User Safety on the Auckland Network

Developing and implementing a Pedestrian Slip Resistance Strategy.

Gerri Waterkamp

Auckland Transport
An Auckland Council Organisation

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.

I will cover off the Pedestrian Slip Resistance Strategy First.

Pedestrian Slip Resistance Strategy

Setting the Standard

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The need to ensure public safety has been captured as a measure in the building code for many years.

The strategy allows asset management to have a mechanism to ensure compliance with the Building Code

Statistics

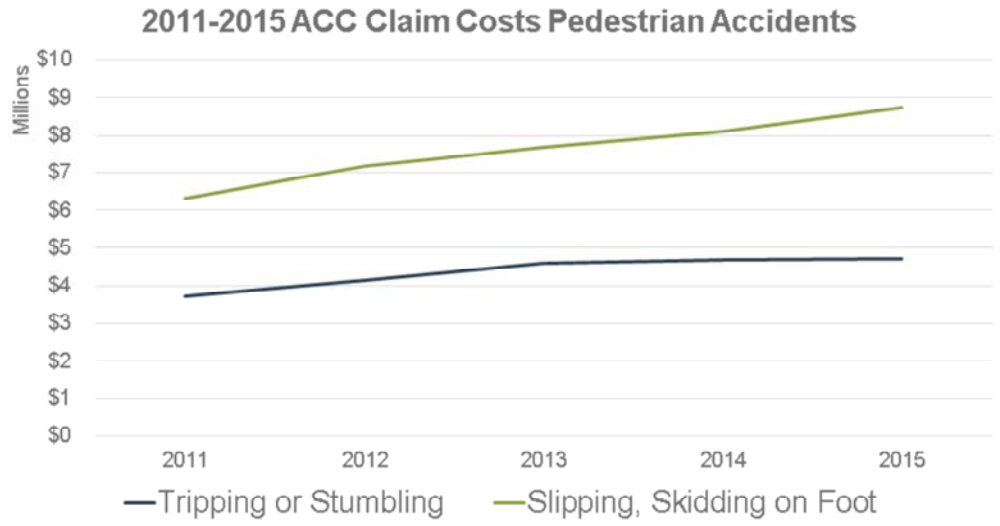
- Slippery surfaces are a major contributor to injury from falls/loss of balance in NZ and Auckland
- New Zealand: over 1,500 fall claims per 10,000 people each year
- Claim costs for falls have steadily increased over the last 5 years to $ 9 M per annum in 2015

Falls on public surfaces are a major contributor to the overall costs to society illustrated by the following Statistics.

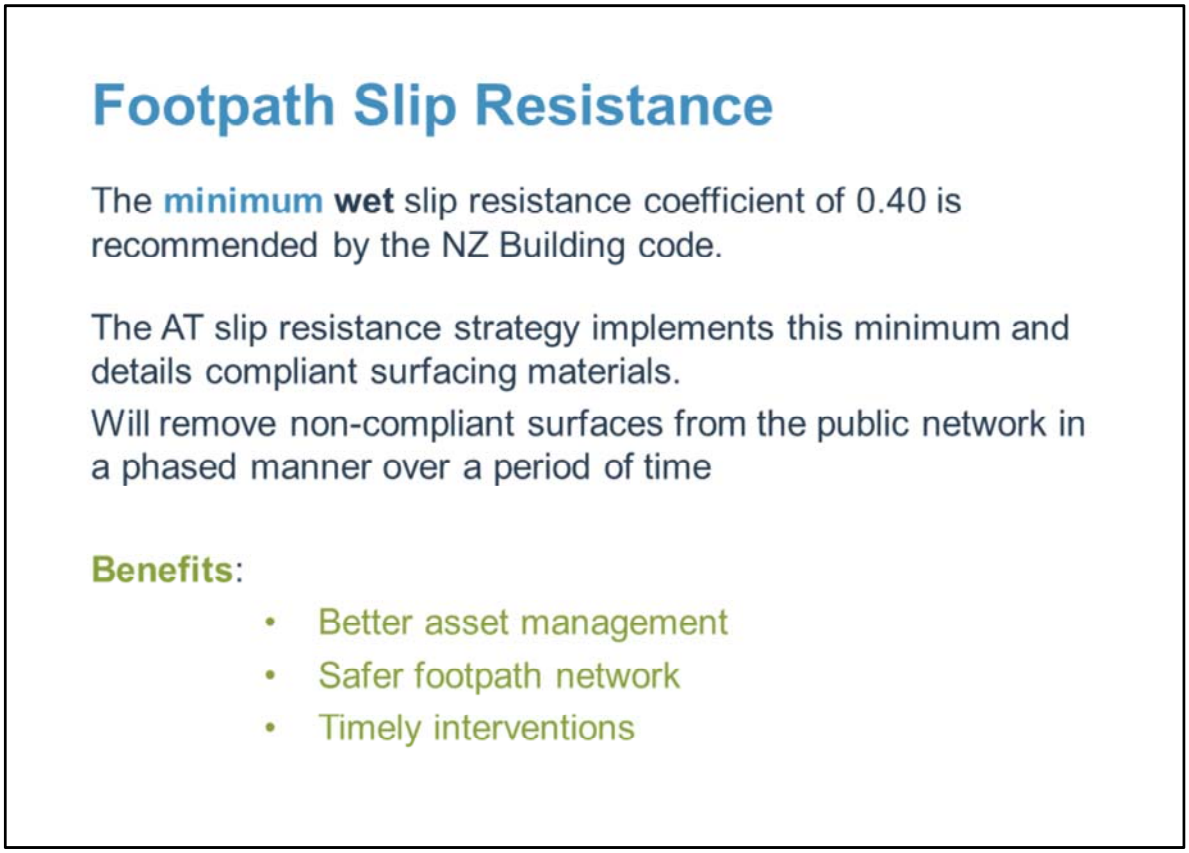
Auckland:

Over 1,900 fall claims per 10,000 people each year
(ACC 2012-2013 5 year trends)
approx. 11 fatalities per year from falls
9.6% (approx.183) falls annually from slipping on “paths”

Statistics



2011-2015 - Auckland Region statistics.



The wet coefficient of 0.40 represents the level at which a rubber soled shoe, is unlikely to slip in the wet.

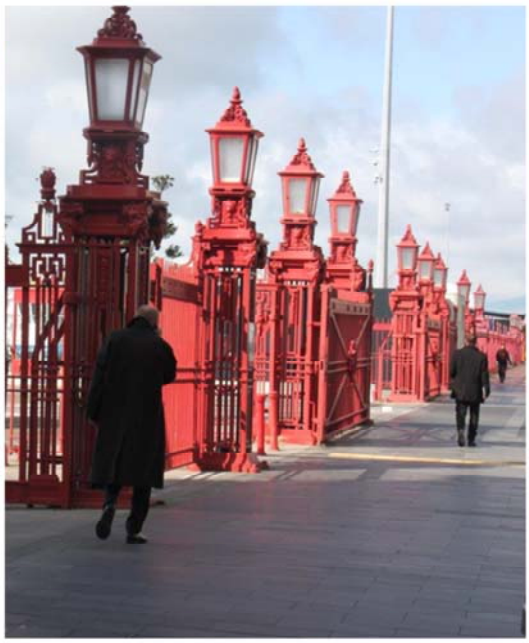
The coefficient is the measure at which the resistance of the material is such that a slip is unlikely to occur. These have been measured and studied on numerous laboratories, with the BPT the most commonly used tester.

It is preferred to achieve higher than this, however, at this stage compliance with the Building code is the minimum we are aiming for.

Vision aids are required to meet a higher slip resistance, due to the uneven nature of the tiles, and as such is not a level surface for pedestrians and cyclists etc.

Compliant Surfaces

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



The majority of the AT footpath surfaces are compliant, being Brush finish or exposed aggregate concrete., and Asphaltic surfaces.

New Surfaces

All new or proposed surfaces must meet the minimum standard.

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

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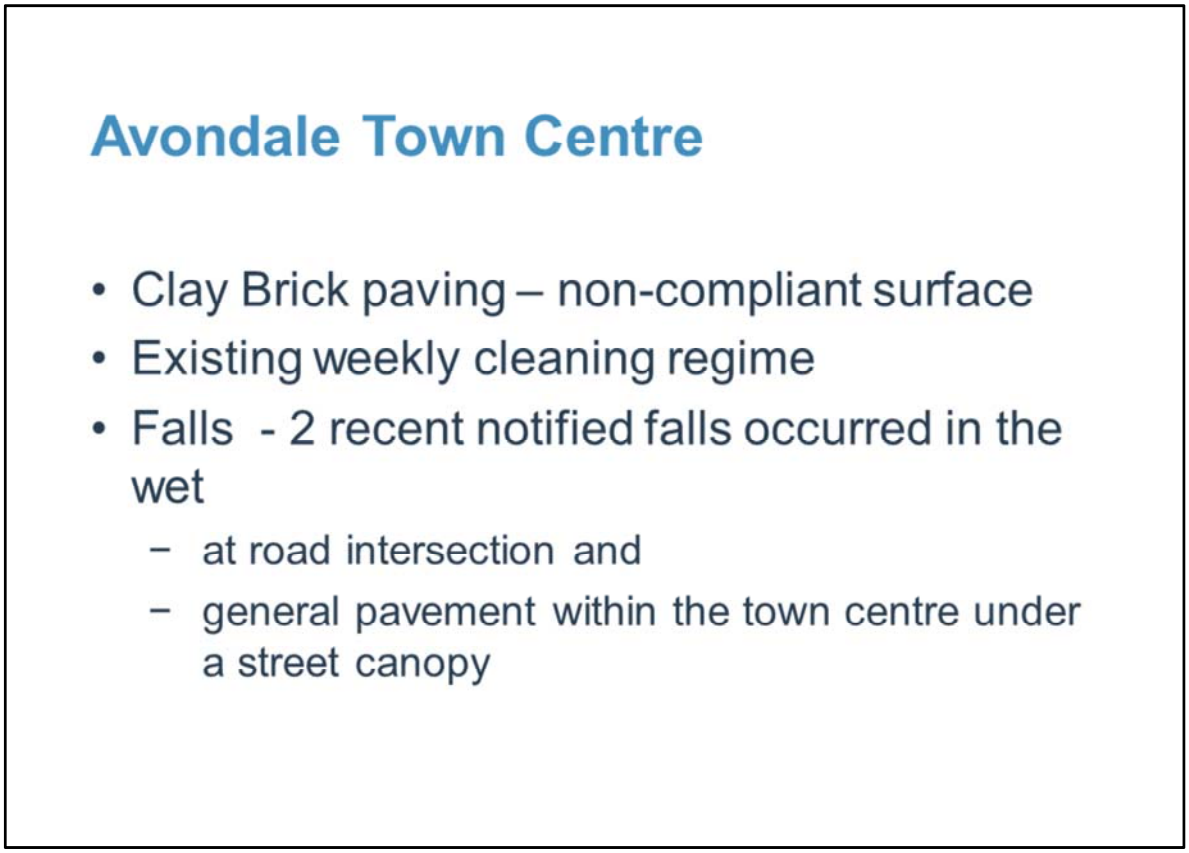
Non-Compliant surfaces

- 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



The Avondale town centre is an example within the Auckland network of a surface which does not comply with the building code in a wet state.

The clay brick pavers were laid as an historic connection to the areas industrial and potting past. With both the Old Monier clay bricks and tiles manufactured in neighbouring New Lynn alongside the “Crown Lynn Pottery” and numerous other smaller pottery manufacturers.

However. The clay bricks are not a suitable surface in the wet.

The clay pavers were ;aid extensively during an earlier period pre-dating AT. 2 recent falls have highlighted the issue, and are now following the process captured in the Slip Resistance Strategy to remediate.

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

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

General acceptance

- New surfaces proposed for trials or installation are 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.


Questions?


Thank you.
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