Managing Future Demands

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Ashburton unsealed road improvement projects - project update and performance monitoring
Background still the same as 2013

Ashburton District Network 1143km Unsealed (56% of the total network)

Land use changes driven by Dairy boom (slowing with the low payout)

Poor aggregate sources from Council Pits (and less pits available)

Challenge to do more for less with reducing budgets

Improve wearing courses
Comparison of lime/clay stabilised AP20 vs Traditional AP20 Topcourse from Council source

Advantages:
• Hard wearing
• Less maintenance
• Corrugation prevention
• Dust reduction

Disadvantages:
• Extra cartage from clay/lime source
• Higher initial cost
Lime stabilised vs clay stabilised wearing course

Limerock
- Crushed to size and easy to spread
- Better at dust suppression than clay

Clay
- Cheaper to extract
- Difficult to blend on road or through a crusher

Both
- Susceptible to moisture
- Additional cartage
Methodology

Drainage improvements first

Shape Improvement to get crossfall

Decide on application type: Mixed on site vs mixed at pit

Clay (25%-30%) and lime (50%-66%) to stabilise aggregate

AP20 spread first

Clay (difficult to spread) clods need to be broken up

Lime easier to blend already crushed to desired size
Methodology

Blend in windrow: consistency;

Moisture content

Laying out: over-construct crown, additional compaction, 4-6% crossfall
15 of the improvement sites have been monitored monthly for up to one year

Roadroid used to measure IRI

These are some of the results from that testing
Carneys Rd

Constructed week of 9 April 2014

This road services the Limeworks so is subject to heavy traffic. The steep incline at the end is constructed from basalt.
Carneys Road
Upper Downs Road - the perfect research project
Upper Downs Road

Limerock after 42 days  after 70 days  after 264 days
Upper Downs Road

[Graph showing the percentage of good conditions over days for Upper Downs Road, with a note indicating the January Drought.]
Upper Downs Road - AP20 section

% Good
% Poor
Maintenance Intervention

% good % satisfactory % unsatisfactory % poor
Upper Downs Road

Unbound AP20 – loose metal and corrugated
Orrs Road

Plots up to 469 days after treatment

NAASRA = 65
Orrs Road

Calculation of percentages after 469 days

after 404 days
Carneys Rd

Following snow storm Carneys Road has ‘softened and rutted’ but can be fixed
Carneys Rd

But ride is still smooth