Infrastructure Alliance

Hamilton City Council
Te kaunihera o Kirikiriroa

Downer
Mission Statement

To deliver world class asset management of the Hamilton City Transport Network that exceeds the expectation of our customers.
Alliance Scope

Maintenance and Renewal of;
• Carriageway
• Bridges and Retaining Walls
• Footpaths
• Kerb & Channel and other drainage
• Streetlights
• Traffic Signals
• Intelligent Transport Systems
• Signs and Barriers
• Roadmarking
• Street Furniture
• Variations for the City Council
Alliance Scope

Includes RCA Functions;
• Corridor Access
• Utilities Co-ordination
• Traffic & Roading Bylaws
• Overweight Permits
Infrastructure Alliance

Hamilton City Council
Te kaunihera o Kirikiriti

Downer

Direction NZ
Design Installation - Maintenance

Civic Contractors
Maintain & Preserve

ITS

TSL
Construction Innovation
The 3-limb compensation model consists of the following:

- **Limb 1** Direct cost of delivering the project
- **Limb 2** Cost of overheads and normal profit as a mark-up on Limb 1
- **Limb 3** is the resultant of delivering the scope over or under the budget

3-LIMB COMPENSATION MODEL

- **Limb 1**
  - Corporate Overheads
  - Consists of direct costs such as: Plant, Materials, Labour and Suppliers

- **Limb 2**
  - Gainshare and Painshare are capped
Generating Gainshare

- Beating Target Cost Estimates
- Scoring above par on the alliance KPIs
People

- Co-location
- Building Strong Relationships
- Developing an Identity
- Setting Common Values
Where was I born?

How many kids do I have?

What is my favourite band?

What are my biggest two passions?

This might surprise you but I ........
Caring for one another and our community

Accept responsibility by taking Ownership of your actions

Demonstrate Integrity through the openness and honesty of our actions

Treat each other with Respect
Developing People

• Strong focus on professional development
• Writing our peoples goals into the KPIs of the alliance
  • Development Plans
  • Training
  • Mentoring
  • Crew Rotation
  • Field work for the management team

For example, if development goals aren’t met, the Alliance is at risk of losing Gainshare or increasing Painshare.
Asset Management

Fully understanding the asset condition;
• Staged condition assessment of all assets
• Alignment of Maintenance Interventions
• Retrospective analysis of network data, lifecycles.
• Data improvement plan
Condition Assessment

Using the All Faults approach for:
- Pavement and surfacing
- Footpaths

Visual Assessment of:
- Streetlights
- Culverts
- Signs
- Traffic Signals
- Electronic Signs
- Bins
Intervention Strategy

- We developed our own Maintenance Intervention Strategy
- Consistency to our customers
- Targeted intervention
- Easy to train new alliance members
# Infrastructure Alliance Visual Assessment Guidelines

## Footpaths — Trip Hazards

**Definition:** Deviations from profile which may cause tripping hazard within the concrete, asphalt or cobble footpath.

<table>
<thead>
<tr>
<th>Example Defects</th>
<th>Condition</th>
<th>1 - Acceptable</th>
<th>2 - Acceptable - Monitor</th>
<th>3 - Defect - Medium</th>
<th>4 - Poor - Intervention</th>
<th>5 - Very Poor - Safety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tree roots, potholes, unlined trenches, settlement and service covers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Example Photos</th>
<th>1 - Acceptable</th>
<th>2 - Acceptable - Monitor</th>
<th>3 - Defect - Medium</th>
<th>4 - Poor - Intervention</th>
<th>5 - Very Poor - Safety</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Example Photos" /></td>
<td><img src="image2.png" alt="Example Photos" /></td>
<td><img src="image3.png" alt="Example Photos" /></td>
<td><img src="image4.png" alt="Example Photos" /></td>
<td><img src="image5.png" alt="Example Photos" /></td>
<td><img src="image6.png" alt="Example Photos" /></td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Defect Description</th>
<th>Typical Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>No evident trip hazards</td>
<td>None</td>
</tr>
<tr>
<td>Minor hazard &gt;10mm &lt; 15mm — potential to trip</td>
<td>Monitor</td>
</tr>
<tr>
<td>Tree roots causing small hazard — &gt;15mm &lt; 25mm programme if in area</td>
<td>Saw cut — remove root and backfill</td>
</tr>
<tr>
<td>Sunken trench causing trip hazard — &gt;25mm &lt; 50mm</td>
<td>Saw cut — remove root and backfill</td>
</tr>
<tr>
<td>&gt;50mm opening trip hazard</td>
<td>Saw cut — remove root and backfill</td>
</tr>
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### Footpaths: Tripping Hazards

Hamilton city council's footpaths are one of its key assets, with high customer use and impact. The tripping hazards are mostly tree roots located within the road corridor and from private property. Isolated hazards can be cut and removed, if multiple tree roots are present then it should form part of the renewal programme. The All assets programme will identify both maintenance and renewal sites.

<table>
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<th>Routine maintenance</th>
<th>Footpath renewal candidate</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image7.png" alt="Routine maintenance" /></td>
<td><img src="image8.png" alt="Footpath renewal candidate" /></td>
</tr>
</tbody>
</table>
Innovations and Initiatives

- Reinforcing the value of innovation
- As the client we have the ability to give things a go
- Balanced view of risks
- No blame culture
- Innovation breeds innovation
Safety Requests in RAMM

Visibility of:
- Public Requests
- Planned safety works
- Helps communications team inform customers
- Alignment of programmed works
GPS Tagged Catchpit Photos

- Historical Record of Condition
- Checking Location of Located Catchpits against RAMM
- Further data mining; prevalence of partitions, filter bags etc.
Network Video

- Two cameras
- Self reliant
- Kerb and pavement views
- Supplier software fell over
- Devise a method to extract KML files for google earth
We now share vehicles, traffic management and even staff between the teams.
Innovations and Initiatives

• 28 documented innovations / initiatives
  • Benefit / Cost analysis completed
• Plus many ways of sharing resources
Is it a success?

• 2.1 days average customer response time
• Savings reinvested in the network
  • 20% more surfacing
  • 25% more footpaths
  • Long Life Road Marking
  • Converting Traffic Signals to LED lights
  • Renewing Streetlights for the first time in 5 years
Where to next?
Questions