Ultramender
An innovative new maintenance material
Sound Familiar?
Ideally we want to stop it from getting worse at this point
Ultramender
Cold Applied Polymer Binder

- Resilient Modulus: 5700 Mpa
- Indirect tensile strength: 1500 kPa
- Waterproof
Case Study
Putaruru-Lichfield

- Localised deformation and cracking
- Multiple repairs using cold and hot mix
- Repair frequency of 1 month
- Hope was that Ultramender would last 6 months until the planned reseal
It lasted 6 months
Cost Benefits?
### Using Standard Maintenance Materials

<table>
<thead>
<tr>
<th>Cost Description</th>
<th>Proportion of total activity cost</th>
<th>Nominal cost</th>
<th>Total nominal cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material</td>
<td>10%</td>
<td>$1</td>
<td>$10</td>
</tr>
<tr>
<td>Plant and People</td>
<td>90%</td>
<td>$9</td>
<td></td>
</tr>
</tbody>
</table>
## Using Ultramender

<table>
<thead>
<tr>
<th>Cost Description</th>
<th>Proportion of total activity cost</th>
<th>Nominal cost</th>
<th>Total nominal cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ultramender</td>
<td>40%</td>
<td>$6</td>
<td>$15</td>
</tr>
<tr>
<td>Plant and People</td>
<td>60%</td>
<td>$9</td>
<td></td>
</tr>
</tbody>
</table>
Cost comparison over number of revisits

Payback after 1 revisit

- Using Standard Materials
- Using Ultramender
Conclusions

• Surface defects can propagate into bigger problems when the root cause is not treated properly

• Root cause is that the materials currently used are not strong enough and don’t provide the required waterproofing

• Ultramender is a product that can fix the root causes and prevent propagation of defects

• The cost benefits of using higher cost products like Ultramender is in the prevention of revisits and rework because most of the cost is associated with people and plant – not product cost