User Safety on the Auckland Network

Setting the Standard.

Gerri Waterkamp

Auckland Transport
An Auckland Council Organisation

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Background

- AT identified user safety on its network as contributing to the strategic theme of “transforming and elevating customer focus and experience”

- AT have developed 2 strategies to enhance the network and ensure user safety
  1. Pedestrian Slip Resistance Strategy
  2. Pavement Skid Resistance Strategy.

AT are the first local authority in NZ to:

1. develop a comprehensive Pavement Skid Resistance Strategy

2. develop a framework to set a minimum standard for Public Pedestrian surfaces.

Pedestrian Slip Resistance Strategy

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Why?

Comply with the NZ Building code for public pedestrian surfaces

Ensure our public pedestrian surfaces are safe for all users

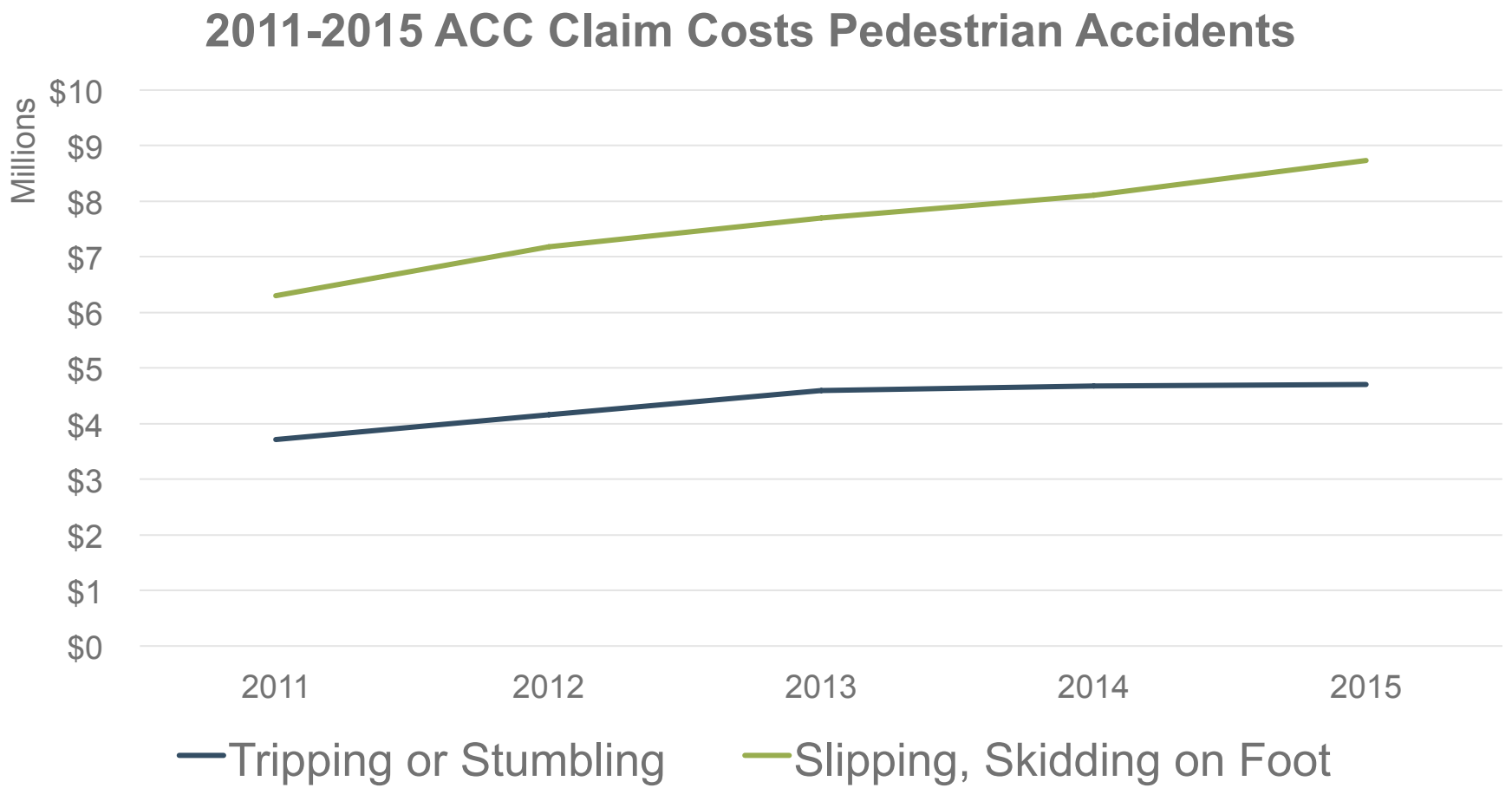
Statistics

- Slippery surfaces are a major contributor to injury from falls/loss of balance in NZ and Auckland

- New Zealand: over 1,500 fall claims per 10,000 people each year

- Claim costs for falls have steadily increased over the last 5 years to $ 9 M per annum in 2015

Statistics



2011-2015 - Auckland Region statistics.

Footpath Slip Resistance

The **minimum** **wet** slip resistance coefficient of 0.40 is recommended by the NZ Building code.

The AT slip resistance strategy implements this minimum and details compliant surfacing materials.

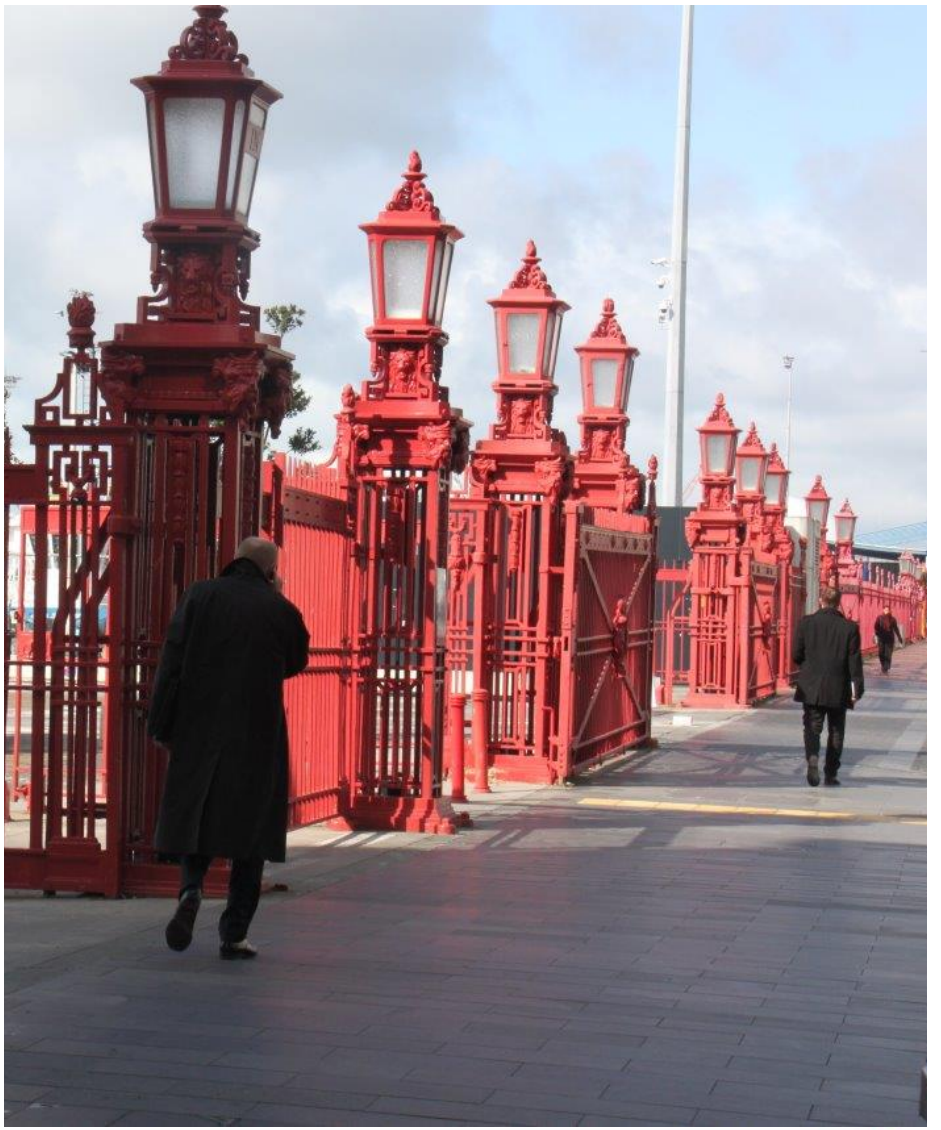
Will remove non-compliant surfaces from the public network in a phased manner over a period of time

Benefits:

- Better asset management
- Safer footpath network
- Timely interventions

Compliant Surfaces

Majority of AT pedestrian surfaces meet the minimum standard for slip resistance



New Surfaces

All new or proposed surfaces must meet the minimum standard.

Producers must supply the relevant testing certificate to support the slip resistance achieved.

Non-Compliant surfaces

- The strategy progressively removes non-compliant surfaces from the pedestrian network (through planned renewals or upgrades)
- All non-compliant surfaces are tested to AS/NZS 4586: 2004 to establish the existing slip resistance
- Recommended intervention methods for some non-compliant surfaces as an interim action

Avondale Town Centre

- Clay Brick paving – non-compliant surface
- Existing weekly cleaning regime
- Falls - 2 recent notified falls occurred in the wet
  - at road intersection and
  - general pavement within the town centre under a street canopy

Avondale Town Centre

- Tested on the 30th August 2016 with British Pendulum Tester per strategy
- 6 of 9 test areas failed to meet the minimum standard
- 400 m2 affected area

Current progress?

Maintenance

- Wet Sandblasting carried out to mitigate slip hazard programmed for March 17

Proposed Renewal

- Tinted exposed chip aggregate concrete surface
- Business case for Renewal
- Local board liaison for renewal/replacement of surface
- Inclusion in 17-18 Regional Forward Works Programme

General acceptance

- New surfaces proposed for trials being referred to asset management to ensure compliance
- Asset management assisting in implementation and advising of process
- Will influence product selection in new capital projects
- Will reflect AT focus on pedestrian safety across the network.

Pavement Skid Resistance Strategy

Focusing on User Safety

Auckland Transport
An Auckland Council Organisation

Why?

- Nationally 28% of crashes are from loss of control on bends (wet)
- Auckland region has similar trend at 24%
- Auckland is growing, how do we keep the user safe in the future?
  - Appropriate skid resistance reduces crash rates
  - An appropriate skid resistance strategy has a very high cost benefit ratio – BCR of 4.5 to 6, based on the level of investment

Finding a solution

- Developed in collaboration with NZTA
- Based on NZTA T10 specification
- Trial scope to assess Auckland Roads
- Analysis to ascertain long term costs and benefits

The Trial

- 858 lane kms - 2015-2016
- Urban and Rural roads
- Varying Speed environments

System

- RAMM review
  - Data tables & data
- What needs to change?

What we found

- 2015-16 Survey
    - 376.57 lane km of surveyed roads preliminarily returned as Priority A sites - Primarily in “rural” speed areas
    - Priority A sites are those that fall below the Threshold Level, are flushed, or where the Scrim Coefficient is low
- Surfacing data completeness and currency greatly affected the results.
- RAMM requires a significant change to our Skid Tables to enable analysis in-line with NZTA -T10 process

Where are we now?

- 2016-2017 SCRIM Survey underway
- RAMM has implemented the required changes to the system.
- Surfacing data currency is significantly better and a current improvement task

Next steps

- Analysis of both years skid trial results
- Review of AT Maintenance interventions
  - What are the drivers behind interventions?
    - asset preservation?
    - extended life?
    - safety?
- Create Toolbox for Urban interventions
- Describe need – Budget for 2017-18 onwards?

The Future

- AT is committed to ensuring the safety of all users of the transport network
- Strategies to ensure public safety are in development for other asset areas
- The future is built on people, keeping them safe is a priority.

For a copy of either strategy please email : Gerri.waterkamp@AT.govt.nz


Questions?


Thank You