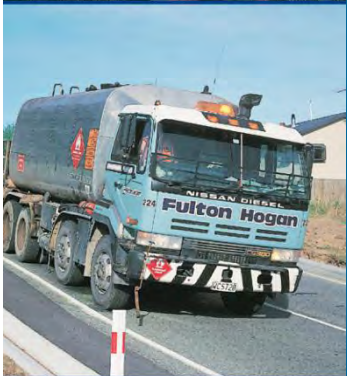


The Key Issues

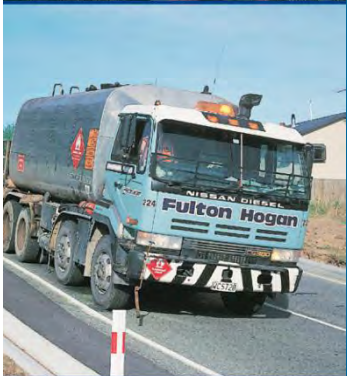
Unsealed Roads Management Strategy

Simon Hunt
NZ Road Asset Manager



Establishing the Strategy

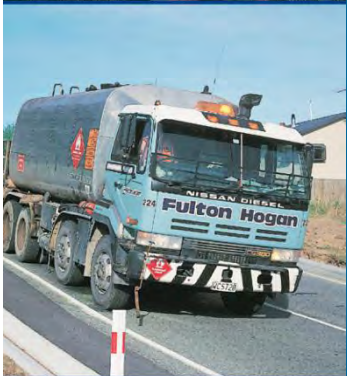
- Long Term Council Community Plan
- Key Result Areas
- Levels of Service
- Key Performance Indicators
- Targets
- Gamebreaking Performance / Stretch Targets
- Risks to Achieving Key Performance Indicators
- Information Required
- Methodology
- Development of Strategies



Establishing the Strategy

Long Term Council Community Plan

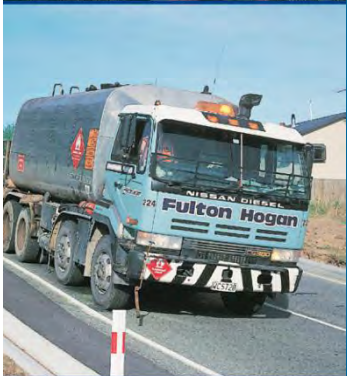
- Key Result Area – Unsealed Roads (1 of 8) – 15%
 - Network Quality – 8%
 - Maintenance Standard – 4%
 - Debris Removal – 3%



Establishing the Strategy

Long Term Council Community Plan

- Network Quality – 8%
 - Level of Service
 - Roading network provides a smooth and comfortable ride quality
- Key Performance Indicator
 - Percentage of unsealed roads providing a smooth and comfortable ride quality



Roading network provides a smooth and comfortable ride quality

Risks

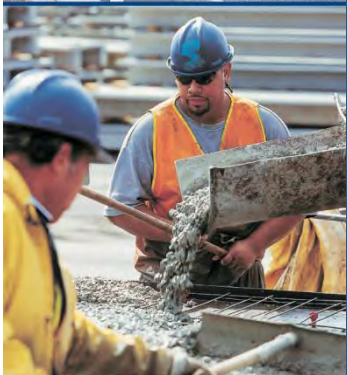
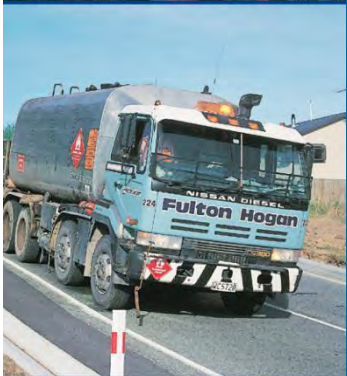
- Unseasonable and / or severe weather
- Unexpected increase in traffic loading
- Metal depth insufficient
- Incompetent Grader Operator
- Grader Operator leaves
- Lack of shape in road camber and/or superelevation
- Lack of cut-off drains
- Roadside drainage inadequate



Roading network provides a smooth and comfortable ride quality

Risks

- Grading regime
- Culvert blocked or failed
- Metalling quantity not sufficient
- Location of metalling not correctly identified
- Metal quality not appropriate
- Metal not spread at appropriate time of year
- Metalling not co-ordinated with grading / compacting





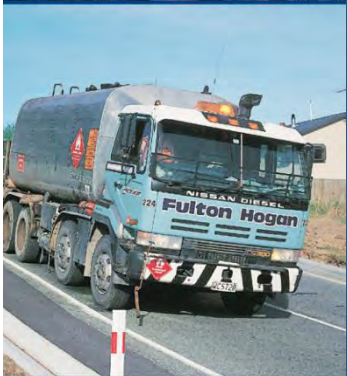
Roading network provides a smooth and comfortable ride quality

Risks

- Metal Depth insufficient

Methodology

- Establish metal depth for every road on network through use of GPR (or other system) and test pits (to calibrate GPR survey). If GPR trial unsuccessful, we will need to reconsider options. Also, grader operator to assess depth of metal during grading operations





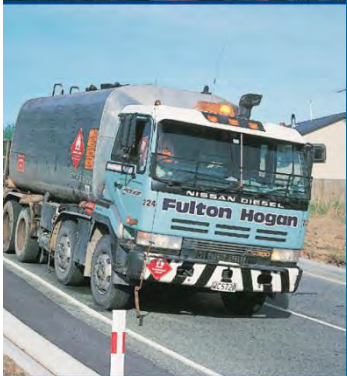
Roading network provides a smooth and comfortable ride quality

Risks

- Metal Depth insufficient

Methodology – R & D Project

- To find a cost effective method to determine the metal depth on unsealed pavements





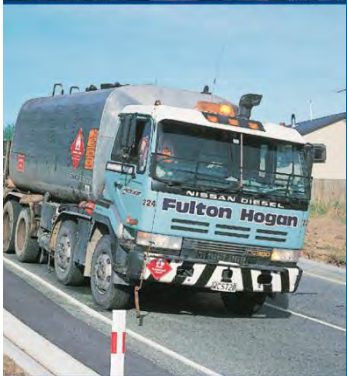
Roading network provides a smooth and comfortable ride quality

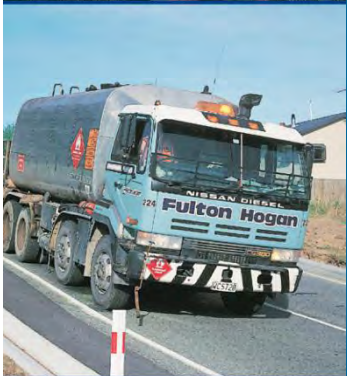
Risks

- Incompetent Grader Operator

Methodology

- Ensure Grader Operator is competent – assess, undertake GAP analysis, and provide training and development programme
- Training provided by approved tutor / instructor and performance monitored





Risks

- Incompetent Grader Operator

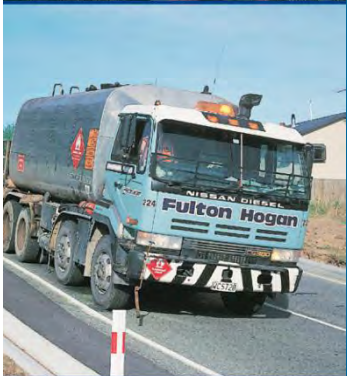
Methodology

- Developing a guideline for grader operators
- Grader Operator workshops on South Island & North Island every 6 months

Grading Maintenance

A Guide for Fulton Hogan Staff



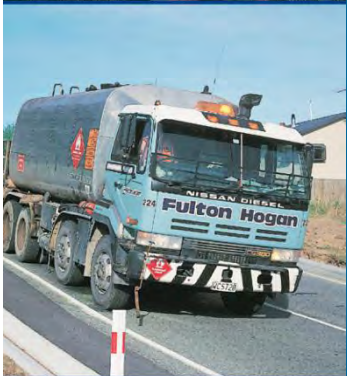


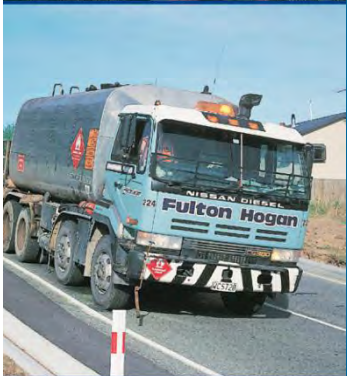
Risks

- Work not prioritised correctly

Methodology

- Developed a Road Condition Assessment & Evaluation Maintenance System
- Pavement rated 1 – 5; 3 is agreed Level of Service
- Rating made up of each pavement and surfacing defect, and given its own weighting = total rating every 100m
- Drainage survey done separately





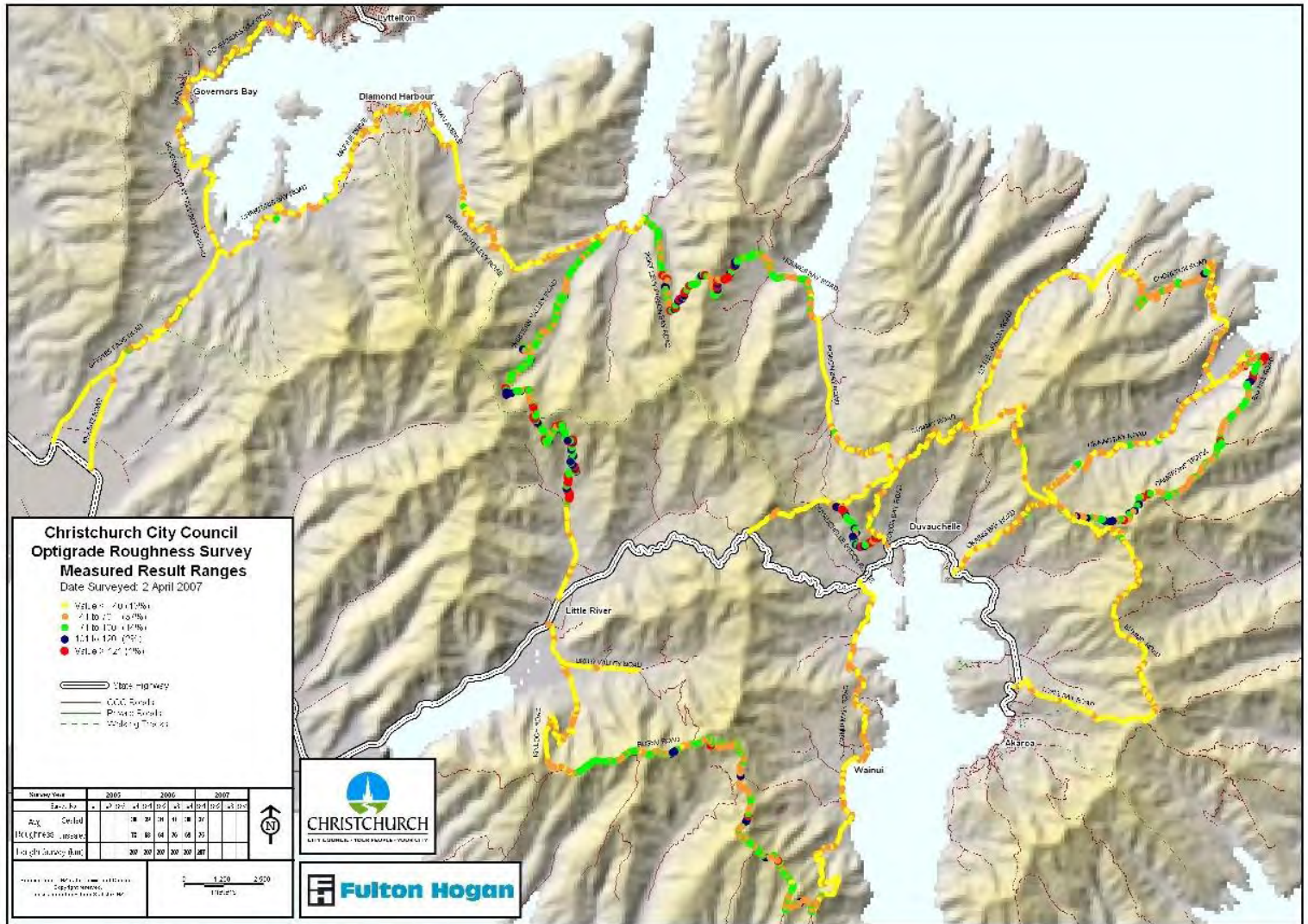
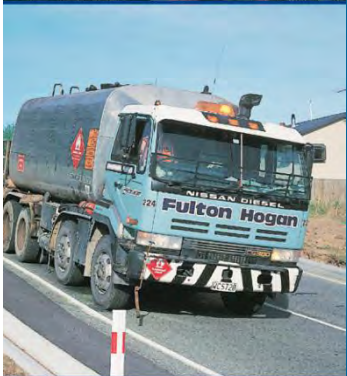
Road Hierarchy	Road Name	RCAMES Survey	Full Inspection	Inspectors	Date
1					
2					
3					
4					



OptiGrade (low cost roughness measuring device)

4 or 5 runs through the network per annum

- Pre-metalling (autumn)
- Post-metalling (pre-winter)
- Post winter
- Floaters (1 or 2): tie in with significant change in traffic loading, say before and after harvesting





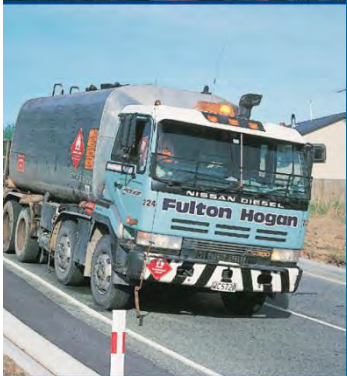
Roading network provides a smooth and comfortable ride quality

Risks

- Grader Operator leaves

Methodology

- Encourage Grader Operator to be unsealed roads “supervisor” and consider incentivising the role. Develop Position Description. Unsealed Roads Manager to meet with the Grader Operators weekly to discuss issues and plan of attack for following week





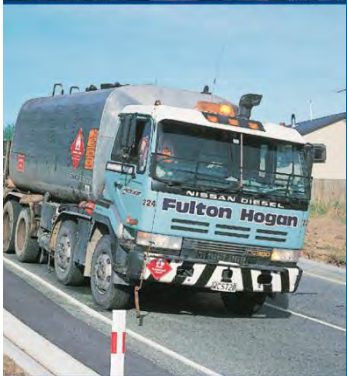
Roading network provides a smooth and comfortable ride quality

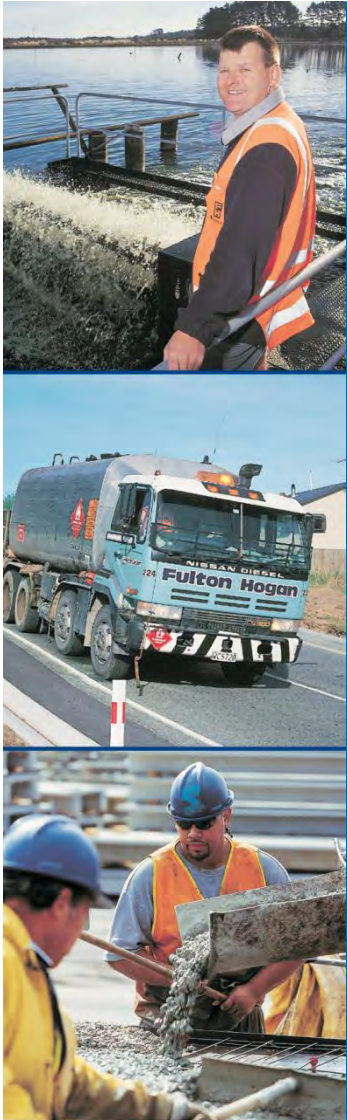
Risks

- Grader Operator leaves

Methodology

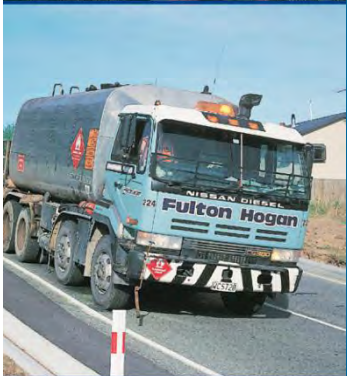
- Appoint junior Grader Operator and establish and implement Training and Development Programme
- Knowledge of Grader Operator must be captured and fed into the unsealed roads management strategy. Unsealed Roads Manager to review strategy 3-monthly with Grader Operator





Conclusions

- Establish Key Result Areas and Key Performance Indicators directly to the LTCCP
- Risk Analysis to identify issues to achieving Key Performance Indicators
- Consequences and Likelihood to prioritise Methodologies
- Workshop for each Key Result Area with all staff (and some stakeholders) involved – must have inputs from all and ownership of outcomes. Hold 6-monthly
- Measure performance and drive improvements
- Reward innovation



QUESTIONS