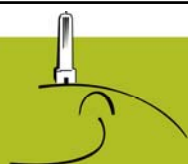




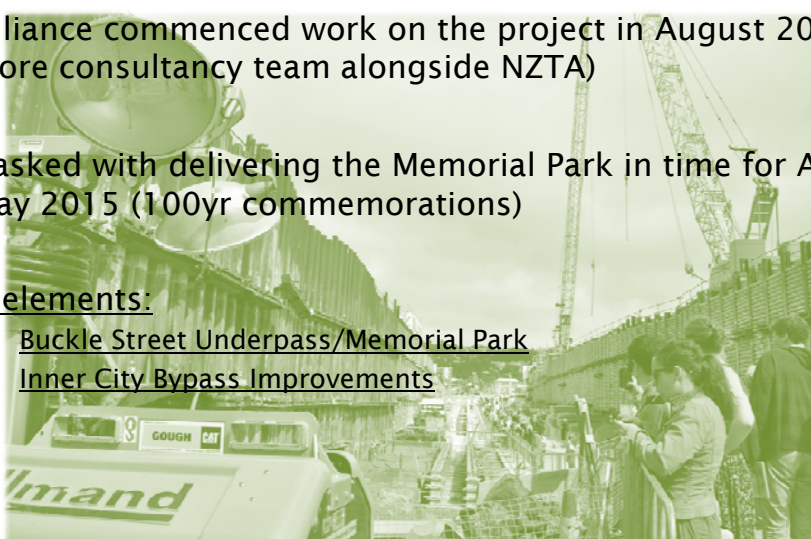
Memorial Park Alliance

Keeping Wellington Running:
Inner City Temporary Traffic
Management Modelling



National War Memorial; a brief history...





Memorial Park Alliance (MPA)

- Alliance commenced work on the project in August 2012 (core consultancy team alongside NZTA)
- Tasked with delivering the Memorial Park in time for ANZAC Day 2015 (100yr commemorations)
- 2 elements:
 - Buckle Street Underpass/Memorial Park
 - Inner City Bypass Improvements

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Wellington Inner City Bypass


Some intervention needed for future-proofing

Development of a final design is being achieved in stages

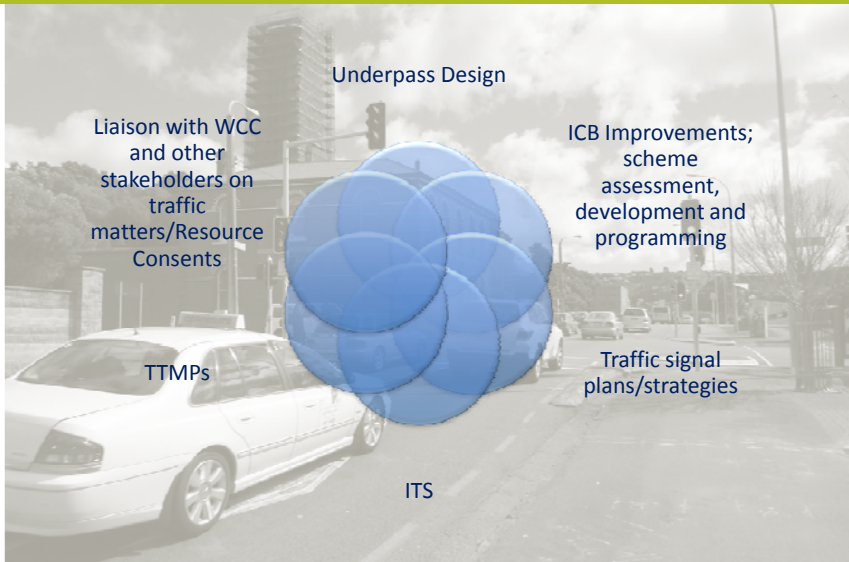
- Land acquisition negotiations
- Council consultation
- Resource consent approvals
- Urban Design inputs

Various link widening and intersection enhancements

4



TDG's Role in the MPA



Underpass Design

Liaison with WCC and other stakeholders on traffic matters/Resource Consents

ICB Improvements; scheme assessment, development and programming

TTMPs

ITS

Traffic signal plans/strategies

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Temporary Traffic Management

Buckle Street Underpass & Memorial Park

- SH1 Westbound diversion
- Tory Street/Tasman Street connection severed
- Massey University Access

ICB Improvements

- Lane closures (to enable kerb works/services relocation)
- Pedestrian/cyclist diversions around work sites



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TTM Operation

Key Performance Indicators (KPIs)

Monitoring of traffic conditions/delays

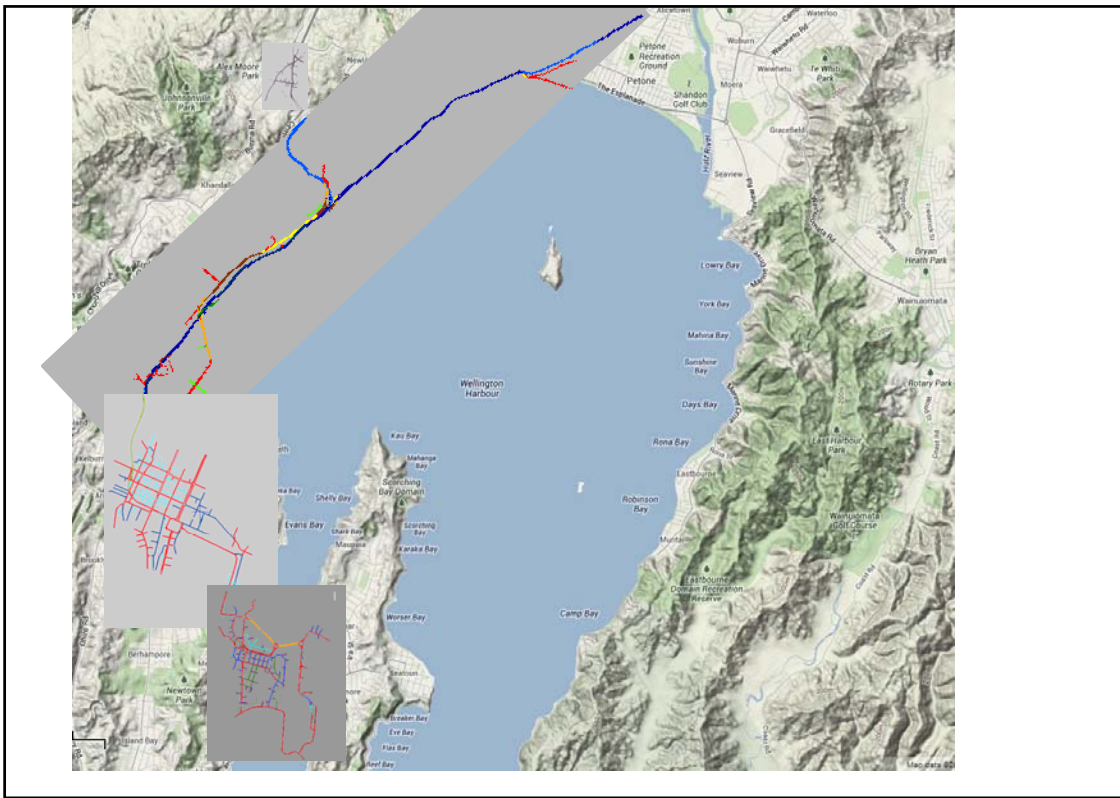
Temporary Traffic Management Plans (TTMPs)

7

Transport Modelling

WELLINGTON CITY: 2004 Base Network - AM Description at 12/11/2010 20 - 4-08


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CBD Microsimulation Model

A collage of four images illustrating a microsimulation model. The top-left image shows a 2D street network diagram with red and blue lines. The top-right image shows a 3D perspective view of a street grid. The bottom-left image shows a 3D perspective view of a road intersection with small colored dots representing vehicles. The bottom-right image shows a 3D perspective view of a road with a red bus and a purple truck, with a yellow cone of vision or sensor beam emanating from the bus.


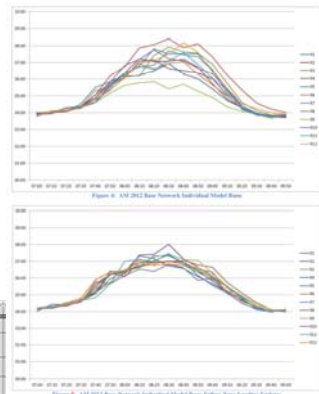
10



TTM Modelling


Application of model:

- Impact identification
- Outputs
- Clarity
- Economic indicators





TTM testing:

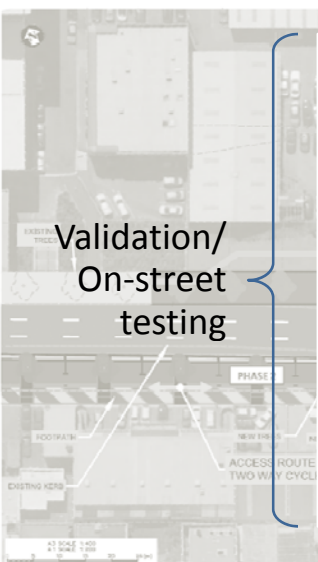
- Delays
- Optimisation and mitigation
- Programming and staging



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TTM Modelling



- TTMP operation: Modelled vs. On-street
- Example: Willis St approach to Karo Drive
 - Lane 1 closure on approach to signals
 - Model indicated significant queues on both Brooklyn Road and Aro Street
 - On-street monitoring confirmed the quantum of modelled queuing/delay
- Outcome – TTMP delay exceeds KPI's during AM and PM peaks, therefore work site restricted to off-peak

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Modelled Outputs

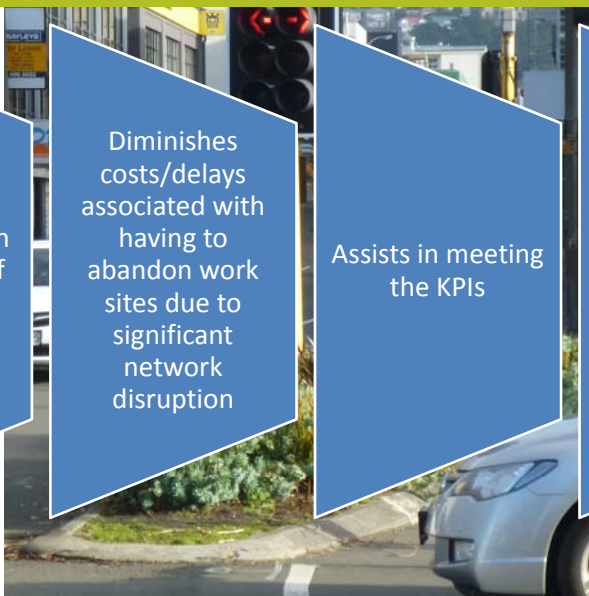
A variety of performance indicators are used to determine the on-street impact of a TTMP, including:

- Journey time - inform KPI's
- Queue length (build-up and dissipation)
- Network economic impact – calculate 'weekly dis-benefits'

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Advantages of Modelling TTM



- Assists Council in consideration of TTMP approval
- Diminishes costs/delays associated with having to abandon work sites due to significant network disruption
- Assists in meeting the KPIs
- Mitigates public disruption; avoids creating negative perception of the project

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