



# Maintaining unsealed roads

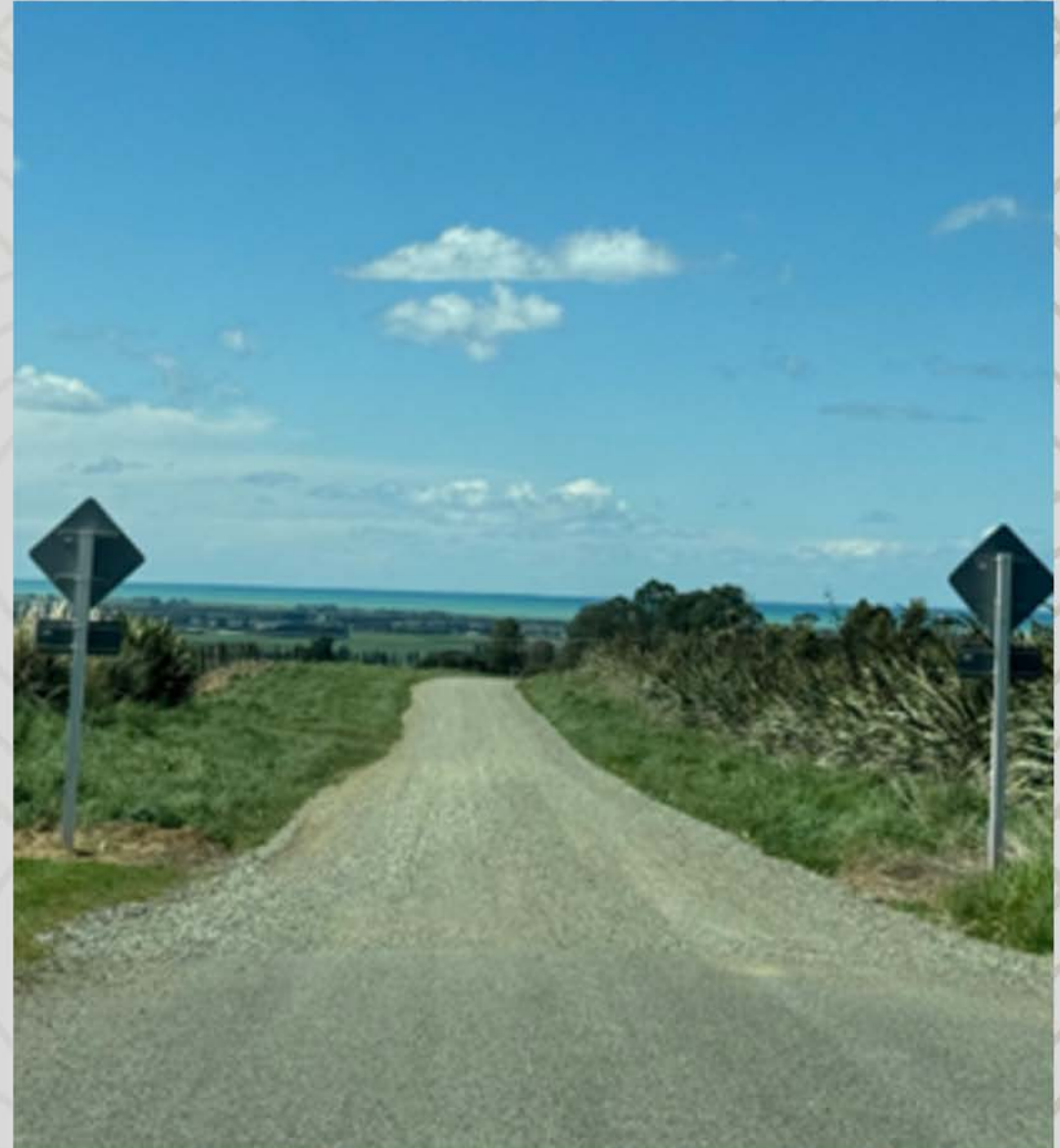
Workshop for Timaru District Council

3 June 2025



# Key stats

- A little over 40% of our roads are unsealed (about 741km)
- 78% of our unsealed roads are classified as **low volume** (<50 vehicles per day). The remainder are classed as **access** or **secondary collector** (<200 vehicles per day).
- Unsealed roads are critical for freight collection, supporting agriculture, hort, forestry, quarries. Also important for residential access and visitor access to touristed areas.

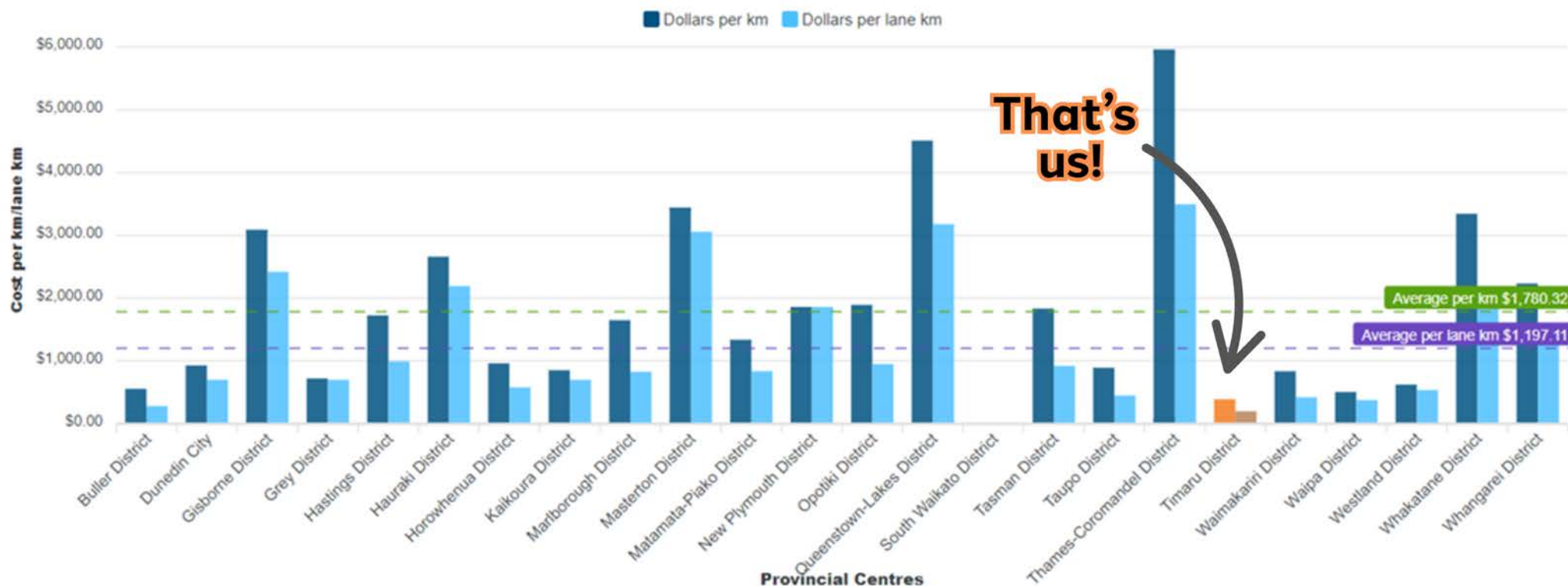


# We deliver one of the most cost efficient unsealed road metalling programmes in provincial New Zealand.

## How?

- Investment in high quality data capture to enable real time monitoring and tailoring of maintenance approaches
- Use of technology - compacting rollers and specialist grading parts (not everyone does this!)
- Access to low cost aggregate

WC211 - Unsealed road metalling - 3 year average (2020/21–2022/23)





# What work do we do?



## GRADING & METALLING

- This is where we smooth out (and lightly replenish) the existing metal surface, removing corrugations
- Grading occurs on a cycle across the network, and is both seasonal and needs based
- This is maintenance work (**operational expenditure**)
- We spend roughly \$480 per km on grading per year (noting frequency varies across the network based on need)

Standard wearing courses are the most common type of metalling undertaken and are suitable for most areas



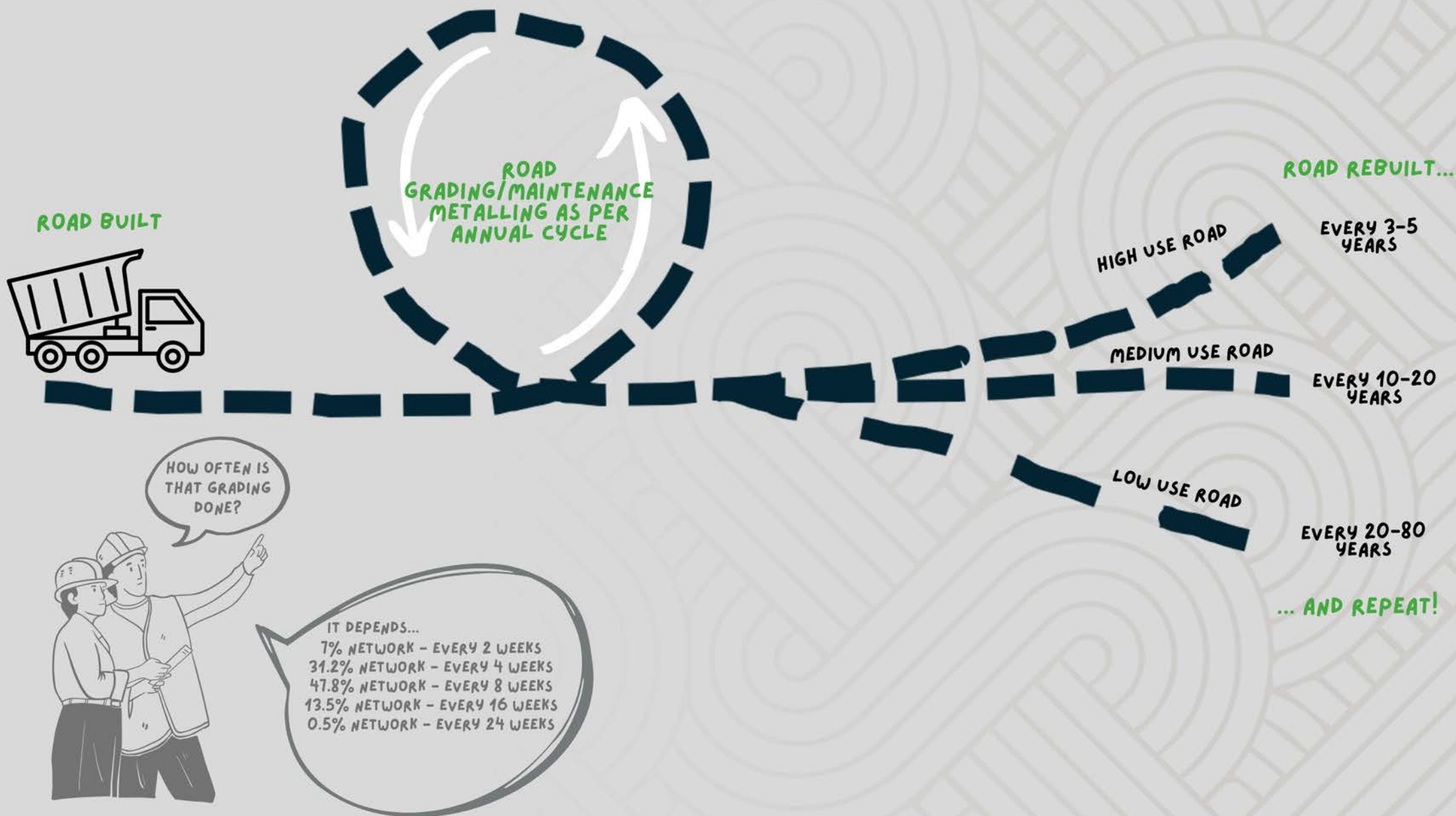
Lime wearing courses allow for a hard crust to form, adding strength and reducing dust nuisance (good for dry areas but avoided in wet/shady areas as the lime will not settle with moisture)



## ROAD REBUILDING

- This is where we add new aggregate (metal) to the road, where it has been lost/worn away over time
- 3 types of materials can be used depending on the needs of the road: standard wearing course, lime wearing course, basalt wearing course
- This is renewal work (**capital expenditure**)
- We are funded to rebuild about 3% of the network every year - high use roads get priority as they deteriorate faster

# The life of an unsealed road...





# What does it cost?

*Current programme (subsidised by NZTA)  
 + if we were to fund seal extensions*

## GRADING & METALLING (OPEX)

2024/25	2025/26	2026/27
\$703,775	\$716,676	\$729,576

## ROAD REBUILDING (CAPEX)

2024/25	2025/26	2026/27
\$605,574	\$616,674	\$627,775

## SEAL EXTENSIONS (CAPEX)

**Between \$380,000-\$440,000 per km depending on complexity of site, plus ongoing maintenance costs**

*(corresponding reduction in grading/metalling costs of network overall but impact likely marginal unless substantial proportion of unsealed network sealed)*

# How do we prioritise?

Lots of factors are considered when prioritising seasonal programmes:

- Traffic volumes and heavy transport
- Seasonal variances and weather
- Safety needs
- Surrounding land use/ access needs
- Customer feedback



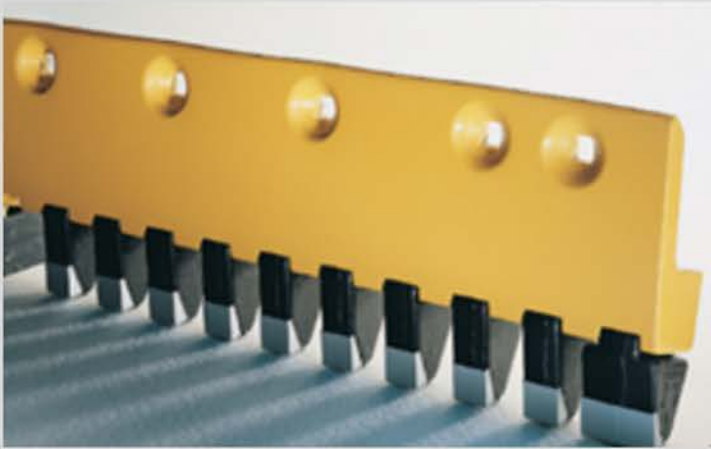


# Who does the work?

- Unsealed road works are delivered under the road network maintenance contract, and subsidised by NZTA.
- As required under NZTA Procurement rules and the Land Transport Management Act 2003, and in alignment with the s14 principles of the LGA 2002, unsealed road works are competitively tendered
- We use the price/quality method, with 60% of scoring based on non-price attributes
- The contract is managed and monitored in house
- Current contract expiry: 30 June 2026 (2 year extension available)



# Innovation



- Use of different grader blades to cater to different environments - e.g. CAT bit blades cut deeper to fix larger faults and redistribute fine materials



- Investment in data systems e.g. Roadroid software enables officers to measure roughness of roads (saving on consultancy costs to gather this data)

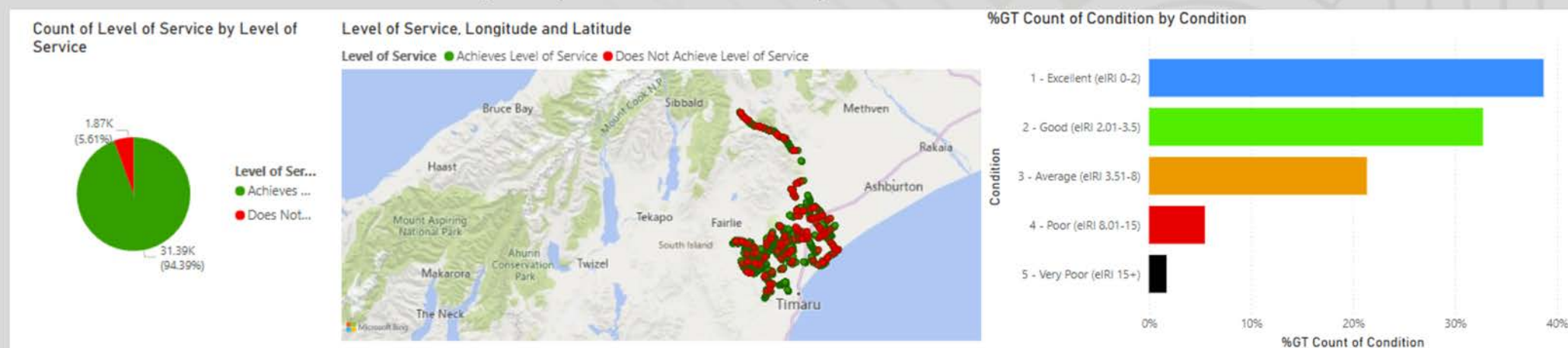


# How do we measure performance?

We continually monitor before and after grading to assess road condition against a range of metrics:

- **Potholes**
- **Corrugations**
- **Acceptable driving surface** – assessment of whether the road feels safe to drive at **70 kph**.
- **Roadside drainage maintenance** – assesses the ability for surface water to shed away from the road to an appropriate discharge point.
- **Suitable crossfall maintenance** – assessment of the suitability of the crossfall of the road from the crown to edge of formation.
- **Aggregate levels** – assessment of the amount of aggregate on the road, is there enough material for the grader to perform an efficient grade?

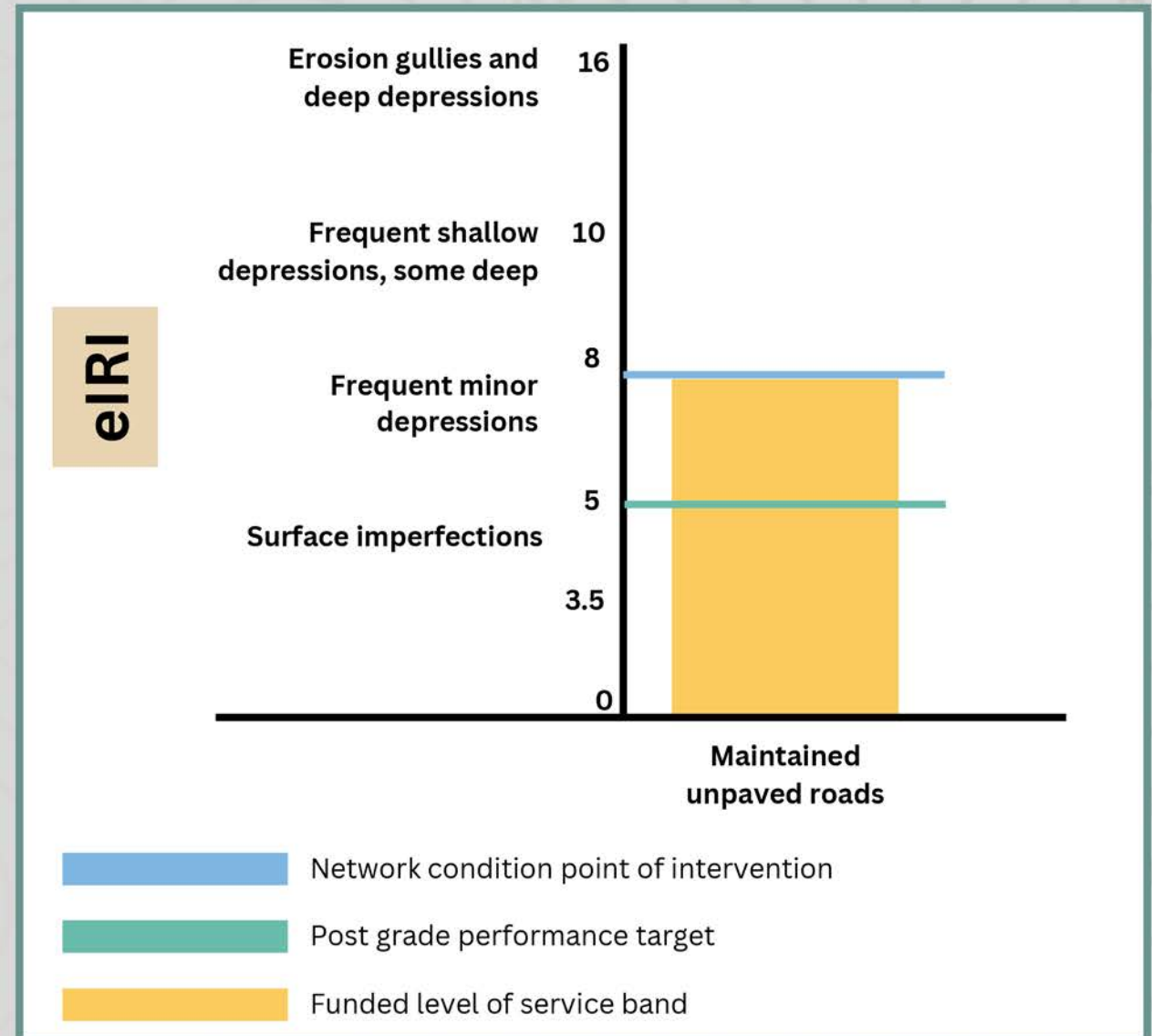
## Power BI tools we've developed (Demonstration)





# How are we performing?

- eIRI is a measure of road roughness – **the lower the number, the better road ride**
- Our funded level of service is an eIRI roughness score of 8 or below
- We aim for roads to score 5 or below post grading



# How are we performing?

Data snapshot as of 22 May 2025

## The roads below this line meet our post grade target

**Only 1 road scored above 8.  
This is when we would intervene  
with maintenance**

**Simpson Road 9.18**

**The roads below this line still meet  
level of service target**

**Scott Road 6.81**  
**Payne Road 6.55**  
**Milton Road 6.13**  
**Old Main South Road 5.31**

White Road	5.21	Mount Gay Road	3.38	Agnew Road	2.61
Burke Road	4.91	Middle Road	3.32	Limestone Road	2.61
Keen Road	4.87	Mckenzie Road	3.31	Mccully Road	2.58
Flatman Road	4.78	Rolling Ridges Road	3.31	Sterndale Valley Road	2.56
Seaward Road	4.68	River Road	3.31	Oliver Road	2.56
Lapthorne Road	4.18	Rapawai Road	3.28	Horsfall Road	2.54
Moa Pass Road	4.17	Arundel Rangitata Road	3.24	Christmas Road	2.52
Middleswamp Road	4.17	Gaulter Road	3.23	Station Road	2.52
Stalker Road	4.11	Langley Downs Road	3.23	Bassett Road	2.51
Hall Road	4.09	Pareora Ford Road	3.19	Geraldine Flat Road	2.49
Slip Panel Road	4.07	Newton Road	3.19	Casey Road	2.46
Looker Road	4.06	Beeby Road	3.16	Robinson Road	2.46
Elmslie Road	4.03	Keane Road	3.11	Main Waitohi Road	2.46
Parke Road	3.98	Prattley Road	3.07	Gould Road	2.45
Lewis Road	3.93	Sercombe Road	3.06	Orton Rangitata Mouth Road	2.44
Guild Road	3.89	Ambler Road	2.99	Armstrongs Zig Zag	2.41
Chisholm Road	3.89	Mount Peel Church	2.99	Te Ngawai Flat Road	2.41
Oakwood Road	3.87	Goodwin Road	2.99	Lyon Road	2.41
Whichester Hanging Rock Road	3.86	Arundel Belfield Road	2.98	Coles Road	2.37
Rangitata Gorge Road	3.86	Mckinnon Road	2.91	Mowat Road	2.26
Wilks Road	3.85	Fraser Road	2.89	Parr Road	2.26
Henrikson Road	3.82	Esler Road	2.87	Clarkson Road	2.24
Tripp Settlement Road	3.78	Timewell Road	2.86	Metherell Road	2.22
Burnham Road	3.71	Raydon Station Road	2.81	Opihi School Road	2.22
Brothers Road	3.69	Patrick Road	2.79	Harney Road	1.96
Sutherlands Road	3.69	Rangitata Valley Road	2.79	Kirk Road	1.85
Budd Road	3.65	Kakahu Street	2.78	Pratt Road	1.82
Walker Road	3.61	Rockwood Road	2.78	Edgar Road	1.66
Craig Road	3.57	Crombie Road	2.73	Hadlow Road	1.49
Cliffs Road	3.51	Howell Road	2.71	Pit Road East	1.46
Fletcher Road	3.46	Andrew Steam Road	2.71		
Three Mile Bush Road	3.44	South Boundary Road	2.63		
Spur Hut Road	3.41	Davison Road	2.62		



# Customer feedback

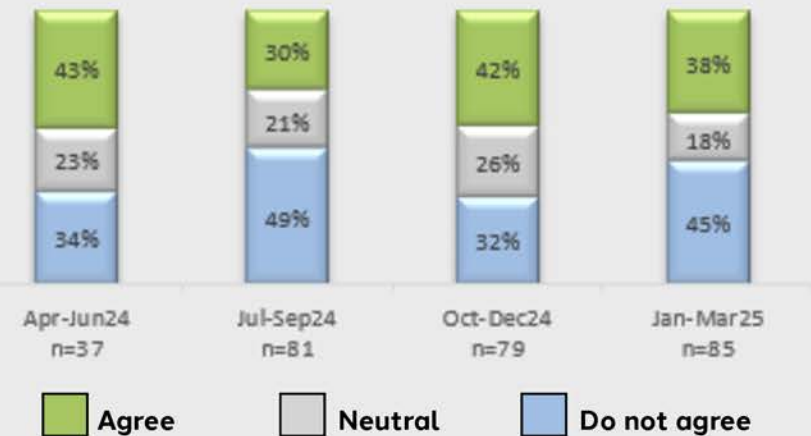
## Road User Survey Results January-March 2025

In your opinion, what's the main thing Timaru District Council could do to improve our road network?

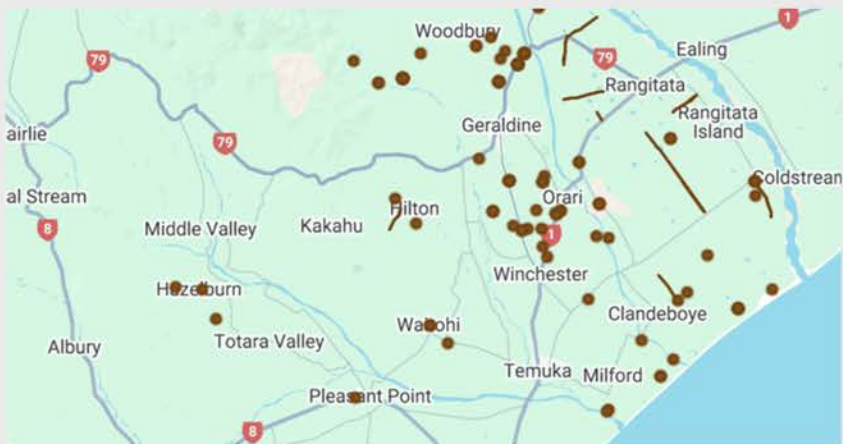
**"Stop cutting corners on road sealing so it lasts longer and reduces the need for constant repairs, which in turn costs more money."**

**"Aim to seal as many of the numerous gravel roads in the district around Timaru, beginning with the most residential ones."**

I think we do enough maintenance on our gravel/unsealed roads



### Unsealed road CRM dispatches Q4 2024/2025



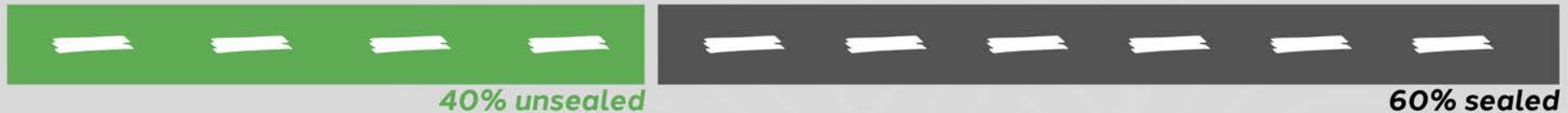
**and some positive feedback!**

**"There's some great sustainable work being carried out within the Timaru District for road maintenance and safety. If you go to other council areas, you can see the poor quality of the roads."**

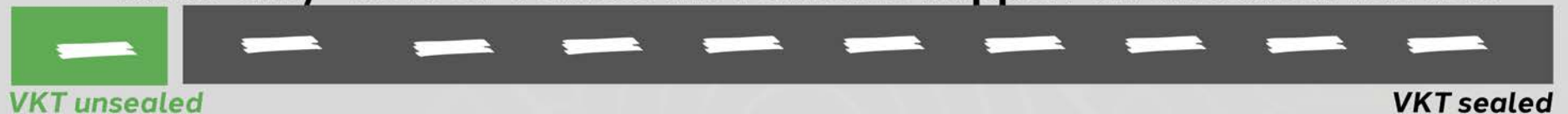
**"I understand it is a very difficult job maintaining the infrastructure of this town and region, especially given the rising cost of everything. Overall, I am satisfied with the services the council provides."**

# How does customer feedback compare with the work we do?

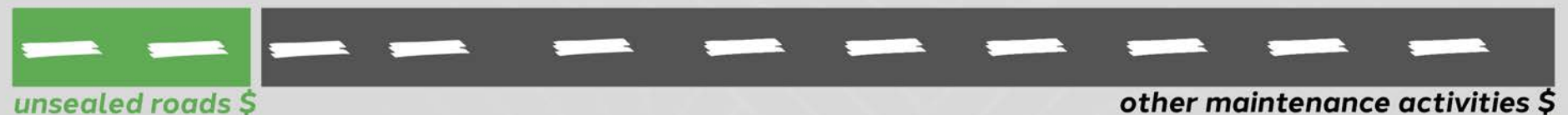
Our road network is 40% unsealed...



...but only 4.6% of vehicle movements happen on unsealed roads...



...we maintain them very well using about 7% of our total subsidised operating budget...

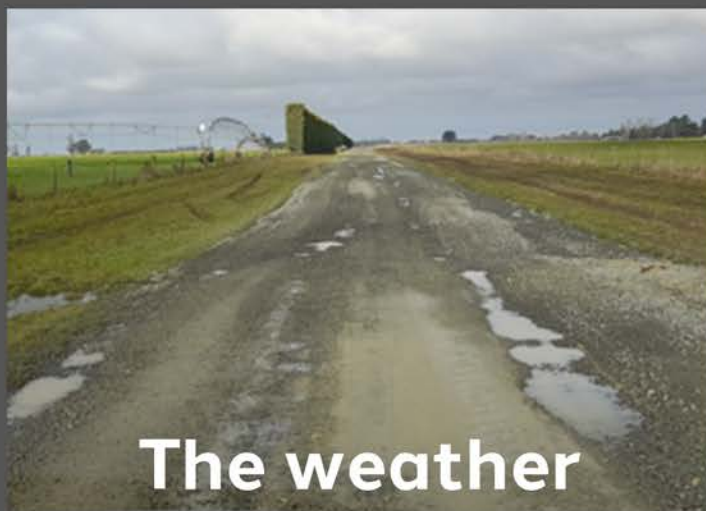


...but 60% of customer complaints on rural roads are about unsealed roads.





**We can't  
control...**

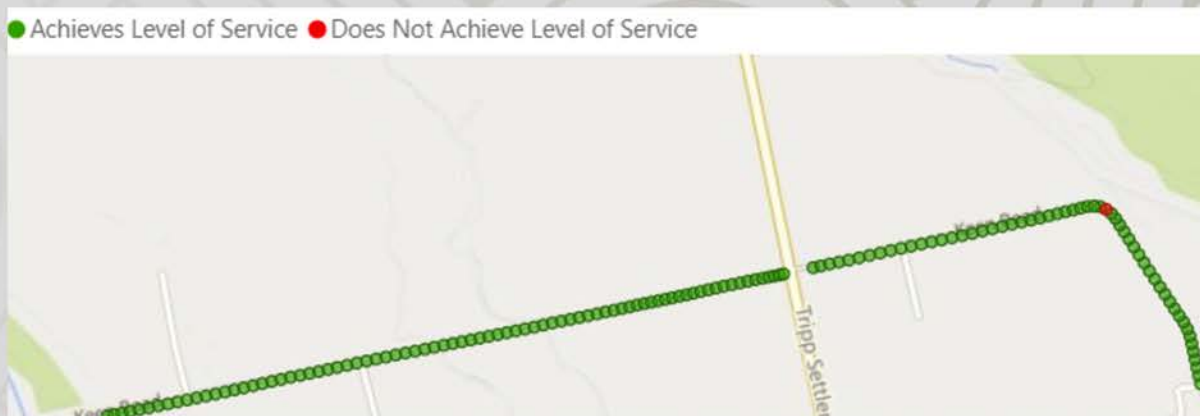


**...but we can and  
do respond**

**Keen Road - 15 April 2025, after heavy rain**



**Keen Road - 5 May 2025, after grading**



# Future improvement opportunities

- Current service delivery is pretty much optimised - we can't do more without more money
- Section 17A review in 2025/26 will determine any opportunities for improvement to current wider operating model
- Introducing a budget for seal extensions would likely help to improve customer satisfaction - but this will also increase maintenance costs over time and requires significant additional capital investment
- Officers are investigating a new public online tool showing when roads were last graded and grading frequency



# Questions

## Reminder:

More detailed information on management of our unsealed road network is available in the Land Transport Activity and Asset Management Plan