

FAR NORTH DISTRICT COUNCIL
CONTRACT 7/18/101

Road Maintenance and Renewals Contract

MONTHLY REPORT – AUGUST 2023

*Waimatenui Rd – Tree Removal
(NTW) and Slip Repair (DCL) –
2 of our awesome SME partners*



1. SUMMARY

August felt a bit slow paced and when it came to the claim being submitted and approved it still was over \$2mil. Looking back through what was completed it dawned on me that because there hadn't been any weather events the team were able to plan and action as per the plan for once. This created a much less stressful situation for all for a change.

Early in the month we had the Ventia Steerco team visit – a team run by Ventia NZ General Manager with various other team members from across many other Ventia operations (water, telco, power to name a few) it was great to have them up for two days and show them what we do up in Northland. Along a similar line to this the NTA had an external audit done this month which involved staff from Fieldforce4 coming to our offices and talking with most of our team and observing for 3 days. We really enjoyed the challenge as they had lots of good questions you could see their brains working overtime.

Gabrielle and May weather event Phase 2 works continued with mainly sub-contractors on the role – Motukiore Rd, Taita Rd, Waiotemarama Gorge Rd, Puketi Rd, Hooks and Hall Rd plus many more as you will see further down in section 8. Some awesome progress has been made and we had some great feedback from the residents of Ngawha Springs for the footpath renewal works completed and backing this up immediately with full town water tabling.

Hihitahi Rise in Te Haumi was levelled out with AC14 asphalt as the slip/area is still on the move this will allow it to be safe for both motorists and pedestrians for a lot longer hopefully.

Heavy metalling continued - Ngawhitu Rd, Kupa Rd, Matawaia Maromaku Rd, and Martin Rd. All these roads needed some serious attention. Some sitting in the flood plains had unfortunately given up providing strength above 100% saturated clays.

In the next lot of summary words the 11th of September pops up alot. It's a significant date for summer season works commencing 😊

In the renewals space - Seal Treatment Workshops were completed for both FNDC and KDC Contracts. The list for both networks have been effectively approved and we will be commencing in the FNDC network with our bitumen sprayer from next week (11th Sept), with over 100km of seal programmed we are very confident of finishing both contracts along with preseals and first coats before 31st March 24.



Jash's team starts on Ngapipito Rd sealed pavement rehab next week (if the subgrade continues to dry out) and will be in there for a month before moving onto Cumber Rd, Kaikohe. You guessed it 11th Sept.

The stabilising machine is due to arrive on 11th for the preseal repairs programme, designed to repair pavements before they get a reseal.

Unfortunately, the signs crew have been busy on activities that are purely caused by vandalism. A lot of signs damaged around Kaikohe this month; someone has had a bit too much spare time on their hands.

Routine response dropped below 95% due to a few system glitches but we are back on track this month. Patrols have been doing amazing work with the 4 graders keeping the network in top shape.

Nga mihi

Jamie



Where's Wally (Yellow hi viz) Ventia styles – Photo from the Steerco visit in August



2. WORK PROGRAMME

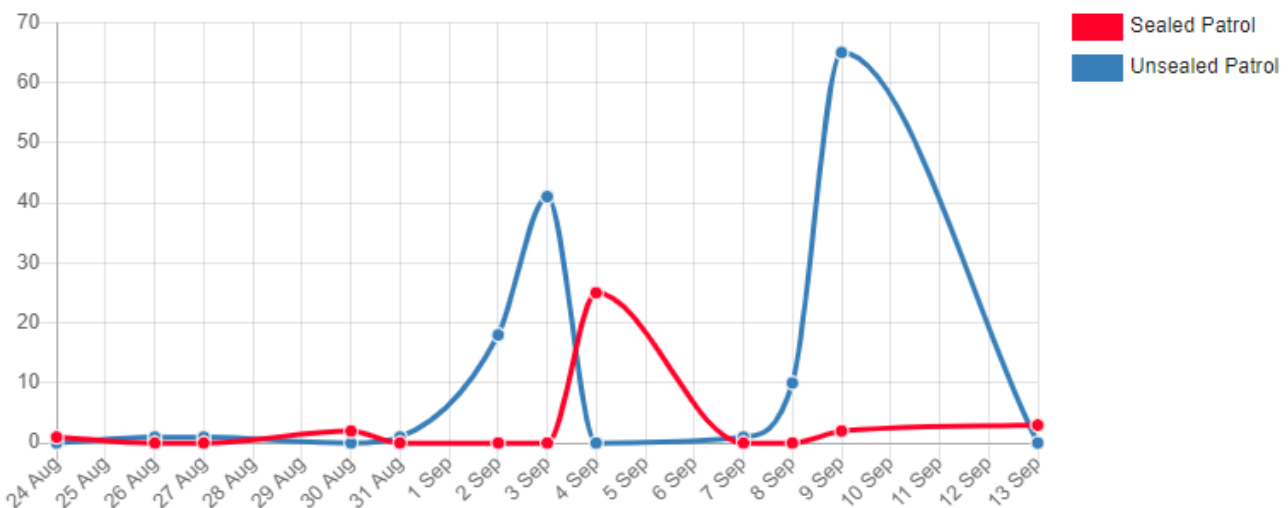
A total of 2,801 individual work items were completed throughout the month of June, of which 2,689 were routine find and fix issues, 1 cyclic or annual rounds, 46 were programmed works, 11 renewal / capital project, and 54 were callouts or emergency response works.

September 2023 forward works programme has been submitted in RAMM.

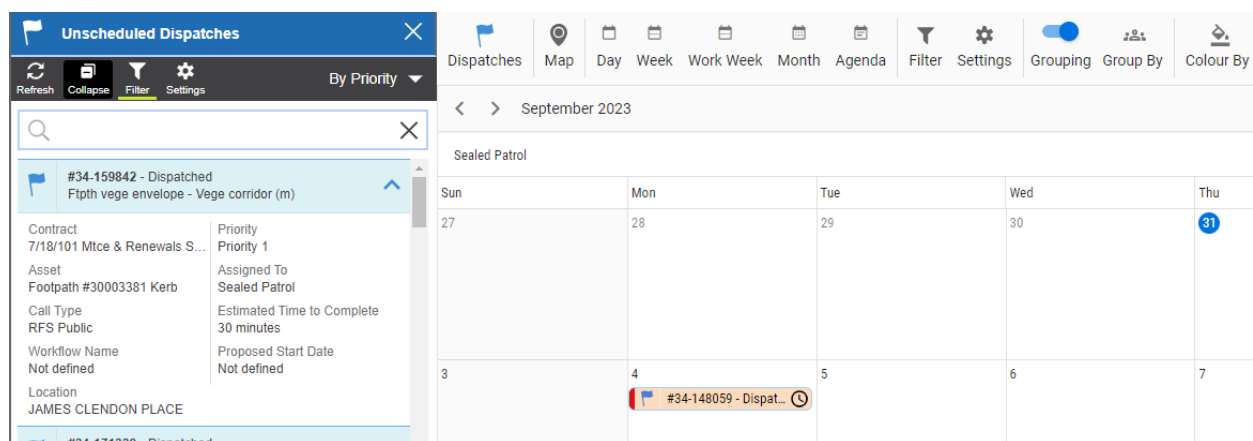
Some additional work is being done to make use of “RAMM Insights” in tracking our Routine response efforts. A snip below indicating the expected completion of some dispatches allocated to the Patrol teams. Routine response is currently tracking around 93% - *this report was run 30/08/23 and will be subject to change over the next few days.*

In addition to this working RAMM scheduling into future works to generate more accurate programmes.

Dispatches expected completion Date:



RAMM scheduled dispatches, intended use to allocate and programme ordered works.





3. ROUTINE INSPECTION REPORT

Our 3 inspectors have been working through routinely programmed inspections.

Sealed:

There are currently 0 sealed inspections running overdue, 388 completed.

Unsealed:

There are currently 0 un-sealed inspections running overdue, 235 completed.

Drainage

There are currently 0 drainage inspections running overdue, 25 completed.



Network Area Inspection	
South Area – August 23	
Week 1	378 km
Week 2	297 km
Week 3	286 km
Week 4	215 km
Total KM	1,176 km

4. ROUTINE WORKS COMPLETED

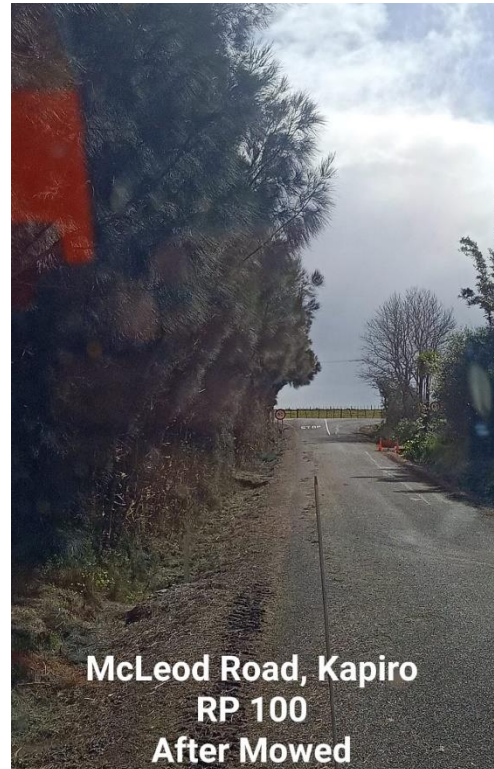
Routine maintenance activities completed in August:

- 460 sealed potholes repaired.
- 2,101 unsealed potholes repaired.
- 286.8km of unsealed roads graded equating to 36.7% of the total unsealed network. Matene Rd Grading to the right >>>





**McLeod Road, Kapiro
RP 100
Before Mowed**



**McLeod Road, Kapiro
RP 100
After Mowed**



**Puketotara Road, Kerikeri
RP 7500
Before Mowed**



**Puketotara Road, Kerikeri
RP 7500
After Mowed**

5. EMERGENCY WORKS

Other than the continuation works from previous weather events there were no major new emergencies this month.

6. DRAINAGE MAINTENANCE & RENEWALS

Drainage maintenance activities completed in August:

- 400m of heavy water tabling (Storm recovery package & scheduled work)
- 1,005m of water table reconstruct/scouring. (Storm recovery package & scheduled work)
- 18.5m of Culvert pipes replaced/new. (Renewals Programme)
- 0 Culverts flushed.

The crew have taken a break from culvert renewals this month with just a handful of emergency lines replaced. They have focussed on heavy water tabling and slip clearing in the Russell/Rawhiti areas with a bit of storm work in between. The photos below show a repair carried out on a retaining structure on Manawaora Rd.



7. PHASE 2 – RECOVERY WORKS – GABRIELLE & MAY RAIN EVENTS

Works on Gabrielle and May rain events have continued through August with a large amount of work ticked off. A summary on the next 4 pages with pictures shows just how much is being done across the network generally away from most of the public eyes as these roads are mainly back roads.

Pavement Team

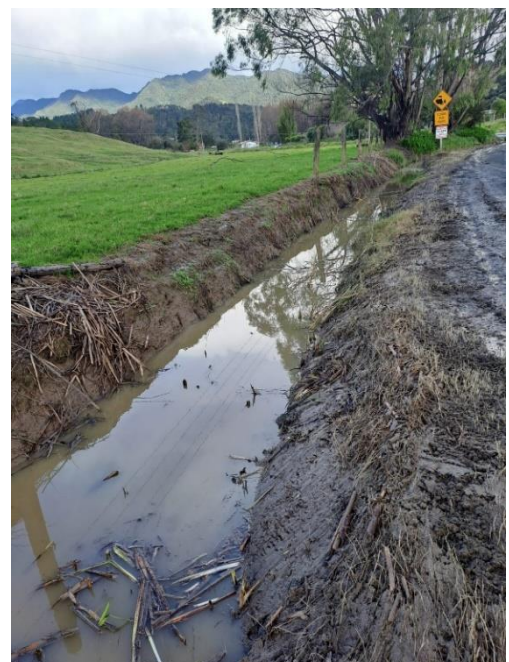
Alex and the team worked there way from Ramsey Rd (river scouring) to Classen Rd (2nd time it dropped out in weather events this year to Taheke Rd for a long overdue run of resilience repairs to under drops.

Taheke Rd – Underslip (before and after) and Classen Rd after



Water tabling team

The team had been on Omanaia Road (photo to right), Koutu Loop Road, Mountain Road, and Puia St in Ngawha clearing up blocked culverts and water tables from the recent events. The team has now mobilised to Pukepoto Road and will be spending a week clearing water tables and them moving on to Matawaia Maromaku Road



DCL

Completed a large under slip on Newton Rd, Omapere along with many other smaller jobs from May Rain event.

JR Hack

The past rain events have left some noticeable damage to Motukioire Rd, that can only be a nuisance to the local residences. This is a dead-end Road and one-way in one-way out made large areas impassable.

The Hack team have been working away on this road for the whole month of August and a little more to go. This road is already looking great since the team got stuck into fixing large under slips, clearing over slips and side drains, relaying disconnected culverts, and building up several dropped road surfaces.





Tarmac

In the month of August the team at Tarmac has completed the full storm repair list for Tokawhero Road, this has been a massive undertaking in clearing and repairing a number of large slips and reformation of side drains. Ventia have been fortunate to spoil these unuseable materials at a friendly locals property (right photo). The last of the works is to tidy up the tip site in a drier time, seed and mulch. We aim to keep everyone happy when we walk away.



Pristine Projects

Ventia is pleased to have worked with Pristine Projects and saw good project delivery from them. Finishing quite a few roads off this month. Akerama Rd, Equestrian Dr, Hooks & Halls Rd, Orira Rd, Pakanae Cemetery Rd, Perry Rd, Waikuku Rd and Waoku Rd.





Far North Roding

With ongoing repairs all over the network, Far North Roding has continued to help Ventia on storm work. Puketi Rd (Below Left), Old Valley Rd, Taita Rd (Right) and Waitotemarama Gorge Rd got the once over from FNR. The roads look great and the local community in these areas feel valued.



8. ORDERED WORKS

As per last month most of the ordered works this month were phase 2 of the cyclone Gabrielle response, and Phase 2 of the May Rain event.

Some smaller ordered works were carried out:

- Rock void on Clendon Esplanade Filled to remove risk of collapse.
- Hihitahi Rise Asphalt



Hihitahi Rise – Before & After

9. FOOTPATH MAINTENANCE/RENEWALS

Mike's crew have finished up on Clifford St, Kaikohe and are now working on Gills Dr in Kawakawa. The team have had a rough start in Kawakawa, having uncovered some nasty scouring along the kerb after removing the existing paths (500mm deep in some places). A 60m trench and subsoil drainage were needed to divert water into a downstream Cesspit.



10. ROAD FURNITURE ACTIVITY

- 19 new signs installed or replaced (damaged or missing)
- 6 signposts replaced/new.
- 44 signs re-erected or straightened.
- 121 signs/posts cleaned.
- 91 posts painted.
- 14 metres of railing replaced.

11. UNSEALED NETWORK

Unsealed rehabs completed on:

- Ngawhitu Rd
- Kupa Rd
- Matawaia Maromaku Rd
- Martin Rd

NTA/Ventia have an unsealed pavement workshop planned for this Wednesday to go over the long term programme as well as the summer overlay plans on the unsealed network.



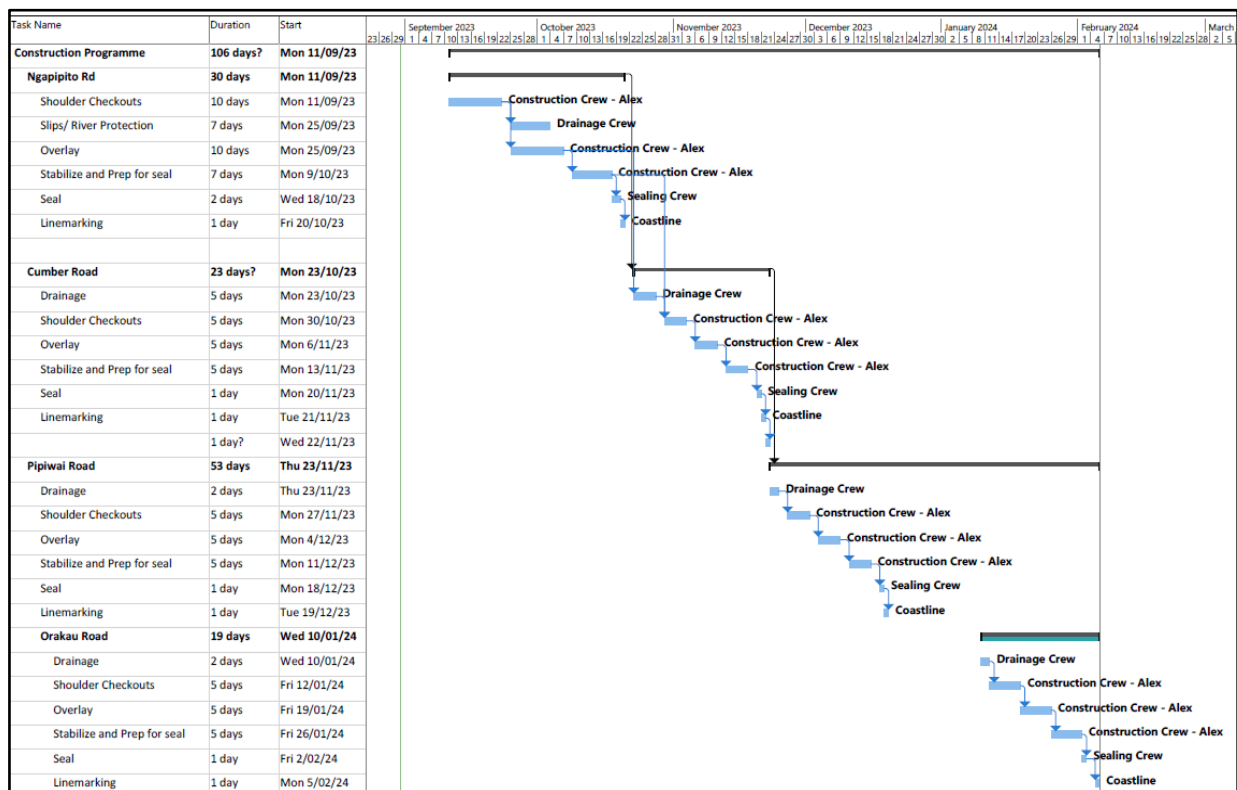
Ngawhitu Rd unsealed overlay – Brian in action.



12. PAVEMENT REHABILITATIONS

A reminder that the confirmed sites for this coming season are as follows:

1. Ngapipito Rd 1850-3000m – Carry over – will commence early to mid-September depending on the ground conditions. At present there is a lot of water coming off the hills surrounding the pavement.
2. Cumber Rd 0-421m
3. Orakau Rd 14822-15050
4. Piiwai Rd 12274-12610m



13. RESURFACING

The final count down to the sealing season. Daily temperatures are getting above 20deg and the weather is slightly more predictable. With this news last week both the FNDC and KDC resurfacing workshops were completed with the NTA with at this stage 65km of sealing planned in FNDC and 43km planned in KDC. A large programme when combined with preseals but we are looking forward to completing this with the NTA. **Resealing is commencing on 11th of September.** Sorry in advance for the loose stones!

Glimpse of Chip sealing History in New Zealand

Before Chip sealing

The technique of sealing roads has only been used for wheeled traffic for the last 175 years. Roman roads surviving for at least 2300 years were constructed with protected surfaces, but were rigid usually made with slabs of stone, over a built-up base, or bridge-like causeway across soft soils. Remnants of these straight roads include the Appian Way which was begun in 312BC. There is evidence that bitumen was used by Nebuchadnezzar of Babylon to grout stone roads and to waterproof the masonry of his palace (Morgan & Mulder 1995) about 600BC. However, the present use of a bituminous binder in a road pavement started with tar macadam in Nottinghamshire as recently as 1830.

Chip sealing comes to New Zealand

Two advances made in the latter part of the 19th century encouraged sealing roads with protective surfaces in New Zealand. One was of the increased production of coal gas for lighting and heating, and its by-product coal tar. The other was the automobile which required smoother and safer surfaces than the rutted gravel surfaces which had previously provided the needs of lighter horse-drawn traffic.



"Up to axles in mud" was commonplace in the early days of transport (photos 1910).

Chip sealing in New Zealand

A contributing reason to the wide use of chip sealing in New Zealand in the early 20th century was its lower production costs and construction using simple plant and local materials. It could be applied over a conventional water-bound macadam pavement yet provide flexibility to resist cracking under normal traffic use. This technique has been developed to a high degree and New Zealand's roading engineers are acknowledged to be among the world leaders in this field.

From about 1880 in New Zealand, tar from the local gasworks was hand sprayed over roads or footpaths and covered with chips then compacted with a roller. Gradual refinement in techniques have evolved.

Changes in Binder Materials

Coal tar being a by-product from local gasworks was the earliest and only binder used in New Zealand until about 1910, when bitumen for roading use first became available. Approx. 65 gasworks around the country ensured availability.

It was undistilled and hazardous to work with, workers could suffer skin burns from the high sulphur content and other chemicals in the tar, and it was known to be carcinogenic. Distilled tar mainly from England was more benign, had a longer pavement life, but substantial processing was required. Their tars were suitable as primers which were exposed for only a short time before being covered by the next seal coat. This source dwindled by the mid-1950s when only four or five gasworks were producing roading tar.

Road grade bitumen was first produced in USA around 1900 and came into use in New Zealand as a more durable and less temperature-sensitive material than coal tar about 1914. The first bitumen applied to a pavement in New Zealand was undertaken in 1914 in New Plymouth, being imported in wooden stave barrels from Pennsylvania, USA (until the early 1930s, crude oil products were mainly imported mainly from USA). The barrel staves made a good fuel for the decanters or heaters (tar kettles) which supplied bitumen to the sprayers and were horse-drawn). A rope extended along the side of the heater to the horse-hitching harness so that the horse could be released if the bitumen caught fire. This escape mechanism was used in the case of explosion or fire so if the horse bolted it did not drag the unit up the street leaving a trail of catastrophes for both workers and bystanders.

As if not hazardous enough, the bitumen was pumped by a hand-operated gear pump, and that was a very unpleasant occupation for the person standing alongside the uninsulated surfaces of the tar kettle.

Lighter penetration grade bitumen, road oils and cutbacks were transported from California and Mexico in 44-gallon drums until after 1945, when sources included the Middle East oilfields.



Horse drawn bitumen sprayer ready for sealing the main street of Opunake (right side photo)

As road building increased, annual bitumen use doubled between 1950 and 1960 to about 60,960 tonnes. It levelled out at to about 101,600 tonnes per year until 1980.

To cope with this increase, and in anticipation of refining oil in New Zealand, the first imports of bitumen in bulk tankers were in 1959 from Venezuela.

In 1964, the New Zealand Refining Company's plant at Marsden Point opened and took over supply almost totally, with distribution to a total of nine ports around New Zealand. To maintain consistency in meeting the demanding requirements and to be within the refinery's capability, crude oil generally came from a single Middle East oilfield which could be accessed by the main New Zealand oil companies. Its higher price was a relatively small disadvantage compared to the high transport costs of importing the bitumen.

Unfortunately Marsden Point Refinery shut down its bitumen operations in 2021.

Changes in Aggregate Materials

In the early days of chip sealing, it was quickly discovered that if graded sandy aggregates were used for cover stone or chip, the binder tended to work its way to the surface.

When the Main Highways Board (MHB) began issuing specifications in the late 1920s, consensus was that unweathered chip, free of sand, silt, and clay, of a defined range of sizes should be used. 1935 recommendations placed considerable emphasis on the use of a single layer of uniform sized chips, even though recommending the use of much larger chips than we now use.

The 1970's oil shortage affected the amount of bitumen available for sealing in New Zealand. It made the use of smaller chip more attractive as a surfacing, especially as smaller chip is considered to use bitumen more efficiently, although greater skill is required by the operator to use it successfully. Smaller chip also cuts down on road noise and vehicle fuel consumption by creating less rolling resistance.

Changes in Equipment

Advances in engineering technology have seen some notable improvements and developments to overcome the hazards of the early equipment. Early chipseal methodology compared to modern methods were quite primitive and based more on experience than research. Before the introduction of spray bars, bitumen was hand sprayed. Hand spraying became a highly developed skill and good operators needed to have the rhythmic grace and style.



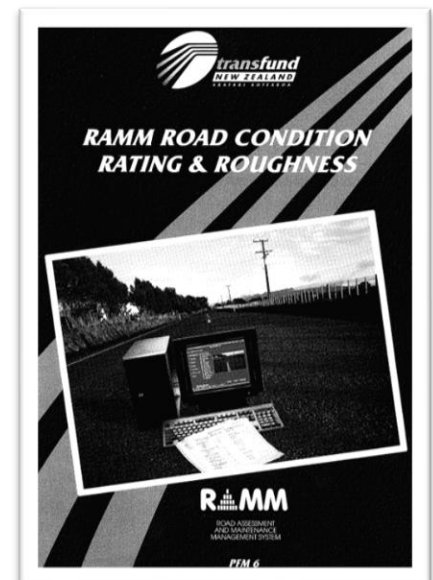
In addition, they had to be able to vary this rhythm to compensate for any variation in surface texture, and the tanker driver moved the tanker along the road synchronised with the movements of the sprayer operator. Without this synchrony of the driver and the sprayer operator, the quality of the job could be seriously lowered. The pumps on the tank wagons could not be reversed, so once a job was started it had to be kept going until it was finished. So, at 'smoko' time, the lance would be poked back into the tank to keep it warm and prevent blockages.

Initially, when fully circulating systems were introduced, the return line went into the top of the tank and the binder flowed down through the vapour space into the tank. When using emulsions this caused aeration with many foam-overs or boil overs, and very messy results. This arrangement has been discontinued and the return line now enters at the bottom of the tank. Early mechanical spray bars had very unreliable control of transverse or longitudinal distribution, and of the application rates of the bitumen, with common blockages.

Changes in Procedures

Though relatively flexible, cracks left untreated in chip sealing will let water in and increase the incidence of potholes and deformation. Because wear and weathering require spot repairs and eventual resealing, a deliberate maintenance regime and provision for resealing was needed in the longer-term care of a chipseal.

To keep track of the state of the roads and their needs for maintenance and resealing, the database Road Assessment and Maintenance Management System or RAMM was established in 1985.



The RAMM Road Condition Rating Manual was issued in 1988 by the then National Roads Board.

In 1994 the Minister of Transport, in consultation with the Minister of Finance, required all local authorities to have in place a maintenance management system based on RAMM no later than 30 June of that year.

As a result, all Road Controlling Authorities are now using RAMM.



From the mid-1990s, intelligent systems have been implemented that use the RAMM inventory and condition information to predict long-term maintenance needs.

Not a lot remains of the old ways but the overall aim is the same just with different views on safety, plant, materials.



14. ROAD ACCIDENT REPORT

No accidents to report this month.

15. RAMM ISSUES



No issues this month – Any development & minor operational issues encountered in the system are being recorded to provide feedback to Think project each month.

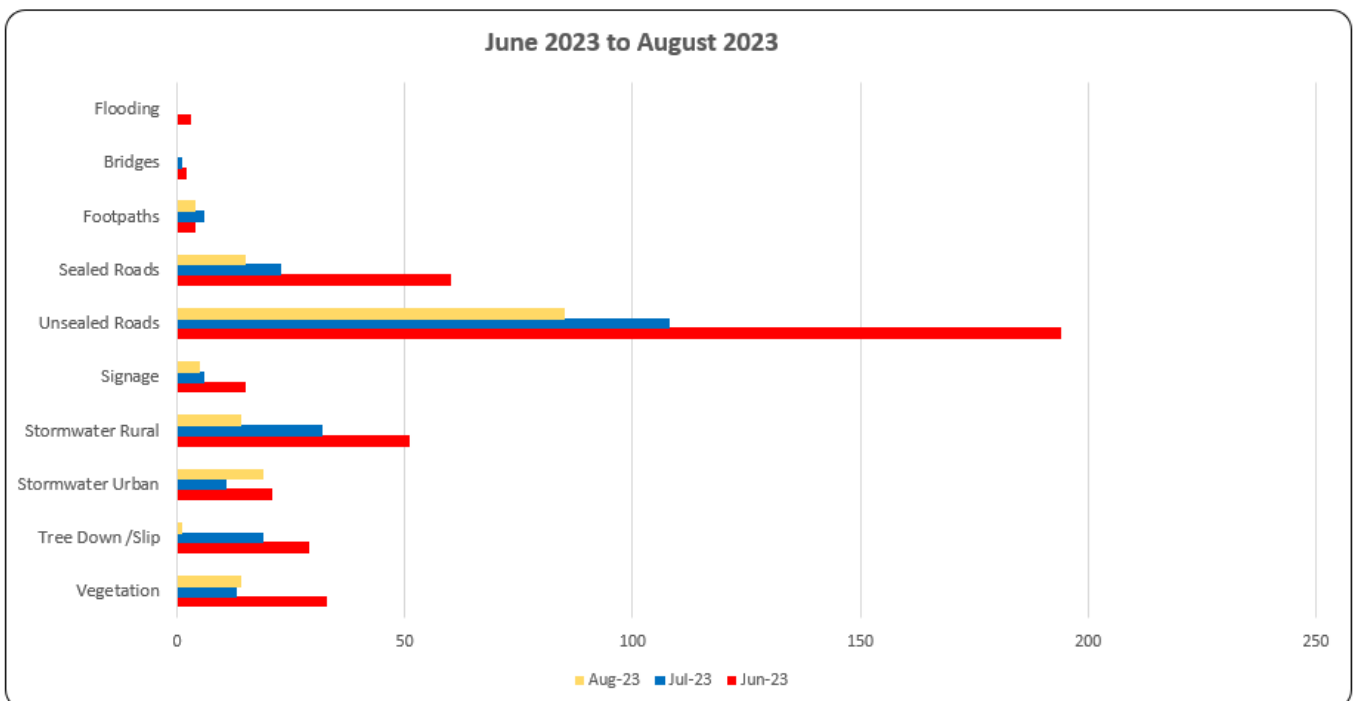
16. CUSTOMER SERVICE ISSUES / COMPLAINTS

Another quieter month of requests received during August. The pastel orange lines below show the main trigger this month was the unsealed network. Only 157 for the month! So good.

Ventia Customer Service Request Comparison, June 2023 to August 2023

Number of RFS's

Month	Vegetation	Tree Down /Slip	Stormwater Urban	Stormwater Rural	Signage	Unsealed Roads	Sealed Roads	Footpaths	Bridges	Flooding	Total
Jun-23	33	29	21	51	15	194	60	4	2	3	412
Jul-23	13	19	11	32	6	108	23	6	1		219
Aug-23	14	1	19	14	5	85	15	4	0	0	157



17. COMPLIMENTS

Just the one compliment this month from the Ngawha Springs water tabling.

Ngawha Springs - Jackie one of the local residents emailed us from our letterdrop.

Thank you Ventia for the awesome work over the past month in Ngawha Springs. It has been a long time waiting but we are so thankful for the footpath and drainage works done. We have had flooding through the town regularly and this will hopefully reduce the risks of further flooding in the future. Nga mihi

18. HEALTH & SAFETY & WELLBEING

See attached to this report email for the SHEQ stats for the month.

The themes from our Branch Toolbox held on 8th August at the Kerikeri Sports Complex were:

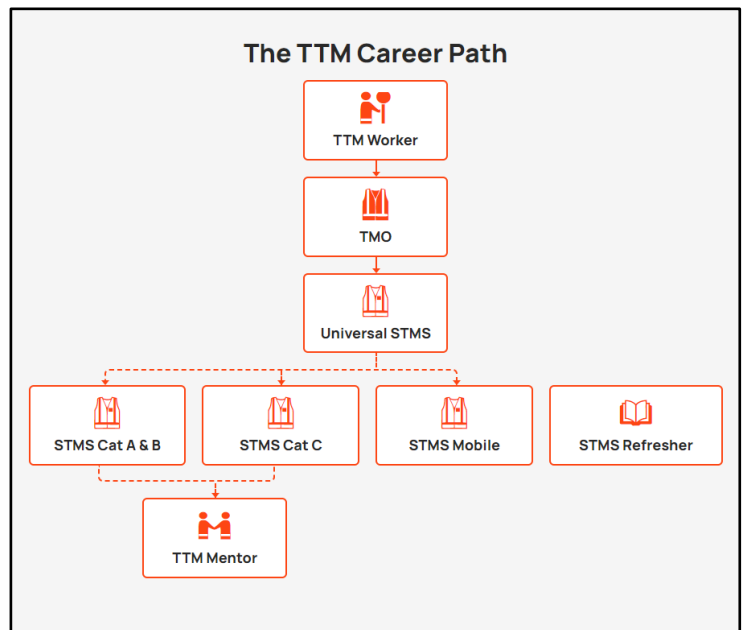
- Our 4 x safety reps had a chance to report on what is occurring out in the field around safety.
- Discussed the change with the Quarries team now as part of the same team as the Maintenance/Construction team. A more inclusive yard.
- Ventia's Have your say survey was rolled out. A yearly anonymous survey to gather information on what needs improving and what is important to you.
- E road positive recognition where 6 of the top 10 drivers in Ventia Transport (over 1200) are currently in our Branch between Maintenance/Construction and Quarries. A little well done in the form of a New World Voucher thanking them for their efforts in showing good driving behaviours.





19. TRAINING

Late in the month one of the team headed down to Hamilton to McAdams Traffic Training to sit the TTM Mentor Certification. Stoked with this as it will now allow us to continue the push for more internal TM rather than outsourcing to TM specialists. The role of TTM mentor is to assist TMO (Traffic Management Operators) into SMTS roles (Managers of the TM on site).



20. ENVIRONMENT

In August we had no notifiable incidents to report.

21. SMALL TO MEDIUM ENTERPRISE (SME) BUSINESS ENGAGEMENT

As promised in the July report below are the newly updated figures for the period 1st July 22 to 30th June 23. When populating the figures, the main difference in why we have dropped from 49% to 41% SME is we have purchased a lot more aggregate from our Quarry here at Puketona due to supply shortages at other Quarries and increasing rates from these suppliers that we are unable to absorb. Still 41% of our (Councils) Expenditure is going to local companies on top of the already local Ventia.

Measurement	Qty
Local Contractor component of work	41%
Internal salaries and wages (Generally invested back to local communities)	\$3,490,121.02
Local labour hire wages	\$ 394,111.74
Other internal local market expenditure e.g., local supplier purchases etc. Includes local Ventia Quarry purchases	\$ 8,066,806.05



22. ANNUAL ROUTINE ACTIVITY ACHIEVEMENT

Routine and cyclic rounds start at the financial year (July 2023/24):

Biennial Painting of All Rails	0% completed - on hold due to funding.
Biennial Parapet Painting of Bridges	0% completed - on hold due to funding.
Annual Cleaning of EMP's	0% complete
Annual Sucking of All Sumps	0% complete
Biannual sweeping	0% completed.
Urban Vegetation Spraying	0% complete. Commencing round 1 Sept-23
Rural Vegetation Spraying	0% complete. Commencing round 1 Sept-23
Line marking Network Remark	0% complete.

23. OTHER WORK IN PROGRESS

The Construction team stayed on course with the delivery of our projects as per below:

Pokapu Road Bridge Construction

Progression at the Pokapu Bridge site is moving at a steady pace. The bridge tensioning has been completed and the infills at both abutments has been poured. The footpath and kerb across the bridge is currently having steel added before being boxed up for concrete along with the infills above the piers. This will be tied in with the mountable kerb that was installed on the northern and southern approaches last week. Prep for the footpath on either side of the bridge is underway with a pour to follow shortly.

A double cesspit along with 375 diameter culverts will be added to the northern side before we start adding our sub-base. Once we have our pavement in on either side, we can install the guardrails, AC over the bridge, line mark, then open the bridge for the public to use.





24. COMMUNITY WORK

Ventia supported Daffodil as always this year with a yellow themed morning tea and fundraiser on 25th August. We all know someone or potentially ourselves who have been affected by Cancer.



Nga Mihi

Jamie Kitzen

Contract Manager – FNDC South Maintenance Ventia (NZ) Ltd