Making Infrastructure Happen

A SPOTLIGHT ON PUBLIC INFRASTRUCTURE AND APPLIED ASSET MANAGEMENT

CHARLOTTE TURNER

Fulton Hogan

A little bit about me

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Why is maintaining our roads important?

Potholes number one reason Taranaki drivers put damage claims to Waka Kotahi

Elijah Hill . 05:10, Nov 24 2022

Mum, toddler stranded in dark as pothole carnage returns

Avina Vidyadharan . 09:34, Oct 03 2022

Motorists and businesses pay dearly as poorly maintained roads fall apart under the onslaught of climate change and wild weather

anda Cropp . 05:00, Aug 28 2022

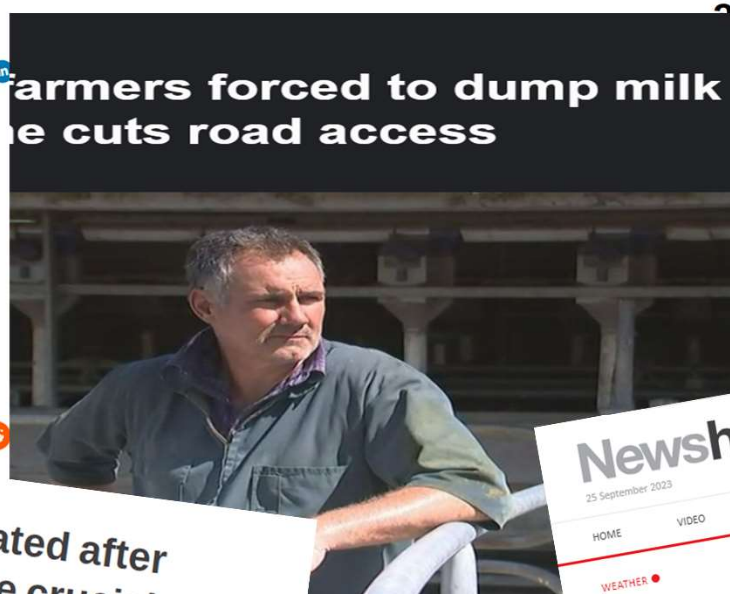
NEW ZEALAND / ENVIRONMENT

Some Marlborough communities still isolated a week on from wild weather

Share this

6:35 am on 26 August 2022

Niva Chittock, Reporter



Unrepaired state highway causes community angst

Carly Gooch . 05:00, Jul 04 2022

Cyclists dodge hair-raising potholes

16:31, Jul 21 2012

GISBORNE

East Coast locals frustrated after truck appears to collapse crucial road underneath it

23/09/2023 | William Terite

Newshub.

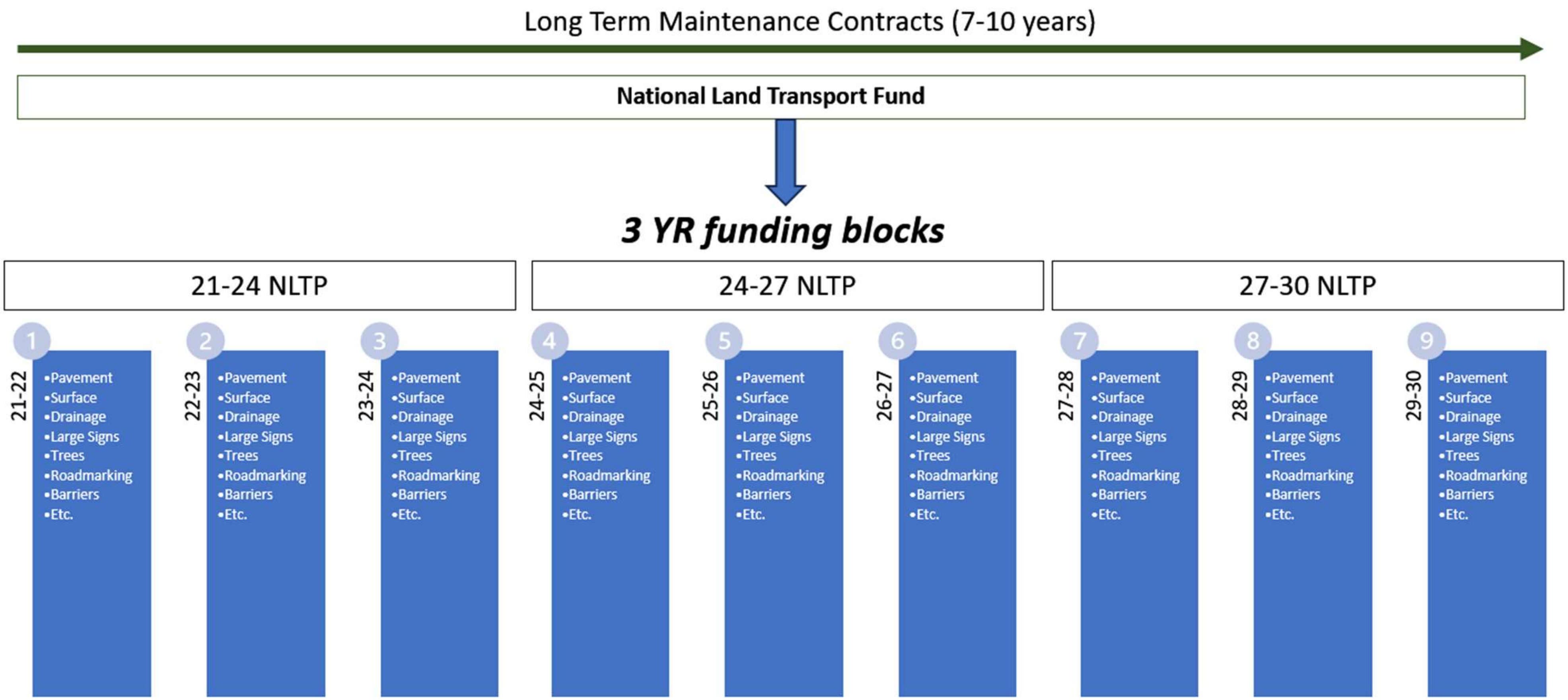
25 September 2023

HOME VIDEO NEW ZEALAND WORLD DECISION 23 RWC23 SPORT

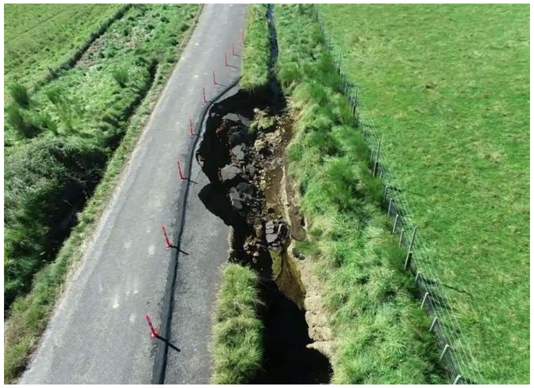
WEATHER

Midwives fear roadside births if Cyclone Gabrielle damages more roads

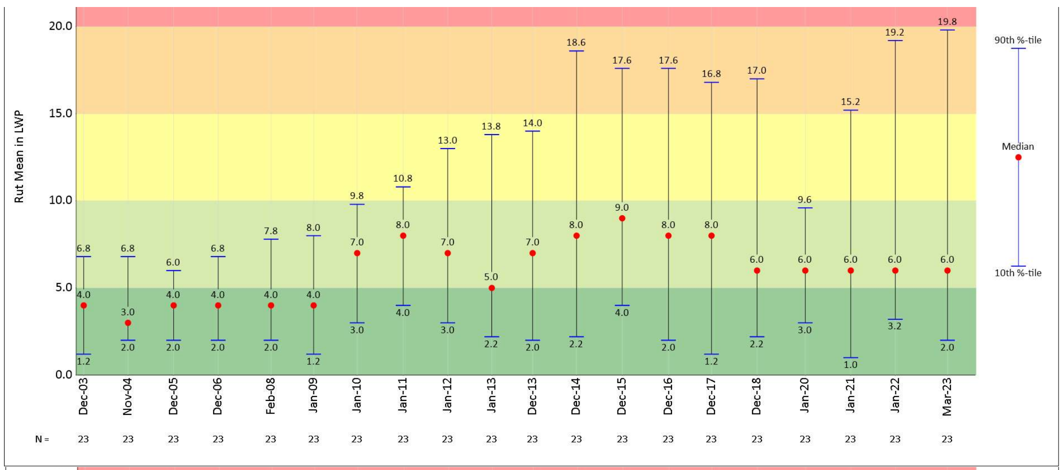
How are roads maintained in NZ?

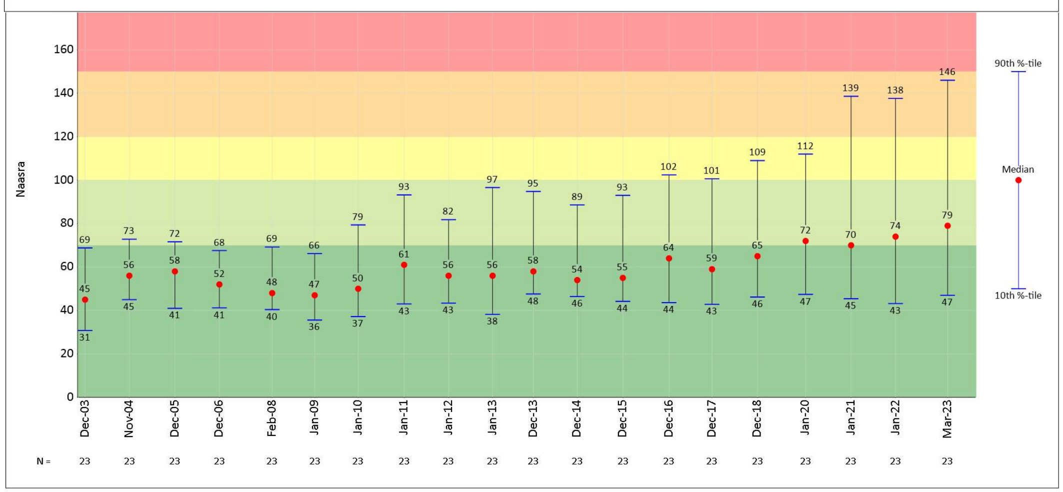


What are the challenges?



How do we know what our network needs?



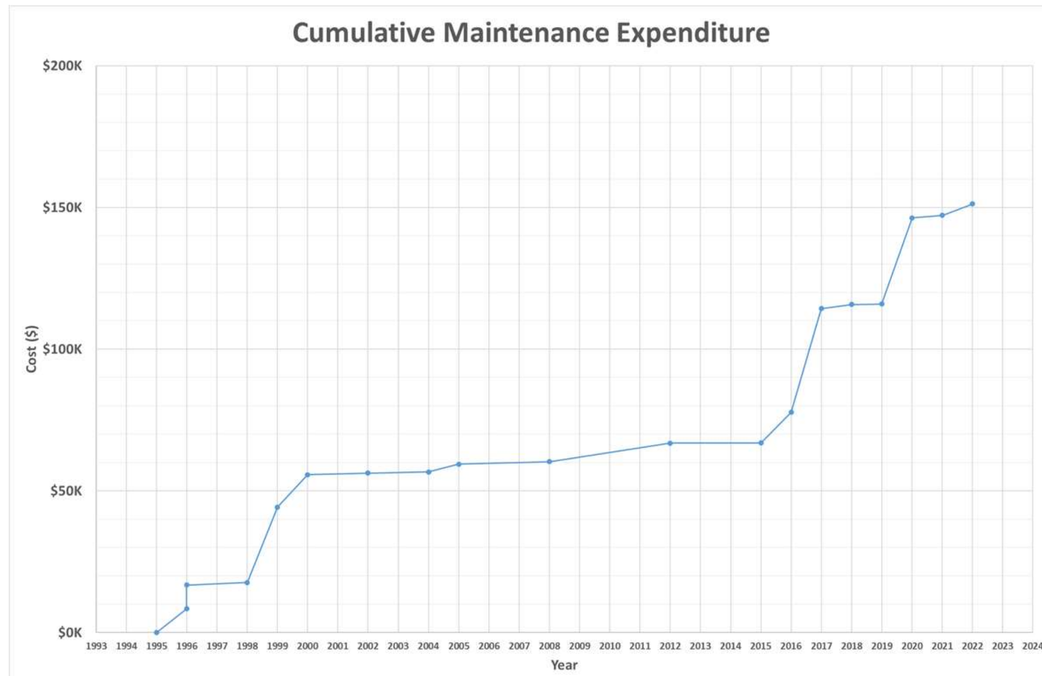


NZ TRANSPORT AGENCY	Bridge name : NEW (KAIMATA) RIVER BRIDGE	Highway 6	RS: 430	RP: 12.6	BSN: 4426
Bridge type:			Inspection type :	Routine Surveillance	
Marking code 0 = Not inspected 1 = Satisfactory 2 = Monitor next inspection R = Routine maintenance (provide comment) S = Structural maintenance (provide comment) N = Not applicable	Deck width :	6.2m	Map ref. (easting) :		
	Total bridge length :	37m	Map ref. (northing) :		
	Span : of		Owner :	Waka Kotahi	
	Span length :				
Inspector : Charlotte Turner		Reviewer : Nik Davy			
Date : 28/01/2022		Date (mth/yr) :			

Item	Description	Mark	Defect Description/Remedial Work	Priority (H/M/L)	Estimated Cost
1	Signs	R	North end name sign missing	L	
2	Superstructure/deck drainage	R	Minor vegetation growth on sides of deck	L	
3	Movement/expansion joints	2	Seal cracked on joints above abutments and piers	L	
4	Carriageway and deck surfacing	R	Scabbing on surface through middle of deck	M	
5	Approach adequacy	1	N/A		
6	Guardrail/handrail	S	Northern end concrete bridge ends have sunk, damage to various barrier panels. True left north approach barrier is missing.	M	
7	Road marking	1	N/A		
8	Flood debris/vegetation	R	Flood debris around pier	H	
9	Scour/erosion	1	N/A		
10	Other defects	N	N/A		

NOTE: In addition to the categories above, Routine Surveillance inspections shall identify any obvious defects which may affect the safety of road users or anything else needing urgent attention (as required by NZTA S6). Photographs of key defects should be taken. These shall be supplied to the Structures Management Consultant where the defect is structural in nature.

My role in maintaining our roads



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What is the right treatment?

Existing Pavement

Thickness (mm)	Model
120mm	Deteriorated Asphalt
180mm	Existing Pavement
∞	Subgrade CBR > 30%

Option 1

Thickness (mm)	Model
60mm	Asphalt Surfacing
160mm	Structural Asphalt
80mm	Existing Pavement
∞	Subgrade CBR > 30%

Option 2

Thickness (mm)	Model
60mm	Asphalt Surfacing
120mm	Structural Asphalt
120mm	Existing Pavement
∞	Subgrade CBR > 30%

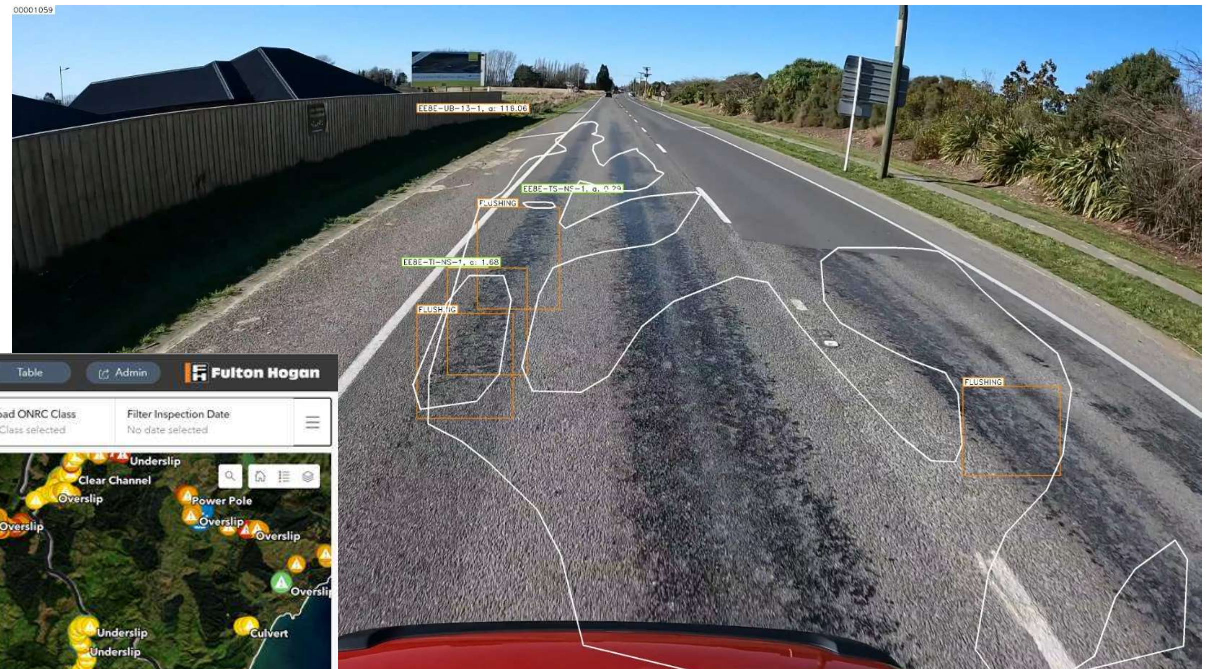
Option 3

Thickness (mm)	Model
60mm	Asphalt Surfacing
180mm	Cement Stabilised Insitu Basecourse (1.5% Cement)
60mm	Existing Pavement
∞	Subgrade CBR > 30%

Option 4

Thickness (mm)	Model
45mm	Thin Asphalt Surfacing
80mm	Structural Asphalt
175mm	Cement Bound Insitu Subbase (4-5% Cement)
∞	Subgrade CBR > 30%

Asset management – the changing game



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Why choose Asset Management?

Thanks!

Charlotte Turner

Pavement Engineer

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