,686	16,199,267	16,560,356	**48,425,309**
HCC	15,051,345	15,564,002	15,910,930	**46,526,277**

3.8.3 Project Prioritisation

HCC is committed to improving project prioritisation, having previously done this in an inconsistent manner, utilising different approaches for different work categories and types of intervention. While this previous approach can work for small scale and unrelated works, it is not optimal for larger scale, interdependent projects such as are found in growing, urban environments like Hutt City.

Council plans on taking a more holistic and integrated approach to project prioritisation for Improvements, Renewals, Maintenance, and well as any Capital Projects. This change is incorporated into the Improvements Plan.

The existing prioritisation approaches are described below:

Improvements:

Council has instituted a prioritisation process for the transport improvement requests it self-generates (through safety reviews) or from the community (due to accidents or concerns on safety). HCC has more requests than it can undertake, and it has been difficult to ensure consistency and equity of decisions as to which projects were undertaken.

To remove a purely subjective based decision, which can be difficult to justify later, a more transparent prioritisation process was instituted which includes a subjective overview step to ensure there are not unintended or undeliverable outcomes.

An initial algorithm review is undertaken to prioritise the list of requests, the criteria has a methodology underpinning it and calibration of results were undertaken. There is a sense test of the general results and, due to need to be responsive to community wishes (which are difficult to fully quantify) there may be a subjective decision to escalate priority – however the intention is that would only be within a range of 10 places.

A final subject step of confirming funding availability, availability of resource (such as project management) to deliver and operational optimisation (such as grouping projects which are not prioritised together) is then made. An excerpt of the resulting table is shown below:

TRANSPORT PRIORISATION SPREADSHEET

Job #	Site Name	Suburb	Confirmed Reference Number	Officer	Date entered	5 Year Period	Crash Types: Non	Minor	Serious	Fatal	Volumes: Pedestrian	Vehicles	Regulatory Compliance	Reputational Risk	Operational speed	Speed limit	Pedestrian Demand (P)	Vehicle Volumes (V)	Total Volumes	Accidents (A)	Compliance with Stds (C)	Speed limit (S)	Reputational Risk (R)	Score	PRIORITY
870	example			Amin	12/07/23	19-23	0	0	0	1	Heavy	Heavy	Non compliant	10	56	50	5	5	10	10	10	9.6	10	9.96	
262	Frankmoore Ave	Johnsonville	2843976		14/10/19	2014-2019	19	6	0	1	Moderate	Heavy	Medium	1	50	50	2.5	5	7.5	14.9	5	1	1	6.79	1
871	Moohan			Amin	12/07/23	19-23	4	1	0	1	Moderate	Heavy	Needs improvement	1	54	50	2.5	5	7.5	10.9	5	6.4	1	5.93	1
215	Tory St / Courtenay Pl Intersection	Te Aro	2811827		3/09/19	2014-2019	32	4	2	0	Heavy	Moderate	Low	1	50	50	5	2.5	7.5	9.2	10	1	1	5.545	1
872	Biddle	Taita		Amin	12/07/23	19-23	0	0	1	0	Heavy	Light	Needs improvement	10	50	50	5	1	6	2	5	1	10	5.35	1
187	Hutt RD (Outside Spotlight)	Kaiwharawhara	2796524		20/08/19	2014-2019	6	8	3	0	Moderate	Heavy	Medium	1	50	50	2.5	5	7.5	10.6	5	1	1	5.285	1
873	Eastern hutt road (Taita College)			Amin	12/07/23	19-23	0	0	1	0	Heavy	Heavy	Needs improvement	7	54	50	5	5	10	2	5	6.4	7	5.04	1
193	Ironside Rd	Johnsonville	2773037		27/08/19	2014-2019	0	0	0	1	Light	Heavy	Normal	1	50	50	1	5	6	10	5	1	1	5	1
148	Willowbank Road/Middleton Rd	Glenside	2796740		8/08/19	2014-2019	5	4	3	0	Light	Heavy	Medium	1	50	50	1	5	6	8.5	5	1	1	4.475	2
875	Milne	Taita		Amin	12/07/23		0	0	0	0	Light	Light	Needs improvement	10	50	50	1	1	2	0	5	1	10	4.45	2
876	Johnston	Taita		Amin	12/07/23		0	0	0	0	Light	Light	Needs improvement	10	50	50	1	1	2	0	5	1	10	4.45	2
177	Ngaio Gorge RD/ Kaiwharawara Rd (3)	Ngaio	2784236		15/08/19	2014-2019	0	4	3	0	Light	Heavy	Medium	1	50	50	1	5	6	8	5	1	1	4.3	2

Renewals:

HCC has managed the prioritisation for each work category in a quasi-independent manner, utilising various experts in their respective field.

Council is confident that the renewals are prioritised in accordance with standard practice across New Zealand, however it is expected that there is an opportunity to improve this by taking a more holistic and integrated approach. It is intended that the renewals, maintenance, rehabilitation, and capital improvements programmes are jointly considered where practicable.

Maintenance:

Council has generally taken a reactive approach for maintenance within each work category. Council plans on taking a more holistic and integrated approach to project prioritisation, and has included this within the Improvements Plan.

Capital Projects:

Capital projects traditional go through a Business Case to confirm the case for investment. This is a rigorous process that includes an evaluation of options and consideration of priorities – and is a separate process to the Transport AMP.

Response Times:

When considering prioritisation decisions, it is also necessary to evaluate the appropriate response times associated with these matters. Council has a proposed table of response times, and which is under review. The draft table is shown below and is subject to approval processes.

Work Section	Priority 1	Priority 2	Priority 3	Priority 4	Priority 5
Pavement Repairs (Excl potholes and road markings)	7 Days	28 Days	60 Days	120 Days	Programmed with other works
Pothole Repairs – Access Roads	3 days	7 days	28 Days		
Kerb and Channel Repairs	7 Days	28 Days	60 Days	120 Days	Programmed with other works
Footpath Repairs	3 Days	7 Days	28 Days	60 Days	Programmed with other works
Berm Repairs			28 Days	60 Days	Programmed with other works
Vehicle Crossing Repairs	7 Days	28 Days	60 Days	120 Days	Programmed with other works
Hand Rail and Barrier Repairs	7 Days	28 Days	60 Days	120 Days	Programmed with other works
Rural Watertable Maintenance	3 Days	7 Days	28 Days	120 Days	Programmed with other works
Reinstatement of Road Markings	Varies dependent on type of markings and hierarchy of road. Refer to table in Cl 7.2.14				

3.8.4 Forward Works Programme

HCC has managed the forward works programme for each work category in a quasi-independent manner, utilising various experts in their respective field. Consequentially, Council does not have a documented long-term forward work planning process across renewals and maintenance. Its focus has been, due to the funding approval cycles, to focus on the immediate term and fit the work programme to the existing funding.

This has required deferral of maintenance or renewals, and this was highlighted in the 2023 WSP report for roading rehabilitation and pavement resurfacing.

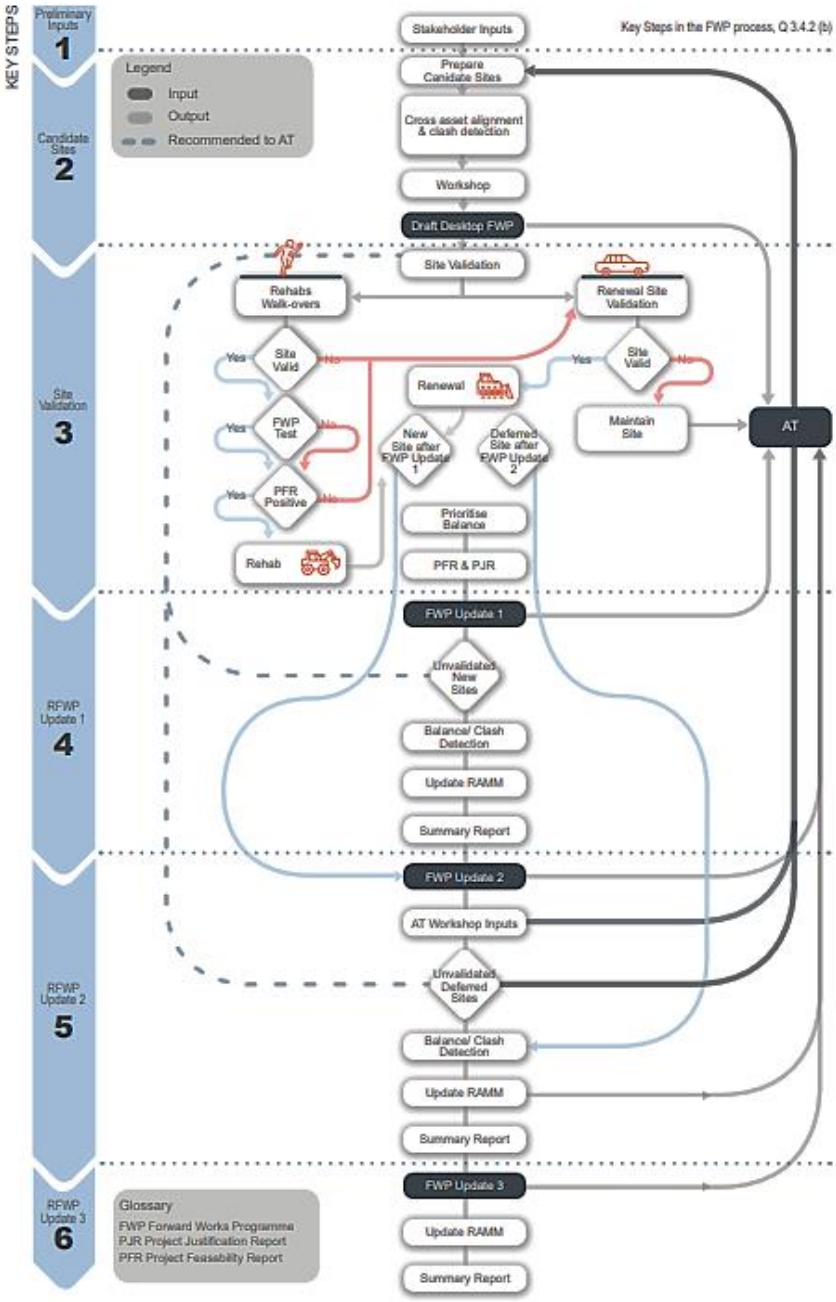
That report also sets out at a high level the expected level of funding required as calculated by the dTIMS model. Stantec, contracted to HCC help provide a robust prioritisation and treatment selection process to maximise value through use of NPV calculations that fact in avoided maintenance cost through renewals.

This process sets the annual work programme on an annual basis and this period is appropriate given the detailed nature and visual validations required.

The RAMM data to support the maintenance programme is not at the level required, but this is being proactively updated with a dedicated resource to complete this review by June 2024. Completing this update is critical to the success of any forward work planning process.

It is HCC's intention, as part of its improvement plan to develop a more transparent and longer-term forward works planning process, noting the constraints of funding lengths and needing to iterative from year to year.

An intended end state Forward Works Programme process is shown below (from another Council), and would provide a clear process flow which outlines the key steps. This framework would specifically include consideration of prioritisation tool(s) and also holistic decision making with respect to maintenance and renewals (evaluate trade-offs to optimise limited resources).



Sealed Roads:

WC 212 and 214 (road resealing and pavement renewals) are planned annually to take account of dTIMS model re-runs, condition reporting and funding constraints.

The WSP June 2023 dTIMs report set out how spend in these work categories would need to increase from current annually spend levels of $7.4m to $10.8m to maintain roading conditions. This sets the expected level of funding requirements for the 2024-27 period in these work categories and the specific work programmes, along with the funding levels, would be reset annually.

It is expected that only the first year of MOR funding will be certain before the 2024/25 year commences and therefore more detailed planning for outer NLTP years would potentially have little value until the funding envelopes for those years are confirmed.

Council is seeking a more transparent alignment between condition assessments, modelled alternatives, the decision-making process, optimised funding methodologies, and prioritised outcomes.

Structures:

At the completion of the annual inspections, an annual report is produced which outlines any remedial work that is required, prioritisation of the repairs, and rough order costs for this work to be completed.

Prioritisation is based on the assessed timeframe in which the repairs need to be undertaken, with repairs prioritised into the following categories:

- Urgent – to be completed immediately
- High – to be completed within 6/12 months
- Medium – to be completed within 2/3 years
- Low – to be completed within 5+ years

Remedial work is categorised into Routine Maintenance repair, Routine Structural repair, or Structure Component Replacement/Renewal.

Repair works are carried out in accordance with the NZTA Bridge Inspection and Maintenance Manual. The types of maintenance work activity undertaken include:

- Repairing structural defects
- Repairing or replacing damaged components
- Restoring protective coatings
- Clearing waterway obstructions
- Installing scour protection

Routine Maintenance repairs are undertaken as part of the general roading maintenance contract, within the timeframes that were specified during the inspections.

Routine Structural repairs that are prioritised as "Urgent or High" (which now includes previous year's "Medium or Low") and/or repair work that is of the same nature to enable pricing efficiencies, are grouped together into an annual bridge maintenance contract, which is then tendered out for construction.

Any structural replacement or renewal work identified has further investigation undertaken, to determine the construction work required and the estimated cost. Economic evaluation is required to determine the financial justification for best cost for whole of life. This is presented to Council as part of the Annual / Long Term planning process to secure budget, with work then programmed into the appropriate financial year, based on the timeframes specified at the time of inspections/investigation.

The exception to this is when there has been damage to safety structures such as barriers and guardrails which needs to be repaired or replaced immediately to maintain the structural integrity to ensure that there is no reduction in safety levels.

The current maintenance investment level has been determined through the identified Medium to Low repair work that has been prioritised for completion over the 2024/25 to 2026/27 years, with an additional contingency sum for unforeseen urgent work.

Over more recent years, maintenance work on the seawalls has been reduced to address only urgent, safety related or likely loss of accessibility repairs, prior to Tupua Horo Nuku Eastern Bays Shared in Path's construction, which in part includes the replacement/renewal of some of the seawalls along the Eastern Bays.

3.8.5 Assumptions

Growth and Demand

All growth forecasts include uncertain projections, and which may be impacted by the many vagaries of fiscal policy, economic forces, political policy, natural hazards, and more. Demand is assumed to be closely aligned to growth.

Climate Change

There are many possible changes which may occur. Many, like sea level change, temperature change, and rainfall change, can be measured over time. Other changes may be sudden and unexpected, with an understanding that we do not know all the potential outcomes that may occur.

Policy and Legislation

The cycle of government can bring changes to the Government Policy Statement and related priorities, guidance, and legislation. This plan does not allow for changes that cannot be known at this time.

Affordability

The programme will be affordable by HCC and co-funded by Waka Kotahi, NZTA. If funding varies from the preferred programme of work, then level of service adjustments will be required.

3.8.6 Implementation Risks

HCC employs a Risk Manager, and manages risks at different levels as appropriate. Specific project risks are managed through the use of project risk registers, and as noted previously, the strategic and organisational risks are managed through the LTP, 30-year Infrastructure Strategy, and/or at a corporate level by Council. Larger and/or key transport risks are captured on a Transport Risk Register. While the Transport Risk Register is not attached to this AMP, it is available for review upon request. The most recent workshop to review the Transport Risk Register was conducted on 5 December 2023, with ongoing workshops/meetings to review this document at regular intervals.

Council understands that there are a variety of different risks that may exist, or emerge, on any transport project – particularly when undertaking new initiatives. The risk can generally fall into the following example categories:

- Procurement Risks
- Financial Risks
- Regulatory Risks
- Compliance Risks
- Health & Safety Risks
- Environmental Risks
- Project Delivery Risks
- Reputational Risks

There is a desire by Council to progressively improve risk management, and ensure that risks are clearly identified, adequately assessed, appropriate level of response or intervention are actioned, and effective monitoring is enacted.

3.8.7 Approvals Process

The Draft Final AMP will be submitted to Waka Kotahi, NZTA, on 8 December 2023.

The final AMP will go to Council in March 2024 for final approval, it will then be submitted to Waka Kotahi, NZTA.

3.8.8 Partnering Integration

The implementation of the activities described by this Transport AMP will only be truly optimised when Council effectively collaborates with their key stakeholders. To achieve this, Council have identified the following stakeholders, and have outlined a high-level approach about how HCC plans to partner with each.

Stakeholder	How HCC plans to partner
Hutt City Residents	HCC consults with residents on designs and plans for projects and on the long-term plans.
Hutt City Businesses	Regular discussions are held with the Chamber of Commerce and businesses through our Business team. In-depth engagement occurs with businesses as part of project specific engagement.
Mana Whenua	HCC transport team engage with mana whenua through our Tumuaki Māori throughout the development of our work programmes and on key pieces of work to ensure that the voice of iwi plays a leading role in all decision making.
Kiwi Rail	HCC engages with KiwiRail on initiatives and projects in the rail corridor.
Waka Kotahi, NZTA	HCC Officers meet with Investment Advisors from Waka Kotahi, NZTA, on a monthly basis to provide updates on the work programme. Strategic quarterly meetings are held between the Head of Transport and the Waka Kotahi,NZTA, Regional Manager.
Te Ringa Maimoa	HCC is a contributing member of Te Ringa Maimoa and is looking to play a more active role in 2024.
Neighbouring Councils	HCC regularly engages with neighbouring Councils on an ad-hoc basis and more regularly through Te Ringa Maimoa.
Wellington Water	HCC transport have regular operational meetings with Wellington Water every six weeks which looks at current and future work programmes. Strategic meetings are held quarterly.
Wellington Electricity	Operational meetings are held every 6 weeks.
Other Utility Providers	Operational meetings are held every 6 weeks.
Wellington Lifelines Group	HCC are members of the Wellington Lifelines Group and regularly contribute to the group.
Suppliers / Contractors	Regular progress updates, quarterly meetings, as outlined in individual Supplier/Contractor contracts/agreements.

The comprehensive inclusion of stakeholders in the project delivery process, will better enable Council's ability to attain broader strategic goals, extending beyond transportation outcomes alone.

3.8.9 Procurement

Procurement across HCC has been identified as an area that would benefit from a specialist centralised resource. This "Centre of Expertise" would assist the business in achieving greater value from the procurement activity through better application of fundamental principles and a wider consideration of delivery models.

Responsibility for procurement at HCC sits with the Finance team, who are recruiting for a new Procurement Manager.

The 2023-26 HCC Transport Activity Procurement Strategy was revised in May 2023, this document sets out the strategic approach to transport related procurement of works and services by HCC. The strategy was endorsed by Waka Kotahi, NZTA, in June 2023.

In November 2023 the Transport team also established the Transport Construction Panel. The purpose for establishing the panel allows HCC to select a preferred supplier who can deliver best value for money. Council can build strong relationships with contractors, positively contributing to Lower Hutt's economy. The panel provides a consistent accountable process for delivering general construction projects. This also avoids the need for a lengthy tendering process or contract negotiations.

The Transport leadership team will identify potential experienced staff to undergo Waka Kotahi, NZTA, procurement training.

3.8.10 Performance Management

HCC follows the following high-level steps with regard to the performance management of suppliers, including contractors and other service providers:

Planning

Depending on the nature and specificity of the work involved, there may be a planning component to further confirm any prioritisation aspects of the work, prior to the commencement of associated activity.

It is specifically noted that key milestones should be clearly established at the beginning of each project.

Monitoring

Council will monitor the progress of the work at regular or periodic intervals, in accordance with the perceived risk, priority, or other extenuating circumstances.

It is noted that the completion of key milestones will be recorded and compared against planned targets.

Review

Council will review project status or contract status on a regular basis. This review can be augmented with regular engagement with the supplier, with an intent to share a common understanding about the project/contract matters.

Remediation

Where there is a difference between the view of the supplier and Council, may require various levels of remediation. Remediation may require any of the following:

- confirmation or correction of the data
- analysis of the data and related information
- Minor rework
- Negotiation
- Major rework

Project Close-Out

At the conclusion of major deliverables, or the completion of the contract, it is preferable for a Potential Lessons debrief to accompany other close-out requirements. This provides an opportunity for all participants to review potential lessons about elements of the project which were particularly successful – and warrant consideration for future projects, or were not particularly successful – and could be improved in the future. Ideally these potential lessons are reflected in changes for the delivery of future work.

3.9 Audit

Council is routinely audited by Waka Kotahi, NZTA, for both technical and procedural compliance. Hutt City is committed to addressing any issues that arise from these regular audits.

The most recent Investment Audit was conducted 15-18 November 2021, with the Technical Audit intended for late February 2022.

The Procedural Audit and report, dated 25 November 2021, resulted in an overall rating of 'Some Improvement Needed'. Procurement Procedures and Professional Services rated as Effective with Financial Processes and Contract Management rated as Some Improvement Needed.

Due to internal resourcing at Waka Kotahi, NZTA, the Technical Audit was not completed, and this will be rescheduled at a later date.

Council has since implemented all the relevant recommendations from both audits.

3.10 Self-Assessments

Council have conducted a series of three self-assessments. The first relates to the REG Smart Buyer self-assessment, the second relates to the Asset Management Competency assessment required by The Treasury, and the third relates to the adequacy of this Transport AMP against the measures applied by Waka Kotahi, NZTA.

3.10.1 Smart Buyer

Council staff met on 29 November 2023 to workshop through the REG Smart Buyer framework. The outcomes of this workshop are shown below:

REG THE ROAD EFFICIENCY GROUP We are. LGNZ. WAKA KOTAHI

Smart Buyer Principles Assessment Tool

This assessment is based on the Smart Buyer Principles identified in the Road Maintenance Task Force Report. That statement of principles is included at the end of this document. Score the following by ticking the appropriate box - (1) Disagree to (5) Strongly Agree

Whenever you score yourself "4 or 5" think of an example you can use to justify your score to an independent auditor

Assessment statement Our Organisation	Score				
	1	2	3	4	5
1. Fully understands the different contracting models available				✓	
2. Holds meetings that updates the contracting industry on the forward works programme and any changes it is taking in approach and proactively engages with the contracting industry to ensure that gains optimal value out of any changes being implemented			✓		
3. Has sufficient robust data (or is in the process of gathering robust data) on our networks that enables optimal integrated decision-making			✓		
4. Has access to expertise that fully enables best use of the data available			✓		
5. Is open to alternative solutions to those proposed in the contract documents				✓	
6. Understands risk and how to allocate and manage it			✓		
7. Has a Council that is prepared to pay more now to achieve a lower whole of life cost			✓		
8. Actively pursues value for money & does not always award contracts to the lowest price				✓	
9. Is able to manage supplier relationships / contracts to ensure that expenditure is optimal and sustains infrastructural assets at appropriate levels of service				✓	
10. Supports ongoing skill and competency training and development for its staff				✓	
11. Actively participates in gatherings to share and gain knowledge within the sector			✓		
12. Is effective in keeping up with best practice in procurement including best practice RFP / contract documentation				✓	
13. Regularly seeks and receives candid feedback from suppliers on its own performance as a client and consistently looks to improve its performance			✓		
14. Explores opportunities for collaboration by either sharing in-house resources with neighbours, or by procuring together or tendering together. That exploration could be through an LGA s17A evaluation of transport function delivery options.			✓		
Number of ticks in each column			8	6	
Multiplying factor	x1	x2	x3	x4	x5
Total Score in Column			24	24	
Total Score	48				

Score: Interpretation

65 to 70: A smart buyer: Our organisation is a smart buyer. We help to minimise rate increases by maximising the value created for our community

55 to 64: Developing: Our organisation has embraced the principles of being a smart buyer but can still create further improved value for our communities

30 to 54: Limited: Our organisation currently has limited capability to maximise the value created from being a smart buyer

0 to 29: Basic: Our organisation is focused on tender process and compliance. We have not developed the capability to realise any of the value created for our community from being a smart buyer

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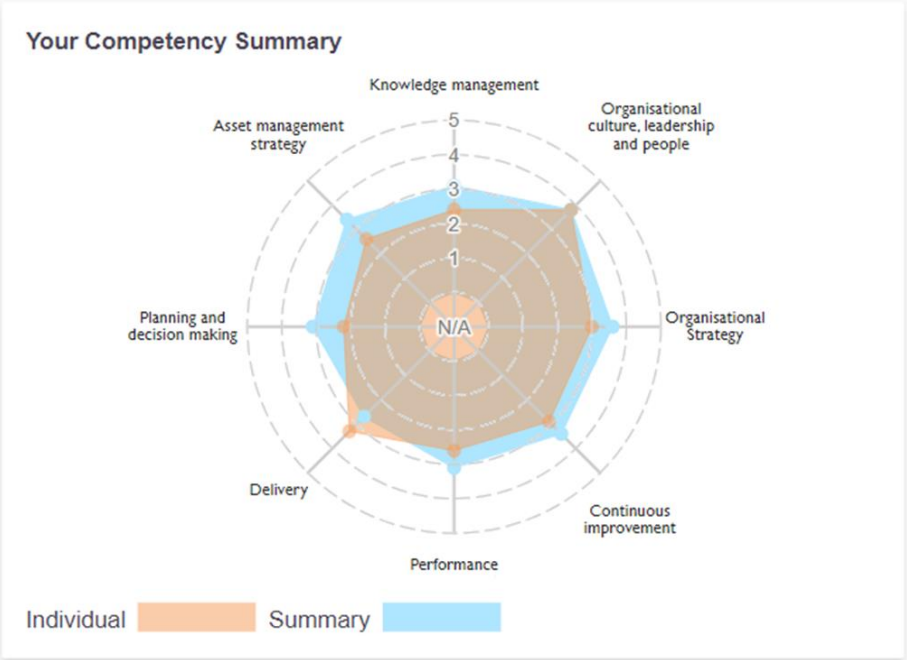
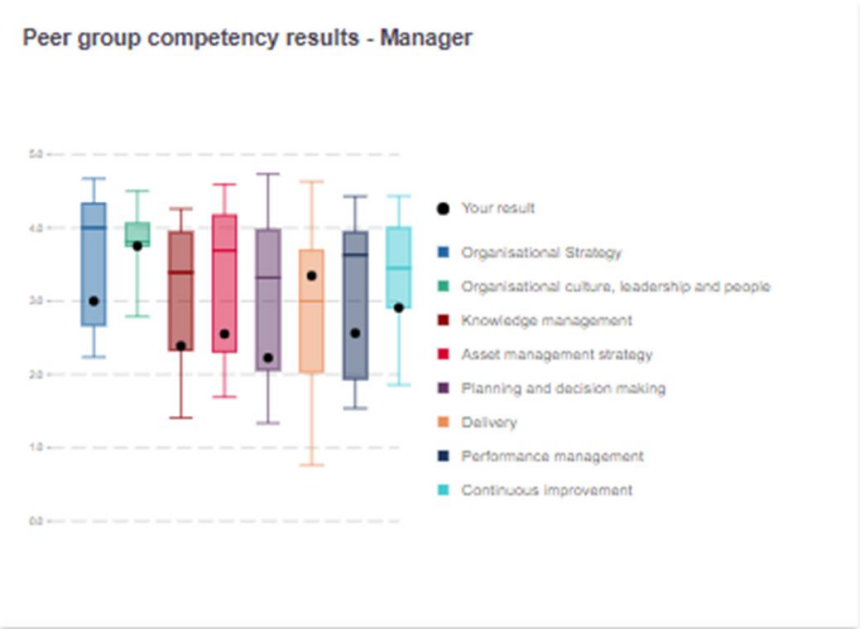
3.10.2 Asset Management Competency

Council staff met on 29 November 2023 to workshop through the Asset Management Competency framework. The outcomes of this workshop are shown below:





The outcome of this self-assessment shows that Council are generally good at delivery, when compared to peers, but have opportunities in other areas.

3.10.3 Transport AMP Self-Assessment – Investment Quality Assurance for NLTP

Council have assessed this AMP against the criteria outlined by Waka Kotahi, NZTA. The results of this assessment are shown below.

It is specifically noted that there has been a significant change in the level of detail which is included within this AMP, from the first draft earlier this year.

Further, there are significant changes within the Transport Group at HCC, and a corresponding change in priorities and focus. Consequentially, there are a large number of items which have been added to the Improvements Plan.

The following table has been prepared by HCC as an aid to Waka Kotahi, NZTA, for their assessment of the HCC AMP.

Item	Focus Area	Assessment (Sections That Address Performance Requirement)
1.	**Strategic Alignment** Briefly describe the information that demonstrates how the business case: • Supports and aligns to government priorities • Takes account of regional priorities • is informed by the Waka Kotahi, NZTA, planning documents • Responds to the ONRC/ONF	HCC have aligned their AMP with the GPS and other related regional priorities, in addition to Waka Kotahi, NZTA, planning documents and the migration from ONRC to ONF. 2.3 Strategic Alignment 2.3.1 IIMM 2.3.2 NPS on Urban Development 2.3.3 National Adaptation Plan 2.3.4 Land Transport GPS 2.3.5 Ministry of Transport Strategic Intentions 2.3.6 Waka Kotahi, NZTA, Arataki 2.3.7 ONF 2.3.8 Differential Levels of Service 2.3.9 NLTP 2.3.10 Wellington RLTP 2.3.11 HCC Infrastructure Strategy 2.3.12 HCC LTP 2.3.13 HCC ITS

Item	Focus Area	Assessment (Sections That Address Performance Requirement)
2.	**Strategic Direction** Briefly describe the information that identifies issues such as: • Long term trends that impact on the network's customer levels of service • Acceptable levels of service gaps • Risks to the reliability and continuity of the network • other priorities	HCC have an excellent understanding of the long term growth within Hutt City, and the consequential impacts on the transport network. This AMP demonstrates a significant step change with respect to the management of risk from previous years, together with an improved focus on evidenced based decision-making. Council also have a detailed Improvements Plan which includes elements about holistic and integrated solutions, to better align with targeted objectives. 2.2.2 Demographics 2.2.3 Economics 2.5 Risk Management 2.7 Forecasts and Assumptions 2.7.7 Lifecycle of Transport Assets 3.8.3 Project Prioritisation 3.8.4 Forward Works Programme 4.0 Improvements Plan
3.	**Problem identification (current state)** Briefly describe the information that provides: • A clear statement of the current state problem or problems, or opportunities being addressed • What would be the consequences of not addressing the problem(s) or opportunity and the urgency	HCC have revised the Problem Statements to better reflect the current state in Hutt City, with focus on Network Complaiance, Network Resilience, and Network Future Capacity. The consequences of not addressing these, are unrealised benefits, and worsening KPI results, in addition to the Alternative Outcomes described in that Section. A comprehensive Improvements Plan has been included which includes improved integration of consultants and constructors as part of a more holistic and integrated approach. 2.11.1 Problem Statements 2.11.2 Benefits 3.6 Alternative Outcomes 4.3 Improvements Plan

Item	Focus Area	Assessment (Sections That Address Performance Requirement)
4.	**Benefits & measures identified and reasonable** Benefits and measures: • are traceable, achievable, and address the problems identified • there is adequate evidence available to confirm achievement • shows how the AMP responds to the benefits framework, ONF and links its underlying programmes (MOR, RSP, LCLR, etc.)	HCC have referenced reliable data from RAMM, KPI's from Transport Insights Te Ringa Maimoa, in addition to factual peer group comparables provided by Waka Kotahi, NZTA. Level of Service options have been provided for each work category, together with an assessment of alternative outcomes. 2.6 Natural Hazards and Other Constraints 2.11.2 Benefits 3.2. Target Levels of Service 3.3 Performance and Gap Analysis 3.5 Level of Service Options 3.6 Alternative Outcomes
5.	**Procurement** Briefly identify & describe: • Procurement strategy was last reviewed • Procurement assessment is consistent with REG's procurement evaluation guide • emerging procurement risks or opportunities • Any issues or risks identified	HCC have an endorsed procurement plan which was most recently reviewed in February 2022. Council have completed the REG Smart Buyer self-assessment and are managing risks. 3.8.6 Implementation Risks 3.8.9 Procurement 3.10.1 Smart Buyer Self-Assessment 4.2 Summary of Planned Improvements
6.	**Evidence** Business case and supporting information must demonstrate that sufficient evidence has been provided to supports the proposed programme. Includes evidence like modelling, benchmarking, incremental analysis & sensitivity analysis	HCC have included updated evidence from RAMM, dTIMS model, and expert technical consults. KPI results from Transport Insights Te Ringa Maimoa have been included, in addition to factual peer group comparables provided by Waka Kotahi, NZTA. A Section has been added to specifically address Lifecycle managment, and text has been included about treatment selction methodologies/prioritisation. 2.7.7 Lifecycle of Transport Assets 3.2. Target Levels of Service 3.3 Performance and Gap Analysis 3.5 Level of Service Options 3.6 Alternative Outcomes 3.8.3 Project Prioritisation

Item	Focus Area	Assessment (Sections That Address Performance Requirement)
7.	**Quality Assurance** Briefly identify & describe: • Procurement strategy was last reviewed • Procurement assessment is consistent with REG's procurement evaluation guide • emerging procurement risks or opportunities • Any issues or risks identified	HCC have a robust procurement strategy and have completed both the Smart Buyer and Asset Maturity Assessment. Risk has been adequantly address at both a strategic and tactical level. 2.5 Risk Management 3.8.6 Implementation Risks 3.8.9 Procurement 3.10.1 Smart Buyer 3.10.2 Asset Management Competency
8.	**Core Programme** Must demonstrate: • A sufficient range of alternatives and options have been identified and explored • Preferred programme is optimised and is the best way to respond when considring maintenance/improvement • Cost and level of service performance benchmarking	HCC have a clear programme outline, with a clear understanding of targets, Level of Service options, alternative outcomes, and a clearly defined programme preference. In addition, there is a clear plan for implementation and an comprehensive Improvements Plan with areas for planned improvement. 3.2. Target Levels of Service 3.3 Performance and Gap Analysis 3.5 Level of Service Options 3.6 Alternative Outcomes 3.7 Preferred Programme 3.8 Implementation 4.3 Improvements Plan
9.	**Alignment of programme expenditure** Review documentation/references provided and provide assurance that there is: • An alignment between the planning documentation and the TIO funding application for the total core programme (including any service improvement(s)) • Any gaps are identified	HCC have aligned the current funding request with the guidance from technical consultants regarding the target Levels of Service, and with the projected funding within the Draft LTP - subject to consultation and Council approval. 2.9 Financials 3.7 Preferred Programme
10.	**Affordability** Briefly describe: • If the proposed programme is feasible	HCC have revised the Transport AMP down to align with LTP funding levels which are affordable, subject to the outcomes from consultation and Council approval. 2.9 Financials 2.9.4 Escalation and Inflation 2.10 Comparables

Item	Focus Area	Assessment (Sections That Address Performance Requirement)
11.	**Integration** Briefly describe: • How the programme takes account of other agencies programmes/activities • Does the proposal ensure optimal programme delivery efficiency and co-ordination with suppliers and partner organisations?	HCC have accounted for stakeholders, with a clear goal of effective and regular engagement. 3.8.8 Partnering Integration 3.8.10 Performance Management
12.	**Partnering** Briefly describe: • How the programme takes account of other agencies programmes/activities • Does the proposal ensure optimal programme delivery efficiency and co-ordination with suppliers and partner organisations?	HCC has, and will continue to work closely with other agencies, organisations, and stakeholders. Where possible, work will be coordinated in a way that minimises disruption, minimises cost, and maximises the use of time or other resources. 3.8.8 Partnering Integration
13.	**Performance Management** Demonstrate: • Key milestones outlined and are traceable • Key parties involved in managing & delivering the Maintenance, Operations & Renewals programme are identified, and their role outlined • Programme delivery is described and will be monitored	HCC has, and will continue to track and monitor the peformance of contractors and consultants. This specifically includes the tracking of key milestones as a monitored measure of project delivery. 3.8.10 Performance Management
14.	**Confidence in delivery / Risk management** Briefly describe: • How findings from previous Transport Agency audits have been addressed • Concerns related to delivery of the preferred programme • Delivery track record • Organisation capacity and capability • Risk identified and managed • REG excel. frame.	HCC have acted in response to completed audits, plus have actively engaged in risk identification, assessment, mitigation and monitoring. 2.5 Risk Management 2.5.1 Critical Infrastructure 2.5.6 Existing Asset Management Capacity 3.8.6 Implementation Risks 3.9 Audit

3.10.4 Transport AMP Self-Assessment - REG Pillars of Success Self-Assessment

Building on the review from 2021/2024 AMP Review, HCC has provided the following self-assessment about how this AMP measures against the REG Pillars of Success, specifically:

- Systems
- Evidence
- Communicating
- Decision Making
- Service Delivery
- Quality Improvement
- Benefit Delivery
- People & Culture

Each of these have been evaluated as shown below:

Systems

HCC have systems in place for the effective delivery of transport related work. These are evidenced by contracts with suppliers for the provision of both technical consulting plus also construction and maintenance services. Council is actively developing an Improvements Plan to further improve their capabilities, capacity, and decision-making.

Evidence

HCC have increased the evidence which is provided within their AMP from the last cycle. There are numerous references to detailed, specific evidence. Council recognise those areas where there is less data, and is proactively working towards addressing those gaps. There are ample references to the comparable KPI's with peers.

Communicating

HCC have a clear understanding of their stakeholders, and have a documented plan of how to engage with said stakeholders.

Decision Making

HCC have several prioritisation tools which are used in specific areas, and have identified that there is an intent to develop a more holistic and comprehensive approach – which integrates these individual tools.

Service Delivery

HCC score well in the Asset Maturity category of Service Delivery, and provide excellent value-for-money when compared to their peers.

Quality Improvement

HCC have made numerous important changes since the last AMP cycle, but have prepared a comprehensive Improvements Plan which accentuates the importance of quality data, focused resources, and quality processes.

Benefit Delivery
HCC have an excellent understand of the target benefits, specifically including KPI's, but are still working towards a more integrated approach to the decision-making process – such that alternative benefits are more fully considered.

People & Culture
HCC have made significant strides within this category by making a major restructure of the Transport Group, to include the establishment of key positions to hold specific responsibilities – and to focus on essential elements of the Transport Programme.

3.11 Organisation

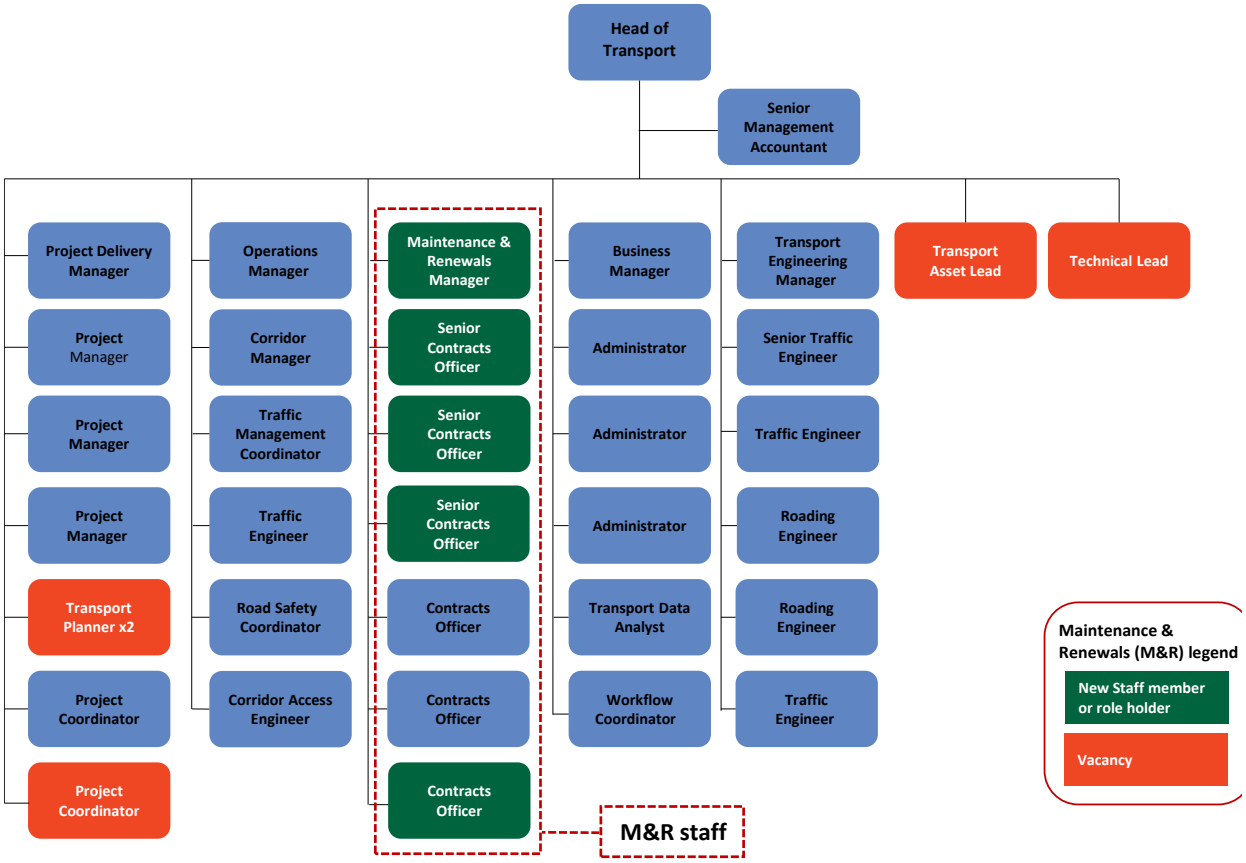
Hutt City is committed to the delivery of the proposed programme. To ensure effective and efficient delivery, it is recognised that adequate resources are needed to govern, direct, manage, implement, inspect, check, and record the many details that are required of Council programmes.

Council undertook a realignment in 2023 to optimise our efficiency by ensuring we have the right resources in the right positions, aligned with new priorities, so we are able to successfully deliver the required business outcomes.

The organisational structure of the Council Transport team is shown below. As context, the MOR staff are highlighted, showing that only two staff remain from when the last Transport AMP was prepared. Outside that core, only seven staff remain within the other areas, and there are key vacancies still to be filled – including the Transport Asset Lead and Technical Lead.

Council will also endeavour to shift administrative tasks from technical staff to business services where possible. This will increase in-house technical capability and, over time, minimise outsourced activities.

Transport Team Structure - October 2023



4.0 Improvements Plan

This section provides a summary of improvements that have been completed, or are in progress, since the submission of the last AMP. Further, the Improvements Plan includes a description of work which is proposed over the coming three years. This proposed work is to improve Council's and Waka Kotahi's, NZTA's understanding about the transport infrastructure network – and better inform future decisions about transport planning, investment, operation, and maintenance.

In light of the organisational change outlined in the previous section, it is specifically noted that the proposed activities are much more extensive than in previous AMP cycles. While there are many individual areas where improvements could be made, it is also noted that Council is seeking to implement a holistic strategy.

4.1 Summary of recent improvements

Since the preparation of the 2021-2024 AMP, HCC has undertaken the following improvements:

- Council has developed an Integrated Transport Strategy to serve as the vision, with associated objectives and focus areas.
- The recruitment of a RAMM specialist, and additional roles with RAMM experience will enable more seamless and transparent programming of maintenance and renewals work. This ensures that all completed work is captured directly into RAMM in the necessary format, and in its entirety.
- A focus on asset data collection across the network is underway, improving accuracy for improved future decision making.
- Multi Speed Deflectometer (MSD) testing was completed across the entire network to provide current information/data on the strength of the network's pavements (structural numbers). This information is key to understanding the network's pavement condition and is a core input required for dTIMS modelling (for long term planning).
- The dTIMS modelling was re-run to provide current predictions of the network's pavement and surfacing renewal needs over the next 20-year period, including budget requirements.
- The Road Condition Rating Survey is now undertaken across 100% of the network, rather than just a small section of each rating section, as has been done previously. This provides condition information for the full network, rather than just a representative sample, from which the initial identification of sites for our annual road resurfacing and pavement rehabilitation programmes is made.
- Council has reviewed and reaffirmed the findings of the previous Investment Logic Mapping process to identify problems, benefits, alternatives, and solutions.
- Council have engaged the services of a consultant to help with the preparation of this Activity Management Plan.
- Council have participated in Te Ringa Maimoa, the Road Efficiency Group and are pro-actively engaging with Waka Kotahi, NZTA.

4.2 Summary of planned improvements

Over the upcoming AMP cycle, HCC is proposing to undertake the improvements which are defined in the following Section. However, the following framework improvements are specifically noted as being enablers for the improvements process.

Establish Monthly Status Meetings

Council understands that regular meetings are required to keep the proposed improvements identified in this AMP at the front of mind for staff – who otherwise are enveloped in other urgent tasks. The intention is to have short, regular, facilitated meetings such that these actions are fully incorporated into the regular work of Council staff.

Develop Holistic Strategy

While each item within the Improvements Plan could be completed in isolation, it is recognised that there is significant benefit to Council if there is a broader, holistic strategy behind all efforts to improve data, performance, and delivery. While not specified nor defined at present, HCC intends to work towards a more comprehensive approach to Asset and Activity Management. This has been included as a specific line item within the Improvements Plan.

Leadership

For any endeavour to be successful, it is imperative that there is leadership in place and whom prioritise the work that is required. HCC have leaders within the Transport Group who are eager to make the necessary improvements, and will ensure that staff focus their efforts accordingly.

RAMM Data and AMDS

Hutt City utilises the Road Assessment and Maintenance Management (RAMM) database to capture network asset profiles, statistics and activity. The integrity of RAMM data underpins the credibility of asset monitoring, life-cycle maintenance and financial implications.

HCC is currently working on the AMDS (Asset Management Data Standard) project, which aims to standardize RAMM data. The project is expected to be completed by August 2024. This Waka Kotahi, NZTA, initiative is anticipated to bring numerous benefits to the council, including cost savings and increased efficiency in data collection and processing, better value for money through prioritization, benchmarking of best practices across councils, more accurate planning and forecasting, improved investment decision-making, and better asset management.

Specific Items Listed in AMP

There are numerous items which have been identified as actions within this AMP. These items have been captured in the table in the following Section.

4.3 2024-2027 Transport Improvement Plan

The following activities in the below table are intended to be a 'live' list on the HCC Server, where completed activities may be removed and new items are added as they are raised.

To ensure momentum, where practicable, Council will endeavour to break larger initiatives into smaller more manageable components that enable progress to be celebrated.

All the initial listed items are likely to start concurrently and is expected that some items will be completed relatively quickly, while others may take longer.

The items within this Improvements Plan are not listed in any particular order at present, however, these may be categorised in the future to aid monitoring and reporting.

Council is responsible for the prioritisation of all actions within the Improvements Plan, and recognise that these priorities may change over time.

Item	Improvements	Index[2]	Method Summary	Status	Item Lead
2024 Priorities					
1.	Establish Monthly Status Meetings to Review this Improvements Plan	CI, D, PDM	Regular meetings	Commencing Feb 2024	TBC
2.	Regular review of the risk register and implement any required changes.	KM, OCLP, CI, P, D		2024	TBC
3.	GIS Data Management	KM, CI, P, D, PDM, AMS	All new contracts to include GIS deliverables of completed work	As implemented	TBC
4.	Identify and fill RAMM data gaps	P, D, PDM, AMS	Plan to be developed by specialist resource	Commenced Nov 2023	TBC
5.	Key Performance Indicator Review	P, D, PDM	Via Monitoring & Evaluation function	2024	TBC

[2] Index of which Asset Management Competency Framework that each improvement relates to:

KM.....Knowledge Management
OCLP.....Organisational Culture, Leadership and People
OS.....Organisational Strategy
CI.....Continuous Improvement
P.....Performance
D.....Delivery
PDM.....Planning and Decision Making
AMS.....Asset Management Strategy

Item	Improvements	Index[2]	Method Summary	Status	Item Lead
6.	Develop a plan to optimise maintenance and renewals of pavements based on visual inspection, NPV's, and ONF.	KM, CI, PDM, AMS	TBD	2024	TBC
7.	Develop a plan to optimise demand management and capacity improvement.	KM, CI, PDM, AMS	TBD	2024	TBC
8.	Develop and prioritise a maintenance and replacement strategy for all structures.	KM, CI, PDM, AMS	TBD	2024	TBC
9.	Develop a plan to assess drainage capacities and develop a prioritised maintenance and upgrade strategy.	KM, CI, PDM, AMS	TBD	2024	TBC
10.	Develop and prioritise a maintenance and replacement strategy for Traffic Services assets.	KM, CI, PDM, AMS	TBD	2024	TBC
11.	Develop and prioritise a maintenance, upgrade, and expansion strategy for Operational Traffic Management assets.	KM, CI, PDM, AMS	TBD	2024	TBC
12.	Develop and prioritise a maintenance, upgrade, and replacement strategy for Low-Cost / Low-Risk Safety Improvements.	KM, CI, PDM, AMS	TBD	2024	TBC
13.	Address footpath faults for funding prioritisation	P, D, AMS	TBD	2024	TBC
14.	Develop an asset register and conditional report of existing Seawalls, prioritise and secure funding	KM, PDM, AMS	TBD	2024	TBC
15.	Review and update Emergency Response Plan(s)	KM, OS, P, D, PDM		2024	TBC
16.	Review and update Critical Infrastructure list	KM, OS, P, D, PDM		2024	TBC
17.	Update travel time monitoring on key routes (and collect data on delays)	CI, PDM, AMS		2024	TBC
18.	Update transport forecasts and projections on key routes	CI, PDM, AMS		2024	TBC

Item	Improvements	Index[2]	Method Summary	Status	Item Lead
19.	Review and reconcile target Levels of Service between overarching HCC goals and detailed Waka Kotahi, NZTA, KPI's.	KM, CI, OS, P, D, PDM		2024	TBC
Future Priorities					
20.	Evaluate options for an improved, holistic and integrated asset and activity management approach (system).	KM, CI, P, D, OS, PDM, AMS		2024-25	TBC
21.	Develop a plan to assess flooding and landslip vulnerabilities and prioritise targeted upgrades.	KM, CI, PDM, AMS	TBD	2024-25	TBC
22.	Develop and prioritise a maintenance and replacement strategy for footpaths.	KM, CI, PDM, AMS	TBD	2024-25	TBC
23.	Develop and prioritise a parking maintenance, upgrade, and replacement strategy.	KM, CI, PDM, AMS	TBD	2024-25	TBC
24.	Assess location, ownership, and composition of Council Retaining Walls.	KM, PDM, AMS	TBD	2024-25	TBC
25.	Develop a holistic and integrated approach to forward works programme.	KM, OS, P, D, PDM, AMS	TBD	2024-25	TBC
26.	Combine prioritisation tools into a single tool to support more holistic decision-making.	KM, OCLP, OS, P, D, PDM, AMS		2024-25	TBC
27.	Review & confirm prioritisation tool aligns with Strategic Case guidance documents.	OS, CI, P, D, AMS		2024-25	TBC
28.	Conduct a new ILM workshop prior to next AMP cycle.	OS, PDM, AMS		2026-27	TBC
29.	Confirm and prioritise a maintenance, upgrade, and expansion strategy for Cycleways.	KM, CI, PDM, AMS	TBD	2027-30	TBC

4.4 Proposed method for undertaking the improvements

While some improvements are already in progress, the majority of Improvements will not start until 2024. The overarching target is as follows:

2023	• Assess current situation and prepare AMP
2024	• Prioritise the actions required to implement the Improvements Plan, and
	• initiate said actions
2025	• Focus on delivery of targeted improvements
2026	• Review and monitor progress

Responsibility of each improvement activity will be assigned to a specific role within Transport. While monthly status updates will be conducted, formal progress reviews will only be undertaken at the discretion of the HCC Head of Transport.

Where resource limitations, or conflicting priorities impact the delivery of items on the improvement plan, this must be escalated up to the Head of Transport.

4.5 Projected cost to undertake improvements

It is anticipated that many of the improvements can be funded from existing budgets. The improvements related to the organisational structural review will be funded centrally by HCC.

Where improvement initiatives require additional funding, an application will be made to HCC based on the benefits anticipated or unacceptable risk associated with not undertaking the improvement.

Our Reference

TO: **Chair and Members**
Infrastructure and Regulatory Committee

FROM: **Vanessa Gilmour**

DATE: **20 February 2024**

SUBJECT: **INFRASTRUCTURE AND REGULATORY FORWARD PROGRAMME 2024**

Purpose of Memorandum

1. To provide the Infrastructure and Regulatory Committee with a forward Programme of work planned for the Committee for 2024.

Recommendation

That the Committee receives and notes the Forward Programme for 2024 attached as Appendix 1 to the memorandum.

Background

2. The Terms of Reference for the Committee requires the Committee to consider and make recommendations to Council on infrastructure matters and considering any infrastructure core matters referred to it by Council. This is an operationally focused committee, overseeing Council's above and below ground core infrastructure needs, and core regulatory functions.

3. The forward programme for 2024 provides a planning tool for both members and officers to co-ordinate programmes of work for the year. The forward programme is attached as Appendix 1 to the memorandum.

Forward Programme

4. The forward programme is a working document and is subject to change on a regular basis.

Appendices

No.	Title	Page
1⇩	Appendix 1 - Infrastructure and Regulatory Committee forward work programme 2024	316

Author: Vanessa Gilmour, Democracy Advisor
Reviewed By: Kate Glanville, Senior Democracy Advisor
Approved By: Kathryn Stannard, Head of Democratic Services

Infrastructure and Regulatory Committee Forward Work Programme

Description	Team	Cycle 2 9 May 2024	Cycle 3 11 July 2024	Cycle 4 12 Sept 2024	Cycle 5 21 Nov 2024	Pending
Committee Forward Work Programme	Democracy Advisor	✓	✓	✓	✓	
Regulatory Matters report	Environment and Sustainability	✓	✓	✓	✓	
Three Waters update	Strategic Projects	✓	✓	✓	✓	
Te Wai Takamori o Te Awa Kairangi (RiverLink) Update	RiverLink Project	✓	✓	✓	✓	
Infrastructure Acceleration Fund Stormwater and Wastewater	RiverLink Project	✓				
Akatea Road – Section E Footpath Improvements	Transport	✓				
Temporary Road Closure - Petone Rotary Fair 2025	Transport			✓		
Temporary Road Closure - Christmas parade	Transport			✓		
City Wide Speed Review	Transport					✓
Micromobility programme update (community connections)	Transport					✓
Integrated Transport Strategy	Transport					✓