"A community is more sustainable when all the threads pull together as one."

Unsealed Roads
Innovation on a Shoestring

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Tasman District Council
Council’s Challenge

- 750km unsealed roads, logging, dairy + lifestylers
- Historically 38,000m³ of metal placed per year (ave 13mm depth across entire network)
- Annual metalling budget cut from $1.2M to $0.9M
- ‘Opportunity’ to smarten up

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Why Change?

Unsealed Pavement - Whole of Life Costs per km (40 years, 6% DF)

Total Costs (Metalling and Maintenance)

Metal Rate ($ per m³)

Gravel Loss Rate
- 4mm/yr
- 6mm/yr
- 8mm/yr
- 10mm/yr
- 12mm/yr
- 14mm/yr

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What Are We Doing?

• Try things! New sources, techniques
• By-products (dolomite/lime production)
  – Used successfully close to source, what about further away?
• Minimise costs
  – Cartage distance
  – Partnering with maintenance contractors, backloading, shared benefits
• Measuring loss, and other benefits
• Examples
Quail Valley Road

“A community is more sustainable when all the threads pull together as one.”
Trass Valley Road

“A community is more sustainable when all the threads pull together as one.”
Tadmor-Bushend Road

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Efficiency Limit

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Some Initial Findings

• Less maintenance
• Less dust
• Crossfall critical >6%
• Product-Specific Construction Methods, eg
  • Layer thickness
  • Best results when very wet during construction
  • BUT needs good drying weather to ‘bake’
    ▪ avoid winter construction
• By-product or premium product?
• Customer demand
Progress & To do List

• Monitor performance
  – Understand gravel loss
  – Maintenance issues
  – Real whole of life cost comparisons
• Continue to develop and secure sources
• Refine Site Selection Criteria
• See you in a few years!
Acknowledgements

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