

Infrastructure Committee Agenda

Date: Thursday, 13 May, 2021

Time: 9:00 am

Location: Council Chamber
Forum North, Rust Avenue
Whangarei

Elected Members: Cr Greg Martin (Chairperson)
Her Worship the Mayor Sheryl Mai
Cr Gavin Benney
Cr Vince Cocurullo
Cr Nicholas Connop
Cr Ken Couper
Cr Tricia Cutforth
Cr Shelley Deeming
Cr Jayne Golightly
Cr Phil Halse
Cr Greg Innes
Cr Anna Murphy
Cr Carol Peters
Cr Simon Reid

For any queries regarding this meeting please contact
the Whangarei District Council on (09) 430-4200.

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Recommendations contained in the agenda are not the decisions of the meeting.

Please refer to minutes for resolutions.

Infrastructure Committee – Terms of Reference

Membership

Chairperson Councillor Greg Martin

Members Her Worship the Mayor Sheryl Mai
Councillors Gavin Benney, Vince Cocurullo, Nicholas Connop, Ken Couper, Tricia Cutforth, Shelley Deeming, Jayne Golightly, Phil Halse, Greg Innes, Anna Murphy, Carol Peters, Simon Reid

Meetings Monthly

Quorum 7

Purpose

To oversee the management of council's infrastructural assets, utility services and public facilities.

Key responsibilities

- Services including the provision, maintenance and capital investment for:
 - Infrastructure asset management, projects and support
 - Infrastructure project co ordination
 - Transportation
 - Waste and drainage
 - Solid waste, waste minimisation and recycling services
 - Water
 - Parks and reserves
 - Cemetery
 - Laboratory services
 - Flood alleviation schemes
- Reporting on service delivery, including operational financial performance.
- Reporting on capital projects.
- Operational reporting for the Infrastructure group within Council.

- Procurement – general procurement relating to the areas of business of this committee, within delegations.
- Shared Services – investigate opportunities for Shared Services for recommendation to council.
- Council Controlled Organisations (CCOs) – monitoring the financial and non-financial performance of CCOs whose functions would otherwise fall under the scope of this committee. Includes trading CCOs (CCTOs) and those CCOs exempted under the LGA. Responsibilities include:
 - advising on the content of annual Statement of Expectations to CCOs
 - agreement of the Statement of Intent
 - monitoring against the Statement of Intent
 - for exempted CCOs, monitoring and reporting as agreed between Council and the organisation

CCOs accountable to this committee:

- Northland Regional Landfill Limited Partnership (NRLLP) – CCTO
- Whangarei Waste Limited (WWL) – exempted CCO

Delegations

- (i) All powers necessary to perform the committee's responsibilities, including, but not limited to:
- a) the approval of expenditure of less than \$20 million plus GST.
 - b) approval of a submission to an external body.
 - c) establishment of working parties or steering groups.
 - d) adoption of strategies and policies relating to the key responsibilities of this committee (except for those that cannot be delegated by Council under Clause 32(1)(f) of Schedule 7 of the LGA).
 - e) power to establish subcommittees and to delegate their powers to that subcommittee.
 - f) the power to adopt the Special Consultative Procedure provided for in Section 83 to 88 of the LGA in respect of matters under its jurisdiction (this allows for setting of fees and bylaw making processes up to but not including adoption).
 - g) the power to delegate any of its powers to any joint committee established for any relevant purpose under clause 32, Schedule 7 of the Local Government Act 2002.

Item 3.1

Infrastructure Committee Meeting Minutes

Date: Thursday, 8 April, 2021
Time: 9:00 a.m.
Location: Council Chamber
 Forum North, Rust Avenue
 Whangarei

In Attendance	Cr Greg Martin (Chairperson) Her Worship the Mayor Sheryl Mai Cr Gavin Benney Cr Vince Cocurullo Cr Nicholas Connop Cr Ken Couper Cr Tricia Cutforth Cr Shelley Deeming Cr Phil Halse Cr Greg Innes Cr Anna Murphy Cr Carol Peters Cr Simon Reid
Not in Attendance	Cr Jayne Golightly
Scribe	C Brindle (Senior Democracy Adviser)

1. Declarations of Interest

There were no declarations of interest made.

2. Apology

Cr Jayne Golightly

Moved By Cr Greg Innes

Seconded By Cr Vince Cocurullo

That the apology be sustained.

Carried

3. Confirmation of Minutes of Previous Infrastructure Committee Meeting

3.1 Minutes Infrastructure Committee Meeting held 11 March 2021

Moved By Cr Simon Reid

Seconded By Cr Vince Cocurullo

That the minutes of the Infrastructure Committee meeting held on Thursday 11 March 2021, having been circulated, be taken as read and now confirmed and adopted as a true and correct record of proceedings of that meeting.

Carried

4. Information Reports

4.1 Contracts Approved Under Delegated Authority

Moved By Cr Carol Peters

Seconded By Cr Shelley Deeming

That the Infrastructure Committee note the Infrastructure contracts awarded under Chief Executive and General Manager delegated authority.

Carried

4.2 Infrastructure Operational Report

Moved By Cr Vince Cocurullo

Seconded By Cr Greg Innes

That the Infrastructure Committee notes the Infrastructure Operational Report update.

Carried

5. Public Excluded Business

There was no business conducted in public excluded.

6. Closure of Meeting

The meeting concluded at 9.46am.

Confirmed this 13th day of May 2021

Councillor Greg Martin (Chairperson)

4.1 Ngunguru Old Coach Trail – Te Toiroa Paper Road

Meeting: Infrastructure Committee
Date of meeting: 13 May 2021
Reporting officer: Jeff Devine (Strategy & planning Manager, NTA)

1 Purpose

To consider requests to close the Ngunguru Old Coach Trail, a cycle trail route on the Te Toiroa paper road, to all motor vehicles.

2 Recommendations

That the Infrastructure Committee

1. Considers the requests to close the Te Toiroa paper road, to all motor vehicles.
2. And either;
 - a. Support the closure of Te Toiroa Road to all motor vehicles, OR
 - b. Support the continue the use of Te Toiroa Road as a shared path for vehicles and walking and cycling users.

3 Background

Council has received a number of requests from residents to close the Te Toiroa and Waipoka Coach Roads to motor vehicles, due to the potential conflict with cyclists and pedestrians using the newly created Ngunguru cycleway.

Ngunguru Old Coach Trail

The Tutukaka Coast Residents and Ratepayers Association (TCR&R) and Tutukaka Cycleway Group have constructed a cycle route from Scow Landing (Memorial Bridge) to Ngunguru. Grant funding by Council to TCR&R was approved for the 2017-2018 financial year for improvements necessary to build the cycle trail.

The route of the cycle trail is shown on attachment 1.

The majority of this route follows existing maintained gravel and paved roads. Two sections of unmaintained paper roads were upgraded to a cycle trail standard, details below:

- the “Waipoka Coach Road” (approx. 1.5 km) is an unformed legal road (“paper road”) however is not suitable for vehicles and is used now as a walking/ cycling track and bridleway. This is in good condition but required some reshaping and gravel in a few short sections (photo in attachment 1, diagram 1). The Waipoka Coach Road section

has long been unsuitable for any motor vehicles and has not been used in this way in living memory.

- the “Paper Road” section of Te Toiroa Road (approx. 1.4 km) is an unformed legal road not maintained by Council and currently used by walkers, cyclists, horse riders and 4WD vehicles. It was heavily rutted in sections and required reshaping, drainage work and gravel for most of its length (photo in attachment 1, diagram 1). The unmaintained section of Te Toiroa Road has in recent years, and prior to the upgrade, been used by a range of vehicles, including 4WD cars and trucks on a regular basis. It is understood that since the upgrade occurred the road is also being used by 2WD vehicles from time to time.

Cycleway start, end, directional signage, and safety signs such as shared vehicle/ cycle signs have been installed along the gravel road sections as part of the project.

Following a number of complaints regarding potential safety and potential environmental damage issues, Council had the newly constructed shared path inspected by a Biosecurity staff member from the NRC, for the risk of Kauri die back. His inspection report is attached (attachment 2).

Based on this assessment and the fact that there is only 1 Kauri tree up-hill of the track, the risk to Kauri from the cycleway has been assessed as “fairly low”.

The “Paper Road” section of Te Toiroa Road is only one lane wide and is currently used by walkers, cyclists, horse riders and 4WD vehicles. Council has received a small number of complaints from cyclists and pedestrian regarding the safety issues of meeting motor vehicles while using the shared path. The safety signage installed at the ends and throughout the track indicates the shared nature for all users of the track.

As part of the project and prior to the construction, Council, the TCR&R and the Tutukaka Cycleway Group undertook a consultation exercise with the community, and this showed relatively substantial opposition by the Community to closing the road to vehicles.

4 Discussion

The shared path on the Te Toiroa Road section of the Old Coach cycle trail has been operating since 2018. Council has received a number of requests asking Council to consider closing this section of road to all vehicles.

Council can choose to stop vehicle use of the Te Toiroa Road section of the Old Coach cycle trail or choose to continue the use of this road as a shared path for vehicles and walking and cycling users.

The options for Council should it wish to stop vehicle use of the road way, is to either legally stop the road or invoke a bylaw restricting vehicle use of this road. Both processes will require Council to undertake a public consultation process with the community.

There is currently significant use of the track by vehicles, mainly 4WD's. Closing the track to these users may encounter considerable resistance. Without community support for either of these processes it will be virtually impossible for Council to physically stop vehicles from using this roadway.

If Council supports the closing of this paper road to motor vehicles, then a programme of Community consultation will need to be undertaken and either a road closing or new bylaw process commenced.

5 Significance and engagement

The decisions or matters of this Agenda do not trigger the significance criteria outlined in Council's Significance and Engagement Policy, and the public will be informed by the publication of this agenda on the website.

6 Attachments

1. Diagram of Scow Landing to Ngunguru Route.
2. Te Toiroa Track Inspection Report, August 2018



Diagram 1 - Scow Landing to Ngunguru Route



Share the Road – Safety and Directional Signage

Te Toiroa Track inspection.

Site visit 27/08/2018

Present: Stuart Jackson WDC Parks and Recreation and Pete Graham NRC
Biosecurity Team.

In response to concerns that the upgrading of the paper road/track would pose significant risks to spreading or introducing kauri dieback.

A site inspection was carried out on the 27th August.

Stuart Jackson and I walked the track in both directions and discussed the concerns raised with WDC and NRC.

Initial reaction was that the track was well formed and while it had a fairly good cover of coarse aggregate over the centre section of the track, there was bare soil exposed on the sides for the majority of the 1.4km track.

Phytophthora agathidicida/ kauri dieback disease is largely a soil borne pathogen, so exposed soil/mud does increase the risk of the disease being spread. While I agree with the consultants' view that the risk of introducing the disease on vehicles was low, a tractor had recently driven up the track which had highlighted these muddy edges and I expect that other vehicles including quads (which like tractors can carry large amounts of soil) will use the track and will likely create and maintain more mud on the track edges as time goes by.

Only one kauri was seen close to the track, and this single tree was approximately 60m off the track on the up-slope side.

However, because no soil testing has been carried out along the track we have no evidence to confirm that kauri die back is either present or absent from the site, it is recommended that as soon as ground conditions are suitable soil tests be carried out at various sites along the track and around the single kauri seen close to the track. If these soil tests come back as positive to *Phytophthora agathidicida* then management of the track will need to be re looked at to come up with ways risks can be minimised, but in its current state I believe the upgraded track poses a fairly low risk of introducing *Phytophthora agathidicida*.



Example of the upgraded track



Example of margins of the track showing mud exposed by recent vehicle movement

5.1 Contracts Approved Under Delegated Authority

Meeting: Infrastructure Committee
Date of meeting: 13 May 2021
Reporting officer: Simon Weston (General Manager Infrastructure)

1 Purpose

For the Infrastructure Committee to note Infrastructure contracts awarded under Chief Executive and General Manager delegated authority

2 Recommendation

That the Infrastructure Committee note the Infrastructure contracts awarded under Chief Executive and General Manager delegated authority.

3 Background

Table 1 (below) records Infrastructure contracts awarded under Chief Executive and General Manager delegated authority. Attachment 1 provides a summary of the award process for each contract and a brief description of the works being undertaken

Table 1: Infrastructure Contracts Awarded Under Delegated Authority

1. Roothing	
CON20046	Kamo Shared Path – Kensington Avenue Link
CON20060	Maunu and Rewa Rewa Roads Rehabilitation
CON21009	2021/24 Road Rehabilitation & Seal Extension Projects Investigation & Testing
CON21010	Pataua North Road Slip Repair
2. Water	
CON19067	Contract Variation: Whareora Road Raw Watermain Replacement 2020
3. Parks and Recreation	
CON18054	New Town Basin Park Water Feature Design and Supply
CON20057	Pohe Island Master Services Installation – Stage 1

4 Significance and engagement

The decisions or matters of this Agenda do not trigger the significance criteria outlined in Council's Significance and Engagement Policy, and the public will be informed via Agenda publication on the website.

5 Attachment

1. Summary of Contracts Approved Under Delegated Authority May 2021

Summary of Contracts Approved Under Delegated Authority

This attachment provides a summary of the award process and works being undertaken for Infrastructure contracts awarded under Chief Executive and General Manager delegated authority.

1.0 Roothing

CON20046 Kamo Shared Path – Kensington Avenue Link

Introduction

This contract is for the construction of a shared path along Kensington Avenue to connect the Kamo Shared Path to Kensington Stadium and Western Hills Drive.

The Whangarei District Council has received \$6 million worth of funding from the Ministry of Business, Innovation and Employment (MBIE) for Active Modes Urban Shared Paths Programme.

The construction of this connection is the second piece of work in the program, the Tikipunga Shared Path being the first. The majority of the funding will go towards the completion of the Raumanga Shared Path, between State Highway 1 and Cafler Park, which will be tendered out and constructed in stages between 2021 and 2023.

Procurement Process

The tender was invitation only as per the Variation to Procurement Policy signed on the 11th of August 2020.

Tenders Received and Evaluated

Tenders closed on 29th of March with the following submissions received;

Tenderer	Price (Excl GST)
Asset Construction Ltd	\$399,066.90
United Civil Construction Ltd	\$465,355.76
Ventia NZ Operations Ltd	\$299,915.00
Engineer's Estimate	\$350,000.00

The tender was evaluated using Lowest Price Conforming. Ventia was the lowest price, all attributes were found to be conforming and their tender did not contain any errors or omissions.

Financial

These works are part of the funding agreement with MBIE for Active Modes Urban Shared Paths Programme. The funding agreement is \$6million, \$500,000.00 of which has been assigned to these works.

Chief Executive Approval

The contract for Kamo Shared Path – Kensington Avenue Link (CON20046) be awarded to Ventia NZ Operations Ltd for the tendered sum of \$299,915.00 (Two hundred and ninety nine thousand, nine hundred and fifteen dollars and zero cents) excluding GST.

CON20060 Maunu and Rewa Rewa Roads Rehabilitation
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Introduction

The Maunu and Rewa Rewa tender closed on the 3rd November 2020. Downer were awarded SP1 & SP2 of this contract on the 15th December 2020 for the investigation and design of Maunu and Rewa Rewa Road Rehabilitation.

The contractor had completed the design report as requested in SP1 & SP2 for Rewa Rewa Road. The recommendation is to award Separable Portion 6, Option 2 for Rewa Rewa Road. Construction starting during the 2020/21 financial year.

Procurement Process

This was an Early Contractor Involvement (ECI) contract and will be completed as a series of separable portions. Rewa Rewa Road will be completed during the 2020/21 financial year as SP6. Maunu Road will be completed during the 2021/22 financial year as SP3 or SP4 (see table below).

The intent with an ECI contract is to provide preliminary designs for the contractor to price. Then to work collaboratively with the contractor, consultant and client to refine the initial options to determine the best option/solution.

The award of Separable Portion 6 – Option 2 is based on rigorous optioneering and assessment. This option offers the best pavement design life for the budget available. It is tailored to suit requirements such as maintaining business access, minimising traffic disruption, maintaining use of the road area for daytime traffic, minimising service disturbance, minimising risk associated with adverse weather and maximising productivity.

Separable Portion 1: Pavement investigation, options and design report.	Previously approved on the 9 th December 2020 and Awarded 15 th December 2020 to Downer NZ. Contract value of \$204,463.40
Separable Portion 2: Dayworks for resources and plant utilised when requested by the engineer for further investigation and design.	
Separable Portion 3: Option 1 – Maunu Road Rehabilitation	N/A
Separable Portion 4: Option 2 - Maunu Road Rehabilitation	N/A
Separable Portion 5: Option 1 – Rewa Rewa Road Rehabilitation	N/A
Separable Portion 6: Option 2 - Rewa Rewa Road Rehabilitation	Approval to award being sought with this recommendation

Note: This contract award is for Separable Portion 6 – Option 2 only.

Tenders Received and Evaluated

The tender evaluation process was undertaken in accordance with the procedure outlined in the NZ Transport Agency (NZTA) Procurement Manual Section 5.4 (Price Quality).

Tenderer	Price (Excl GST)	Less all Scheduled Fixed Amounts	Supplier Quality Premium	Adjusted Tender Price (Excl GST)
Downer	\$1,610,025.61	n/a	n/a	\$1,610,025.61

Financial

This project will be funded from Work Category 214 - Sealed Road Rehabilitation, with an approved annual budget of \$4,196,000.00.

Chief Executive Approval

The contract CON20060 Separable Portion 6, be awarded to Downer NZ Ltd for the agreed sum of \$1,610,025.61 (One million, six hundred and ten thousand, twenty-five dollars and sixty-one cents) excluding GST.

Bringing the total contract value for CON20060 to \$1,814,489.01 (One million, eight hundred and fourteen thousand, four hundred and eighty-nine dollars and one cent) excluding GST.

Separable Portion 1 & 2	\$204,463.40
Separable Portion 6	\$1,610,025.61
Total Contract Value	\$1,814,489.01

CON21009

2021/24 Road Rehabilitation & Seal Extension Projects Investigation & Testing

Introduction

The contract 21-24 Road Rehabilitation and Seal Extension, testing and investigation is for the geotechnical testing of existing road pavement and underlying foundation materials. This is critical for understanding the cause of failure and integral for the structural design and calculating the theoretical design life of a rehabilitated pavement.

Using the geotechnical data and material testing results provided by this contract, road renewal projects will be designed.

The NTA has been tasked with delivering the capital and renewals programme for the three district councils. In alignment with the original business case which is to achieve:

- Improved regional strategy, planning and procurement and;
- ensure transport infrastructure to be more affordable

We are seeking a regional contract for the investigation and testing of all pavement rehabilitation sites and seal extension sites for the next three-year period.

In addition to the above reasons for this joint contract we have also considered the risk of receiving no tenders for this work if it was procured with separate contracts for each council. By combining this work, we believe we have significantly reduced the risk of receiving no tenders.

The works will be awarded with Whangarei District Council being the principle. This will require WDC to pay all invoices and on charge the respective costs to both KDC and FNDC.

Approval from FNDC and KDC for their respective portions has been obtained.

Procurement Process

The procurement process was an open tender, lowest price conforming method.

The contract is a measure and value and will be completed as a series of separable portions.

Separable Portion 1: 2021/22

Separable Portion 2: 2021/22

Separable Portion 3: 2022/23 Provisional

Separable Portion 4: 2023/24 Provisional

Each separable portion shall be treated as an independent scope of works, terminated upon completion, without any further obligation on either party to proceed to Separable Portions 3 and 4.

Tenders Received and Evaluated

The tender evaluation for this contract has followed the procedure outlined in the NZ Transport Agency (NZTA) Procurement Manual. The evaluation method is in accordance with Section 5.4 (Lowest Price Conforming) of the Procurement Manual.

One tender was received.

Tenderer	Price (Excl GST)	Less all Scheduled Fixed Amounts	Supplier Quality Premium	Adjusted Tender Price (Excl GST)
WSP New Zealand	\$1,307,431.90	n/a	n/a	\$1,307,431.90
Engineers Estimate				\$1,079,198.95

The tender evaluation team met on 4th March 2021 to agree on the results. Members of the tender evaluation team assessed each non-price attribute individually. Reference checks were confirmed by Shakhin Sharma.

The Tender Evaluation Team (TET) consisted of:

- Rachael Mannion, NTA (Qualified Tender Evaluator)
- Shakhin Sharma, (NTA)
- Curt Martin, Censeo Consulting

Financial

The financial contribution for each individual Council in this Contract is as follows:

Council	SPI – 21/22	SP2 – 21/22	SP3 – 22/23	SP4 – 23/24	Total
KDC	\$61,854.80		\$79,823.00	\$82,297.00	\$223,974.80
WDC	\$91,263.08	\$79,751.00	\$176,962.50	\$167,901.50	\$515,878.08
FNDC	\$99,730.02	\$62,705.00	\$167,100.50	\$188,043.50	\$517,579.02
Contingency	\$50,000.00				

WDC will be the Principle and make payments on behalf of the other Councils to the recommended Supplier and invoice individual Councils for cost reimbursement.

NTA has obtained approval from FNDC and KDC for their portion to proceed with this Contract.

WDC portion of:

- Separable Portion 1 will be funded from Work Category 214 – Sealed Road Rehabilitation, with an approved annual budget of \$4,196,000.00
- Separable Portion 2 funded from Unsubsidised Seal Extensions

Testing beyond 21/22 will be subject to LTP and AMP approval.

Chief Executive Approval

Contract 21009 for Road Rehabilitation and Seal Extension Investigation and Testing be awarded to WSP New Zealand for the tendered sum of \$1,307,431.90 (One million, three hundred and seven thousand, four hundred and thirty-one dollars and ninety cents) excluding GST.

CON21010 Pataua North Road Slip Repair

Introduction

Contract 21010: Pataua North Road Slip Repair consists of slip remedial works on Pataua North Road at RS 5893. This includes the construction of a tied back timber pole wall and reinstating drainage, and existing pavement within the work extents.

Process

Tenders have been evaluated in accordance with the Conditions of Tendering stated in the tender documents. The tender evaluation method is “Lowest Price Conforming Evaluation” in accordance with the Waka Kotahi New Zealand Transport Agency Procurement Manual (September 2019).

The tender evaluation team (TET) consisted of the following members:

Dwayne Claassen	(WSP New Zealand)
Michael Batchelor	(Northland Transportation Alliance)
Naushaba Todd-Jones	(WSP New Zealand)

Tenders Received and Evaluated

The tenders were opened using the Tenderlink forum on 2nd March 2021.

The following tenders were received.

Tenderer	Submitted Price
GHK Piling Ltd	\$ 149,995.00 + GST
Northland Transport Ltd	\$ 299,025.00 + GST
Engineer's Estimate	\$ 280,704.00 + GST

Determination of the Preferred Tenderer

Based on the Lowest Price and Tender Conformance the Preferred Tenderer is GHK Piling Ltd. No anomalies were present in the submitted tenders. The contractor has confirmed their price. This Tenderer has satisfactorily completed similar slip repair works for Council in recent years.

Financial

Funding for these works has been allocated with the approved NZTA flood damage repair programme for 2021.

Group Manager Approval

It is recommended that the Whangarei District Council award Contract 21010: Pataua North Road Slip Repair for the sum of \$ 149,995.00 (One hundred and forty-nine thousand, nine hundred and ninety-nine dollars and zero cents) excluding GST to GHK Piling Ltd.

2.0 Water Services

CON19067

Contract Variation: Whareora Road Raw Watermain Replacement 2020

Purpose

Approval is sought to increase the value of Contract 19067 to \$1,699,883.93 excluding GST. This is a DIA Three Waters funded project.

Background

This contract is for replacement of the Hatea Raw Watermain. It was awarded to Forte Civil Limited. The original contract amount was \$1,126,430.33 excluding GST.

However, the adjacent distribution water main, a 150mm PVC water line failed 6 times between January 2020 and August 2020, including two bursts which caused significant damage to the road and surrounds. This watermain, having passed its useful life was approved as a variation to the original contract, and the value of the contract was increased to \$1,610,539.03 in August 2020.

A contingency sum of \$50 000 excluding GST was included in the original contract. A significant portion of this was spent due to additional works required following the July 2020 flood as well as to cover costs associated with the shutdown and restart due to the COVID-19 lockdown. However, no contingency was allowed for in the additional works.

The quantities of the completed works have exceeded those that were originally estimated. The length of main needing to be replaced was underestimated, particularly the rider main, where many of the existing road crossings were eliminated, additionally more rock was encountered than allowed for.

Financial

A breakdown of the additional costs is provided in the following table:

Item	Variation	Amount (excl. GST)
6.1	Supply and install DN150 watermain. Increase from 1000m to 1208m.	\$ 33,862.40
6.3	Supply and install DN 50 rider mains. Increase from 330m to 705m	\$ 32,437.50
5.1	Excavation of solid unfractured rock. Increased from 20m ³ to 90.7m ³	\$ 17,675.00
7.2	Supply and install Fire Hydrant. Increase from 8 to 10 units.	\$ 5,370.00
	Total Variation	\$ 89,344.90

A breakdown of cost for the whole contract is provided in the following table:

Description	Amount (excl. GST)
Original contract value (excl. contingency)	\$ 1,076,430.33
Contingency	\$ 50,000.00
Total original contract value	\$ 1,126,430.33
Total amount of first variation	\$ 484,108.70
First revised contract value	\$ 1,610,539.03
Total amount of proposed variation	\$ 89,344.90
Total revised contract value	\$ 1,699,883.93

The total contingency is still less than 10% of the overall contract value.

The replacement of the 150mm diameter watermain and associated works is funded under the DIA three waters reform funding. This variation will be funded from savings on other projects under the same funding package such as the Rewarewa road watermain replacement and Kamo road watermain replacement.

Chief Executive Approval

It is recommended that the total contract amount of CON19067 for Whareora Road Raw Watermain Replacement 2020 is increased by \$89,344.90 from \$1,610,539.03 to \$1,699,883.93 (One million, six hundred and ninety-nine thousand, eight hundred and eighty-three dollars and ninety-three cents) excluding GST in order to complete the replacement of the old PVC distribution water main.

2.0 Parks and Recreation

CON18054

New Town Basin Park Water Feature Design and Supply

Introduction

This procurement is for the design and supply of equipment to construct the water feature in the central plaza of the New Town Basin Park.

Procurement Process

Research has shown that international market for the supply of large-scale water feature equipment is dominated by Crystal Fountains. In New Zealand, the only supply of the Crystal Fountain equipment is Aqua Clear Products Ltd., who also appear to be the only designer and supplier of large-scale water features in New Zealand. Therefore, it was decided to engage Aqua Clear Products Ltd. for the design and supply of the water feature equipment. A Signed Variation to Procurement Policy has been approved. That document has a budget estimate for the design and supply of the Water Feature equipment of between \$300,000.00 and \$400,000.00.

Financial

The water feature design and supply of equipment will be paid for out of the New Town Basin Park budget. The budget was approved by Council on the 24th of September 2021.

Chief Executive Approval

The contract for New Town Basin Park Water Feature Design and Supply (CON18054) be awarded to Aqua Clear Products Limited for the tendered sum of \$318,535.60 (Three hundred and eighteen thousand, five hundred and thirty five dollars and sixty cents) excluding GST.

CON20057

Pohe Island Master Services Installation – Stage 1

Introduction

This contract is for the infrastructure necessary to provide wastewater, water, power and ducting to service the soon to be constructed playground and toilet block. It also includes the upgrade of the sewer rising main from Riverside Drive to the Hatea River crossing point including connection into the pump station on Riverside Drive and connection into the line which runs under the Hatea River.

Procurement Process

The contract was advertised on Tenderlink – www.tenderlink.com – and closed on the 26th February 2021 at 3.30pm. Only one (1) Tender was received at the time of closing.

The tender evaluation method was Lowest Price Conforming, in general accordance with the NZTA Procurement Manual.

Tenders Received and Evaluated

This response was evaluated using the Lowest Price Conforming Method in general accordance with Whangarei District Council's Procurement Procedures Manual. The result was as follows:

Tenderer	Price (Excl GST)
United Civil Construction Limited (Conforming)	\$975,538.33
United Civil Construction Limited (Alternative)	\$887,433.10
Engineer's Estimate	\$968,553.00

An arithmetic check was carried out on their submission, no errors were found in the Tenderer's Schedule of Prices or Form of Tender for the Conforming Tender.

The alternative Tender presented risks to WDC that we were not prepared to accept.

Financial

The replacement of the wastewater rising main (\$216,068.00) will be paid out of Wastewater Sewer Line Renewals PJ00244, which has a budget of \$1,853,840.00 for 20/21. The remainder of the project will be paid from Pohe Island Master Plan Services, PJ00537 which has a budget of \$526,000.00 for 20/21 and a further \$200,000.00 for 21/22.

Chief Executive Approval

That the contract for Pohe Island Master Services Installation – Stage 1 (CON20057) be awarded to United Civil Construction Limited for the tendered sum of \$975,538.33 (Nine hundred and seventy five thousand, five hundred and thirty eight dollars and thirty three cents) excluding GST.

5.2 Roothing Efficiency Group WDC Roothing Report 2019-20

Meeting: Infrastructure
Date of meeting: 13 May 2021
Reporting officer: Jeff Devine (Strategy & Planning Manager, NTA)

1 Purpose

The purpose of this item is to present the Roothing Efficiency Group (REG), WDC Roothing Report for 2019/20 and discuss the outcomes leading into the development of the 2021-28 LTP.

2 Recommendation

That the Infrastructure Committee notes the Roothing Efficiency Group WDC Roothing Report for 2019-20.

3 Background

The Roothing Efficiency Group (REG), has evolved from the Road Maintenance Task Force back in 2012 and plays a vital role in supporting the Transport sector capability.

REG has now published the second round of annual rooothing reports using individual performance results and evidence for each of the 67 Road Controlling Authorities, i.e. Councils.

Publishing the Road Controlling Authorities (RCA) reports are a significant step assisting us to collectively deliver better value in the Transport sector. These reports provide a national, objective picture of Transport investment and performance, collated into a single resource.

4 Discussion

The Whangarei District Council's RCA report is shown in attachment 1. The reports for FNDC and KDC are also shown for comparison purposes in attachments 2 and 3.

REG has placed each Council in a national Peer Group based on Councils, with similar sized and types of networks. Whangarei is in a Provincial Centres Peer Group with councils like Dunedin, Gisborne, Hastings, Marlborough, New Plymouth, and Wanganui.

FNDC and KDC are in a different Peer Group of rural districts with greater than 90% rural networks.

The information provided in the reports are based on 2019/20 data, and trends are shown for 2016-20.

4.1 Panel 1- Summary of key facts

- The attached reports are divided into panels of information. Panel 1 Provides a summary of key fact about the Council from Statistics NZ and the MBIE Economic Activity Reporting Tool.
- Valuation figs are the depreciated value of the roading asset, (current value).
- Expenditure is the gross value invested in Roothing (Council plus NZTA subsidy).

4.2 Panel 2 – Activity Management

- Assessment score of Council's 2018 AMP by REG and separately by NZTA. Good >2.25; Fit for Purpose 1.5 to 2.25, Room for Improvement <1.5.
- Procurement score is based on a self-assessment by WDC, rated as Developing, as we are still looking for better outcomes.
- Quality of Data in our RAMM database – score has increased from 60% to 76% resulting from our improvement programme.

4.3 Panel 3 – Service Performance

- The Council's LTP/ Annual Plan LOS Mandatory Performance Measures from Council's Annual Reports.

4.4 Panel 4 – Co-Investor Assurance

- Results of previous NZTA Audits of WDC subsidised Roothing Activity. Audit reports previously presented to the Committee.
- Procedural Audit (financial), is Council following NZTA financial rules? (2018).
- Technical Audit, what we do, how we do it and what results are achieved. (2016). **Note** results from the recent 2020 audit are not yet included.

4.5 Panel 5 – Delivery

- Council expenditure by activity.
- Total expenditure per km compared to peer group
WDC is higher, as we have poor geology, higher traffic volumes and higher forestry traffic than our peer group.

4.6 Panel 6 – Achievements

- Volume of Work completed compared to planned work (lane kms).
 - Rehabilitations:- low, high urban content so more expensive
 - Reseals:- higher, indicates a shift from rehabs to reseals to cope with backlog and reduced funding.
 - Road condition (sealed roads)
 - Surface:- stable reflecting higher reseal programme
 - Pavements:- deteriorating, average pavement age increasing
 - Ride quality:- (smoothness) deteriorating, roads rougher, indicates more pavement faults. Significant impact of higher traffic volumes on rougher Urban roads.

4.7 Panel 7 – Safety

- Fatal and Serious Injuries reflecting Northland's very high accident rate

- Personal risk = crash rate per 100M vehicle km travelled, (VKT), volume X road length. Result:- average compared to peer group
- Collective risk = crash density per 1000 km, used to identify blackspots. Result:- High
- Crash distribution = accidents on our different road classes, e.g. 45% of DSI's on 6% of the network, (Arterial Roads), used to identify blackspots

4.8 Panel 8 - Network Availability

- Percentage of network not available to Class 1 and 50Max vehicles, **Note new measure**

4.9 Panel 9 - Territorial Activity

- Population Growth (statistics)
- GDP by Industry (MBIE).

4.10 Panel 10 - Network Physical Characteristics (trends)

- Network length, sealed/ unsealed
- % Urban
- Cycleway network lengths:- increasing with shared path programmes.
- No of bridges on network

4.11 Panel 11 - Road Network Use (trends)

- Vehicle km travelled, (VKT) traffic volume X road length
- Number of weight restricted bridges on Network, (excluding 50 Max, and HPMV 65T)
- Journey distribution = road trips (VKT) on the different classes of roads in the network. e.g. 57% of trips occur on 6% of the network (Arterial roads).

4.12 Panel 12 - Public Transport

- Public transport (bus service) only data for WDC reported
 - Number of buses, 12
 - Passenger Km's = trip length X total boarding's per annum, approx. 5million (compared to vehicles 500million VKT) **2019/20 impacted by COVID.**
 - Service Km's = total bus km travelled, 450,000 km per annum
 - Population served 56,000
 - Population within 500m of bus stop 45%

4.13 Comparison 2019/20 to 2018/19 Results

Panel	Results 2018/19	Results 2019/20	Comments
Panel 1- Summary of key facts	91,400 pop.	7,000 Pop increase 6.8% incr in GDP	Standard Council statistics
Panel 2 – Activity Management	Data Quality score 60%	76% REG assessment	Asset management at expected standard
Panel 3 – Service Performance	2 KPI's of 5 achieved	2 KPI's of 5 achieved no change	Council's Annual Plan targets
Panel 4 – Co-Investor Assurance	2018 financial audit 2016 technical audit	No change	Note results from the recent 2020 audit are not yet included.

Panel 5 – Delivery	Total expenditure \$22,000/km	\$20,000/km 62.7% of \$124.7M delivered	Reduced expenditure reflecting impact of COVID on program
Panel 6 – Achievements	Improving Road condition trend	Less works completed and road condition downward trend, -0.8 STE, ride quality	Reduced expenditure reflecting impact of COVID on program
Panel 7 – Safety	Fatal and Serious injuries – High compared to peers	Reducing trend in all categories except walking	Results generally at peer group average
Panel 8 - Network Availability		New measure 93.9% network availability	Records no. of below capacity bridges
Panel 9 - Territorial Activity	1,700 annual population growth	2,220 (2.5%) incr annual population growth	Resident population growth (5 yr average)
Panel 10 - Network Physical Characteristics (trends)	1750 kms	-5.1 Km (-0.3%) Growth plus loss of Mangakahia (SH15)	Network length reduction (5 yr annual average)
Panel 11 - Road Network Use (trends)	470M vkt	521M vkt represents a 7.4% annual increase	Vehicle km's travelled on network (5 yr ave)
Panel 12 - Public Transport	4.6M passenger kms	4.2M, -4.2% reduction passenger Kms travelled	Reflecting impact of COVID 5 yr annual average

5 Significance and engagement

The decisions or matters of this Agenda do not trigger the significance criteria outlined in Council's Significance and Engagement Policy, and the public will be informed via the publication of this Agenda on the website.

6 Attachments

- 1 2019/20 WDC RCA Report
- 2 2019/20 FNDC RCA Report
- 3 2019/20 KDC RCA Report

2019/20 Whangarei District Council RCA Report

98,300 Population	\$4,454 GDP (\$M)	\$815 Valuation (\$M)	\$35.6 Expenditure (\$M)	\$362 Expenditure per capita	53% FAR
1,750 Total (km)	1,056 Sealed (km)	694 Unsealed (km)	1,435 Rural (km)	316 Urban (km)	485 No. of bridges

Delivery
Expenditure, Funding, Cost Efficiency and Valuation

\$124.7M (62.7%) Total 2018-21 NLTP Budget (\$M)/ Total Budget Spent (%)

Co-Invested Expenditure
All transport activities

Funding
Co-invested expenditure and funding

Activity Class Expenditure
Road safety promotion

Cost Efficiency
Total expenditure / length (\$1,000 / km)

Valuation
Roading assets

Activity Management
Planning, Procurement and Data Quality

Activity Management Planning

- Planning quality: 2.6 out of 3.0 (Good)
- Co-investment planning quality: 2.5 out of 3.0 (Good)

Procurement

- Smart buyer self-assessment: 59 out of 70 (Fit for purpose)

Data Quality

- Asset management at expected standard (%) and Score: 68 (2018), 74 (2020)

Service Performance
LGA Non-Financial Performance Measures

2018-21 LTP Targets Achieved

Annual Targets Achieved	2015-25 Long Term Plan			2018-28 Long Term Plan	
	2015/16	2016/17	2017/18	2018/19	2019/20
Provision of roads and footpaths	●	●	●	●	●
Road safety	●	●	●	●	●
Condition of the sealed road network	●	●	●	●	●
Maintenance of the sealed road network	●	●	●	●	●
Condition of the footpaths within the local road network	●	●	●	●	●
Response to service requests	●	●	●	●	●

Achievements
Works Completed, Amenity and Road Condition

Works Completed

- Pavement rehabilitation (lane kms): Planned vs Actual (2016-2020)
- Pavement resurfacing (lane kms): Planned vs Actual (2016-2020)

Amenity (Sealed Roads)

- Ride quality (roughness of the roads): TA vs Peer Group vs National %ile (2016-2020)
- Peak and average road roughness (NAASRA) (peer group lighter): Average vs National Average vs Peak (85th%ile) (2016-2020)

Road Condition (Sealed Roads)

- Percentage of network renewed: Rehab vs Resurface (2016-2020)
- Pavement condition: TA vs Peer Group vs National %ile (2016-2020)
- Surface condition: TA vs Peer Group vs National %ile (2016-2020)

Co-Investor Assurance
Investment Performance

Investment Audit (Four Grades)

- Contract Management: ●
- Financial Management: ●
- Procurement: ●
- Professional Services: ●
- Previous Audit Issues: ●

Technical Audit (Three Grades)

- Activity Management Planning: ●
- Data Quality: ●
- Network Condition and Management: ●
- Road Safety: ●
- Previous Audit Issues: ●

Three grades:

- Effective
- Improvement needed
- Unacceptable
- Not available

Four grades:

- Effective
- Some improvement needed
- Significant improvement needed
- Unacceptable
- Not available

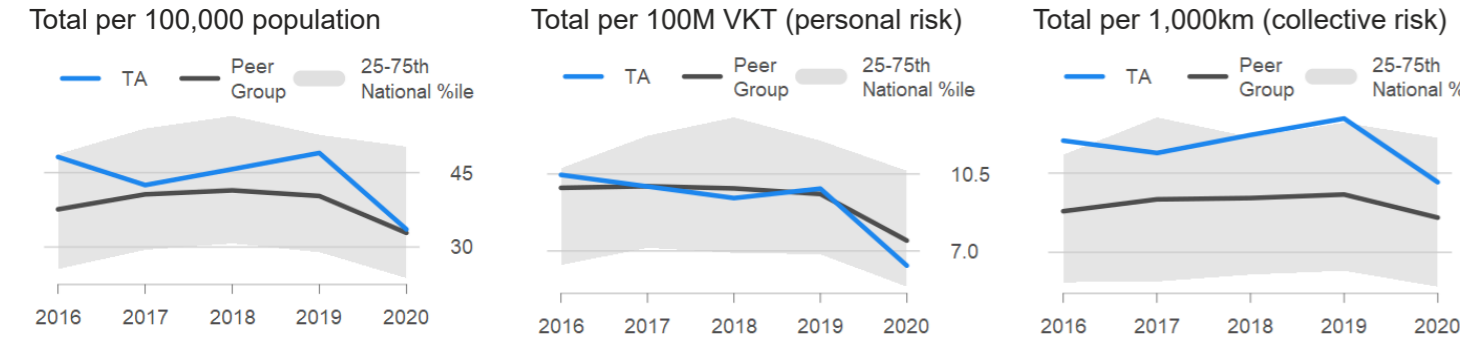
2019/20 Whangarei District Council RCA Report

Safety

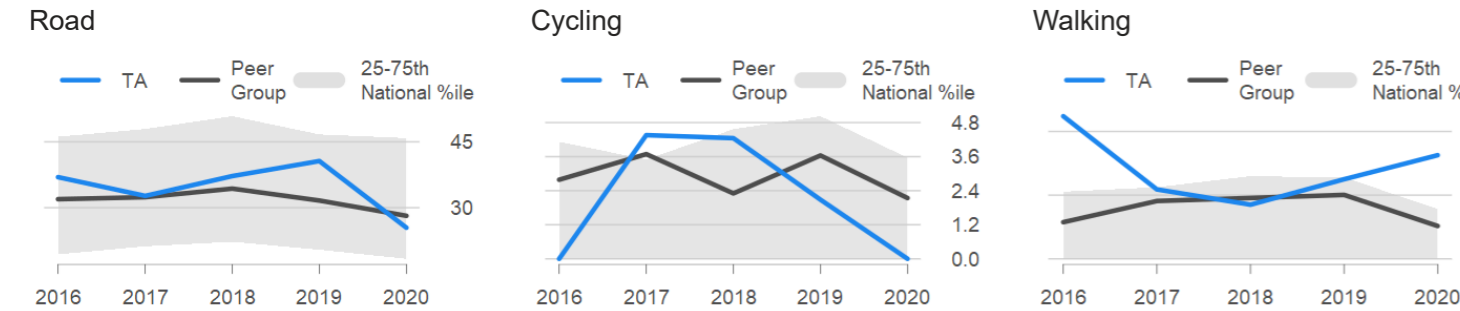
Fatal and Serious Injuries

41 ↓ Fatal & Serious Injuries/
Trend (5 Year Annual Avg)

Network

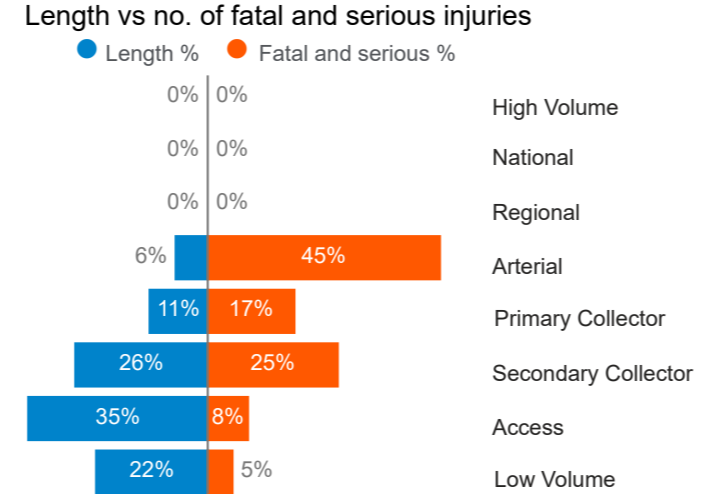


By Mode (no. per 100,000 Population)



Source: Statistics New Zealand, Waka Kotahi Crash Analysis System, and Data and Tools

Crash Distribution



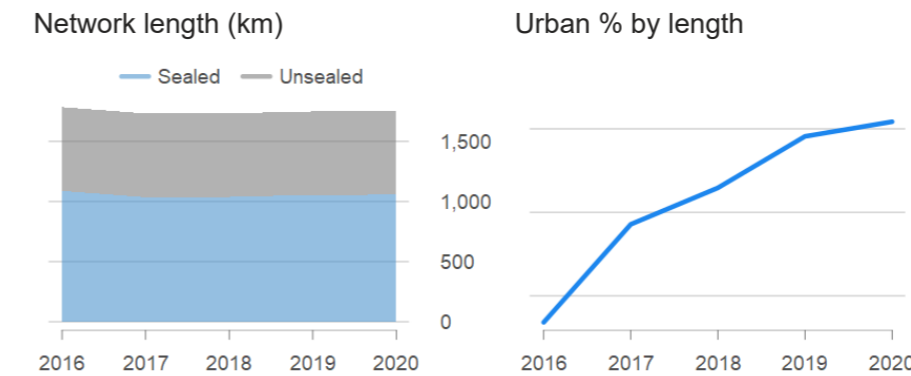
Source: REG ONRC Performance Measure Reporting

Network Physical Characteristics

Roads, Cycleways and Bridges

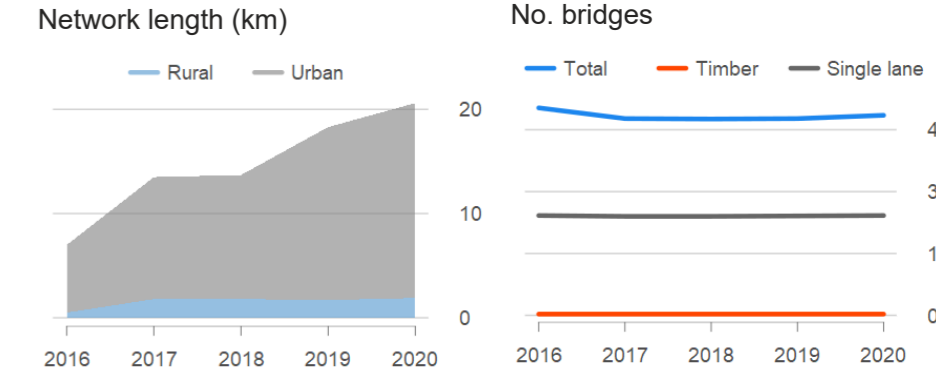
-5.1 (-0.3%) Network Length Growth km (%)
(5 Year Annual Avg)

Roads



Source: Waka Kotahi Data and Tools

Cycleways

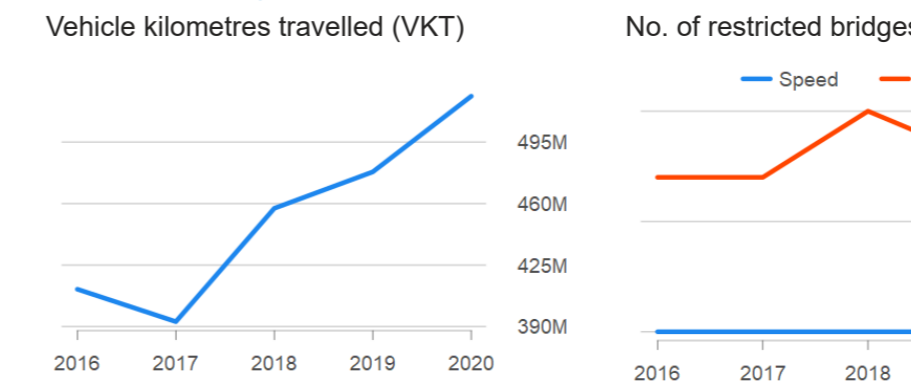


Road Network Use

Roads and Bridges

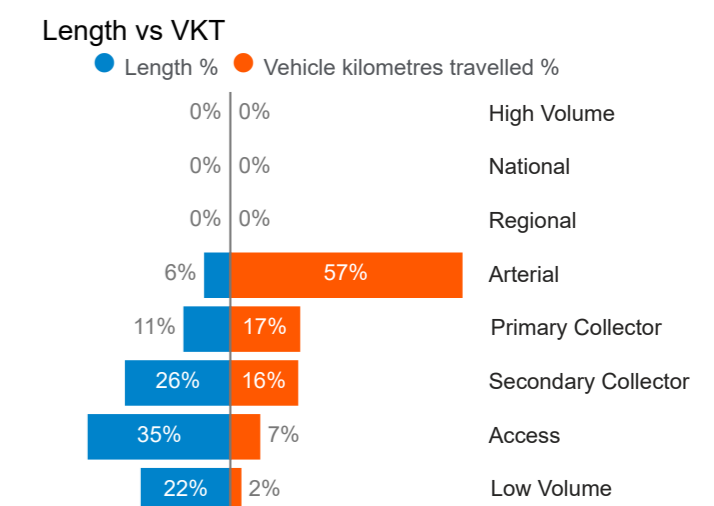
521 (7.4%) Million VKT (Latest Year)/
5 Year Annual Avg % Increase

Roads and Bridges



Source: Waka Kotahi Data and Tools

Journey Distribution



Source: REG ONRC Performance Measure Reporting

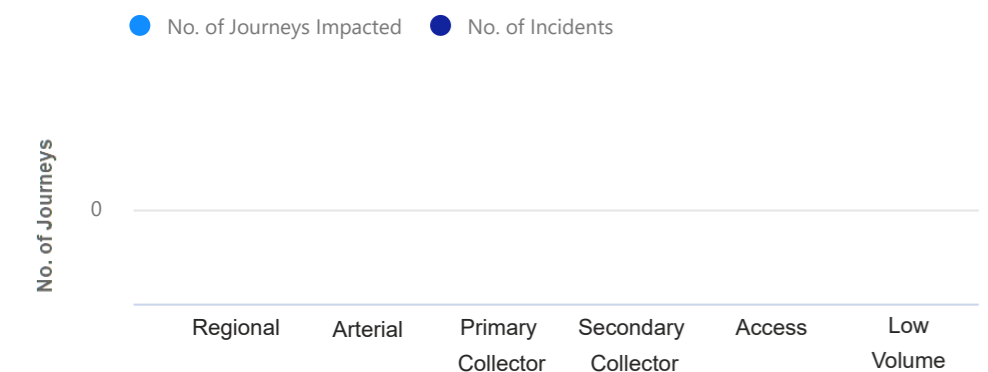
Network Availability and Accessibility

Resilience and Freight Accessibility

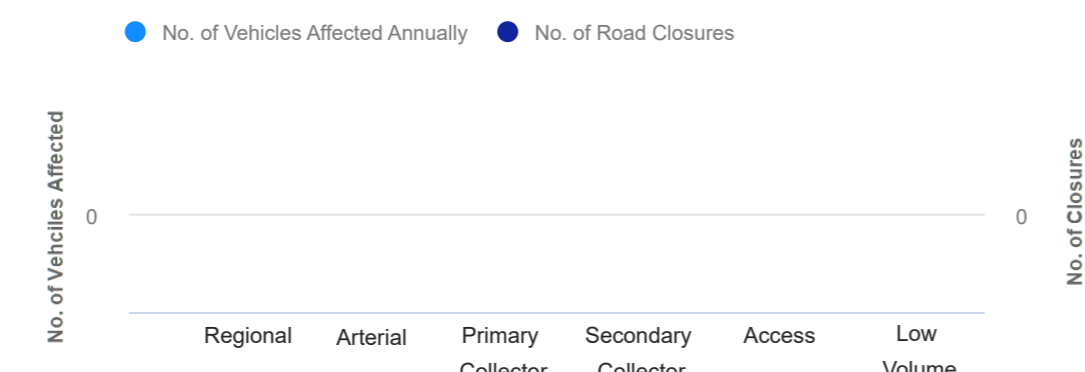
93.9% Proportion Network Accessible
to Class 1 and 50MAX

Resilience

No. of journeys impacted by unplanned events

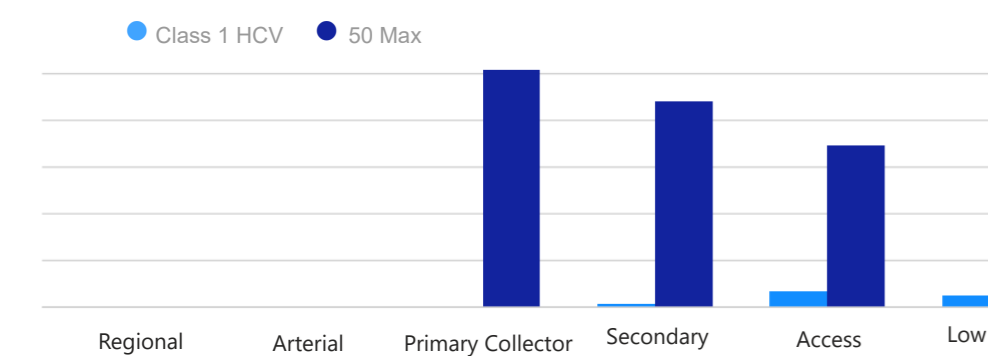


No. of instances where road access is lost



Freight Accessibility

Proportion of network not available to Class 1 heavy and 50MAX HPMV vehicles



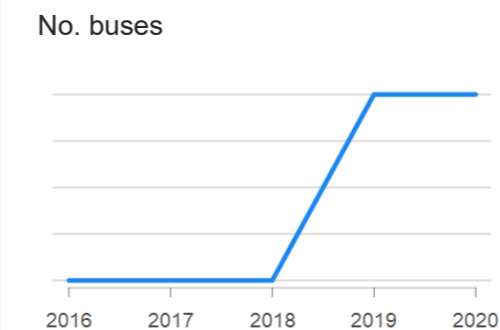
Source: REG ONRC Performance Measure Reporting

Public Transport

Fleet Size, Network Use and Community Served

-4.2% ↓ Passenger kms
(5 Year Annual Avg Trend)

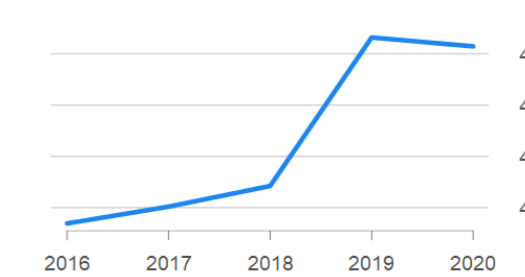
Fleet Size



Network Use

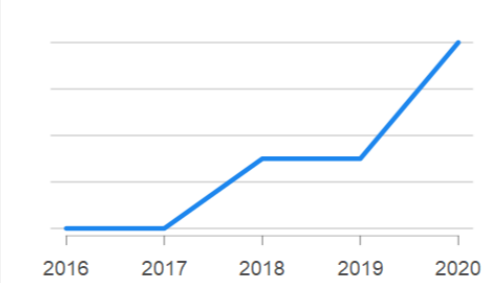


Service kms



Community Served

Population of serviced community



Source: Waka Kotahi Data and Tools

% population within 500m of a bus stop



Serviced communities included

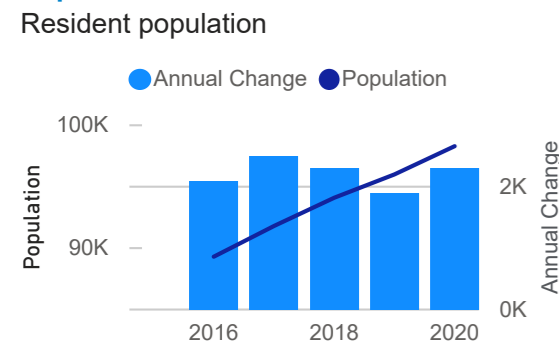
Whangarei

Territorial Activity

Economic Activity

2,220 (2.5%) Population Growth
(5 Year Annual Avg)

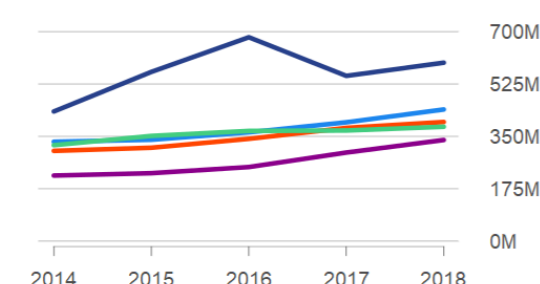
Population



Source: Statistics New Zealand

Economic

GDP by industry



Source: MBIE Regional Economic Activity Tool

Top 5 TA Industries

- Manufacturing
- Owner-Occupied Property Operation
- GST On Production, Import Duties And Other Taxes
- Health Care And Social Assistance
- Construction

2019/20 Far North District Council RCA Report

71,000 Population	\$2,168 GDP (\$M)	\$1,102 Valuation (\$M)	\$29.0 Expenditure (\$M)	\$409 Expenditure per capita	66% FAR
2,507 Total (km)	877 Sealed (km)	1,630 Unsealed (km)	2,304 Rural (km)	203 Urban (km)	723 No. of bridges

Delivery
Expenditure, Funding, Cost Efficiency and Valuation

\$126.4M (47.2%) Total 2018-21 NLTP Budget (\$M)/ Total Budget Spent (%)

Activity Management

Planning, Procurement and Data Quality

Activity Management Planning

Planning quality: 1.7 out of 3.0

Co-investment planning quality: 1.5 out of 3.0

Procurement

Smart buyer self-assessment: 59 out of 70

Data Quality

Asset management at expected standard (%) and Score

Source: REG 2018 AMP Assessment, Waka Kotahi 2018 AMP Assessment, RCA Smart Buyer Nov-2020 Self-Assessment, REG Annual Data Quality Assessment

Co-Invested Expenditure

All transport activities

Funding

Co-invested expenditure and funding

Valuation

Roading assets

Source: TA Annual Reports

Service Performance

LGA Non-Financial Performance Measures

2018-21 LTP Targets Achieved

Annual Targets Achieved	2015-25 Long Term Plan			2018-28 Long Term Plan	
	2015/16	2016/17	2017/18	2018/19	2019/20
Provision of roads and footpaths	●	●	●	●	●
Road safety	●	●	●	●	●
Condition of the sealed road network	●	●	●	●	●
Maintenance of the sealed road network	●	●	●	●	●
Condition of the footpaths within the local road network	●	●	●	●	●
Response to service requests	●	●	●	●	●

Source: TA Annual Reports

● Target achieved ● Partially achieved¹ ● Target not achieved ● Not reported

Activity Class Expenditure

Road safety promotion

New and improved walking and cycling facilities (excl. low cost <\$1M, low risk)

Investment management, network and property management

Cost Efficiency

Total expenditure / length (\$1,000 / km)

Maintenance, operations and renewals expenditure / length (\$1,000 / km)

Source: Waka Kotahi Data and Tools

Co-Investor Assurance

Investment Performance

Investment Audit (Four Grades)

Contract Management	●
Financial Management	●
Procurement	●
Professional Services	●
Previous Audit Issues	●

Technical Audit (Three Grades)

Activity Management Planning	●
Data Quality	●
Network Condition and Management	●
Road Safety	●
Previous Audit Issues	●

Source: Waka Kotahi, Audit and Assurance, Investment Audit Report Sep-18, Technical Audit Report Jul-16

Achievements

Works Completed, Amenity and Road Condition

0% Ride Quality (STE)

Works Completed

Pavement rehabilitation (lane kms)

Pavement resurfacing (lane kms)

Percentage of network renewed

Amenity (Sealed Roads)

Ride quality (roughness of the roads)

Peak and average road roughness (NAASRA) (peer group lighter)

Source: Waka Kotahi Data and Tools, REG ONRC Performance Measure Reporting

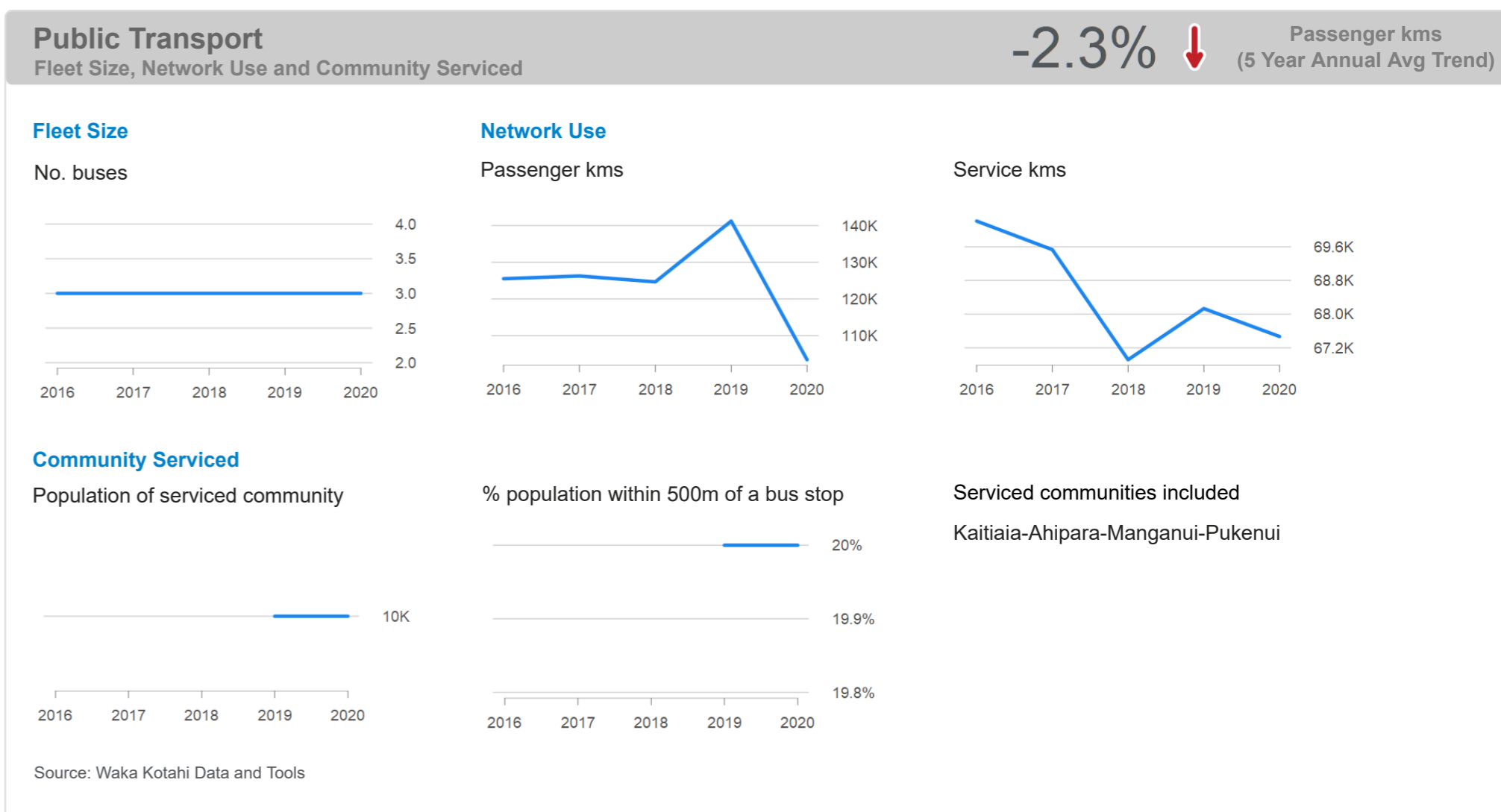
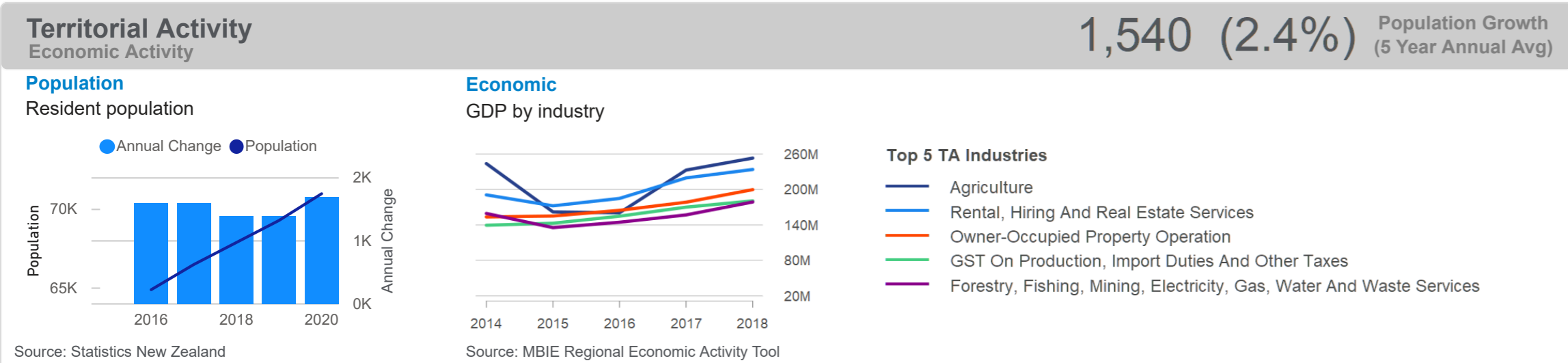
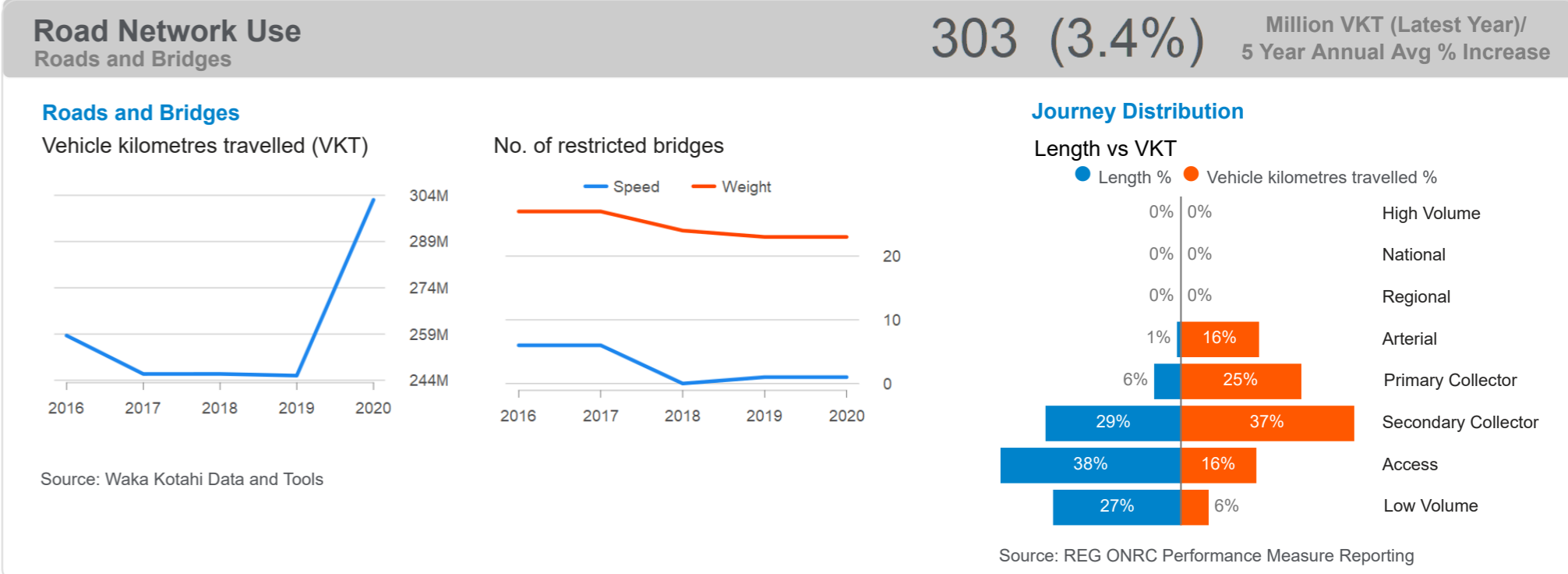
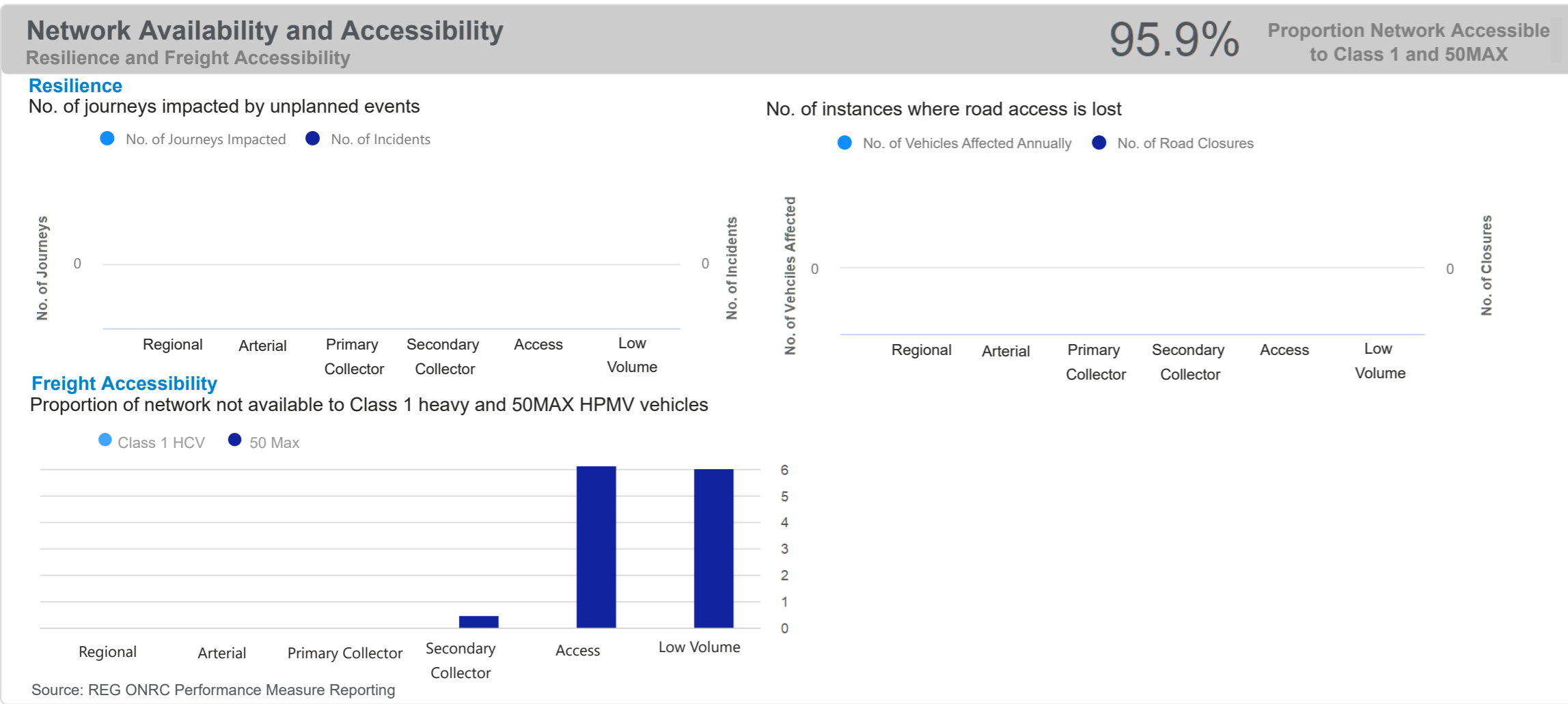
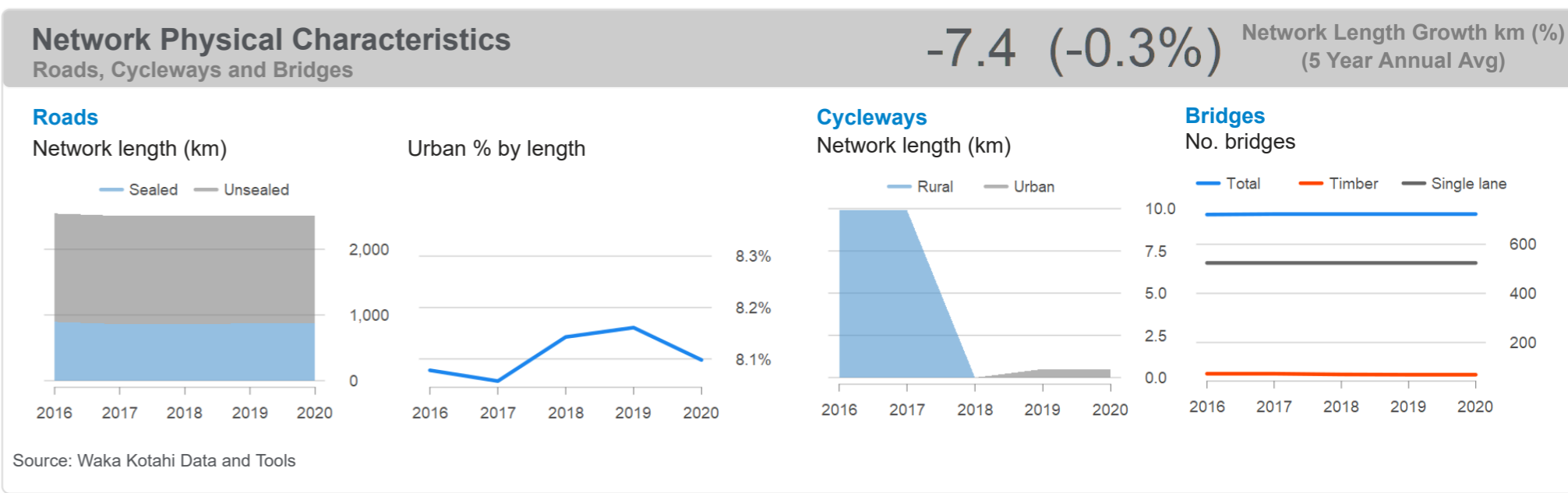
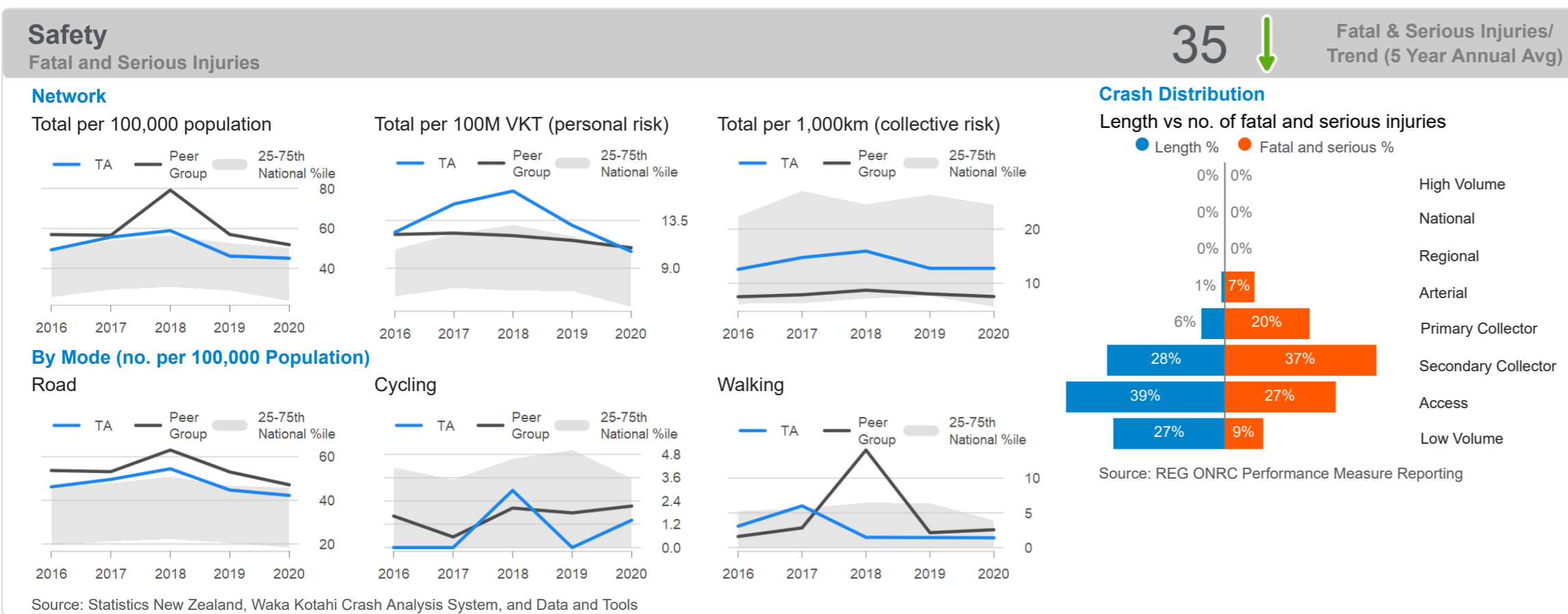
Road Condition (Sealed Roads)

Pavement condition

Surface condition

Source: Waka Kotahi Data and Tools

2019/20 Far North District Council RCA Report



2019/20 Kaipara District Council RCA Report

25,200 Population	\$900 GDP (\$M)	\$613 Valuation (\$M)	\$16.1 Expenditure (\$M)	\$638 Expenditure per capita	61% FAR
1,574 Total (km)	455 Sealed (km)	1,119 Unsealed (km)	1,453 Rural (km)	121 Urban (km)	349 No. of bridges

Delivery Expenditure, Funding, Cost Efficiency and Valuation **\$69.8M (50.9%)** Total 2018-21 NLTP Budget (\$M)/ Total Budget Spent (%)

Co-Invested Expenditure

All transport activities

New roads and road improvements (>\$1M ea)

Road maintenance, operations and renewals

Funding

Co-invested expenditure and funding

Activity Class Expenditure

Road safety promotion

New and improved walking and cycling facilities (excl. low cost <\$1M, low risk)

Investment management, network and property management

Valuation

Roading assets

Cost Efficiency

Total expenditure / length (\$1,000 / km)

Maintenance, operations and renewals expenditure / length (\$1,000 / km)

Achievements

Works Completed, Amenity and Road Condition **-0.5%** Ride Quality (STE)

Works Completed

Pavement rehabilitation (lane kms)

Pavement resurfacing (lane kms)

Percentage of network renewed

Amenity (Sealed Roads)

Ride quality (roughness of the roads)

Peak and average road roughness (NAASRA) (peer group lighter)

Road Condition (Sealed Roads)

Pavement condition

Surface condition

Activity Management

Planning, Procurement and Data Quality Composite Indicator

Activity Management Planning

Planning quality: 1.7 out of 3.0

Co-investment planning quality: 1.8 out of 3.0

Procurement

Smart buyer self-assessment: 59 out of 70

Data Quality

Asset management at expected standard (%) and Score

Service Performance

LGA Non-Financial Performance Measures 2018-21 LTP Targets Achieved

Annual Targets Achieved	2015-25 Long Term Plan			2018-28 Long Term Plan	
	2015/16	2016/17	2017/18	2018/19	2019/20
Provision of roads and footpaths	●	●	●	●	●
Road safety	●	●	●	●	●
Condition of the sealed road network	●	●	●	●	●
Maintenance of the sealed road network	●	●	●	●	●
Condition of the footpaths within the local road network	●	●	●	●	●
Response to service requests	●	●	●	●	●

Co-Investor Assurance

Investment Performance Investment Technical

Investment Audit (Four Grades)

Contract Management	●
Financial Management	●
Procurement	●
Professional Services	●
Previous Audit Issues	●

Technical Audit (Three Grades)

Activity Management Planning	●
Data Quality	●
Network Condition and Management	●
Road Safety	●
Previous Audit Issues	●

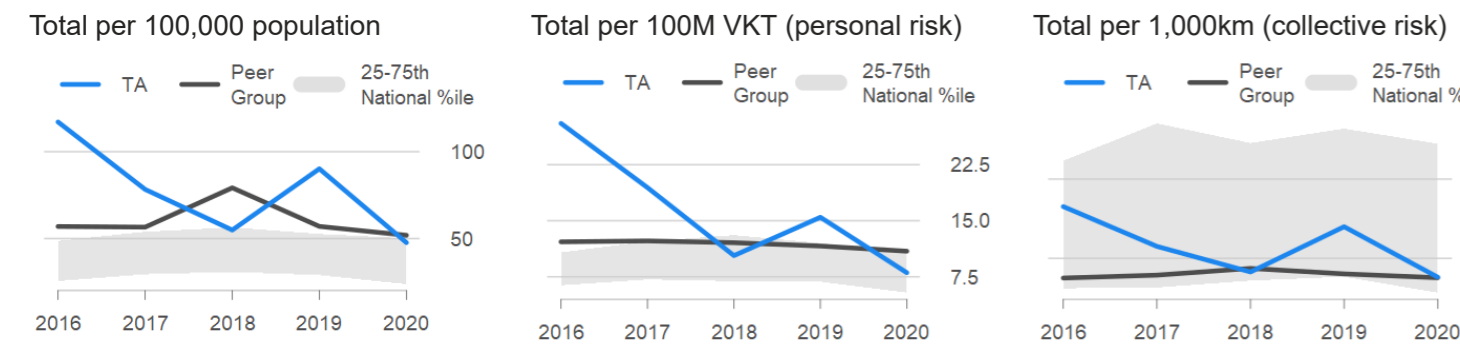
2019/20 Kaipara District Council RCA Report

Safety

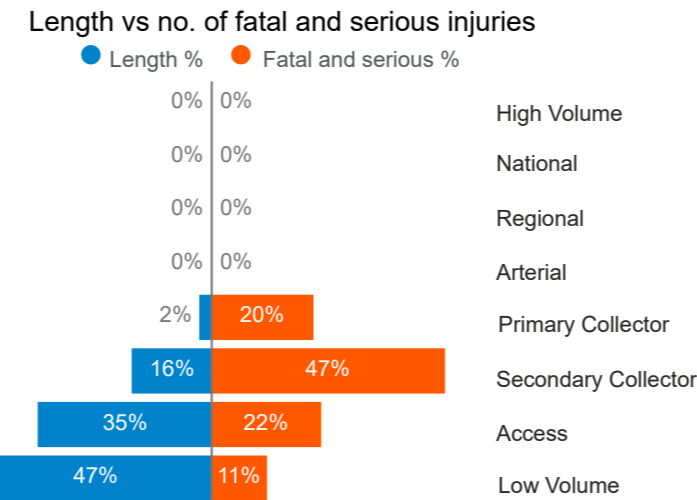
Fatal and Serious Injuries

18 ↓ Fatal & Serious Injuries/Trend (5 Year Annual Avg)

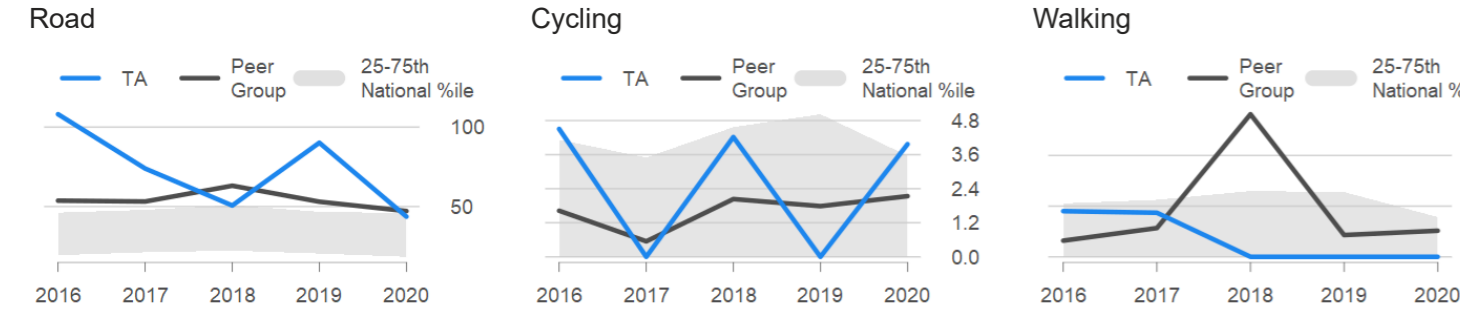
Network



Crash Distribution



By Mode (no. per 100,000 Population)



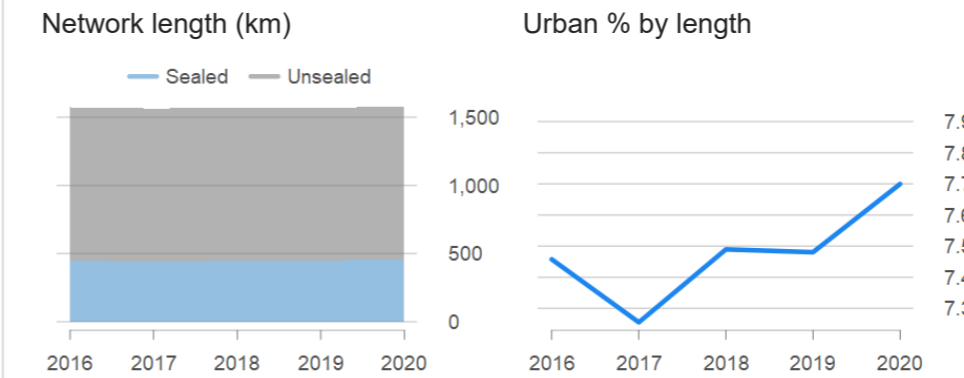
Source: Statistics New Zealand, Waka Kotahi Crash Analysis System, and Data and Tools

Network Physical Characteristics

Roads, Cycleways and Bridges

1 (0.1%) Network Length Growth km (%) (5 Year Annual Avg)

Roads



Source: Waka Kotahi Data and Tools

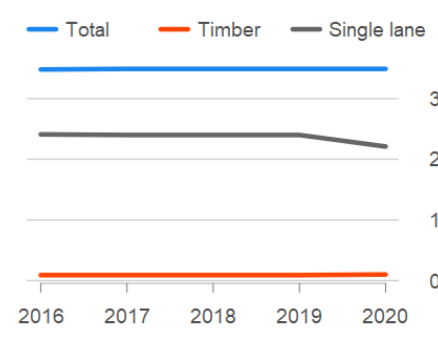
Cycleways

Network length (km)

No data to show

Bridges

No. bridges



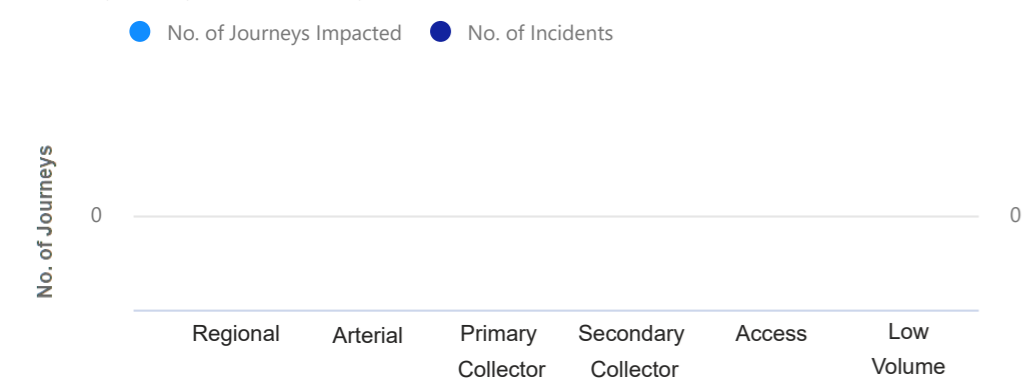
Network Availability and Accessibility

Resilience and Freight Accessibility

No data Proportion Network Accessible to Class 1 and 50MAX

Resilience

No. of journeys impacted by unplanned events



No. of instances where road access is lost

No data to show

Freight Accessibility

Proportion of network not available to Class 1 heavy and 50MAX HPMV vehicles

No data to show

Source: REG ONRC Performance Measure Reporting

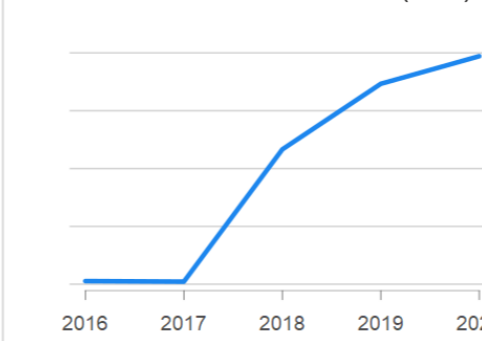
Road Network Use

Roads and Bridges

149 (17.5%) Million VKT (Latest Year)/5 Year Annual Avg % Increase

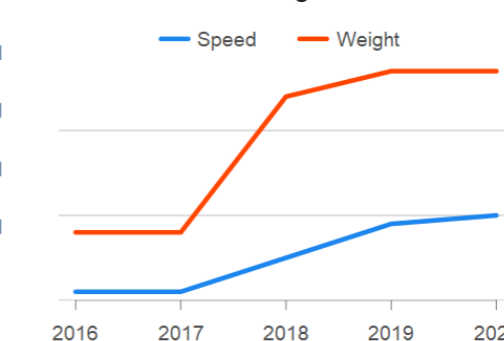
Roads and Bridges

Vehicle kilometres travelled (VKT)



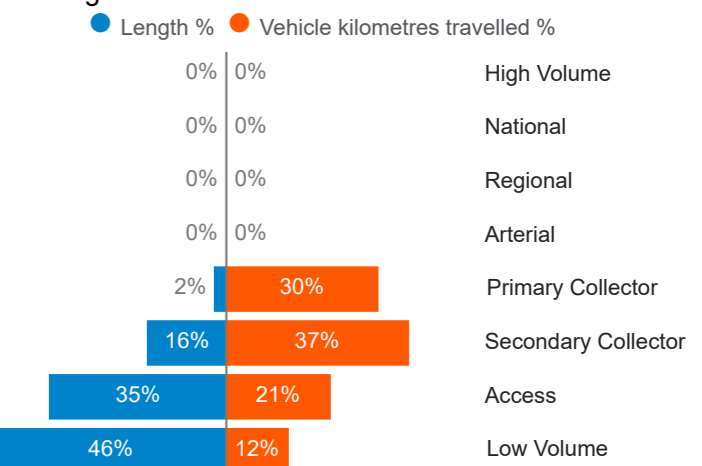
Source: Waka Kotahi Data and Tools

No. of restricted bridges



Journey Distribution

Length vs VKT



Source: REG ONRC Performance Measure Reporting

Public Transport

Fleet Size, Network Use and Community Served

No data Passenger kms (5 Year Annual Avg Trend)

Fleet Size

No. buses

No data to show

Network Use

Passenger kms

No data to show

Service kms

No data to show

Community Served

Population of serviced community

No data to show

% population within 500m of a bus stop

No data to show

Serviced communities included

Source: Waka Kotahi Data and Tools

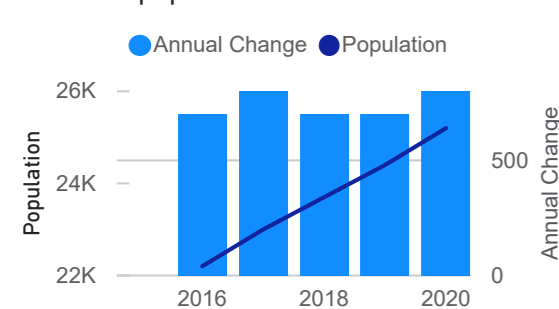
Territorial Activity

Economic Activity

740 (3.3%) Population Growth (5 Year Annual Avg)

Population

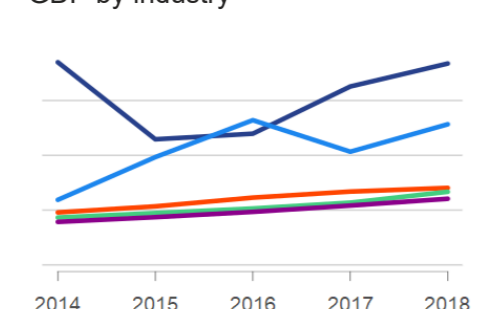
Resident population



Source: Statistics New Zealand

Economic

GDP by industry



Source: MBIE Regional Economic Activity Tool

Top 5 TA Industries

- Agriculture
- Manufacturing
- Forestry, Fishing, Mining, Electricity, Gas, Water And Waste Services
- Owner-Occupied Property Operation
- GST On Production, Import Duties And Other Taxes

5.3 Waka Kotahi Technical Audit of WDC

Meeting: Infrastructure
Date of meeting: 13 May 2021
Reporting officer: J Devine , Strategy & Planning Manager, NTA

1 Purpose

To present to the Committee the findings of the Waka Kotahi Technical Audit of the Whangarei District Council 's Road Network.

2 Recommendation

That the Committee notes the findings of the Waka Kotahi NZTA Technical Audit of the WDC Road Network

3 Background

Under Section 95(1)(e)(ii) of the Land Transport management Act 2003 Waka Kotahi NZTA is required to periodically undertake a Technical Audit of Councils road network to provide assurance that Waka Kotahi's investment in Council's land transport programme is being well managed and is delivering value for money. Waka Kotahi also seeks assurance that the Council is appropriately managing risk associated with Waka Kotahi's investment and recommends improvements where appropriate.

4 Discussion

Waka Kotahi's Audit Team undertook a field visit, with NTA staff, of the Council's road network over four days, 30 November to 3 December 2020.

The full audit report is provided as **Attachment 1** to this agenda.

The Audit reports executive summary raises the following points:

- Whangarei District's road network is well managed by an engaged and committed team and is largely in good condition.
- However, expenditure on maintenance and renewal is high when compared to peer councils.
- Footpaths, signage and delineation devices are the principal areas where improvement is warranted.
- Urban road roughness is adversely impacted by sunken and loose utility covers/lids. Capital improvement and renewal works are completed to a good standard and effective, innovative treatments are being applied.

- Council takes a strategic approach to the management of its maintenance and renewal activity and this has significantly contributed to an improved network in terms of both condition and operation.
- The impacts of the 2020 COVID-19 lockdowns were well managed and network integrity maintained. Contractors developed pandemic plans to ensure that essential works were safely undertaken. To date, there has been no cost implications for the network maintenance in the two maintenance contracts.
- Systems around data recording and reporting require some strengthening to ensure reliable and accurate data for decision-making and to provide the evidence needed for investment by Waka Kotahi NZ Transport Agency (Waka Kotahi).
- Condition rating is a mandatory requirement of Waka Kotahi and must be reinstated.
- The annual number of deaths and serious injuries, listed in New Zealand's Crash Analysis System as occurring in the Whangarei District, has been steadily increasing over the past eight years and personal risk (crashes per VKT) is higher than similar councils.
- A large proportion of crashes occur on bends and one in five involves motorcycles. We encourage Council to review the cause(s) to assess if any change of focus is required.
- The Council's safety improvement projects appear well designed and implemented to achieve the project's desired outcomes and Council was seen to be proactive in addressing safety issues generally.

The last Technical Audit was undertaken six years ago in February 2015 and the rating assessment of both audits are shown below. The format of the audit assessment has changed somewhat since 2015 and the new Assessment Rating Definitions are also shown below.

Audit Rating Assessment

Subject Area		Rating Assessment 2015	Rating Assessment 2020
1	Previous Audit Issues	N/A	N/A
2	Network Condition and Management	Effective	Some Improvement Needed
3	Activity Management planning	Effective	Effective
4	Data Quality	Effective	Some Improvement Needed
5	Road Safety	Some Improvement Needed	Some Improvement Needed
Overall Rating		Effective	Some Improvement Needed

The new Assessment ratings are defined below. These are slightly more complex than the 2015 assessment rating and include a more detailed rating system.

Assessment Rating Definitions

	Effective	Some Improvement Needed	Significant Improvement Needed	Unsatisfactory
Investment management	Effective systems, processes and management practices used.	Acceptable systems, processes and management practices but opportunities for improvement.	Systems, processes and management practices require improvement.	Inadequate systems, processes and management practices.
Compliance	Waka Kotahi and legislative requirements met.	Some omissions with Waka Kotahi requirements. No known breaches of legislative requirements.	Significant breaches of Waka Kotahi and/or legislative requirements.	Multiple and/or serious breaches of Waka Kotahi or legislative requirements.
Findings/ deficiencies	Opportunities for improvement may be identified for consideration.	Error and omission issues identified which need to be addressed.	Issues and/or breaches must be addressed, or on-going Waka Kotahi funding may be at risk.	Systemic and/or serious issues must be urgently addressed, or on-going Waka Kotahi funding will be at risk.

A number of issues were raised in the 2020 Audit and have resulted in a slightly reduced assessment score. Some of these issues have been accepted by Council and improvements have already been implemented. Some of the significant issues raised are commented on in detail below. Full details are provided in Attached Audit Report.

4.1 Assessment Findings

The following recommendations were made by Waka Kotahi on significant issues from the Audit;

- ***R2.4 Ensure footpaths (and associated pedestrian facilities) are well maintained, safe and accessible.***

Council Response - WDC has already captured the footpath assets in RAMM, has recently undertaken condition monitoring (OnSite Video survey) and is carrying out activity management of repairs and renewals. We have fully implemented condition rating as noted above, analysis processes that uses detail condition data and the development of a long Forward Work Plan (FWP) that is also currently being reviewed and implemented. Analysis of the condition of our footpaths shows that over 95% of our footpaths are in fair or better condition. We note the NZTA have only just committed to share funding footpaths and that all towns in NZ would have the same legacy issues to deal with. It is a known issue for the Council and one that is being addressed but will take time to implement significant change. In addition, we are currently undertaking (using consultants ViaStrada) a 10-year footpath and cycleway network plan. This should provide the strategic approach that the auditor is recommending.

- ***S2.1 Investigate and reports to Waka Kotahi on the reasons for their comparatively high maintenance and renewal expenditures.***

Council Response - This was explained at the time of the recent audit and is also covered in detail in the 2021/31 AMP. The main reasons for WDC's higher maintenance costs are; Lack of access to good pavement materials which drives up material rates due to lack of competition and haulage distances; Poor subgrade conditions which result in earlier failures and thicker pavements being required; There is a significant amount of heavy vehicle traffic in the Whangarei District and WDC has the third highest VKT in its peer group; Whangarei being one of the few councils in their peer group with a significant urban area (i.e. city) and the current investment in expensive urban rehabs. By comparison, half of the councils in the peer group are located in the South Island with good quality subgrades (i.e. river gravels) and cheaper material costs

- ***R3.1 Reviews development standards (technical specifications and detailed drawings) to reduce the variety and ensure the quality of asset types to be maintained by Council.***

Council Response - The WDC are currently reviewing the Environmental Engineering Standards (EES) document for development throughout the District. Council is working with the other Councils in Northland to develop a single EES document for the region. The NTA is responsible for the management of roading and traffic safety issues relating to new developments for the WDC and will be able to apply appropriate and consistent standards across the Regions. There is a historical (going back 30 years) issue with low and inconsistent standards enforced by Council over previous years which will obviously take some time to address.

- ***S3.2 Robustly assesses the consequential Opex commitments relating to any new or vested assets and ensures inclusion in subsequent budget forecasts.***

Council Response - Provision for consequential Opex for growth and vested assets has been made in the 30-year costings for both the 2018/28 and 2021/31 AMPs and this includes for the effects of seal extension (of about 2km/year), state highway revocations (it allowed for 30km of SH1 to be handed to WDC as part of the 4-laning project), cycle network projects etc. The additional funding for up to \$4M per annum for extra unsubsidised seal extensions is a political decision late in the development of the 2021/31 Draft LTP. If approved, funding for consequential Opex will be included in subsequent LTP and RLTP requests.

- ***R4.1 Ensures compliance with Waka Kotahi funding rules that require condition rating surveys to be undertaken.***

Council Response - The NTA has not completed Condition Rating for number of years due to its proven inaccuracies, safety concerns and the emergence of better repetitive collection technologies. The NTA ran both condition rating and HSD Cracking collection in parallel for two years to determine the effectiveness of HSD crack data. It was found that manual rating failed to capture the extent of cracking and potholes on the network, which was poorly informing decision, making tools such as the long-term pavement performance model. We understood and took lead from the NZTA, State Highways, in stopping condition rating on the same grounds as they did. However, the NTA has introduced, tested and has

implemented new technology to provide this data and is currently in the last steps to fully implement the population of this data into the standard rating tables in RAMM. Since Council has been collecting the HSD Crack data, we have been analysing the data and using this in our decision-making process. This will allow NTA to more fully report SCI and PII on the network. SCI is the only measure heavily impacted by this technology implementation. PII uses the data sets already captured by the NTA through HSD survey (in the form of HSD rutting roughness and texture-flushing, 100% network coverage).

As commented above we have taken lead from NZTA H&O in the discontinuing condition rating as blunt tool for the system we run today. Unlike the NZTA H&O condition rating has been replaced with more effective repetitive data collection through HSD Crack and Pothole data collection as part of comprehensive HSD data collection strategy (roughness, rutting, texture, geometry, cracking, potholes, video survey completed as one exercise) which covers 100% of the sealed network to better inform tools such as long term pavement performance models. RR 528 refer section 4.6, visual rating remains a subjective process with variable outcomes regardless of sample size as clearly demonstrated by the report.

NTA believe NZTA need to look across the country at this item. RR528 has now led to further review of how and what condition should be collected to keep step with the changing nature of technologies in the world. NTA believe that there is in fact a great opportunity for the NZTA in using the work the NTA have completed to date and for NZTA to assist the NTA to further develop this work to gain better outcomes in regard to decision making and ensuring the right thing at the right place at the right time. A number RCA's do not do condition rating any longer. The training is difficult to source the practice is unsafe and subjective.

5 Significance and engagement

The decisions or matters of this Agenda do not trigger the significance criteria outlined in Council's Significance and Engagement Policy, and the public will be informed via the publication of this agenda on the website.

6 Attachment

1 Report – Technical Audit of Whangarei District Council – 3 December 2020



INVESTMENT AUDIT REPORT

Technical Audit of Whangarei District Council

Monitoring Investment Performance

Report of the investment audit carried out under Section 95(1)(e)(ii) of the Land Transport Management Act 2003.

DAWN SHANNON

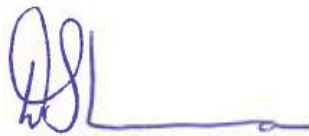
3 DECEMBER 2020

FINAL

Approved Organisation (AO):	Whangarei District Council
Waka Kotahi NZ Transport Agency Investment (2018 – 2021 NLTP):	\$ 73,029,900 (budgeted programme value)
Date of Investment Audit:	30 November – 3 December 2020
Audit Team:	Dawn Shannon - Senior Investment Auditor (Lead) Steve Murrin – Marlborough Roads Manager Martin Taylor – Senior Investment Advisor
Report No:	RADST-2098

AUTHORITY SIGNATURES

Prepared by:



Dawn Shannon, Senior Investment Auditor

Approved by:



Yuliya Gultekin, Practice Manager Audit & Assurance

9/03/2021

Date

DISCLAIMER

WHILE EVERY EFFORT HAS BEEN MADE TO ENSURE THE ACCURACY OF THIS REPORT, THE FINDINGS, OPINIONS, AND RECOMMENDATIONS ARE BASED ON AN EXAMINATION OF A SAMPLE ONLY AND MAY NOT ADDRESS ALL ISSUES EXISTING AT THE TIME OF THE AUDIT. THE REPORT IS MADE AVAILABLE STRICTLY ON THE BASIS THAT ANYONE RELYING ON IT DOES SO AT THEIR OWN RISK, THEREFORE READERS ARE ADVISED TO SEEK ADVICE ON SPECIFIC CONTENT.

EXECUTIVE SUMMARY

Whangarei District's road network is well managed by an engaged and committed team and is largely in good condition. However, expenditure on maintenance and renewal is high when compared to peer councils. Footpaths, signage and delineation devices are the principal areas where improvement is warranted. Rural sealed road widths are generally adequate, as evidenced by the limited incidences of edge break, but there is some risk with narrow shoulder widths and roadside hazards including drop offs, utility poles and culverts. Urban road roughness is adversely impacted by sunken and loose utility covers/lids. Capital improvement and renewal works are completed to a good standard and effective, innovative treatments are being applied.

Council takes a strategic approach to the management of its maintenance and renewal activity and this has significantly contributed to an improved network in terms of both condition and operation. The impacts of the 2020 COVID-19 lockdowns were well managed and network integrity maintained. Contractors developed pandemic plans to ensure that essential works were safely undertaken. To date, there has been no cost implications for the network maintenance in the two maintenance contracts.

Systems around data recording and reporting require some strengthening to ensure reliable and accurate data for decision-making and to provide the evidence needed for investment by Waka Kotahi NZ Transport Agency (Waka Kotahi). Condition rating is a mandatory requirement of Waka Kotahi and must be reinstated.

The annual number of deaths and serious injuries, listed in New Zealand's Crash Analysis System as occurring in the Whangarei District, has been steadily increasing over the past eight years and personal risk (crashes per VKT) is higher than similar councils. A large proportion of crashes occur on bends and one in five involves motorcycles. We encourage Council to review the cause(s) to assess if any change of focus is required. The Council's safety improvement projects appear well designed and implemented to achieve the project's desired outcomes and Council was seen to be proactive in addressing safety issues generally.

AUDIT RATING ASSESSMENT

Subject Areas		Rating Assessment*
1	Previous Audit Issues	N/A
2	Network Condition and Management	Some Improvement Needed
3	Activity Management Planning	Effective
4	Data quality	Some Improvement Needed
5	Road Safety	Some Improvement Needed
Overall Rating		Some Improvement Needed

* Please see Introduction for Rating Assessment Classification Definitions

RECOMMENDATIONS

The table below captures the audit recommendations. Agreed dates are provided for the implementation of recommendations by the approved organisation.

We recommend that Whangarei District Council:		Implementation Date
R2.1	Adopts the standard templates for economic evaluation found in the <i>Waka Kotahi Monetised Benefits and Costs Manual</i> and utilise locally demonstrated input costs and expected lives.	Immediate compliant from 2020/21
R2.2	Prioritises the repair and levelling of sunken trenches and utility covers/lids within traffic lanes.	Immediate (subject to funding).
R2.3	Ensures that roadside signs, markers and other devices are maintained in a serviceable condition and to current standards.	Immediate (subject to funding).
R2.4	Ensures footpaths (and associated pedestrian facilities) are well maintained, safe and accessible.	Immediate (subject to funding).
R3.1	Reviews development standards (technical specifications and detailed drawings) to reduce the variety and ensure the quality of asset types to be maintained by Council.	2021/22 - WDC Engineering Standards document currently under review
R4.1	Ensures compliance with Waka Kotahi funding rules that require condition rating surveys to be undertaken.	n/a
R4.2	Resolves the data issues identified in the REG Data Quality report to improve data accuracy, completeness and timeliness.	Council will continue with its improvement programme regarding data quality
R5.1	Ensures ongoing full compliance with Waka Kotahi funding rules that require Road Safety Audits for renewal and improvement projects.	Immediate compliant from 2020/21
R5.2	Develops and implements a programme to upgrade rural road delineation, with a strong focus on curve warning, to ensure a safe and consistent driving environment during both day and night.	Programme included in the 2021/24 LTP, Road to Zero Funding package, (subject to future funding)

1.0 INTRODUCTION

1.1. Audit Objective

The objective of this audit is to provide assurance that Waka Kotahi investment in Council's land transport programme is being well managed and delivering value for money. We also seek assurance that the Council is appropriately managing risk associated with Waka Kotahi investment. We recommend improvements where appropriate.

1.2. Assessment Ratings Definitions

	Effective	Some Improvement Needed	Significant Improvement Needed	Unsatisfactory
Investment management	Effective systems, processes and management practices used.	Acceptable systems, processes and management practices but opportunities for improvement.	Systems, processes and management practices require improvement.	Inadequate systems, processes and management practices.
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1.3. Council Comments

Prior to this report being approved, Whangarei District Council was invited to comment on the auditors' findings, recommendations and suggestions. Where appropriate this report has been amended to reflect this dialogue. Any additional auditee response comments are attached in the Appendices.

2.0 ASSESSMENT FINDINGS

Our findings relating to each subject area are presented in the tables below. Where necessary, we have included recommendations and/or suggestions.

1. Previous Audit Issues	
<p>The February 2015 technical <i>Investment Audit Report</i> found the network to be generally in good condition but did raise concerns that an emphasis on maintaining, rather than rehabilitating, rural road pavements was impacting on investment in the maintenance and renewals of footpaths and crossings in the urban environment (not funded by the then NZ Transport Agency). The report's recommendations were that Whangarei District Council:</p> <ul style="list-style-type: none"> • Implements the Present Value case study for improved option analysis available from the REG website • Develops a policy for the management and control of stock crossings and ensures an audit programme is established to monitor compliance • Adopts the practice of installing a "mountable culvert headwall" to mitigate the risk of runoff road crashes as part of its renewal programme. <p>Both Net Present Value analysis and stock crossings remain as areas for improvement and are discussed further in Section 2 <i>Network Condition and Management</i>. Implementation of design changes to culvert headwalls was not specifically reviewed in the current audit but has been included in the comments on engineering standards in Section 3 <i>Activity Management Planning</i>.</p> <p>The concerns raised in the report body regarding urban footpaths also appear in the current findings – see Section 2 <i>Network Condition and Management</i>.</p>	
Whangarei District Council's comment	See detailed comments in report sections below.

* * *

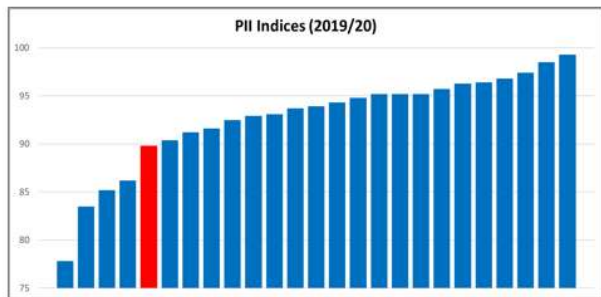
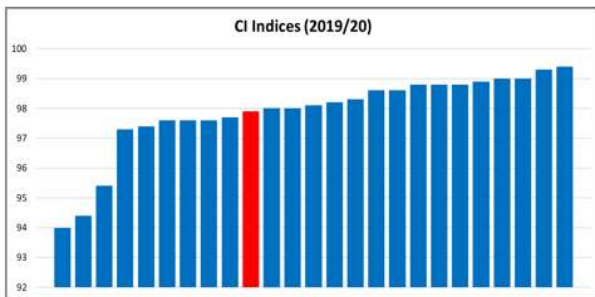
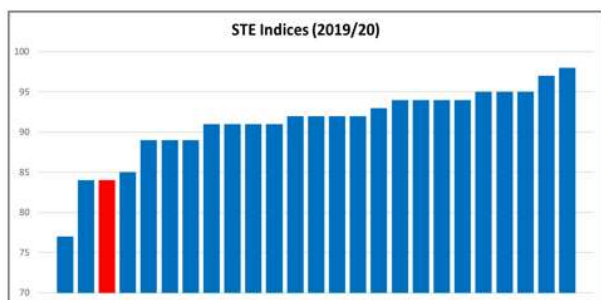
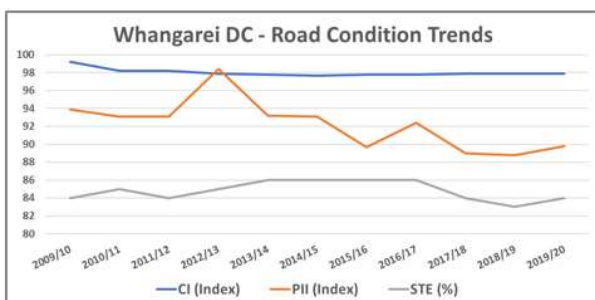
2. Network Condition and Management

Some Improvement Needed

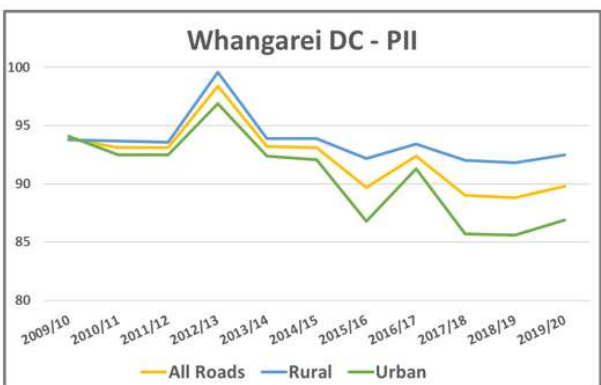
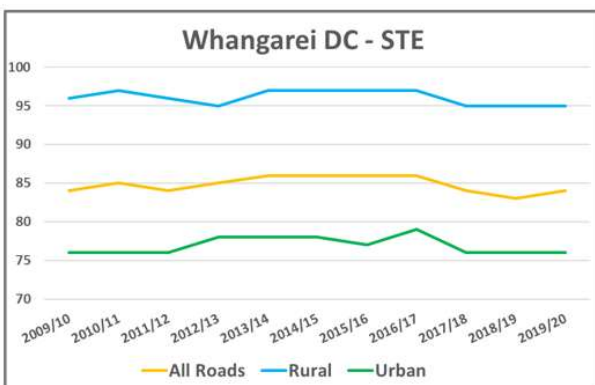
Whangarei District's road network is well managed and largely in good condition. Rural sealed road widths are generally adequate, as evidenced by the limited incidences of edge break, but there is some risk with narrow shoulder widths and roadside hazards including drop offs, utility poles and culverts. Urban road roughness is adversely impacted by sunken and loose utility covers/lids.

Performance Monitoring

Road condition indices for 2019/20 are compared with peer group councils (provincial centres) in the graphs below, along with the Whangarei trends over the last 11 years. The trend data shows a deterioration in Pavement Integrity Index (PII), little movement in Condition Index (CI) and fluctuations in Smooth Travel Exposure (STE)¹. It is pertinent to note that, as Council does not carry out Condition Rating (discussed below), the CI data has subsequently not been updated since 2015 and the PII includes similarly outdated inputs. When compared to peer councils, both the PII and STE rank poorly.

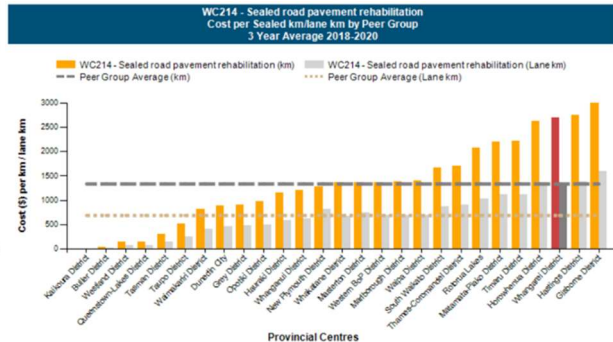
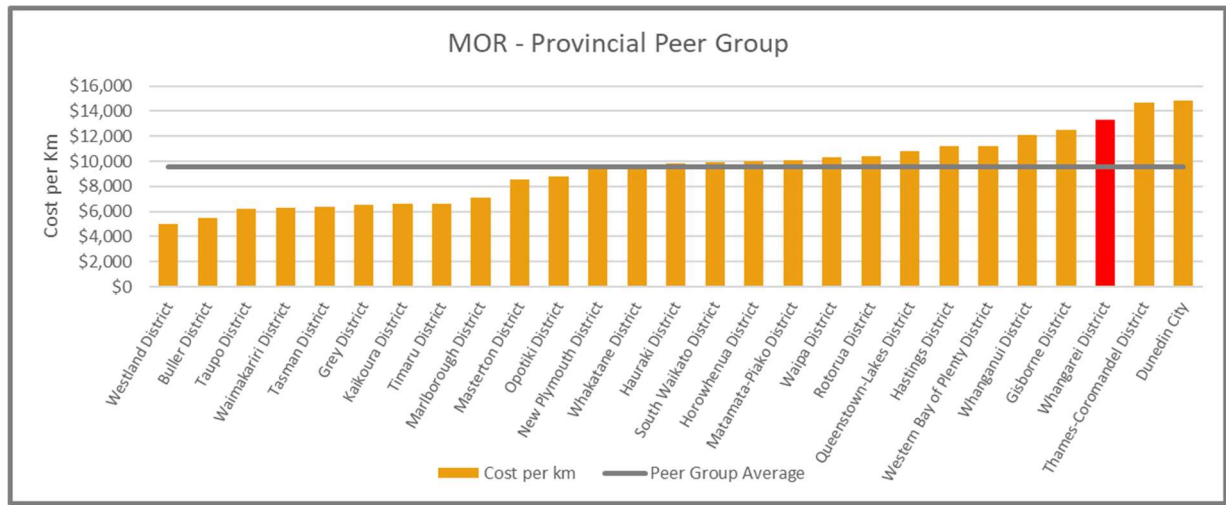


Further analysis of STE (graph below on left) reveals that the urban network is considerably rougher than the rural network. A similar analysis of PII (below right) indicates a divergent trend where urban pavement condition is deteriorating at a faster rate than rural. These are concerning features that Council needs to investigate, understand and address.



¹ Refer to <https://www.nzta.govt.nz/assets/Road-Efficiency-Group/docs/practice-overviews/REG-practice-overview-smooth-travel-exposure.pdf>

The cost per km for maintenance, operations and renewals (excluding emergency works) as a three-year average (2018-2020) is \$12,013/km, which is significantly over the peer group average of \$9,035/km. Resurfacing and pavement rehabilitation costs contribute to this high rate of expenditure. See graphs below for comparisons with peer councils. We were unable to ascertain the reason for this high cost differential during the audit and recommend that Council investigate further.



Compliance

Council does not fully comply with the Planning & Investment Knowledge Base requirements. Specifically, we noted that:

- Bridge and structural inspections are generally undertaken in accordance with the Waka Kotahi S6 *Bridges and other significant highway structures inspection policy*.
- Roughness recorded in RAMM complies with the requirements set in the Waka Kotahi Knowledge Base.
- Condition Rating is non-complying – see section 4 *Data Quality*.
- Net present value (NPV) analysis is undertaken for improvement and rehabilitation projects, but an outdated form is used (based on the examples we viewed). The standard forms for economic evaluation can be found in the Waka Kotahi *Monetised Benefits and Costs Manual*². Additionally, the use of actual data from Whangarei’s RAMM database for inputs such as maintenance costs and achievable seal life would produce more robust outcomes. The examples provided to the team did not use historical maintenance costs but assumed maintenance costs that were not realistic.

² Refer to <https://www.nzta.govt.nz/resources/monetised-benefits-and-costs-manual/>

General Observations

The standard of completed works was observed to be very good. At the time of the audit (early December), all the 2020/21 reseals had been completed – this was an impressive achievement for the team. The carriageway resurfacing and pavement rehabilitation projects that were inspected featured good quality cross sectional shape and surfacing finishes and comprehensive attention to ancillary works such as shoulder flanking, reforming of drainage channels and upgrading of delineation/signage. Capital improvement and emergency works were similarly completed to a good standard.

We also commend the high standard of signage for bridges, particularly the single lane bridges. However, approaches to single lane bridges on unsealed roads tended to be very rough. Maintenance of the surfaces (sealed and/or unsealed) should be prioritised in these locations. Where bridge approaches are not sealed, sealing should be considered to facilitate safe deceleration and acceleration by appropriate vehicle types, as well to protect the bridge deck. At the transition between sealed and unsealed surfaces, care needs to be taken that there is at least a 4% crossfall in order to prevent potholing. In addition, for tourist routes, the *Manual of Traffic Signs and Markings* (MOTSAM)³ suggests that a single straight-ahead arrow be marked on the exit side of one lane bridges as a reminder to tourists that they should drive on the left. These arrows are well used elsewhere in the District.

Unsealed roads (691 km; 40% of network length) in general had good ride quality. The adoption of the Paige-Green Index to help formulate wearing courses is clearly contributing to this outcome. However, there was a lack of crossfall in some locations and inadequately formed stormwater channels. Unsealed roads with low crossfall (< 4%) are likely to pothole and can lead to an unsafe network when drivers swerve to avoid potholes. Council needs to ensure that a crossfall within the range of 4 to 6% is delivered, which will mitigate the incidence of potholes on the network and help drivers stay in their lane.

Sealed roads were generally well maintained with minimal edge break or high/low shoulders. This suggests adequate carriageway width, but it was noted that formed shoulders tended to be narrow, thus providing little separation from roadside hazards such as drop offs, utility poles and culverts. Extensive surface stripping was observed throughout Northland, including Whangarei District. It is suggested that Council work with Waka Kotahi (as state highways are also affected) to better understand the causes. Other surface faults included flushing, scabbing, ravelling and cracking. We commend the good use of crack sealing to address the cracking and extend surfacing life. Sealed surfaces were observed to be deteriorating at stock crossing sites. Stock effluent damages the road surface, as well as creating health (splashes on vehicles) and safety (slippery surface) issues. There can also be road safety problems when livestock are crossing the roads, especially when crossings are neither adequately signposted in advance nor supervised. Better control of this activity⁴ is required.

A contributing factor to the high urban roughness indices is the prevalence of settling or failed reinstatement around manhole lids and other service covers. It is important that service covers, and surrounds where applicable, are raised or otherwise levelled to be flush with the road surface to minimise excessively rough ride, vibrations affecting neighbouring properties and issues relating to drivers swerving to avoid them. In the longer term, this outcome may be improved with stronger reinstatement conditions on Corridor Access Request (CAR) approvals, combined with a higher level of supervision and/or handover inspections.

The topography and geology of much of the District makes the rural road network susceptible to damage, such as subsidence, slips and dropouts. Staff advised that recent investigations for the *Resilience Management Plan* identified some 1,150 slip sites over the 1,000 km of “critical routes” examined across Northland (an average of over one slip per kilometre on these routes). We observed dropouts in various stages of development. Most were signposted and secured, many were not. Where warning signage/devices were installed, there was inconsistent use of complying sight rails, non-complying sight rails, broken and unpainted sight rails, lines of edge marker posts, random cones and other variants. Compliant and appropriate warning devices should be consistently used. On some sites, slumps and

dropouts extended into the traffic lane, but the resultant hazard to drivers was left unmarked awaiting scheduled remedial work or a higher intervention level. Wherever work cannot be undertaken immediately, temporary warning of any potential hazard should be provided to the travelling public.

Some recent seal extensions are still awaiting second coat seals after two years or more (e.g. sections of Wright Road were first coat sealed in 2018). Common practice in New Zealand is to apply second-coat seals in the construction season following the construction of the first coat seal, however this is dependent on factors including adequate trafficking on the first coat to ensure it is well compacted. Surfaces comprising only a first coat seal are less robust and more permeable than those with a second coat. We are concerned that second coat sealing is being too long delayed on some of these seal extensions, particularly on forestry roads.

Other deficiencies observed on the sample of roads visited can be addressed by increased attention to routine maintenance. Examples of these deficiencies are:

- Faded road marking of intersection limit lines
- Weed growth in urban areas
- Blocked culverts
- Driveways spilling loose aggregate into traffic lanes
- Debris on bridge decks.

Signs and Delineation Devices

Traffic signs were generally well used, and we noted effective placement of single and gated stop / give way ahead signs (WA1 and WA2) and speed limit ahead signs (WA3) in situations where advance warning aids compliance. However, it is important that all traffic signs are installed in accordance with the relevant standards and are thereafter well maintained. We noted the following deficiencies:

- The curve orientation on a curve permanent warning sign does not match the road alignment ahead (ie Vinegar Hill Road - refer to the photo to the right)
- Outdated black and white chevron signs (outdated signs are unlikely to meet reflectivity requirements and may not be sufficiently conspicuous)
- Damaged and faded signs
- Twisted signs (generally intersection signage in urban areas)
- Missing STOP and GIVE WAY signs (in remote rural areas)
- Signs obscured by trees, vegetation or placement of other signs
- Inconsistent use of edge marker posts, width markers and hazard markers
- Compliance (e.g. WN2 Hump signs not correctly located, RD6R Keep Right signs missing from bulbous kerbs)
- Broken and/or unpainted sight rails.



³ Refer to MOTSAM Part 2 Section 3 cl 3.05.02 (c) (i)

⁴ Refer to <https://www.rcaforum.org.nz/working-groups/stock-crossings/guidelines-for-stock-crossings/>

Examples of sign issues are in photos below – these include noncompliant layout of single chevrons, faded black and white chevron board, noncompliant sign combinations, twisted signs, signs obstructed by vegetation and illegible, lichened signs.



Night inspections are undertaken by the contractor on an infrequent basis. It is suggested that more inspections be undertaken and that they utilise a driver unfamiliar with the network (provide “fresh eyes”). It is leading practice to ensure all roads are inspected at least annually at night to ensure the adequacy of existing delineation, hazard warning and regulatory signs.

Tourist Signage

Northland is an important player in New Zealand’s national tourism scene and tourism is one of Whangarei District’s largest industries. Both domestic and international visitors use the road network to access Whangarei’s beaches, forests, walks and other attractions. They rely on clear and consistent guide signage to direct them to their chosen destination via routes that are specifically designed and maintained for



drivers unfamiliar with District roads. We found the guide signage on the network to be confusing, inadequate and often missing. The photograph above shows the inconspicuous destination sign for Waipu Caves. On the journey to the Caves, we observed that locals had painted their own signs to direct visitors, highlighting the deficiency. Popular destinations such the Caves should be signed in accordance with section 6 of Part 2 of the *Traffic Control Devices* manual (TCD manual)⁵. Tourist destinations should be signed from the Twin Coast Discovery Highway.

Footpaths

Many of the footpaths in Whangarei appear to be narrow, uneven, cracked, lack accessible pram crossings and do not safely provide for users’ requirements. On some streets the vehicle crossing crossfalls combined with steep splays on each side resulted in a “roller coaster” footpath profile. As the maintenance and renewal of footpaths is now funded by Waka Kotahi, we expect this asset group to be managed like all other assets. This includes asset inventory, condition monitoring, maintenance activity and use management. Further, we remind Council that guidance on the design of footpaths (including width and crossfall), pedestrian cutdowns and vehicle crossings can be found in Waka Kotahi *Pedestrian Planning and Design Guide*⁶. We expect any renewals (renewals to a revised current standard are not considered improvement) or new work to comply with this guide.

⁵ Refer to <https://www.nzta.govt.nz/assets/resources/traffic-control-devices-manual/docs/part-2-draft-direction-service-and-general.pdf>

⁶ Refer to <http://nzta1.cwp.govt.nz/resources/pedestrian-planning-guide/>

<p>Recommendations</p>	<p>We recommend that Council:</p> <p>R2.1 Adopts the standard templates for economic evaluation found in the Waka Kotahi <i>Monetised Benefits and Costs Manual</i> and utilise locally demonstrated input costs and expected lives.</p> <p>R2.2 Prioritises the repair and levelling of sunken trenches and utility covers/lids within traffic lanes.</p> <p>R2.3 Ensures that roadside signs, markers and other devices are maintained in a serviceable condition and to current standards.</p> <p>R2.4 Ensures footpaths (and associated pedestrian facilities) are well maintained, safe and accessible.</p>
<p>Suggestions</p>	<p>We suggest that Council:</p> <p>S2.1 Investigates and reports to Waka Kotahi on the reasons for their comparatively high maintenance and renewal expenditures.</p> <p>S2.2 Investigates effective means of maintaining/managing stock crossing sites, including other stock movements, fencing requirements for roadside grazing and stock-related traffic management plans.</p> <p>S2.3 Considers upgrading guide signage, particularly tourist signage, to provide logical, consistent and clear direction to road users.</p>
<p>Whangarei District Council's comment</p>	<p>R2.1 accepted – compliant from 2020/21</p> <p>R2.2 accepted - Council has instigated a programme of repairs to trenches and the raising of manhole and other service lids in the road as part of the new maintenance contracts (2017). However, Council has a considerable backlog of legacy issues that will take some time to address and is subject to future funding.</p> <p>R2.3 accepted – Immediate subject to future funding</p> <p>R2.4 accepted - WDC has already captured the footpath assets in RAMM and has recently undertaken condition monitoring (OnSite Video survey) and is carrying out activity management of repairs and renewals. We have fully implemented condition rating as noted above, analysis processes that uses detail condition data and the development of a long FWP that is also currently being reviewed and implemented. Analysis of the condition of our footpaths shows that over 95% of our footpaths are in fair or better condition. We note the NZTA have only just committed to share funding footpaths and that all towns in NZ would have the same legacy issues to deal with. It is a known issue for the Council and one that is being addressed but will take time to implement significant change. In addition, we are currently undertaking (using consultants ViaStrada) a 10-year footpath and cycleway network plan. This should provide the strategic approach that the auditor is recommending.</p>

	<p>S2.1 - This was explained at the time of the recent audit and is also covered in detail in the 2021/31 AMP. The main reasons for WDC's higher maintenance costs are: Lack of access to good pavement materials which drives up material rates due to lack of competition and haulage distances; Poor subgrade conditions which result in earlier failures and thicker pavements being required; There is a significant amount of heavy vehicle traffic in WDC and WDC has the third highest VKT in its peer group; Whangarei being one of the few councils in their peer group with a significant urban area (i.e. city) and the current investment in expensive urban rehabs. By comparison, half of the councils in the peer group are located in the South Island with good quality subgrades (ie river gravels) and cheaper material costs.</p> <p>S2.2 – accepted Council has in place a stock control bylaw that details the requirements for the management of stock and stock crossings. Council accepts the need for more auditing of existing crossings to push the upgrading and compliance. Council continues to promote and support the installation of cattle underpasses where appropriate.</p> <p>S2.3 – accepted. Council accepts the need to upgrade and maintain guidance signage on the network. Council has applied unsuccessfully for PGF funding for the upgrade of tourist signage as part of the Twin Coast Discovery Route Business Case programme for Northland. Future upgrade works will be subject to funding.</p>
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3. Activity Management Planning

Effective

General

Council has an active and complete 2018-28 Activity Management Plan (AMP) that incorporates the programme business case for maintenance operations and renewals and Low Cost, Low Risk programmes of work. The key strategic problems are identified as high cost of sealed road renewals, impact of reactive maintenance on the condition of unsealed roads, increasing growth and traffic congestion in Whangarei city, network susceptibility to slips and flooding (resilience) and the high number of deaths and serious injuries (safety).

Activity Management

Transportation in Whangarei District is managed by the Northland Transportation Alliance (NTA) which is a collaboration between the Whangarei, Kaipara and Far North District Councils, Northland Regional Council and Waka Kotahi. It has been operating since 1 July 2016. Feedback from staff portrays a positive and supportive working team environment. However, consultants are utilised to provide some core specialist professional services and the audit team is concerned that the loss of these individuals would be a major setback to the effectiveness of NTA. Council is aware of this risk and is working on succession planning to ensure that transfer of skills does take place. We support this essential transition and recommend that the development of staff, including the continuation of the current cadetship programme, be a Council priority.

Council's staff advised that network integrity was maintained during the COVID-19 lockdown periods. Contractors developed and provided appropriate pandemic plans, ensuring that essential works were safely undertaken. These plans will be retained as standard operating practice in the event of any further outbreaks of COVID-19 or future pandemics. To date, there has been no cost implications for the network maintenance in the two maintenance contracts. One contractor has made no claims. The other has made a significant claim, but this hasn't been accepted by Council. More explanation and a breakdown of the claim has been requested and has yet to be provided.

Strategies and Plans

We commend Council for taking a strategic approach to management activity. A suite of plans / strategies has been identified for development. Key strategies (and current status) include:

- Traffic Counting Strategy Review – a five-year programme of counts (251 counts/year in Whangarei District) has been developed based on catchments (9 in Whangarei District)
- Retaining Wall Management Plan – has provided annual funding profiles for maintenance, component renewal and replacement of retaining walls based on route criticality
- Drainage Management Plan – has provided annual, risk-based funding profiles for water table maintenance/ renewal, kerb and channel renewal, culvert renewal, culvert flushing and subsoil allowance
- Resilience Management Plan – currently being developed
- Forestry Loading Review and Impact Assessment – currently being developed
- Unsealed Road Strategy – currently being developed (including formation of Centre of Excellence).

Looking ahead, we would suggest that Council consider the provision of a safe and accessible footpath network (managed plan which prioritises projects by condition, compliance, pedestrian demand and ONRC) as an area where a strategic approach will also benefit the network. The current AMP acknowledges that the District's footpaths are deteriorating due to lack of renewals and recognises the need to provide for the mobility needs of an aging population. The strategic approach to footpaths (and shared paths) will also need to consider the many different user requirements, including those relating to pedestrians, runners, prams, wheelchairs, mobility scooters, e-scooters, skateboards, and even Paxsters (postal delivery). As mentioned in Section 2 *Network Condition and Management*, guidance on the design of footpaths can be found in *Waka Kotahi Pedestrian Planning and Design Guide*⁷.

⁷ Refer to <http://nzta1.cwp.govt.nz/resources/pedestrian-planning-guide/>

Development Standards

Our field inspections included new subdivisions and other developments, where we noted that many features don't align with current best practice (e.g. mountable kerb) or with sustainable maintenance/renewal practice (e.g. decorative lamp posts, AC used on access / low volume streets). Other concerns included carriageway and verge widths, culvert headwalls, swales and rain gardens, street tree placement and speed treatments. The team was concerned that a lack of control of these design aspects will lead to a marked increase in compliance costs to meet and maintain standards (e.g. ongoing maintenance from poor drainage feature design; cost of adding or upgrading pedestrian facilities for accessibility).



It is recommended that Council review their subdivision development standards and update as required, including strengthening linkages to the District Plan and NZS 4404. The inclusion of a comprehensive review, or standalone review, of asset design specifications and detailed drawings will facilitate cost effective maintenance/renewal and ensure best whole of life costs by standardising the asset specifications.

Consequential Opex

We are concerned that Council is not adequately allowing for the impacts of consequential Opex (operating expenditure – i.e. the ongoing spend required to maintain and operate a new asset over its useful life) when programming the capital construction of new assets. Completion of a new asset early in the three-year National Land Transport Programme (NLTP) will result in consequential Opex incurred in the latter year(s). These maintenance/operational costs should be included in the project cost structure, or otherwise catered for, to ensure that the network's maintenance budgets are not adversely impacted. It should be noted that some projects (e.g. LED lighting replacement) will reduce future maintenance cost and should be treated the same way.

Vested assets similarly generate consequential Opex. The current AMP makes allowance in the maintenance budgets for 0.5% growth of assets (primarily assets vested in Council), but this does not include state highway revocations, cycle network projects, seal extension programme or other capital projects. Taking the example of seal extensions, Whangarei District has a historic annual seal extension programme of 1-2 km pa. In discussions with staff, we learned that additional external funding of approximately \$4M pa may be accessed by Council and invested in the sealing of unsealed roads. We are concerned that this unprecedented increase in the size of the sealed network (and potentially not justifiable under Waka Kotahi policies) will result in higher maintenance and renewal cost in the long term. We do recommend that Council considers affordability and delivering cost effectively against a robust benefit cost analysis based on whole of life cost (noting that a sealed road typically costs 2-3 times as much to maintain per year). And ensure that the forecast increases in maintenance, operation and renewal costs are carried through in all future maintenance budget regimes.

In addition, we have concerns that, on the newly sealed roads, increased speeds and road user expectations may result in adverse safety outcomes. We already note that a number of the projects in the LCLR programme appear relate to Funding assistance from Waka Kotahi may not be available for subsequent resilience and safety improvements on these seal extensions, so it is important that the seal extensions and all associated enhancements are designed and constructed to a standard which will minimise any need for any such subsequent capital improvement work.

Recommendations	<p>We recommend that Council:</p> <p>R3.1 Reviews development standards (technical specifications and detailed drawings) to reduce the variety and ensure the quality of asset types to be maintained by Council.</p>
Suggestions	<p>We suggest that Council:</p> <p>S3.1 Prioritises the development of staff, including the continuation of the current cadetship programme, to ensure continuity of level of service and resource.</p> <p>S3.2 Robustly assesses the consequential Opex commitments relating to any new or vested assets and ensures inclusion in subsequent budget forecasts.</p>
Whangarei District Council's comment	<p>R3.1 – accepted. The WDC are currently reviewing the Engineering Standards document for development throughout the District. Council is working with the other Councils in Northland to develop a single EES document for the region. The NTA is responsible for the management of roading and traffic safety issues relating to new developments for the WDC and will be able to apply appropriate and consistent standards across the Regions. There is a historical issue with low and inconsistent standards enforced by Council over previous years which will obviously take some time to address.</p> <p>S3.1 - accepted - The establishment of the NTA allows the four participating Councils to pool existing resources, attract better qualified staff and make provision for training and succession planning across the Region. The benefits from the amalgamation are already evident for the organisation.</p> <p>S3.2 - accepted – Provision for consequential Opex for growth and vested assets has been made in the 30-year costings for both the 2018/28 and 2021/31 AMPs and this includes for the effects of seal extension (of about 2km/year), state highway revocations (it allowed for 30km of SH1 to be handed to WDC as part of the 4-laning project), cycle network projects etc.</p> <p>The additional funding for up to \$4M per annum for extra unsubsidised seal extensions is a political decision late in the development of the 2021/31 Draft LTP. If approved, funding for consequential Opex will be included in subsequent LTP and RLTP requests.</p>

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4. Data Quality	Some Improvement Needed
<p>Road Efficiency Group's (REG) 2019/20 data quality report has scored Council with 77/100 (a score of 100 is achieved by having all metric results at the expected standard level). The improvement from the 2018/19 score of 68 demonstrates that Council has put some effort into data management and quality, but further improvement is warranted.</p> <p>The ONRC PMRT indicates (as at August 2020) that high importance areas for improvement (i.e. have major data issues) relate to:</p> <ul style="list-style-type: none"> • Road condition rating 	

- Pavement layer and Surface records
- As-built data for pavement renewal and AC resurfacing
- Traffic count programme.

It is important that Council investigates, identifies and resolves these data gaps. Doing so will improve reporting at an individual level and allow Council to accurately compare its ONRC performance with its peers.

Condition Rating

Council has not been undertaking condition rating surveys since 2015. Condition rating is a mandatory requirement by Waka Kotahi in order to receive funding assistance. The Waka Kotahi Knowledge Base⁸ states “Roughness and condition rating surveys of all sealed roads must be undertaken at least every second year. Condition rating surveys of all sealed roads carrying more than 2000 vehicles per day are to be undertaken annually.” And “As a condition of receiving funding assistance for road maintenance, Waka Kotahi requires the use of a road asset management system for treatment selection, which will include the following inventory data:” and follows with a list which includes “condition rating”. Further, “...the raters acting on behalf of the Approved Organisation are required to hold a current certificate...”.

The data gleaned nationally from condition rating assists Waka Kotahi in comparing the condition of one council’s network with another or with peer groups. It also provides an independent annual condition trend indicator for each network. The key indicators used are STE, PII and SCI.

Common condition rating practice is to rate the network based on a 10% sample which is generally 50 metres every 500 metres. While acceptable, this methodology does not correlate well with the actual condition of the network. Research (ref NZ Transport Agency Research Report 528) shows that a high correlation exists between a full network survey and a network sample survey when the sample frequency is every 200 metres and the sample size is 40 metres (a 20% sample).

General

A review of RAMM Manager reports indicates that Maintenance Cost data batches have historically only been loaded three or four times a year, but practice has improved since April 2020 with the batches being loaded monthly. Best practice⁹ is to acquire the data, review for accuracy and completeness and upload into RAMM on a monthly cycle.

Further, queries run on RAMM involving maintenance costs highlighted anomalies in the data. From 2015/16, extraordinarily high costs have been recorded for unsealed roads (for example routine grading costs \$30/m (10 km is \$300,000)) and for vegetation control (for example vegetation envelop clearing and chemical control each costs \$50/m (10 km is \$500,000)). Activities such as core maintenance relating to environment, surfacing, traffic facilities, etc, should be reasonably consistent from year to year, but the data showed large gaps in expenditure on these activities and an occasional unexplainable peak. It is likely that unrealistic unit rates and erroneous coding of works may be the source of some of these results and it is suggested that Council works closely with its contractors to ensure a consistent understanding and approach to the recording of maintenance cost data. Robust maintenance costs facilitate invaluable analysis of network expenditure trends by year, by kilometre, by classification and by road - the measure of the actions taken to maintain the network inventory. They also provide a network-specific maintenance cost history that can be used in NPV calculations to justify renewal activity.

⁸ Refer to <https://www.nzta.govt.nz/planning-and-investment/planning-and-investment-knowledge-base/activity-classes-and-work-categories/road-maintenance/wc-151-network-and-asset-management-201821-nltp/>

⁹ Refer to <https://www.nzta.govt.nz/assets/Road-Efficiency-Group/docs/practice-overviews/REG-practice-overview-maintenance-activity-data.pdf>

Smooth Travel Exposure (STE), based on the data in the ONRC PMRT, is poor across all classifications in comparison to peer group averages. For this reason, it is prudent to be confident in the accuracy of data in relation to these measurements so that trends can be monitored. However, the PMRT shows a 100% STE reading for both rural and urban arterial roads in 2015/16 and a substantial drop in the following year. This type of anomaly indicates a lack of quality assurance regarding the data being reported to external parties (historically at least) and we suggest that council review its quality processes surrounding the provision of data to external parties and the subsequent review of published data.

Council is reminded that closer scrutiny will be given to data accuracy in future TIO annual achievement reporting and to the delivery of the forecast quantities within the approved budget.

<p>Recommendations</p>	<p>We recommend that Council:</p> <p>R4.1 Ensures compliance with Waka Kotahi funding rules that require condition rating surveys to be undertaken.</p> <p>R4.2 Resolves the data issues identified in the REG Data Quality report to improve data accuracy, completeness and timeliness.</p>
<p>Suggestions</p>	<p>We suggest that Council:</p> <p>S4.1 Considers reviewing the relevant processes to ensure that maintenance cost data added to the RAMM database is timely, accurate and complete.</p> <p>S4.2 Considers reviewing the relevant quality processes ensuring accuracy of data provided to external parties and of the subsequently published data.</p>
<p>Whangarei District Council's comment</p>	<p>R4.1 Condition Rating: The NTA has not completed condition rating for a number of years due to its proven inaccuracies, safety concerns and the emergence of better repetitive collection technologies. The NTA ran both condition rating and HSD Cracking collection in parallel for two years to determine the effectiveness of HSD crack data. It was found that manual rating failed to capture the extent of cracking and potholes on the network, which was poorly informing decision, making tools such as the long-term pavement performance model. We understood and took lead from the NZTA, State Highways, in stopping condition rating on the same grounds as they did. However, the NTA has introduced, tested and has implemented new technology to provide this data and is currently in the last steps to fully implement the population of this data into the standard rating tables in RAMM. Since Council has been collecting the HSD Crack data, we have been analysing the data and using this in our decision-making process. This will allow NTA to more fully report SCI and PII on the network. SCI is the only measure heavily impacted by this technology implementation. PII uses the data sets already captured by the NTA through HSD survey (in the form of HSD rutting roughness and texture-flushing, 100% network coverage).</p> <p>As commented above we have taken lead from NZTA H&O in the discontinuing condition rating as blunt tool for the system we run today. Unlike the NZTA H&O condition rating has been replaced with more effective repetitive data collection through HSD Crack and Pothole data collection as part of comprehensive HSD data collection strategy (roughness, rutting, texture, geometry, cracking, potholes, video survey completed as one exercise) which covers 100% of the sealed network to better inform tools such as long term pavement performance models. RR 528 refer section 4.6, visual rating remains a subjective process with</p>

	<p>variable outcomes regardless of sample size as clearly demonstrated by the report.</p> <p>NTA believe NZTA need to look across the country at this item. RR528 has now led to further review of how and what condition should be collected to keep step with the changing nature of technologies in the world. NTA believe that there is in fact a great opportunity for the NZTA in using the work the NTA have completed to date and for NZTA to assist the NTA to further develop this work to gain better outcomes in regard to decision making and ensuring the right thing at the right place at the right time. A number RCA's do not do condition rating any longer. The training is difficult to source the practice is unsafe and subjective.</p> <p>R4.2 accepted: Council will continue its improvement programme to address the data issues identified in the REG Data Quality report to improve data accuracy, completeness and timeliness.</p> <p>S4.1 accepted: This was discussed during the audit and initial findings into these costs have found a keying error in the way LS items such as grading have been given default values. This will be reviewed and corrected. As for the other anomalies at specific sites these will be looked at and corrected or reviewed where possible.</p> <p>S4.2 accepted: - immediate start</p>
Auditor's Response	<p>Regarding recommendation R4.1, we accept that technology is opening up possibilities for safer and more efficient means of carriageway condition assessment. However, at this time, a replacement methodology has not been agreed and the traditional RAMM condition rating remains a mandatory requirement in the Waka Kotahi funding rules.</p> <p>One of the key benefits of condition rating to Waka Kotahi is as a comparative tool. For example, the results aid in identifying networks requiring assistance to provide the same level of service as peer group or neighbouring networks and can be used as evidence for consequent funding applications. The majority of councils in New Zealand are currently compliant with this requirement.</p> <p>It should be noted that, in addition to rating the condition of pavement and surfacing, condition rating surveys also rate the condition of shoulders and surface water channels. With resilience and security included as a GPS 2021 outcome, there will be a need for greater emphasis on the condition of drainage assets obtained through manual condition rating.</p>

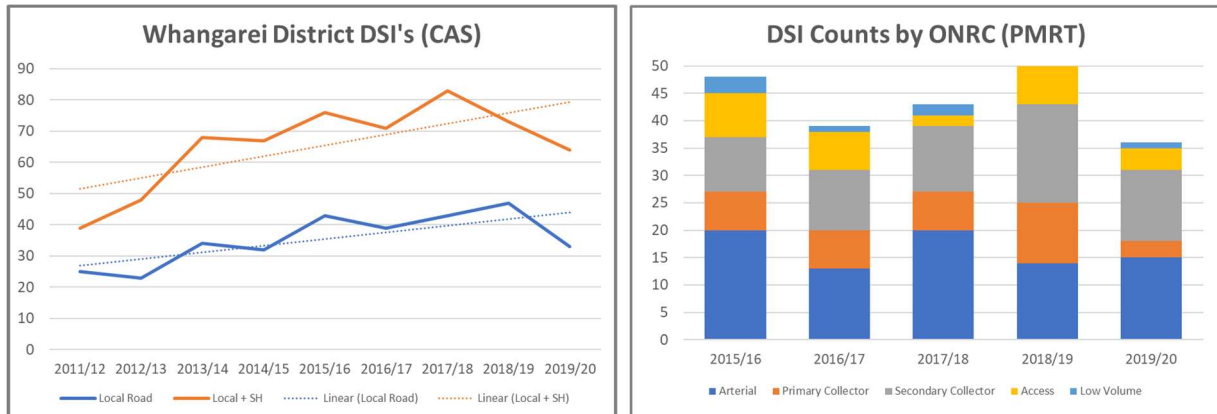
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5. Road Safety

Some Improvement Needed

Performance Monitoring

The annual number of deaths and serious injuries (DSI's), listed in New Zealand's Crash Analysis System (CAS) as occurring in the Whangarei District on the local road network, has been steadily increasing over the past eight years. There was a notable drop-off in 2019/20, most likely due to the COVID-19 travel restrictions in place during that year. Numbers on the state highway network are increasing at a slightly faster rate. CAS data is illustrated on the graph below on the left. The graph on the right is taken from the ONRC PMRT and shows crash distribution by road category. Crashes on Arterial roads and Secondary Collector roads contribute significantly to the DSI totals.



The levels of collective risk (crashes per km) generally align with peer group averages but are a little higher on rural Secondary Collector roads. Personal risk (crashes per VKT) is comparatively higher on most road classifications, particularly rural Primary and Secondary Collectors. The *Communities at Risk Register 2019* identifies pedestrians as a risk area of high concern. Rural road loss of control &/or head-on is included as one of four areas of medium concern. It is also noted that four areas which were of medium concern in 2018 are no longer ranked as concerns under the 2019 evaluation.

Over the last five years (2015/16 – 2019/20), CAS records show 181 crashes which resulted in 205 DSI's. Of these, over 15% of the crashes occurred on just three roads (Ngunguru Rd, Whangarei Heads Rd and Kamo Rd), 48% were 'Bend-Lost control/Head on' type crashes, 17% involved pedestrians and 21% involved motorcycles. Investigation is required to identify common factors in crashes and develop potential engineering solutions. Note that solutions can reduce the likelihood of a crash occurring or they can reduce/mitigate the consequences, if the crash is a result of non-riding factors.

Road Safety Audits

Council has not historically been fully compliant with Waka Kotahi requirements to undertake road safety audits at key stages of the "development of any improvement or renewal activity that involves vehicular traffic, and/or walking and/or cycling, proposed for funding assistance from the NLTP"¹⁰. However, over the last 12 months, the NTA road safety team has developed and is implementing processes to embed good safety audit practices in the organisation. The team's work is commended, and we do recommend that they maintain a regulatory role in signing off the audit process for all relevant projects.

¹⁰ Refer to <https://www.nzta.govt.nz/planning-and-investment/planning-and-investment-knowledge-base/activity-classes-and-work-categories/road-improvements-other-road-related-funding-policies-guidance/road-safety-audit/>

General Observations

From our observations, Council is proactive in the investigation, development and implementation of safety-related engineering solutions for at risk sites. For example, the audit team visited a site currently under investigation at the intersection of Boundary Road with Korau Road. The site comprises a priority-controlled T-junction where the turning traffic on the 90° bend has right of way. Unfortunately, the vertical alignment was designed with crossfalls to accommodate a through road across the head of the T. The priority traffic now must traverse the right turn on a curve with negative superelevation. This has been compounded further by the introduction of right turn bay (for oncoming traffic) effectively moving the right turning traffic to outer edge of the carriageway where the crossfall is steepest. It is not unexpected that some vehicles fail to take the bend and crash into the adjacent property owners' front fence. Staff are considering a number of safety improvement options.

We also commend Council on the well planned and connected walking and cycle network in and around Whangarei City. However, we did note some incidences of inadequate maintenance (poor signage, sunken catchpits, loose aggregates, etc) on the on-road cycle lanes. The *Whangarei District Walking and Cycling Strategy 2018* recognises that it is necessary to “ensure that the maintenance and inspection programmes for the road network consider the safety of cyclists, particularly in relation to the condition of road shoulders” and we would reinforce this requirement. On Port Road (just south of Okara Drive) we observed a cyclist “use left shoulder” sign on a marginal width shoulder. Within a short distance, at the bridge, that shoulder width reduces to approximately 100mm adjacent to the lip of channel. While retrofitting cycle lanes into existing road networks can often lead to this sort of scenario, some thought should be given to providing safe and sound guidance to vulnerable network users.



During the field inspections, we observed the presence of loose chip and detritus on the sealed road surfaces at intersections, reducing traction and erasing roadmarking. In several instances, where the side road was unsealed, loose gravel from this road had migrated into the intersection. A preferred method to improve safety, road condition and reduce maintenance costs is to chip seal the side road approach. The optimal seal back distance is calculated based on the safe stopping distance for a heavy vehicle approaching the intersection. Sealing back provides safety benefits as well as facilitating the installation of full intersection makings, reducing dust and eliminating corrugations formed by acceleration and braking forces. Increased sealing back should also be considered on rural driveways and farm entrances to minimise gravel migration and edge break at these locations.

Frequent use of humps, some non-complying, as a speed control feature was noted in urban areas, including new developments. While humps can be useful for slowing vehicles down, the sudden change in gradient can sometimes be detrimental to the surrounding residents and businesses due to the increased noise and vibrations generated by this, especially from larger vehicles such as trucks or buses. Speed humps should not be used on bus routes or heavy traffic routes. Alternative forms of urban speed control can be found in the Austroads *Guide to Traffic Management Part 8: Local Street Management*¹¹. Where speed humps are used, they must be clearly visible to approaching motorists, correctly signed and road marked and must be illuminated by streetlights.

Other concerns noted by the team included:

- Prevalence of uncontrolled intersections
- Inconsistent use of hazard markers on rural roadside obstacles
- A lack of pedestrian crossing facilities in main streets (centres of retail, commercial and community activities).

<p>Close to 60% of motorcycle DSI crashes and 31% of all DSI crashes (57 of the 181 total) over the past 5 years (CAS data) occurred on bends on open roads. The audit team observed that both road delineation (edge marker posts, centrelines, edge lines) and curve warning signage on the rural network is inconsistently applied and often non-complying with standard guidance for implementation. It is important that road safety is a high priority for Council and their maintenance suppliers. Ensuring consistent application and maintenance of road and curve delineation, based on road classifications, is an essential step in reducing the risk of death and serious injury crashes. Guidance on the use and placement of delineation devices can be found in Part 5 (draft) of the TCD manual¹².</p>	
Recommendations	<p>We recommend that Council:</p> <p>R5.1 Ensures ongoing full compliance with Waka Kotahi funding rules that require Road Safety Audits for renewal and improvement projects.</p> <p>R5.2 Develops and implements a programme to upgrade rural road delineation, with a strong focus on curve warning, to ensure a safe and consistent driving environment during both day and night.</p>
Suggestions	<p>We suggest that Council:</p> <p>S5.1 Considers sealing back unsealed road approaches to rural intersections.</p>
Whangarei District Council's comment	<p>R5.1 accepted- Council will be compliant from 2020/21</p> <p>R5.2 accepted - Programme included in the 2021/24 RLTP, Road to Zero Funding package, (subject to future funding)</p> <p>S5.1 accepted – Will be included in Council's existing programme of sealing unsealed rural road bridge approaches, subject to future funding.</p>

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¹¹ Refer to <https://austroads.com.au/publications/traffic-management/agtm08>

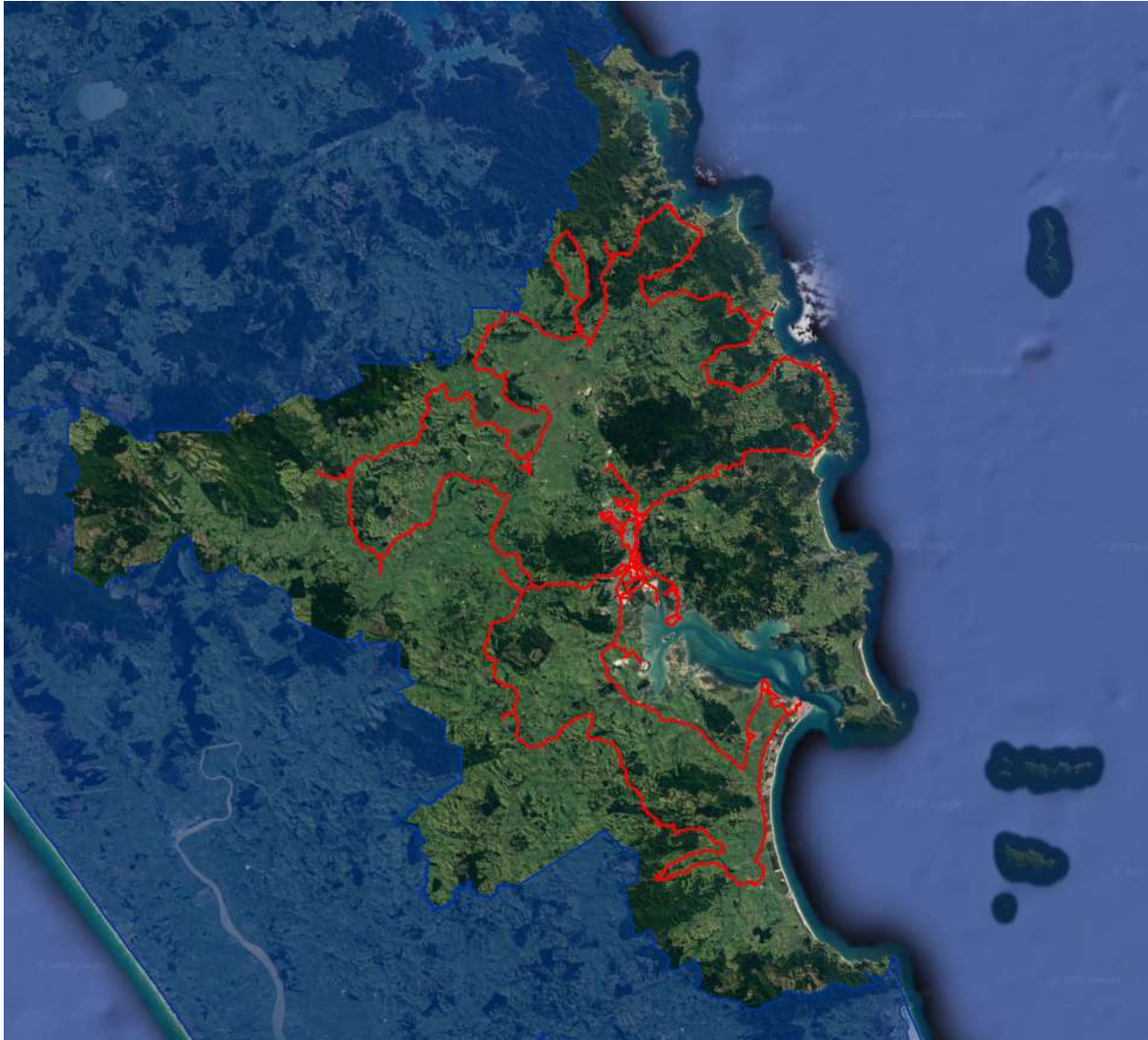
¹² Refer to <https://www.nzta.govt.nz/assets/consultation/draft-traffic-control-devices-manual/docs/TCD-manual-part-5-draft-June-2018.pdf>

3.0 APPENDICES

APPENDIX A

Network Field Inspections

Audit routes:



APPENDIX B

Sample of Audit Photos



Highlights from the Whangarei District audit include (clockwise from top left) a good standard of work on rehabilitations and reseals, safety improvement projects supporting active travel facilities, the growing strategic cycle network, Whangarei City's harbour bridge (Te Matau ā Pohe), maintenance contractors seen working safely and effectively on network, good traffic management at worksites, use of crack sealing to extend surface and pavement life, and a good standard of ride on unsealed roads.



Some areas for improvement include (clockwise from top left) providing unobstructed footpath width, appropriate and consistent warning devices around slumps and dropouts, management of stock crossings, maintenance of bridge approaches, consistent road and curve delineation, warning of kerb extensions/traffic islands on the left (keep right signs), maintenance of utility lids/covers in the traffic lanes and maintenance of signs.

5.4 Infrastructure Operational Report

Meeting: Infrastructure Committee
Date of meeting: 13 May 2021
Reporting officer: Simon Weston (General Manager Infrastructure)

1 Purpose

To provide a brief overview of work occurring in the current financial year, across services that the Infrastructure Committee is responsible for.

2 Recommendation

That the Infrastructure Committee notes the Infrastructure Operational Report update.

3 Background

In November 2019, Council adopted committee terms of reference for the 2019 – 2022 triennium, with the purpose of the Infrastructure Committee being to ‘oversee the management of council’s infrastructural assets, utility services and public facilities’.

This report provides the Committee with a summary of Infrastructure operations during March – April 2021.

4 Significance and engagement

The decisions or matters of this Agenda do not trigger the significance criteria outlined in Council’s Significance and Engagement Policy, and the public will be informed via Agenda publication on the website.

5 Attachment

Infrastructure Operational Report – March 2021

Infrastructure Group

Monthly Operational Report

March 2021

Infrastructure Monthly Operational Report

Reporting Officer: Simon Weston (General Manager Infrastructure)

Date: May 2021

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Customer Request Management Services (CRMs)	Error! Bookmark not defined.

Projects Overview

Infrastructure Planning & Capital Works

Planning & Capital Works Projects	Current Stage	Estimated Construction Start Date	Estimated Completion Date	RAG Status
Major Projects - Sense of Place				
New Town Basin Park	Construction	Oct-20	Dec-21	
Amphitheatre is completed. Water feature, hard landscaping, lighting and toilets are being progressed.				
Town Basin Wharf & Boardwalk Renewals	Construction	Jan-21	Oct-21	
Piling due to be completed by March 19.				
Ball Clock (3rd party project)	Final drawings	Aug-20	Apr-21	
Off-site fabrication of ball clock progressing.				
Town Basin Bus Facilities Upgrade	Design	Jun-21	Sep-22	
Landscape design progressing, stakeholder meetings ongoing, Clapham's concepts under review.				
Pohe Island Destination Playground & Public Toilets	Procurement	Oct-21	Feb-22	
Construction tender awarded to United Civil Construction.				
Pohe Island Master Services Installation	Construction	Apr-21	Aug-21	
Construction tender awarded to United Civil Construction.				
Tamaterau Carparks Upgrade (TIF funded)	Design & Consenting	Oct-21	Jan-22	
Cultural impact assessment received. Discussions with hapū on next the steps have begun.				
Restoring the Mauri of Matapōuri Stg 1 (TIF funded)	Investigation & Design	Oct-19	Nov-21	
Recycling & rubbish facilities installed. Investigating toilet options. Works on estuary dune protection early 2021.				
Abbey Caves Car Park & Public Toilets (TIF funded)	Construction	Mar-21	Jun-21	
Construction commenced in March 2021, due for completion end of May.				
Quarry Gardens Carparks	Investigation & Design	Aug-21	May-22	
CIA due end April for the consent application. Stream repairs from August, carpark construction during summer.				
Major Projects - Parks & Recreation				
Matapōuri Beach Restoration	Physical Works	Apr-21	Oct-21	
Contract awarded to United Civil. Work scheduled to start May 3 rd after school holidays.				
Princes Road Seawall Renewal	Physical works	Apr-21	Jul-21	
Contract awarded to Huband Contractors. Work scheduled to start in April.				
Ruakākā Sports Fields (Sand Removal)	Physical works	Sep-20	Aug-21	
57,000m ³ of sand removed. 27,000m ³ still to remove. Looking to continue the sand removal in May/June.				
Ngunguru Seawall Renewal	Design	TBC	TBC	
Preliminary re-design prepared, discussion underway with Arborist regarding works under dripline.				
Town Basin Lighting Renewals	Construction	Apr-21	Jun-21	
Tender awarded to McKay's. Works scheduled for April.				
Tikipunga – Sports Field Improvements	Practical Completion	Nov-19	Sep-21	
Field 10 handed over to WDC Parks. Project in defects liability period.				
Pyle Road West Seawall Renewal	Procurement	May-21	Jul-21	
Project being tendered for construction. Tender closes 20 th May.				
Waipu Youth Activity Zone - Skatepark	Design	Oct-21	Dec-21	
Tender closes mid-April. Construction will be scheduled after winter.				
Cobham Oval Carpark Upgrade	Construction	Oct-20	Jun-21	
Construction commenced October, completion due June 2021.				
Frank Holman Track Renewal	Consenting	Oct-21	Dec-21	
Consent application in progress.				

Major Projects - Water				
Whau Valley Water Treatment Plant	Construction	Mar-19	Oct-21	
Commissioning commenced in March, opening in May 2021.				
Major Projects - Waste & Drainage				
Whangarei WWTP Discharge Consent Renewal	Options Assessment	n/a	Aug-21	
Draft Dynamic Adaptive Planning Pathway (DAPP) study to be presented to key technical stakeholders in April.				
Stormwater Network Consent Applications	Technical Reports	n/a	Dec-21	
Stormwater Catchment Strategic Assessment underway. Data gathering, asset updates & mapping continue.				
Major Projects – Compliance & Regulatory				
New Animal Shelter	Design	Nov-21	Dec-22	
Cost Estimate due.				
Major Projects – Venues & Events				
NEC Lighting Upgrade	Completed	Nov-20	Mar-21	
Lights commissioned 28/29 March. Initial reports indicate international broadcasting standards are exceeded.				
NEC Replacement Roof	Concept Design	TBC	TBC	
A value engineering exercise is being undertaken. Due end of April 2021.				

Three Waters Delivery Plan Projects (\$11.78m DIA Funded)

Three Waters Delivery Plan Projects	Current Stage	Estimated Construction Start Date	Estimated Completion Date	RAG Status
Whareora Rd Watermain Renewal	Complete	Nov-20	Apr-21	
Renewal of 800m PVC main. Nearly complete.				
Rewarewa Rd Watermain Renewal	Complete	Dec-20	Apr-21	
Renewal of 800m AC main. Brought forward to align with roading project. Final testing underway				
Kamo Rd Watermain Renewal	Construction	Apr-21	Aug-21	
Renewal of 900m AC main. Construction tender awarded.				
Kioreroa Rd Watermain Renewal - Design	Design	n/a	Sep-21	
Renewal of 2200m AC main. Brought forward to align with CIP/PGF funded roading upgrade project.				
Whau Valley Water Treatment Plant - Stage 2	Construction	Jan-21	Oct-21	
Variation awarded for stage 2. Construction started, due to complete October 21.				
Poroti Water Treatment Plant - Design	Design	n/a	Mar-22	
Design awarded to Beca.				
Water Filling Points	Design	Feb-21	Mar-22	
One new filling point completed.				
Leak Detection – Water Supply Network	Investigation	n/a	Mar-22	
Work commenced. Leaks found through investigation will be fixed under the maintenance programme.				
Network Modelling – Water & Wastewater	Design	n/a	Mar-22	
Updates to water models, and the Whangarei and Bream Bay wastewater models.				
Asset Condition Assessments – WW and SW	Investigation	n/a	Mar-22	
A programme of CCTV pipe inspections to obtain asset condition information to inform renewal priorities. Ongoing.				
Asset Data Improvements – 3 Waters	Investigation	n/a	Mar-22	
Ongoing. Trial process for stormwater manholes in CBD surveyed in March.				
Enhanced Water Testing at Laboratory	Design	Apr-21	Sep-21	
Assessing quote received from suppliers.				
Hikurangi WWTP – Inlet Screen & Plant Upgrades	Design	Mar-21	Mar-22	
Screen due in May. Monitoring equipment to be installed in April. Data to be collection until Aug 21.				
Ngunguru WWTP – Inlet Screen	Completed	Jan-21	Jul-22	
Civil work for the inlet screen complete. Screen due in May.				

Oakura WWTP – UV Upgrade	Completed	Jan-21	Feb-21	
UV upgrade completed.				
Ruakākā WWTP – Wetland Upgrade	Initiation	Jul-21	Mar-22	
Desludging of existing wetland requires resource consent. At risk, backup project ready to go instead.				
Whangarei WWTP Building Seismic Upgrade - Design	Investigation	n/a	Mar-22	
Initial report received and reviewed. Options under investigation.				
Kauika Rd Wastewater Upgrade	Procurement	n/a	Mar-22	
Design completed. Preparing to tender construction as a backup project.				
Heretaunga St Wastewater Upgrade - Design	Investigation	n/a	Mar-22	
Investigation and design to address surcharge and overflow issues. CCTV of catchment to be arranged.				
Te Ao Māori Decision Making Model (CCAP)	Execution	n/a	Mar-22	
Project Execution Plan drafted.				
Mātauranga Māori Report & GIS Capture	Execution	n/a	Mar-22	
Project Execution Plan drafted.				
Three Waters Reform Options for Northland	Execution	n/a	Jun-21	
Investment Logic Mapping workshops held. Draft reports being reviewed.				
Three Waters Request for Information	Completed	n/a	Feb-21	
RFI is 100% complete including further information and Special Factors request.				

Waste and Drainage

Waste and Drainage Projects	Current Stage	Estimated Construction Start Date	Estimated Completion Date	RAG Status
CON20055 - Whangarei Sewer Renewal 2019-2021	Construction	Feb-21	Jun-21	
Construction is now underway				
Tikipunga - Heretaunga St Sewer Upgrade Stage 1	Construction	Feb-21	Jun-21	
Construction underway				
Marsden Bay-Ruakaka WWTP Rising Main Upgrade	Design	Jul-21	Dec-21	
Design underway.				
CON20061-Cove Rd-Waipu WWTP Rising Main	Construction	Apr-21	Aug-21	
Construction has started.				

Water Services

Water Services Projects	Current Stage	Estimated Construction Start Date	Estimated Completion Date	RAG Status
Water Treatment Plant Upgrades	Construction	Sep-20	Jun-21	
Various works, programme being developed.				
Meter Replacements	Design	Jan-21	Jun-21	
Focus on large and bulk meters, work started after delays developing programme.				
Reticulation Programmed Works	Construction	Jul-20	Jun-21	
Armstrong Ave is next area of works.				
Minor Projects - Emergency Works	Design	Jul-20	Jun-21	
Ruakaka Clarifiers complete, other works ongoing.				
SCADA Upgrade	Construction	May-19	Dec-21	
Ahuroa, Poroti, Maungakaramea, Mangapai complete.				

Roading

Roading Projects	Current Stage	Estimated Construction Start Date	Estimated Completion Date	RAG Status
LED Street Lighting – Supply & Install (V Category)	Construction	Jul-19	Jun-22	
Retrofit completed. Southern infill contract - city work nearly completed. Northern infill contract well underway.				
KSP Stage 5 (Final link to Kamo Village)	Detailed Design	Feb-21	Jun-23	
PR020003 Funding for detailed design complete. Business case accepted and detailed design well underway.				
Dent Street Pedestrian Crossing Upgrade	Design	Sep-21	Nov-21	
Design nearly completed. Construction to coincide with the New Town Basin Park project completion.				
Port / Kioreroa Intersection Upgrade	Design	May-21	Nov-22	
Detailed design underway, consultation is ongoing and tender documents released with tenders closing 29 April.				
Raumanga Shared Path (CIP)	Design	Oct-21	Jun-23	
Preliminary design underway, including route confirmation.				
Tikipunga Cycle Trail Stage 2 (CIP)	Construction	Nov-20	May-21	
Path construction nearly complete, bridge fabrication underway.				
Kamo Shared Path – Kensington Avenue Link (CIP)	Detailed Design	May-21	Jul-21	
Detailed Design complete, consent application submitted, procurement planned for March/April 2021.				

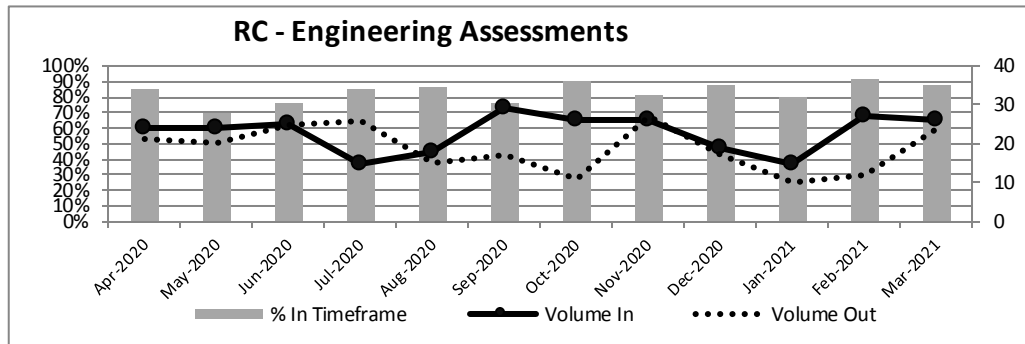
Infrastructure Planning & Capital Works

Infrastructure Planning

Work is continuing to support the District Plan team on the infrastructure capacity in areas of the district where the proposed Urban zoning is appealed and progressing to mediation or Environment Court. Work is also underway to ensure infrastructure requirements are accounted for within PC150 – Marsden City private plan change.

Infrastructure Development

Development Engineering



New Applications

Development	Location	Size (Lots)
New pedestrian bridge at Tikipunga Sports Park	Tikipunga	1
Construction of replacement pedestrian bridge in AH Reed Memorial Park	Tikipunga	1
Retrospective application for an educational facility	Maunu	1
12 additional retirement units	Anchorage	12
Two lot subdivision in the waterfront zone & commercial precinct	Town Basin	2
SS Developments – Residential Lots	Morningside	13
3 Staged Subdivision and land use, construction of a comprehensive care village, bulk earthworks and removal of portion of stone walls	Maunu	

Engineering Plans

Development	Location	Size (Lots)
Workman Properties Stg 3	Avenues	8
Classic Builders Stage 1	Tikipunga	28
Logyard Road	Port Road	9
SS Developments	Otaika	5
Marsden Cove - Stage 5E	OTP	9

Developments under construction

Development	Location	Size (Lots)
Puriri Park	Puriri Park Road	37
Bream Bay Village	One Tree Point	75
Nova Scotia	Waipu	18
Marsden Cove Ltd	Stace Hopper Drive, One tree Point	70
Slatter	Te Hape, Maunu	12
TMB Developments	Three Mile Bush Road	28
Rock Solid	Kamo	91

Totara Parklands – Stage 8	Tikipunga	52
Barrett Homes - Stage 3	Tikipunga	38
Parklands – Stage 2	Kamo	26
Summerset Retirement Village	Tikipunga	1
Jessie Trust	Tikipunga	98
WFH The Landing Stage 4	One Tree Point	56
Logyard Road	Port Road	9
SS Developments	Otaika	5

The number of applications received in March for Engineering assessment were 26. A total of 24 reports were issued compared to 12 in February and 10 placed on hold for further information. This increase reflects the time of the year when development increases along with an increase in construction due to drier weather.

The 8-day level of service for engineering report delivery was 88% in March, a good result for the high number of reports produced. Our team relies on input from other departments to complete some of the reports, any delays from other departments has an impact on our process. There are ongoing improvements to reduce wait times but there is still some improvement required.

Reliance on external consultants is ongoing when staff take leave, or we have more applications come in than we can resource. A total of 81% of applications were processed by Council staff in March or 21 out of the 26 received. We are currently seeking a new development engineer due to a resignation. Increased reliance on external consultants may be required until we have found a replacement.

Staff recently received personal safety training to respond to potential risks we may face when attending site visits. Staff also attended a Land Development conference in Christchurch where the focus was placed on developing while mitigating natural hazards.

Development Engineers continue to support other departments we are currently assisting the Parks department with inspections for projects in Ruakaka and Pohe Island.



Culvert installation at Logyard Road

Development Contributions

March revenue recovery was \$316,139 with 36 applications assessed as requiring contributions.

Commercial applications are very quiet at present.

Infrastructure Support

Contract claims processed for the month of March were the same as the previous month at 50. 267 purchase orders were processed by the team for March. Public Utility applications continue to increase with 73 public utility tasks completed in the last month compared to 57 in February and 35 in January. Work has begun this month with processing Vehicle crossing permits and its going well. The team has recently begun taking minutes for the pre-application meetings and they are going well.

SIGMA Project – Asset Management System upgrade

Second round of testing is to start mid-April. We are still working through some issues with the setup of the system and integration between tech 1 and GIS is not performing as well as hoped. Processes are being finalized ready for training material to be developed. Mid-May should give us a clear picture if we will be on track for 1st July go-live.

LTP Infrastructure workstream

LTP consultation has been completed with submission responses being provided by each department.

Update to the Engineering Standards

The Engineering Standards is currently in the process of being updated with changes ready for review mid-April by and external consultant. It will then be sent council formatting and layout. Once this stage is complete council will be holding workshops with relevant industry members for discussion and review.

Health and Safety

Health and Safety Risk Update March 2021

Staff reported incidents

Type of incident	#	Description
Incident		<ul style="list-style-type: none"> A near miss reported by a staff member in the kitchen at Walton Plaza. A very aggressive member of the public made a threat to an Infrastructure Development Engineer. Police arrested the person and let him go with a caution. Walton Plaza went temporarily into lockdown until the situation was stabilised. A parks officer was accosted by an aggressive vehicle dweller at Pohe Island while taking photographs for compliance reasons.

Member of public reported injuries

Type of incident	#	Description
Medical treatment injury	1	<ul style="list-style-type: none"> An elderly woman fell over at the cemetery and staff phoned an ambulance and undertook first aid. She sustained multiple injuries.
Minor injury	1	<ul style="list-style-type: none"> Hydrotech came to the aid of an elderly member of the public who they noted had fallen over and suffered grazes from his gravel driveway.

Contractors

Type of incident	#	Description
Lost time injury (LTI)	1	<ul style="list-style-type: none"> A Recreational Services worker had an LTI after driving some distance on the road in a large mower and strained their back.
Medical treatment injury	1	<ul style="list-style-type: none"> A Recreational Services Worker cut through his hand when using a silky saw when tidying up a tree stump.
Minor injury	8	<ul style="list-style-type: none"> A Northland Waste recycling worker suffered a strain to shoulder when throwing wet and heavy cardboard. A Northland Waste worker suffered a cut to hand when sorting glass, even though wearing gloves. Robinson Asphalt reported a worker stepped backwards on uneven ground while reading plans and got a cut to the back of their leg. A Robinson Asphalt worker got a spark in their eye when welding at the new Town basin park, even though he was wearing safety goggles at the time. Hydrotech reported a minor injury to a worker's legs when they slipped down a steep bank. A Recreational Services worker reported a similar incident.

		<ul style="list-style-type: none"> A Recreational Services worker was raking up debris and got stung on the arm by two wasps. Another of their workers got stung on the arm when driving.
Pain and discomfort	2	<ul style="list-style-type: none"> A Recreational Services worker sustained shoulder pain after a shift of emptying rubbish bins. A Recreational Services worker reported a back strain when bending down to pick up a palm frond
Incidents	10	<ul style="list-style-type: none"> Recreational Services reported an incident when reversing a mower down ramps and it slid down, fortunately causing no damage Northland Waste reported a breach of rules when a worker noted as leaving the truck on the street side of the vehicle. Robinson Asphalt reported a near miss at the new Town Basin park when a worker caught his foot in reinforcing steel and tripped. A metal peg was flung into the window of the Aquatic centre while Recreational service were weed eating, causing it to crack. Recreational Services reported an aggressive member of the public incident. There was an altercation going on nearby and one of the people came rushing over to the worker, He retreated quickly, got in his ute and phoned the Police. Recreational Services were almost in an accident while driving, when a driver cut across in front of them without warning. They also reported a woman who ran over one of their cones, while trying to park. Recreational Services reported an incident where their mower bonnet latch was faulty causing it to blow open while driving and the machine sideswiped a tree. Another incident was also reported involving a poor weld on a mower deck that suddenly came away and lifted up A Recreational Services mower got stuck on a bank and required towing out.

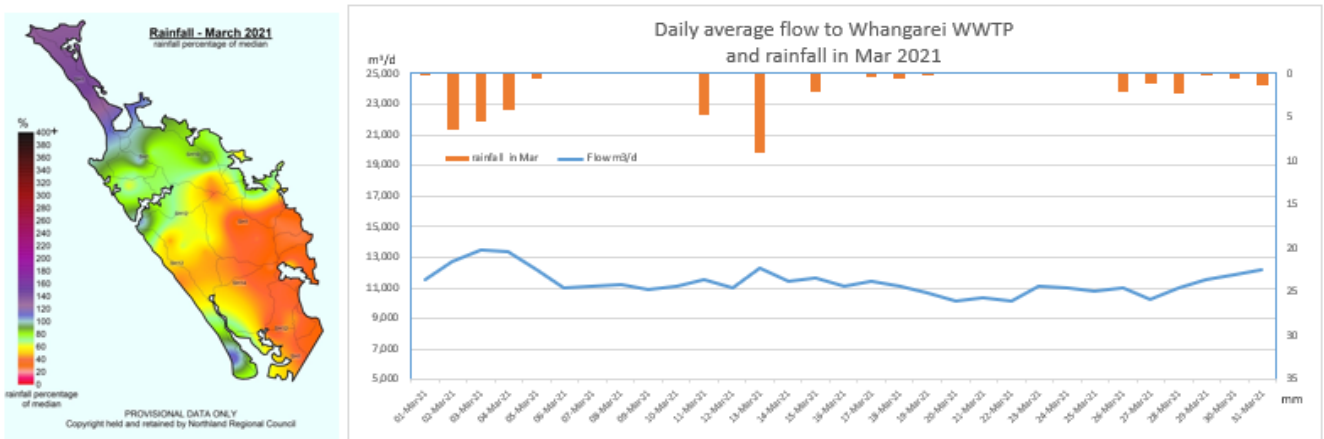
Note: Northland Transportation Alliance incidents are reported separately from this report now.

Waste and Drainage

Operations and Maintenance

Whangarei WWTP

In the first 4 days of March the flow into the plant increased slightly from just above 11,000 m³ to around 13,500 m³. After that the inflow fluctuated at around 11,000 m³. The lowest flow for March was on 20th. The flow pattern was very similar compared to the same period in 2020.



NRC image depicting the percentage of normal rainfall and & graph showing the total daily flow into Whangarei WWTP in March 2021

Activities carried out at the main plant during March included:

- Primary clarifier No 3's wheel replaced;
- Chemical containment bins were installed in sludge room and low flow UV room as per Hazero chemical audit review.
- Return Activated sludge pumps run in manual mode as network switch failed. Replacement was delivered overnight. An extra set was ordered to keep as a spare unit.
- A whiteboard was installed at defac building for drivers to write sludge disposal bin mass to assist with minimizing overloading – centrifuge run times adjusted accordingly.
- Quarterly wetland harvesting indicated good nutrient removal.
- Compression test completed for biogas generator, all parameters are within ranges
- Operation team is working on pictogram signage for hazchem sites.
- Debris removed from supernatant well.

Whangarei WWTP Resource Consent Renewal project

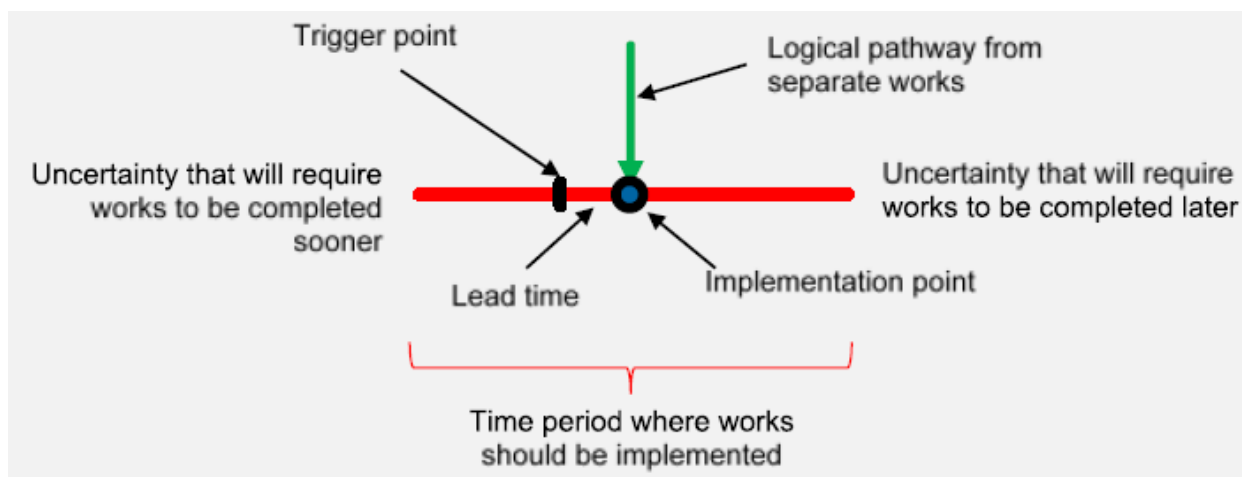
After receiving feedback from a workshop between WDC and technical group stakeholders including: Department of Conservation (DOC), Northland District Health Board (NDHB), local Iwi, Northland Fish and Game (F&G), WDC, with apologies from Northland Regional Council (NRC) and Forest and Bird, Dynamic Adaptive Planning Pathway (DAPP) programme was proposed.

This approach provides guidance on how to develop a future planning that is adaptive and flexible to react to how the future unfolds and avoids redundant infrastructure being built. It also allows response to short/medium term actions that need to be taken and leaves options open for the future if needed. DAPP is a practical planning approach that has been developed in recent years in response to the need to plan for long term and potentially uncertain futures.

DAPP for our resource consent renewal focus on the following:

The below table summaries various adaptive planning concepts:

Concept	Description	Examples
Driver	A factor that has a significant influence on the need for WWTP upgrade works	New treated effluent standard introduction
Implementation point	The point at which upgrade works are predicted to be required in response to a driver.	<i>New primary clarifier required when population reaches 70,000 equivalent</i>
Lead time	The time prior to the implementation point required for final concept preparation, construction and commissioning work, considering uncertainty once a decision has been made.	<i>It might take a primary clarifier five years to design, construct and commission.</i>
Trigger point	The point that “lead time” commences in order to achieve implementation at an appropriate time. Determined in relation to a particular driver/s.	The Peak Wet weather flow is approaching 1,320 L/s and may exceed this limit in five years.
Uncertainties	Uncertainties may require the works to be completed sooner or later.	<i>Additional or lower than expected growth in the catchment resulting in higher or lower Peak wet weather flow</i>
Pathway	Logical progression of upgrade works and initiatives that reflect a single or series of upgrades made in response to particular driver/s. Pathways Considers: : <ul style="list-style-type: none"> • The benefits of the preceding works. • Next step for WWTP upgrade/augmentation 	<i>MBR upgrade to the activated sludge plant after new aeration tanks have been constructed.</i>



There were 10 best practical options examined. However, there are 3 pathways considered

- WWTP augmentation: this achieves improvement in ammonia, suspended solids and disinfection performance
- Pathway 1 **improve quality** – this assumes general improvement in discharge quality while nitrogen and phosphorus mass loads be maintained over the next 35 years. This splits into 4 sub-pathways;
- Pathway 2: **Enhance quality**: this responds to a potential future scenario tighter coastal discharge standard may come into effect
- Pathway 3: **Reuse & Alternative disposal**: this considers the use of recycled effluent in public space irrigation for the interim and ongoing exploring/review of alternative effluent disposal routes

The next step will be for council to present this approach to the technical stakeholders for comments. Once feedback has been received and reviewed, a decision will be made to continue with this approach.

Rural WWTP Major Operation & Maintenance

Hikurangi

- Civil work for the inlet screen completed.
- Instrumentation for continuous monitoring was purchased. However, installation was postponed due to wet weather.
- Wetland was harvested.
- Contractor visited the plant in order to prepare a quotation to demolish the membrane shed as it has been assessed as being structurally at risk of collapse.
- Annual report notes: Hikurangi is the only rural wastewater treatment plant not complying with its resource consent conditions. A targeted data collection programme including TSS, COD, algae survey, sludge survey, flow short-circuiting review is aimed at providing the correct data to allow the operations team and the external consultant they are working with to come up with a permanent solution to plant non-compliance issues. A new inlet screen shall be installed to remove rags and rubbish.

Ngunguru

- Membrane Aerated Biological Reactor trial completed in March.
- The final report to be issued in May for further review and comments
- Operation team will demobilize the unit to the main plant and our contractor shall transport it to Watercare's site for another trial in New Zealand
- Annual report notes: The plant operates well, and treated effluents are within the resource consent limits. A new inlet screen shall be installed at the plant to remove rags and rubbish.

Oakura

- The plant received a new screen and UV system.
- Annual report notes: The plant operates well, treated effluents are within the resource consent limits. E.coli spikes during peak summer no longer an issue

Tutukaka

- The UV system was cleaned.
- Annual report notes: the plant operates well.

Portland

- A culvert was installed in the wetland access road to prevent surface water runoff into pond 2

- Annual report notes: the plant operates well, treated effluent is within the resource consent limits.

Waipu

- The rising main replacement project is progressing well.
- Wetland shall be harvested in April.
- Annual report notes: The plant is operating well.

Ruakaka

- An external consultant is currently supporting the operations team in obtaining a resource consent required to facilitate the wetland upgrade project which includes the following activities:
 - Desludge the wetland. Sludge samples are required to determine the sludge quality
 - A new surface aerator to be installed in pond 2 as the pond reconfiguration project completed.
- Annual report notes: the plant operate well. However, there is a slightly elevated ammonia concentration at borehole No 2. As a result, the operations team will upgrade the wetland to improve treated effluent quality

Waioira

- Annual report notes: the plant is operating well; all parameters comply with resource consent conditions.

Reticulation

There were three recorded spills incident in the March period

Date Spill Started	Date Spill Detected	Date Spill Ceased	Location	Cause	Volume (m ³)	Type of Sewage	Action Taken
Unknown	19/03	19/03	Bowling Club on Third Avenue	Rag solids blockage in downstream line.	<5m ³	Raw Unscreened	cleaned and disinfected, line flushed. NRC and DHB notified.
22/03	22/03/	22/03	2 First Avenue, Whangarei	Rags solids blockage in downstream line.	<2m ³	Raw Unscreened	NRC and DHB notified. Area cleaned and disinfected, pipe flushed. Spill signs warning against swimming for 5 days erected on either side of the foot bridge at DHB's request.
22/03	23/03	23/03	21 Silverstream Road, Maunu, Whangarei	Rag solids blockage in downstream line.	<1m ³	Raw Unscreened	NRC & DHB notified, Line flushed, both manholes hosed down, cess pit vacuumed, channel washed down & disinfected.

Stormwater complaints under investigation

No	Location	Region	Description of problem	Responsibility (W&D unless otherwise stated)	Progress Update
1.	Wrack street, Kensington	Kensington	WA092872 Water team removed the water main, operation team will carry out further investigation		Under investigation
2.	8 Mair St, Kensington	Kensington	Stormwater concerns		Under investigation
3.	18 Zealandia Street	Kensington	WA093237 Report of stormwater drain on Mains Avenue not working properly and water runs straight down to Zealandia Street causing properties to flood.		Met with the customer and site inspection completed. Stormwater maintenance work is sent to council contractors.
4.	13 Henry Street	Kensington	WA094012		Under investigation

No	Location	Region	Description of problem	Responsibility (W&D unless otherwise stated)	Progress Update
			Report of property being flooded due to lack of stormwater remedies.		
5.	30 Russell Road, Kensington	Kensington	Large volumes of storm water caused damage to property during flood event		Met with customer on site. Further CCTV work required. Under investigation.
6.	15 Kent Road, Regent	Regent	Storm water issues at Kent Road - manhole that pops at the small roundabout at Kent Road during big rain events and floods downstream properties.		Met with the customer and site inspection completed. Further investigation in progress.
7.	Shortland Street, Regent	Regent	Flooding at the intersection of Mill and Kamo Road – investigate connecting SW drainage along Donald St to Hatea Drive		Under investigation
8.	48 Handforth Street, Onerahi	Onerahi	WA092143 Runoff from airport into roadside drain and swale that directs water across road into properties causing flooding	Roading – RDG072222	
9.	McKenzie Ave walkway, Onerahi	Onerahi	Report of inadequate stormwater reticulation on McKenzie Ave walkway		Met with the customer and site inspection completed. Further investigation in progress. W&D department to upgrade Stormwater disposal system. This is included in Stormwater Renewals List
10.	64 West View Crescent, Onerahi	Onerahi	WA093082 Flooding to property and neighbours.		Met with the customer and site inspection completed. Further investigation in progress.
11.	29 Weir Crescent, Onerahi	Onerahi	Flow from road not being intercepted by roadside drainage and flows down driveway of lower property	Roading	
12.	64 Beach Road, Onerahi	Onerahi	WA090283 Stormwater run-off from the airport washed out property at 64 Beach Road		Under investigation
13.	2 Kaiwaka Road, Onerahi	Onerahi	WA091997 Flooding damage to property from stormwater run off at airport.		Met with the customer, site inspection & investigation completed. Stormwater remedial works identified and to be actioned by council contractors.
14.	Sorrento Street, Onerahi	Onerahi	Property flooded due to stormwater run off during July storm.		Under investigation
15.	10 Montague Place, Onerahi	Onerahi	Property flooded due to stormwater run off during July storm.		Met with the customer, site inspection & investigation completed. Stormwater remedial works identified and to be actioned by council contractors.
16.	272 Beach Road, Onerahi	Onerahi	Drainage discharging directly onto road	Roading	
17.	Weir Cres / Cliff Street	Onerahi	WA092952 Reports of heavy rain events creating flooding run off to downstream properties.		Under investigation
18.	59 Church Street	Onerahi	WA093311 Requested to increase stormwater network along church street to mitigate flooding intensity in downstream private properties.		Met with the customer, site inspection completed. Further investigation in progress. An email was sent to the customer addressing their concerns.

No	Location	Region	Description of problem	Responsibility (W&D unless otherwise stated)	Progress Update
19.	20 Roderick Place	Onerahi	WA094991 Stormwater capacity near 20 Roderick place. Customer's house flooded in the July storm and has only recently been able to move back in. Please contact the customer		Under investigation
20.	10 Nottingham Road	Onerahi	WA093252 Existing sw culvert is open and uncovered, customer request to close culvert.		Met with the customer, site inspection completed. An email with recommendations was sent to the customer. This complaint is now resolved.
21.	14 Porowini Avenue, Morningside	Morningside	WA090402 Constant flooding of the buildings and land on this site		Under investigation
22.	Whangarei Club on Rust Ave, (CBD)	(CBD)	Report of major storm damage to roof.		Under investigation
23.	240 Western Hills Dr, Avenues	Avenues	Report of culvert along the drive has been eroded significantly in the storm putting water meters, driveway, sewer line and road side power pole at risk.		Under investigation
24.	4b Dundas, Riverside	Riverside	Road drainage that is causing issues for a retaining wall		Under investigation
25.	6 Surfside lane, Ruakaka	Ruakaka	Property being flooded by stormwater		Drafting response to customer.
26.	Dune Lake, Ruakaka	Ruakaka	Reports of dead sea life.		Under investigation
27.	103 Station Road, Kamo	Kamo	Stormwater is being channelled from 103 Station Rd and directed into a lower property		Met with the customer, site inspection completed. Reasons for storm water flows explained to the customer and some remedial works were suggested for customer's consideration. This complaint is now resolved
28.	16 Mcainch Place, Kamo	Kamo	Storm flooding in properties		Under investigation
29.	Kamo Road		WA092758 Request for road hump between King St and Zealandia St be removed to allow water to flow down Kamo Rd.		Under investigation
30.	275a Kamo Road, Whau Valley	Whau Valley	Open drain has been piped – capacity issues have resulted		Under investigation
31.	120 Tauroa St and Acacia Park, Raumanga	Raumanga	Private stormwater drainage damaging private roads. Customer believes it belongs to Council.		Under investigation
32.	68/20 Eilean Donan Drive, Waipu	Waipu	Flow from Right of Way culvert concentrating flow onto property. Property has constructed a bub to prevent this, thus damming flow		Met with the customer, Site Inspection complete, legal opinion obtained. Council's legal team is drafting a response to the Customer.
33.	St Marys Rd Waipu	Waipu	Roadside swale has been infilled to construct footpath and road berm. Pipe is very shallow at discharge and is being damaged by being driven over	Roading	
34.	Austin Rd/ Belle Lane, Maunu	Maunu	Belle Lane and Austin Road – flooding to properties and schools on lower side of Austin Road. Issue with soakage trench capacity.		Met with the Customer, site inspection completed. Meetings & discussions were held with the concerned officers from the neighbouring property developers to ensure stormwater controls in their development site are in place. Council's Building Control team has been advised of

No	Location	Region	Description of problem	Responsibility (W&D unless otherwise stated)	Progress Update
					required storm water controls in this development. Indicative Overland flowpath routing was explained to the customers on site, measures to manage these flows were discussed in the meeting. Drafting a response to the customer.
35.	94 Corks Road, Tikipunga	Tikipunga	Raising of land adjacent to Totara Parklands development has increased likelihood of flooding to neighbouring property		Met with the Customer, site inspection completed. Development Engineering team undertaking remedial works. This complaint is now resolved.
36.	Glendale Rd, Woodhill	Woodhill	Request to install a grate to catch debris coming down from Coronation Reserve		Under investigation
37.	23 Stuart Rd, Reotahi,	Whangarei Heads	Reports of council infrastructure inadequacies damaging property		Under investigation
38.	46E Kohe Street, Parahaki	Parahaki	Report of stormwater running down private right of way causing damage		Under investigation
39.	261 Oakura Rd, Oakura	Oakura	Overland flow path has been blocked by new building which has been built at a higher level	Building	
40.	32 Whangaumu Rd, Tutukaka	Tutukaka	Flooding to lower lying properties across the road		Under investigation
41.	29 Muritai Road	Parua Bay	Concerns around easement for sw & ww drainage, flooding of swale in #29 and driveway of #11 Muritai Rd		Met with the Customer, site inspection completed, sent an email response to the customer addressing all queries. This complaint is now resolved.
42.	69 George St Hikurangi	Hikurangi	Open drain is really effectively on the boundary of the two properties here – scouring is undermining properties		Under investigation
43.	1 Union Street, Hikurangi	Hikurangi	WA095519 Caller advises that there is a stormwater drain that runs along the side of their fenceline and they want to fill it in.		Under investigation
44.	12 Ritchie Road	Parua Bay	Caller has a fenced off easement area of water on her section that is councils. The fence is in need of repair and the caller is asking that this be repaired		Under investigation
45.	137 Pipiwai Road	Kamo	Stormwater problems to property.		Met the customer, site inspection completed. An email was sent to the customer addressing all their queries. Drafting required maintenance work to council contractors.
46.	44 & 46 Whangarei Heads Road		WA096421 Customer owns 44 and 46 Whangarei Heads Road and is really concerned about the large stormwater drain at the front of his property. Recently one of the children from 44 fell into this drain. He would like this drain to be filled in, like has been done at the neighbouring property at number 42.		Closed on 22/3/2021 - Council do not modify drains on Pvt property. Customer was advised that they may apply to Council to pipe the stream privately, however will need to provide a suitably qualified Professional Engineer's stormwater design to us for consideration prior to approval being given.
47.	29 Tapper Crescent		WA096395 There is a stormwater catchment area at the back of		Under investigation

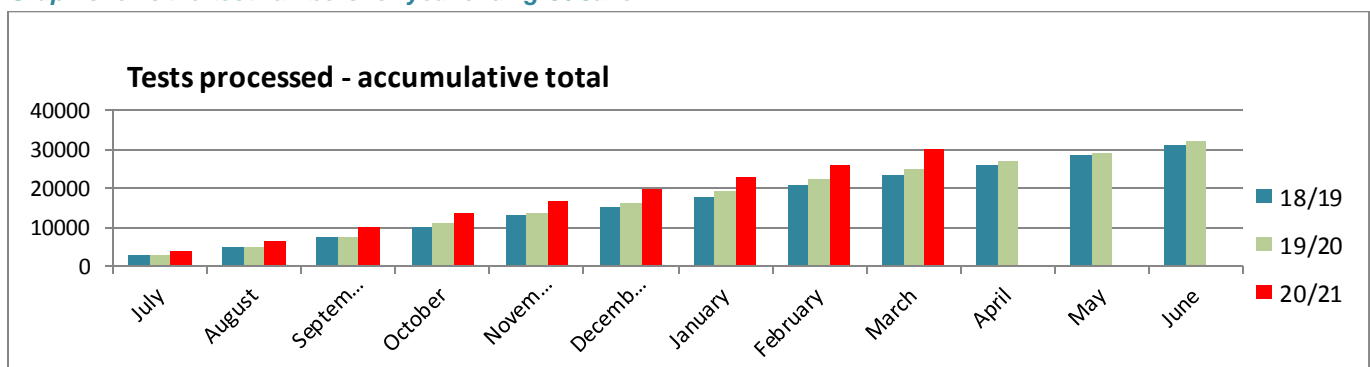
No	Location	Region	Description of problem	Responsibility (W&D unless otherwise stated)	Progress Update
			the callers property. Due July floods this filled with gravel from the properties at Erin Street. Caller had damage to his property.		
48.	1 Raumanga Heights Drive Raumanga	Raumanga	WA096331 Issues with stormwater drain which runs along boundary causing flooding.		Under investigation
49.	15 Bayswater Place	Onerahi	Existing network is probably under capacity which results in flooding of private driveways.		Under investigation
50.	4 Shoebridge Crescent	Ngunguru	Flooding due to piping of open drain		Under investigation
51.	5 Finch Street	One Tree Point	Saltwater flooding in properties		Met with the Customer, site inspection is scheduled next week. Further investigation in progress.
52.	82 Fourth Avenue	Avenues	Request clarification on maintenance responsibility of slipping roadside berm & kern outlet pipe		Desktop assessment & Site Inspection is completed. An email addressing customers queries was sent. This complaint is now resolved.
53.	948 Whangarei Heads Road	Parua Bay	Request to talk to the council engineer about stormwater drainage issues to get their building signed off.		Met with the customer, site inspection & desktop assessment completed. Recommendations to resolve stormwater drainage were explained to the customer.
54.	3 Charlise Place	Onerahi	Customer wanting to remove large plants & tidy up a section of road		Under investigation
55.	55 Anzac Road	Morningside	Stormwater flooding on customers driveway		Under investigation
56.	Third Avenue	Avenues	Stormwater open drains are not functioning		Under investigation

Laboratory Report

For March 2021 939 samples were analysed for 3915 tests. 26% of the tests were subcontracted and 48% of results were reported within 5 working days.

This is 17% increase in testing numbers for the same period in the previous year.

Graph shows the test numbers for year ending 30 June.



Roading - Transportation

Maintenance Contracts

Programmed works completed during March were as follows:

- Heavy metal overlays were carried out on Jobe Road, Hayward Road, Snooks Road, Prescott Road, Graham Road, Mangapai Caves, Applecross Road.
- Brooks Road seal extension has progressed well, the subbase overlay is nearly finished, and completion is now expected by end of April 2021.
- Massey Road seal extension enabling works is near completion and subbase overlay is expected to start soon. Completion is now delayed to Mid May 2021, due to the late start.
- The traffic islands on Mill Road section 1 were installed and Mill Road section 2 traffic islands delivery is planned for early April 2021.
- A total of 2117.70m² of dig-out patches have been dug out from 300mm – 600mm in depth over various sites including Mangapai Road, Mititai Road, Waiotira Road, Onerahi Road, Whangarei Heads, Port Road, Austin Road, Purakau Road, Pompallier Estate Road, Rurumoki Street and the Pipiwai area.
- A total of 3082m² of stabilising patches have been completed over various sites including Paparua Road, Mangapai Road, Mititai Road, Waiotira Road, Pompallier Estate Road, Whangarei Heads Road.
- Chipseal reseal sites completed in March were: Applecross Rd, Appleton Pl, Bougainville St, Collingwood St, Crawford Cres, Elgin Pl, Elmsley Rd, Heretaunga St, Killen St, Lake Ora Rd, La Ruez Pl, Lockesley Pl, Mansfield Tce Service Lane, Marsden Bay Dr, Marsden Point Rd Slip Lanes, Mason St, McInnes Ave, Memorial Dr, Mercer St, Millers Lane, Ngunguru Rd Ctrl, Porter Rd, Portland Rd, Second Ave, Shoemaker Rd, Snooks Rd, Union East St, Waiotira Rd.
- Asphalt sites paved in March were: Hatea Dr, Gillingham/Corks/Station Rd Intersection, RAB Three Mile Bush Rd, Water St and Walton St.
- 400 Raised Reflective Pavement Markers were installed.
- Water tabling – Omana Rd, Applecross Rd, Whareora Rd, Marsden point Rd, Glenmohr Rd, Cove Rd, Rama Rd, Takahiwi Rd, Taipuha Rd, Waiotira Rd, Waikiekie North, Waiotira Rd, Walker Rd, Bull Rd, Kaitaringa Rd.
- We have had two crews water tabling in the north, one in the Hukerenui/Pipiwai area and the other in the Kiripaka area.
- Mechanised culvert clear crew working through the Mangakahia Area.
- Walkways cleared of vegetation – Rata Pl, Clotworthy Cres, McKenzie Ave, Tapper Cres, Winston Pl, Maunu Rd, Hawke St, Chester Ave, Scott Lane, Grey St, Dallas St, Ashley Ave, McClintoch, Croydon Pl, Walker Cres, Lewis Lane, Glover Place, Earls Place, Leonard Lane, Cliff St, Ewing St, Ormiston St.
- Kiripaka Rd – rockwall repair.
- Temporary failure repairs done on Pipiwai Rd and Omana Rd.

Routine Works completed this month were as follows:

March was a very busy month with a lot of routine work being completed. The crews have been working through the CRM's, sealed and unsealed potholes, trip hazards, signs, detritus removal, etc

- We have begun maintenance grading again now that we are getting cooler temperatures and more moisture.
- We are continuing replacing old black and white chevrons with new compliant chevrons.
- Streets swept: 1679 Roads – 415.98 kms. Areas Swept: Kamo, Kauri, Otangarei, Tikipunga, Denby, Central, Kensington, Mairtown, Regent, Whau Valley, Pipiwai, Springs Flat, Port, Onerahi, One Tree Point, Ruakaka, Waipu, Morningside.
- Channels and grates continuing to be cleared



Dish channel – Waipu Caves Rd

Projects started in March

Category	Sub activity	Location
Bus Shelter Renewal	General Maintenance	Various

Projects started in April

Category	Sub activity	Location
125 - Footpath Maintenance	Footpath Renewal	Various
213 - Drainage Renewals	Drainage	Various
214 - Sealed Road pavement rehabilitation	Rehabs	Rewa Rewa Road
341 - Low Cost Low Risk	Pedestrian Improvements	Dent Street Pedestrian Crossing Upgrade
341 - Low Cost Low Risk	Safety	Ngunguru Road - Murphys Cnr
341 - Low Cost Low Risk	Speed	Various sites - Speed limit infrastructure
CIP	Cycleways	Kamo Shared Path Link

WDC Significant Projects

Category	Sub-activity	Location	% Complete	Monthly Update	Next month planned activities
214 - Sealed Road pavement rehabilitation	Rehabs	Mill Road	100%	Pavement Works Complete	Ancillary works - traffic islands etc. to be completed this month
214 - Sealed Road pavement rehabilitation	Rehabs	Rewa Rewa Road	10%	Contractor engagement underway	Construction commence
214 - Sealed Road pavement rehabilitation	Rehabs	Maunu Road	19%	Contract awarded to Downer	Contractor begin design options
324 - Road Improvements	Intersection	Maunu/ Porowini Intersection	56%	Construction complete and Practical Completion Certificate issued. Final paperwork to come (as-builts etc.)	12-month Defects Period. Receive close-out documents and final claim from contractor.
341 - Low Cost Low Risk	Bridge	Whangarei Heads Road	57%	All culvert units have been installed.	Continue with physical works. Backfilling and reinstatement of road and footpath. Forecasted completion by early April.
341 - Low Cost Low Risk	Intersection	Robert/ Walton Intersection	67%	Progress detailed design	Progress detailed design
341 - Low Cost Low Risk	New Footpath	One Tree Point Rd	91%	Physical works completed; minor snags need addressing	Address snags and as-builts Post-construction safety walkover
341 - Low Cost Low Risk	Pedestrian Improvements	Dent Street Pedestrian Crossing Upgrade	10%	Complete design, engage contractors to start construction	Continue construction
341 - Low Cost Low Risk	Safety	Ngunguru Road - Murphy's Cnr	41%	Short term options design complete and construction costs priced by contractor. Progress longer term options for implementation in forward programme.	Construction contract award.
341 - Low Cost Low Risk	Safety	Cove Road	8%	Lodged resource consent application with NRC	Receive resource consent and tender and award works.
341 - Low Cost Low Risk	Speed	Various sites - Speed limit infrastructure	3%	Maintenance Contractors (Downer and FH) prepared prices and programmes.	Started Manufacturing and Installation works

Category	Sub-activity	Location	% Complete	Monthly Update	Next month planned activities
341 - Low Cost Low Risk	Traffic Calming	Hikurangi Township (King Street/George Street/Valley Road)	100%	Working through safety audit and completing minor outstanding works.	Address issues outlined in Post Construction Safety Audit to complete construction stage.
452 - Cycling Facilities	Cycleways	Kamo cycleway Stage 5 (Fisher Tce to Station Rd)	76%	Progressing design	Progressing design
Bus Shelter Renewal	Public transport	Rose Street Bus Terminal (see detailed report below)	21%	Detailed geometric design being finalised. Bus shelter design finalised & under review. Safety audit offer received.	Safety audit to be undertaken and detailed design to be completed. Inform owners and businesses about removal of parallel parking outside Grand Hotel on Rose Street. Prepare tender document for civil works. Place order for bus shelters once Council acceptance confirmed.
CIP	Cycleways	Kamo Shared Path Link	0%	Physical works out to tender	Physical works awarded and started
CIP	Cycleways	Raumanga Shared Path	4%	MBIE Funding agreement signed.	Progressing design
CIP	Intersections	Port Road (Limeburner's Creek) Bridge and Kioreroa Road Intersection (see detailed report below)	0%	Preliminary design completed and detailed design underway. Tender documents released to market. North power enabling works approved. Consultation with mana whenua and KiwiRail ongoing. Cultural impact assessment started. KiwiRail safety assessments undertaken.	Complete detailed design of bridge and progress business case for intersection upgrade. Tenders close for main construction contract at end of April. Let Enabling works contract. Continue consultation with mana whenua and KiwiRail. Continue development of Cultural Impact Assessment. Undertake safety audit.
New Footpaths - Unsubsidised	New Footpath	Whangarei City Wide (Sense of Place) c/o from 19/20	0%	n/a	n/a
Redeployment Package	New Footpath	Ngunguru Rd from Whg Falls to (or close to) Ngunguru Rd path	81%	Complete	Issue PCC and complete required MSQA Documentations
Redeployment Package	New Footpath	One Tree Point Rd	100%	Complete	Complete
Redeployment Package	New Footpath	Gillingham Rd	100%	Complete	Finalise as built drawings and required MSQA Documentations
Redeployment Package	New Footpath	Tauraroa Rd, Maungakaram ea	100%	Complete	Finalise as-built drawings and required MSQA Documentations

Photo Wall



Photo Wall	
Tahunatapu Rd/ Seal Extension Placing overlay aggregate	Cemetery Road/Culvert Replacement
	
Whangarei Heads Road/Culvert Replacement	Massey road/ Seal Extension, Clearing, Earthworks and drainage in progress
	
Attwood Road/ Seal Extension	Brooks Road/ Seal Extension

Speed Management:

- Tranche 1 – Council has adopted the recommendations report for Tranche 1, implementation planned mid-2021, Staff will seek formal adoption of the revised speed limits in May. Areas in Tranche 1;
 - Te Toiroa Rd (Legal Unformed Road) Ngunguru, which forms part of the Old Ngunguru Coach Trail.
 - Vinegar Hill area
 - One Tree Point / Marsden / Ruakaka area
 - Waipu Village
- Tranche 2
 - 2A – Bream Bay (Cove Rd) – concurrent with Kaipara’s Mangawhai area. Hearing complete, Decisions Report planned for early-mid 2021, and implementation mid-late 2021.
 - 2B – Whangarei Heads. Planning started for consultation for early-mid 2021, implementation (early-22).
- Tranche 3 (2021-22) – Tutukaka Coast (Ngunguru Rd & Russell Rd) and Bay of Islands (Opuā / Russell). These two areas will be reviewed concurrently (early-mid 22) with Far North’s Russell catchment area to ensure a seamless and coherent approach to both consultation and delivery of speed management.

Walking and Cycling (Urban) - Planning:

- City Centre – engaged Viadrata to assist in planning interim connections in advance of future Complete Streets projects. Focus on connecting Kamo Shared Path to the Water Front to maximise the benefits of the James Street and John Street pedestrianisation projects.

Walking & Cycling (Rural – Tourism) - Planning:

Bream Bay Trail:

- Stage 2a Cullen Rd to Waipu Cove – Physical works is complete, except for the culvert extension works see major projects.
- Stage 2b McLean Rd to Cullen Rd – works is nearly complete.
- Stage 3 Riverview Place to Cullen Rd – in Draft LTP
- Waipu to Ruakaka – NZTA have funded a detailed investigation of this route to complement NZUP trail from Ruakaka to Whangarei.

Whangarei Heads Trail

- Scoping design complete.

Port / Kioreroa Intersection Upgrade

- Detailed design of the Port Road (Limeburners Creek) bridge widening is mostly complete and the design of the Port/Kioreroa intersection is ongoing.
- Two hui have been held with local iwi and a cultural impact assessment is now underway. Several meetings have been held with KiwiRail and safety assessments for the level crossing are nearing completion.
- Service agreements have been signed to shift two power poles out of the way of the new bridge footprint and these works should be undertaken in May.
- Tender documents were released on the 22 March and tenders close on the 29 April.

Rose Street Bus Terminal Upgrade

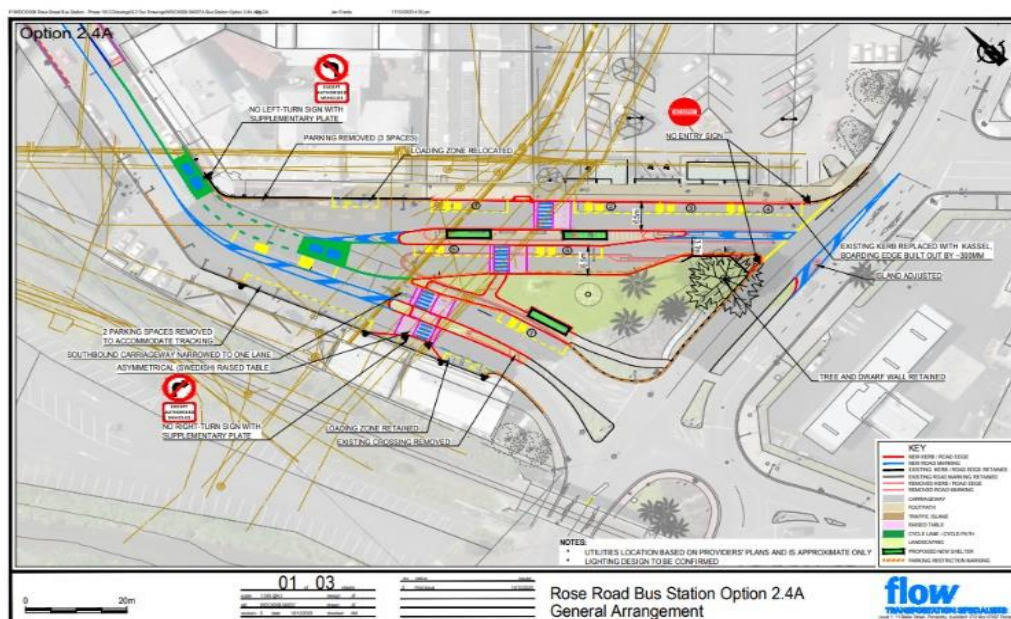
Detailed design of the new layout is nearly complete and tender documents for the works are due to be released in mid-April with award in May. Construction is expected to commence in late May.

The project managers have been working with the NRC bus operations team to make sure that the design achieves their operational requirements. New Bus shelters will be ordered also in mid-May

The construction is being staged due to the funding that is currently available – Stage 1 is as per the attached plan, but will exclude the Bank St bus stop at this stage (because this is a future stage which will be undertaken based on demand). Stage 1 is likely to take 3-4 months to complete.

Options for temporary bus stops at the terminal, while the construction of Stage 1 is underway, have been discussed with the NRC bus operations team. These include temporary bus stops in front of the Grand Hotel and on Vine Street. This will be confirmed once the contractor's methodology is confirmed.

Stage 2 is for the main terminal building and is subject to funding being approved through WDC's LTP and NZTA's NLTP. This stage would require further design and procurement. The timing of Stage 2 will be dependent on when funding becomes available.



Parks, Recreation and Solid Waste

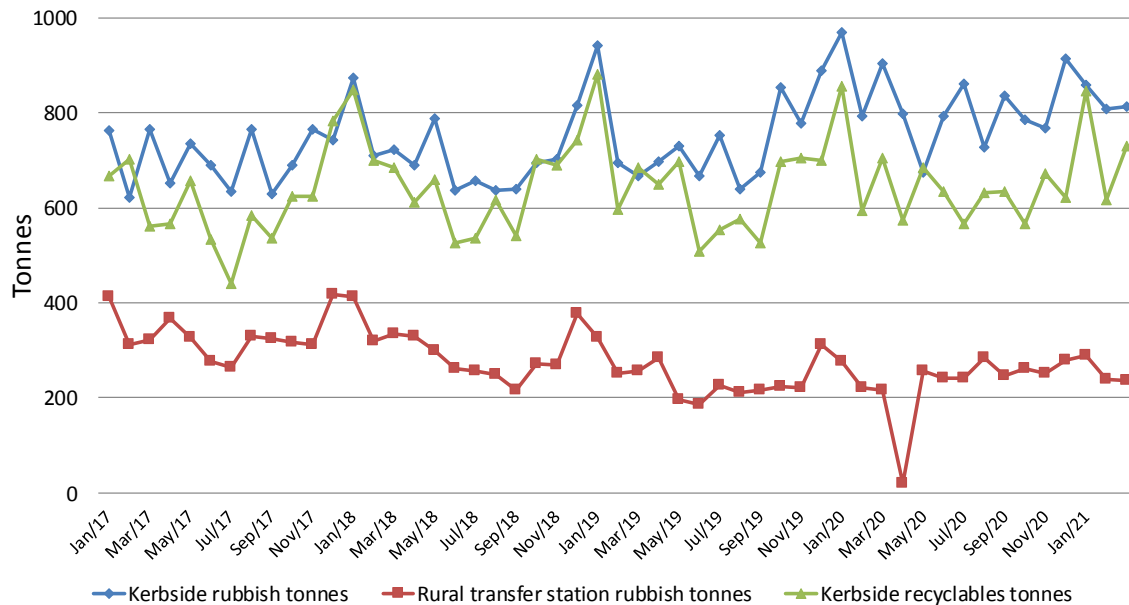
Operations

Solid Waste Operations

The Ministry for the Environment has confirmed that the Waste Minimisation Levy currently \$10 per tonne of waste going to municipal landfills will increase to \$20 per tonne on July the 1st. This will increase waste disposal costs and also result in an increase to the amount of money coming to Council via the Waste Minimisation Fund. The Ministry has also stated that they will be consulting on revisions to the National Waste Strategy and Waste Minimisation Act in the second half of 2021.

Monthly waste tonnages are shown in the table and chart below.

Solid Waste Tonnes Jan 2017 - Year to Date



Rubbish Collection Tonnes	2020/21	2019/20	RTS Tonnes	2020/21	2019/20	Recycling Tonnes	2020/21	2019/20
June		793	June		241	June		633
May		675	May		256	May		684
April		798	April		20	April		575
March	812	903	March	236	215	March	730	705
February	808	793	February	240	221	February	616	593
January	859	969	January	290	277	January	847	856
December	914	889	December	280	311	December	622	699
November	767	779	November	252	220	November	673	704
October	784	853	October	261	224	October	567	698
September	836	674	September	246	217	September	633	525
August	728	638	August	238	210	August	633	577
July	862	753	July	246	226	July	566	554
Total for period	7370	9517	Total for period	2289	2638	Total for period	5887	7803

Walking Tracks

With autumn weed growth, March has been busy with the onset of the autumn flush.

Northparkcare have been targeting weed control, wind fall clearing and drain / culvert cleaning prior to the wet winter season.

Tracks Completed Are:

Coronation Reserve Tracks, Hatea Walkway, Whangarei Falls, AH Reed Kauri Park, Parihaka Summit Tracks, Mackesy Bush, Abbey Caves, Waimahunga Track, Mt Aubrey – Tiller Park, Reotahi Coastal, Ngunguru Walkways, Tutukaka Block Rd Walkways, Limestone Island, Whananaki South, Tamaterau, Raumanga Stream, Mair Park, Manganese Point, Langs Beach, Waipu Cove, Mackerel Track and Goetzee Track.

Tree Maintenance

Treescape® had one and a half crews running on the WDC tree contract this month.

Waiarohia Reserve tree maintenance and site cleanup was completed.

Ruakaka – Peter Snell Drive – Street Tree Palms were lifted to provide clearance, and several other streets had berm trees lifted to provide pedestrian access.

At Paramount Parade a large Puriri tree failed on a reserve behind properties, and the team completed the removal of several Flame trees at the top of Hospital Rd.

The trunk from the large Eucalyptus tree in the reserve on Whareroa Dr at the end of the Hatea walkway was finally dropped onto the ground, the logs were given to a local community group for firewood (approx. 15m³)

During March there was a large increase in reactive work requests though CRM's.

Coastal Structures

The inspection program is still on target with 30 inspections completed in March, predominantly in the South and Ngunguru/Matapouri areas.

Pataua North rate payer's association identified a section of unformed path as hazardous for the increasing number of users, especially the elderly and parents of new born. Parks provided funding with the community working together to complete the pathway.



Pataua North completed walkway section

The latest unscheduled maintenance work program has been released to the contractor, these minor repairs were prioritised and will be completed this financial year.

Sports Parks

63mm of rain meant that grass growth picked up a bit which has helped hugely as we prepare for the winter sports season. With 118 fields to manage, the transition to the winter season is always a massive undertaking for our contractors.

Under-sowing of fields with rye grass is essential in getting them through the winter season. 11ha of under-sowing took place during March. This regrowth is very delicate until established and codes are requested not to use restored fields at this time, when many teams are looking for practice sites, often without booking.

The last first-class cricket game at the oval was disrupted due to flooding and this highlighted the need for the drainage improvement work that was already scheduled to commence straight afterwards. Upgrade of the primary drainage will be followed up with new slit drainage and turf renewal prior to the next summer season. Cricket block renovations elsewhere will take place in the second half of April. A meeting with Northland Cricket was very positive and their appreciation of the standard of fields over this past season noted.

Negotiations are taking place with Whangarei A&P Society regarding bookings at Barge Showgrounds. Currently, these are taken by Recreational Services but with most events being equestrian, the A&P Society are a lot closer to the users and able to provide a much better service and be tighter with invoicing. A transparent booking system visible to service providers, particularly Parks contractors will form the basis of this. Quotes for the repair of the remaining walls are high and need to be further negotiated.

Parks and Gardens

March received 63mm of rainfall with a majority falling in the first half of the month. This summer has been pretty good with regular rainfalls which have kept the grass and plants healthy.

During March the contractor began removing some of the summer annuals and the beds will be dug over and fertilised ready for the April/May plantings.

The winter annual plants have been ordered and will start to arrive and be planted from the week of 12th April. The first to be planted will be the beds at the Town Basin.

The watering of hanging baskets has stopped and the baskets are being removed as the plants start to look poorly.

A consequence of the regular rainfall and humid conditions comes increased weed growth, and the contractor has seen a dramatic increase in weeds and their teams are trying to keep on top of our garden beds. The mowing teams are also struggling to keep up with the Autumn flush of grass growth.



Playgrounds and Skate Parks

During March, the contractor had to repair a vandalised playground at Potter Park and repaired some broken equipment at the Town Basin playground. One of the trampolines was damaged and the fittings of a rope play came loose. The Hedley playground has just been renewed along with new bollards and a picnic table. The Taurikura playground is currently being replaced and the edging boards at Korau St, Taurikara and Insley playgrounds are being replaced.

Hedley Place playground – while it has been popular with the local kids, the litter on this site has increased hugely. We are looking at installation a litter bin.



Cemetery

Another quite month for burials with 6 taking place.

The weather has been mostly dry, but with the warmth and the sporadic rain, the grass has grown well, and kept us busy with grounds maintenance.

Some minor plumbing work has been carried out in the chapel toilets and in the cemetery grounds. Leaking taps and a urinal, were fixed. Also in one of the toilets, the louvre windows were unseized, as they were letting in dust and debris from outside, making the toilets look untidy.

The crematorium operator has installed new carpet in the chapel, and replaced the ageing seats with new ones.

Botanica

Visitor numbers for March: 1329

With the changes of Covid levels there have been no comments in the visitor book this month. This is also reflected in the visitor numbers being down slightly.

It has not stopped te staff from keeping up appearances and the displays look great like usual.

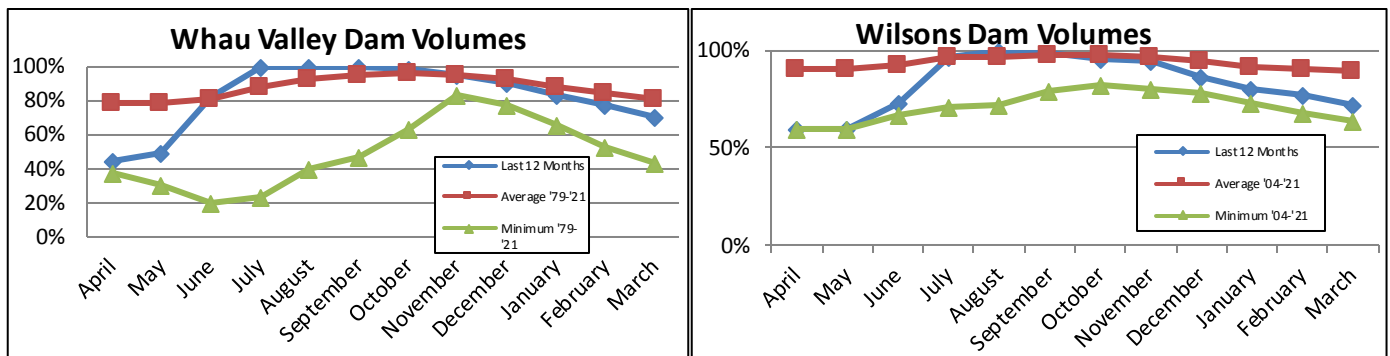
Some repairs have been done on the building which were becoming a hazard. 3 rusted sections of steel frame in the glass houses have been removed and replaced with new steel. Also in the glass houses, a couple of doors which were rotting away have been replaced with new doors. After a lick of paint they are now looking great. A couple of minor trip hazards in the paved area of the fernery, have been made good, and are now flat and level.

Water Services

Operations

Rainfall and Water Sources

A very dry start to Autumn with just 28mm of rain falling at Whau Valley Dam in March. This continues the record trend of a low cumulative rainfall since the beginning of Spring. Only 375mm has fallen compared to the long term average of 792mm. Wilsons Dam had only 28.5mm of rain. In spite of the dry last seven months the dam levels are holding up reasonably well. This is largely because the Hatea line has allowed more water to be taken from this source and staff have run pumps harder and earlier this year. The Whau Valley Dam is now at 70% which is below average for the time of year but above the same time last year (52%). Wilsons Dam is also beginning to drop and sits at 71% which is also below average but above last year's level of 64%. Whilst sources are still holding up well, they are getting to the stage where we will need to start advising the public to be careful with water until we start to see the dams and aquifers re-fill.



Production Report

Compliance

Whau Valley WTP – Plant was fully compliant for protozoa and bacteriological.

Ruakaka WTP – Plant was fully compliant for protozoa and bacteriological.

Ahuroa WTP – Plant was fully compliant for protozoa and bacteriological.

Ruddells WTP – Plant was fully compliant for protozoa and bacteriological.

Poroti WTP – Plant was fully compliant for protozoa and bacteriological.

Maungakaramea WTP – Plant was fully compliant for protozoa and bacteriological.

Mangapai WTP – Plant was fully compliant for protozoa and bacteriological.

Other works

The algal bloom at Wilsons Dam continues to reduce and staff are optimistic that with continued treatment we may be able to get on top of it over Winter. The diatom dosing continues with the additional dosing equipment now operating in some of the shallower side arms of the reservoir.

The upgrade of the SCADA system is progressing well with well over half of the Dams, treatment plants, reservoirs and pump stations having been upgraded. Mangapai Water treatment plant was the most recent to be upgraded and now only Ruakaka and Ruddells treatment plants remain. The new system operates on the cellular network and should be significantly more reliable than the old radio telemetry.

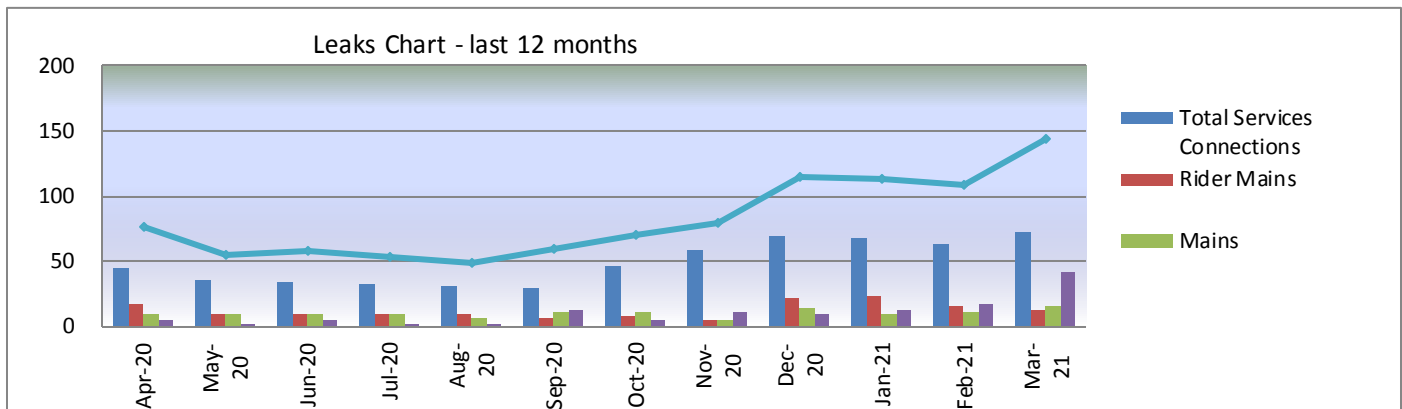
Distribution Report

Water Statistics

91	Connection leaks repaired
29	Rider/Main leaks repaired
56	New connections installed
33	Faulty meters replaced

A total of 91 service connection leaks were repaired together with 29 main and rider main leaks. The number of leaks remains high due to the dry weather making it easier to spot leaks and the fact the leak detection programme is ongoing. It is anticipated the number of leaks will remain high if the dry weather continues and the ground remains dry. A total of 56 new water connections were installed during the month and 33 meters were replaced after being reported faulty by the meter readers.

The following chart shows the number of leaks per category of pipe fixed under the maintenance contract during the last year.



Capital Works

Reticulation Programmed Works

Water mains in Armstrong Ave and Barclay Place have experienced some breaks recently and are being fast tracked for replacement. These are being designed and priced by the maintenance contract so that they can be completed urgently. Staff are also looking to upgrade water mains in the Town Basin and John Street area to take advantage of other works being undertaken in the area.

3 Waters Funding Projects

The Capital projects that will be funded by the Governments 3 Water fund are, Whau Valley Water Treatment Plant stage 2, Poroti Water Treatment Plant Upgrade – Design, Whareora Road watermain replacement, Rewa Rewa Road water main replacement, Kamo Road water main replacement and the installation of filling points. Work on Rewa Rewa Road and Whareora Roads are now complete baring some minor reinstatments. The Kamo main work has been awarded and is due to start in early April. The Whau Valley WTP stage 2 work has been awarded to the existing contractor and is due for completion by the end of the year. The concept design for the Poroti upgrade has been completed and staff are in discussions with the Maungatapere Water Company and the Whatatiri Maori Reserve Trust about the project and outcomes. Work has also started on the design of the electronic control system for the new filling points with the new controls being introduced at the Kioreroa Road filling point in April.

Other projects

Work is underway to identify and secure land in Three Mile Bush for a new storage reservoir. A possible site has been identified and geotechnical investigations show that the site is suitable. A valuation has been completed and it is anticipated an agenda will be presented to Council regarding this shortly. Staff visited the site with a representative of the local hapu in March. It is hoped to be able to purchase the land as soon as possible so the construction can begin next financial year. Initial Geotechnical studies have also been undertaken at Kamo Reservoir and Waipu reservoirs ahead of future reservoir projects at these locations.

Consents and Compliance - Laboratory Water Quality Tests

Description	Number of Tests	Failures	Results	Goal	Retest
E. Coli leaving WTP	13	0	100%	100%	N/A
E. Coli within distribution	46	0	100%	100%	N/A
Free Available Chlorine within distribution (above 0.2mg/l)	84	0	100%	95%	N/A

RESOLUTION TO EXCLUDE THE PUBLIC**Move/Second**

That the public be excluded from the following parts of proceedings of this meeting.

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:

	General subject of each matter to be considered	Reason for passing this resolution in relation to each matter	Ground(s) under Section 48(1) for passing this resolution
1.1	Property Purchase	Good reason to withhold information exists under Section 7 Local Government Official Information and Meetings Act 1987	Section 48(1)(a)

This resolution is made in reliance on Section 48(1)(a) of the Local Government Official Information and Meetings Act 1987 and the particular interest or interests protected by Section 6 or Section 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 follows:

Item	Grounds	Section
1.1	To enable Council to carry on without prejudice or disadvantage commercial activities To enable Council to carry on without prejudice or disadvantage negotiations (including commercial and industrial negotiations)	Section 7(2)(h) Section 7(2)(i)

Resolution to allow members of the public to remain

If the council/committee wishes members of the public to remain during discussion of confidential items the following additional recommendation will need to be passed:

Move/Second

“That _____ be permitted to remain at this meeting, after the public has been excluded, because of his/her/their knowledge of Item_____.

This knowledge, which will be of assistance in relation to the matter to be discussed, is relevant to that matter because_____.

Note: Every resolution to exclude the public shall be put at a time when the meeting is open to the public.