IAG Focus on drainage

20 August 2024

Te Kawanadanga o Astasaroa WeMilitementetigene desteroroa New Zealand Government



JA KU

Canal	Na Ownar						
Capable OwnerCommercial managementPerformance• Develop and execute supply chain contracts.management• Challenge the Integrators in seeking VFM in all commercial dealings.• Own and set the performance metrics, including ongoing performance management.		 Program and sign- achieven custome Set asset 	me development off, ensuring nent of network a r outcomes. t management	t • Articulate the "voice of the customer" for all			
National Integrator							
NZTA National leadership							
noderation of regional nce measures. sial benchmarking against	eration of regional measures. benchmarking against management • Strategic and tactical planning of the Forward Works Programme (FWP).		 National coordination of regional integrators Convening regional decision-making forums. Maintain consistency of customer and network service level outcomes Driving assurance 				
Regional Integrator NZTA Regional leadership							
of managem Coordinate regional Works Programme and development, i with IDC contractor Promoting work pa allocation to optimi efficiency, commer	ent• FaI Forwardan(FWP) inputsapn collaborationpers.cuckaging and• Cose deliveryancial prudence,an	 Network management Facilitate integrated network and corridor management approaches to maximise system performance and optimise customer experience. Coordinate network inventory and condition data collection. 		Surveillance • Monitor and manage deliverable completion, quality and performance.			
Contract Management IDCs Regional / Cross-Regional Panels Specialist Panels							
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Drainage benefits case study

"More than 50% of the sample sites (aging pavements approaching rehab) had ample scope to improve pavement drainage effectiveness which was not undertaken. There is a clear opportunity for improvement in our management of drainage systems".

EARLY SIG	NS OF PAVEMEN	NT FAILURE	OPPORTUNITY FOR DRAINAGE INTERVENTION			TOO LATE FOR DRAINAGE				
-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	REHAB
			12/20 sites had average or poor ULSWC rating, of which 7/12 didn't receive any clear ULSWC maintenance and 5/12 had opportunities to install subsoils					improvements	had ULSWC 1-3 years prior hab	5/20Sites had evidence of subsoil installation during Rehab

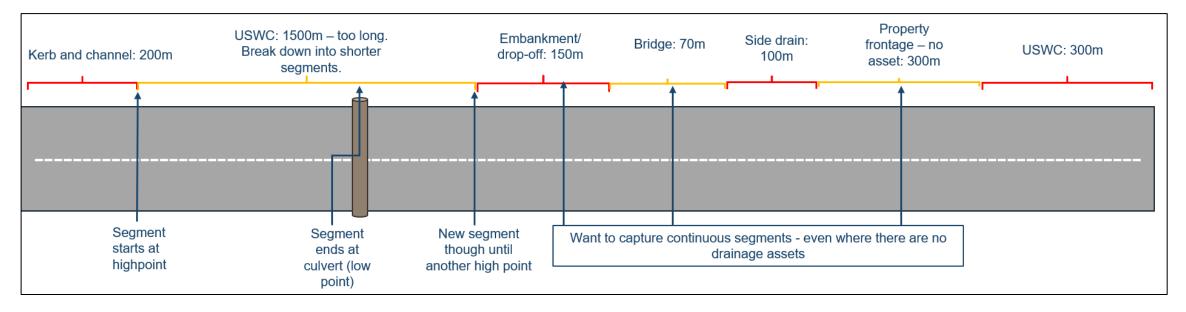
Drainage segmentation

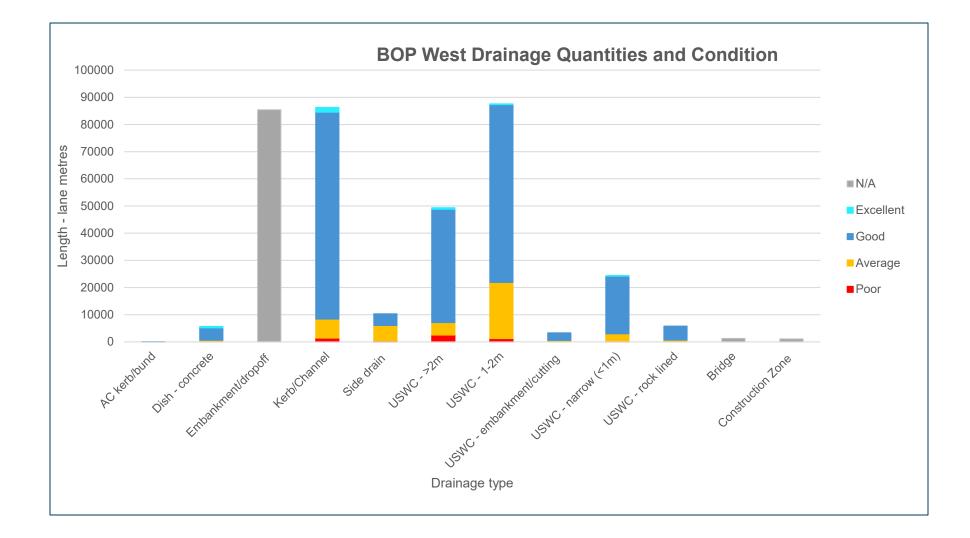
- Segmentation completed for: BOP West, Northland, West Waikato, South Canterbury.
- BOP West also fully condition rated.
- Working through rest of country.
- Benefits of this work:
 - More accurate data on asset (advancing Strategic Investment Model).
 - Creating drainage lengths which are sensible renewal lengths.
 - Consistent assessment of segments allowing for more accurate Forward Works Planning.
 - Condition rating allows for better budget prep (NLTP) and investment justification (condition profile).
 - Data managed using User Defined Tables (UDT) in RAMM.

Contract Area	NOC Standard Investment Allocation (2019- 2021)	SIM Recommended Annual Renewal %	Estimated Length of SH Shoulder Needing Drainage	Historic Achieved Annual Renewal Length last 5 years (lane km) ¹⁷	SIM Recommended Annual Renewal Length (lane km)	
West Coast (NOC)	2%	8.00%	1720	42	138	
Northland (NOC)	2%	8.00%	1680	25	134.40	
Central Waikato (NOC)	2%	8.00%	1342	47	107.36	
Southland (NOC)	2%	8.00%		33	103.20	
Otago Central	2%	6.00%	1012	20	60.72	
Manawatu- Whanganui (NOC)	2%	6.00%	1207	2	72.42	
Nelson-Tasman (NOC)	2%	6.00%	679	9	40.74	
Taranaki (NOC)	2%	4.00%	1087	42	43.48	
Coastal Otago	2%	4.00%	1437	39	57.48	
North Canterbury	2%	4.00%	1641	7	65.64	
South Canterbury (NOC)	2%	4.00%	1064	25	42.56	
East Waikato (NOC)	2%	4.00%	925	10	37.00	
West Waikato (NOC)	2%	4.00%	938	22	37.52	
Hawkes Bay (NOC)	2%	4.00%	975	4	39.00	
BOP East (NOC)	2%	2.00%	985	14	19.70	
Wellington (NOC)	2%	2.00%	478	28	9.56	
Auckland Alliance	2%	2.00%	816	1	16.32	
Tairawhiti Roads Northern & Western (NOC)	2%	2.00%	626	27	12.52	
Milford	2%	2.00%	206	1	4.12	
Marlborough (EC)	2%	2.00%	475	8	9.50	
Tairawhiti Roads Western (NOC)						
BOP West (NOC)	2%	2.00%	391	3	7.82	
		TOTAL	20974	0	1059	

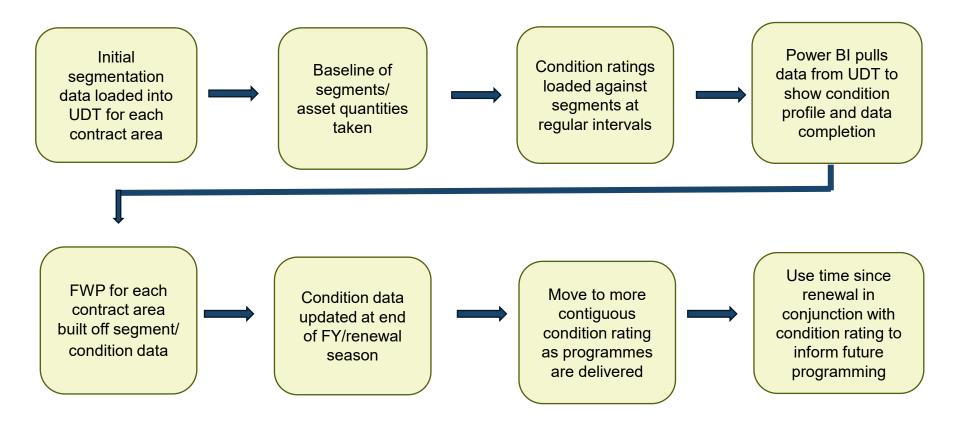
Drainage segmentation- methodology

- Initial segmentation conducted using high speed video. Field verification required get 100% certainty.
- Basic approach:
 - Classify asset e.g. Kerb and channel, USWC, Side drain, Bridge, Property frontage no asset.
 - Segments must be specific to side of road (or centre of road in some cases).
 - Segmentation should be continuous i.e. no gaps in data
 - Then segment asset into logical lengths for renewal e.g. high points to low points, culverts, intersections, where segments are getting too long i.e. needs to be a sensible length for a digger/grader driver to renew around 500m is ideal.

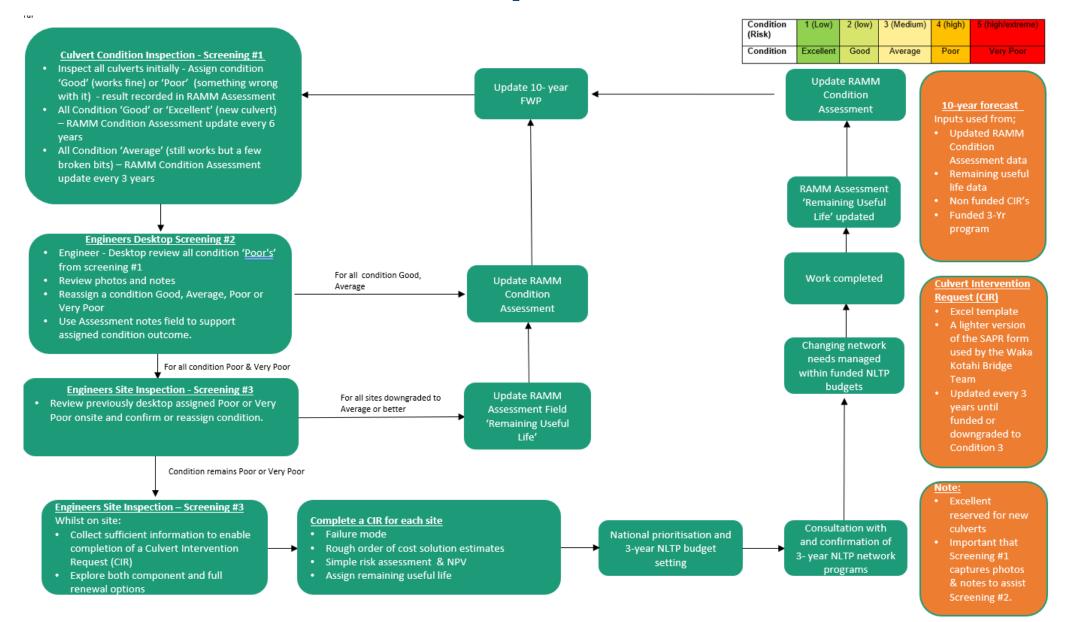




Outline process for drainage User Defined Tables:



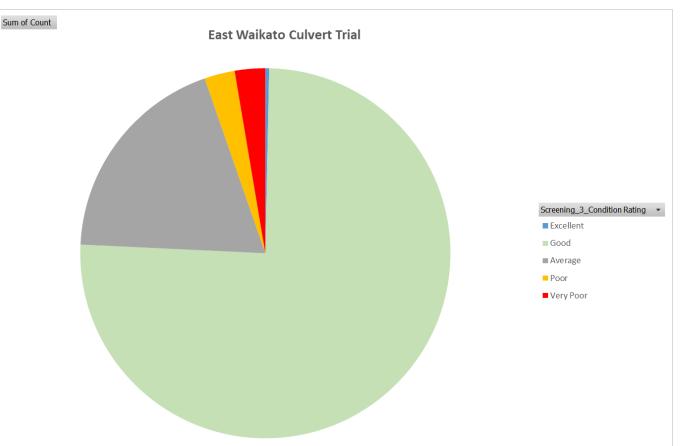
Culvert assessment process



Culvert trial – East Waikato

- East Waikato trial complete
- Keen to have a few other suppliers test the screening method – especially the use of pocket RAMM/tablets
- 3 step screening process:
 - Step 1: Cursory inspection/photos as part of routine inspection. Condition rate Good or Poor.
 - Step 2: All Poor condition culverts go through desktop review by asset engineer, condition revised.
 - Step 3: All those that remain as condition poor require on-site inspection and detailed assessment by asset engineer.

Row Labels 🗾 Sun	n of Count
Excellent	1
Good	227
Average	57
Poor	8
Very Poor	8
Grand Total	301



Report last refreshed: 01 August 2024

Asset Condition - Barriers

Next refresh scheduled: September 2024

