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IPENZ Transportation Group
Conference 2016
Auckland 7-9 March

Pullman Hotel, Auckland



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Paper Details:

Presentation title:	Impacts of volcanic ash on road transport: considerations for resilience in central Auckland
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Overview of Presentation (200 word maximum)

Include details of topic scope, key findings, and any issues for discussion or further investigation

Auckland is built on an active volcanic field. During a future volcanic eruption, functional transport networks will be critical for evacuations, as well as for immediate and long-term recovery once direct threats have subsided. Ash is generally the most disruptive and widely dispersed volcanic hazard, potentially impacting road transport networks for months to years. In Auckland ash may originate from both local eruptions and those further afield in the North Island.

Common ash impacts on roads include:

- Visual range reduction
- Road marking coverage
- Skid resistance reduction

Few studies have attempted to quantify these impacts in detail, particularly for ash <10 mm thick. This research involves the conception and implementation of a series of experiments in the Volcanic Ash Testing Laboratory (VAT Lab) at the University of Canterbury to provide quantitative data relating ash characteristics to road transport impact types.

The results, along with empirical evidence and expert advice from staff at transport organisations, are used to inform models of disruption across Auckland's road network following hypothetical eruptive scenarios. Findings can be used to improve evacuation planning and clean-up strategies, and provide safe operating thresholds and specific travel advice for future ashfall events, increasing transport system resilience.

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