

NGANewmarket Switch Weekend – How to Close the Busiest Stretch of Road in New Zealand

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Abstract

At 6pm on Saturday September 4th 2010, NGANewmarket (the Alliance delivering the Newmarket Viaduct Replacement Project, 'NGA') closed SH1 southbound, beginning a closure of up to 36 hours to relocate the 700 tonne launching truss and switch traffic onto the new southbound Newmarket viaduct. The full 36 hour duration would have required around 75,000 vehicles to either stay off the road or follow diversions.

NGA developed the management strategy for this high-risk activity by collaborating with project stakeholders and re-combining the broad range of skills offered by the Alliance participants in new ways. NGA achieved this through workshops where ideas and objectives from interested parties were developed and incorporated into an operational plan.

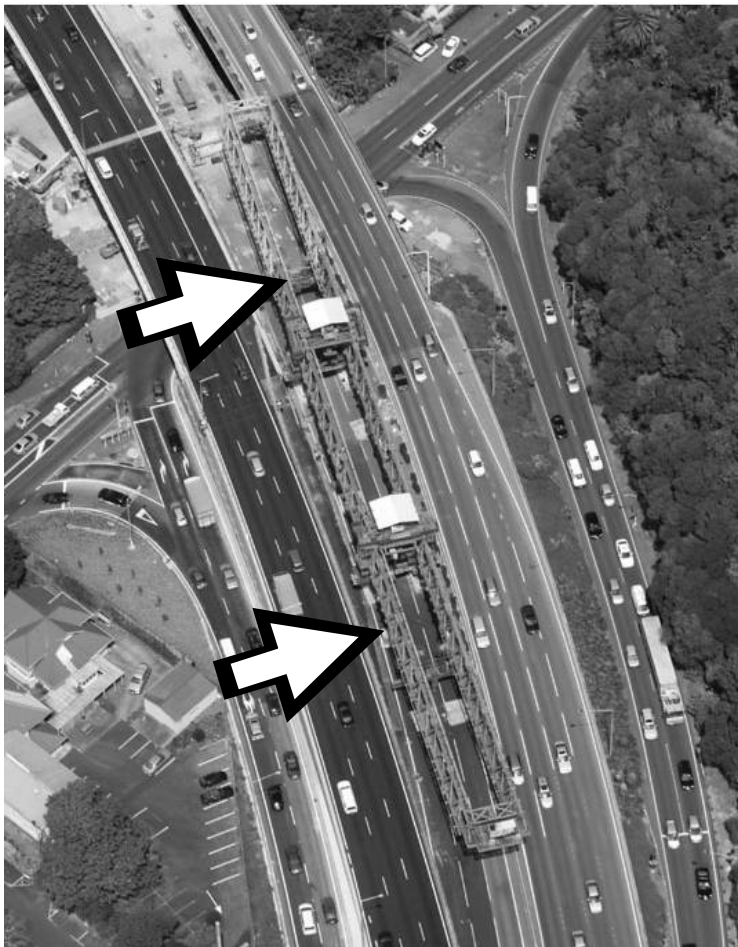
Ultimately it was the innovative and comprehensive communications campaign that captured attention and educated road users to stay at home; 70% of the trips that would normally pass over the viaduct stayed off the road network. This success is a testament to the collaborative and inclusive approach employed by NGA.

This paper outlines the collaborative approach employed in developing a strategy for planning and implementing the closure of Newmarket Viaduct, on the busiest section of road in New Zealand.

'Built in Front of Auckland'

Located within New Zealand's largest city and regional economy, the operation of the Newmarket Viaduct affects many people, business and organisations. NZ Transport Agency (NZTA) and NGA identified the switch weekend as a key risk to the delivery of the Newmarket Connection – Viaduct Replacement due to the high public profile and economic risk associated with closure of such a critical part of Auckland's road network. 'Built in Front of Auckland' is a key result area for NGA, which illustrates how crucial stakeholder objectives, customer experience and public expectations are to the success of the project.

Initial consultation with stakeholders identified that fears of traffic congestion were widespread, and the consequences were difficult to mitigate. Weekend traffic flow over the viaduct typically exceeds 5,000 vehicles per hour in each direction 11am – 6pm on Saturday and 11am – 2pm on



Sunday. Auckland's road network cannot accommodate this flow without SH1 and therefore the communication and road user education was critical to a successful closure. The potential for network-wide gridlock was very real if Aucklanders did not stay off the roads.

A Collaborative Approach to an Intractable Problem

This led to an approach which incorporated feedback from a series of workshops where NGA presented the increasingly refined strategy to subsequently broader groups of stakeholders.

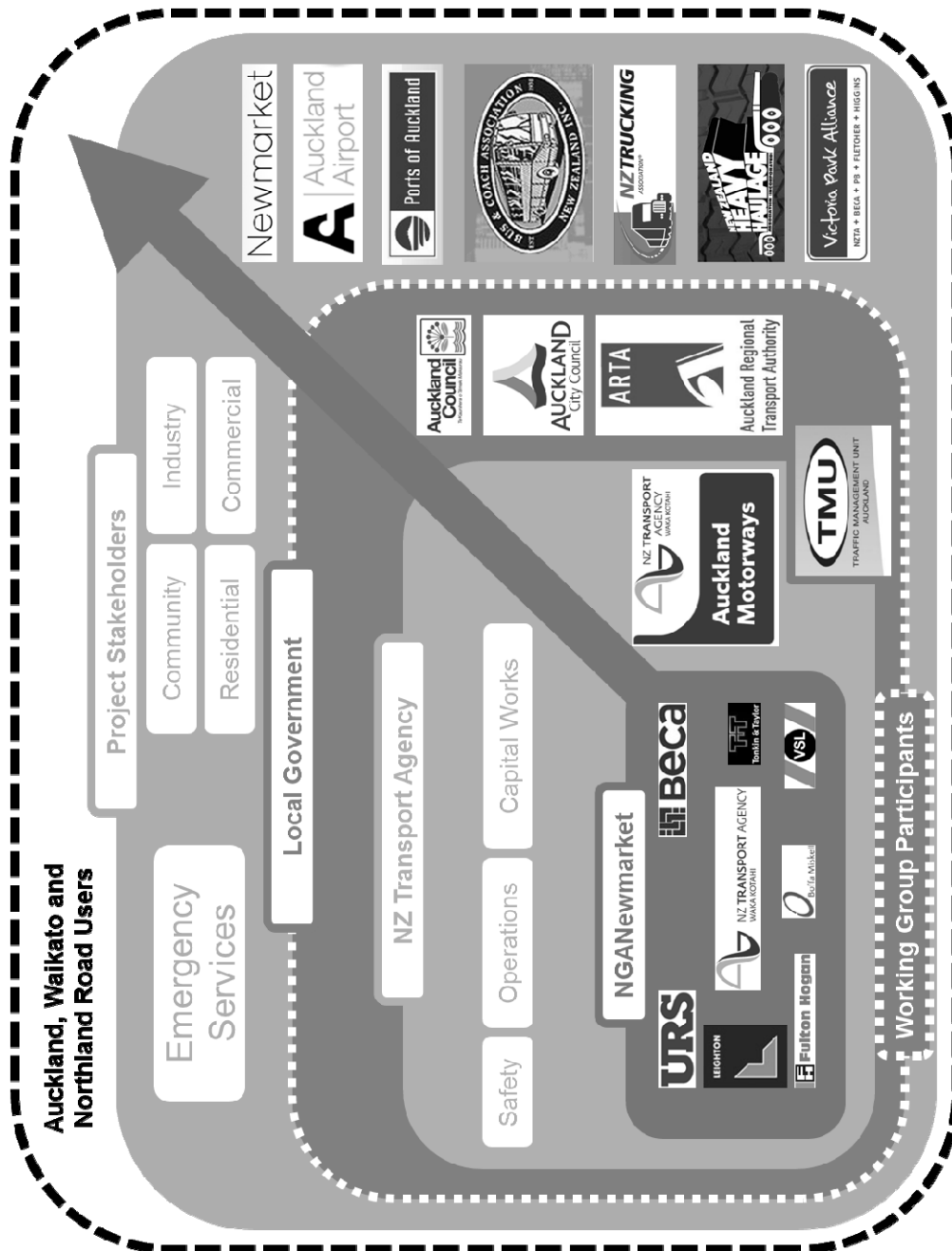
A dozen-strong 'working group' composed of members of NGA and each of the key stakeholders (NZTA, Auckland Motorway Alliance, Traffic Management Unit and Auckland City Council) developed the outline of the strategy. This group was tasked with developing a strategy for managing traffic, and an operational plan which set out the requirements and

procedures that would be adhered to for implementing and managing the closure of SH1. The strategy and operational plan would be refined through workshops and by incorporating feedback from consultation with project stakeholders.

The 'Slow Down over Newmarket' campaign highlighted to NGA how important it is to achieve alignment within a given 'layer of the onion' before extending consultation to the next. This approach minimised the risk of the strategy changing after NGA engaged with a particular stakeholder group, and also allowed each participant of the working group to report back to their organisation a consistent message about the closure. Only 2 months out from the closure NGA were able to confirm the date of the closure, and so it was critical to achieve authorisation to proceed without delay or backtracking.

Figure One, on the following page, below illustrates this approach of achieving alignment with each 'layer of the onion' as the operation plan was refined.

Figure One – The Working Group and Aligning Project Stakeholders

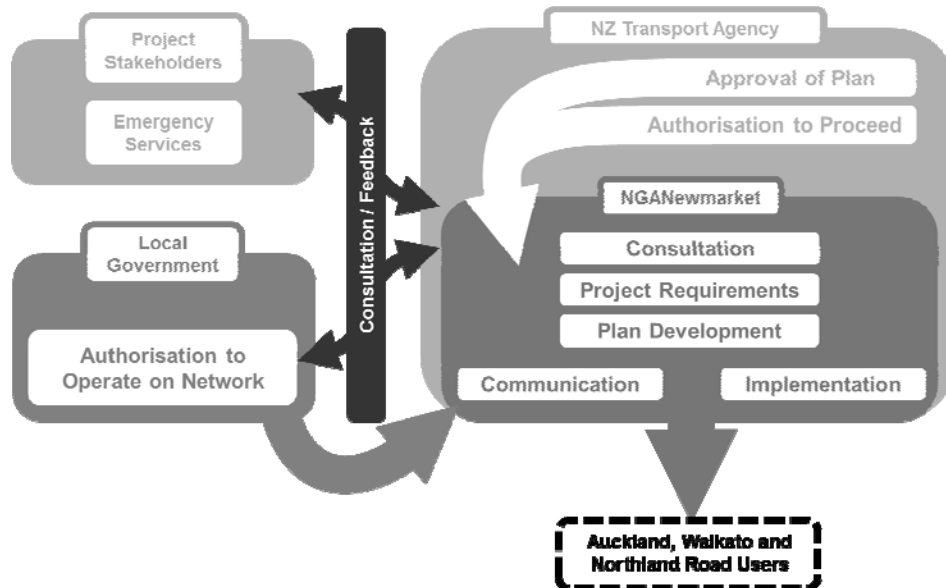


The consultation undertaken highlighted that Auckland City Council and NZTA both held responsibilities as road controlling authorities. While NZTA held ultimate responsibility for authorisation to proceed, there were a number of elements that required resolutions and / or approval from Auckland City Council and therefore sufficient notice was critical for success.

NGA identified the required information to receive ‘authorisation to proceed’ late in the process, which required some back-tracking. This reset parts of the process, but the consultation principle remained robust and ultimately delivered the closure.

This added complexity and highlighted how critical to developing such a strategy and operational plan it is to understand stakeholder responsibilities, which **Figure Two** on the following page shows conceptually.

Figure Two – Responsibilities for Approval of the Plan and Authorisation to Proceed



A Successful Solution

The operational plan incorporated a range of measures for minimising the effects of the closure. The communications campaign included a comprehensive variable message sign strategy on the Auckland Region State Highway and Auckland City road networks, billboard signage, advertising, editorial coverage in newspapers and television, internet information, viral email messaging and social media.

NGA commissioned pulse surveys to help predict the success of the communications campaign. One week before the closure, the survey indicated 67% public awareness with many respondents citing variable message signs as a key source of information. NGA used this to calibrate the final week’s communications activities and withdraw some planned communications activities, which included full-page advertising in the NZ Herald.

We believe the use of Facebook was a first for NZTA, and NGA found it flexible, cheap and user-friendly for communicating with a demographic not easily reached through traditional media. While the openness of this form of communication presents some risks, NGA were aware of this and undertook measures to prevent this becoming an issue. This included making team members available to respond to feedback through the webpage and disabling the ‘wall’ where Facebook members post personal feedback. We recommend this approach on similar projects.

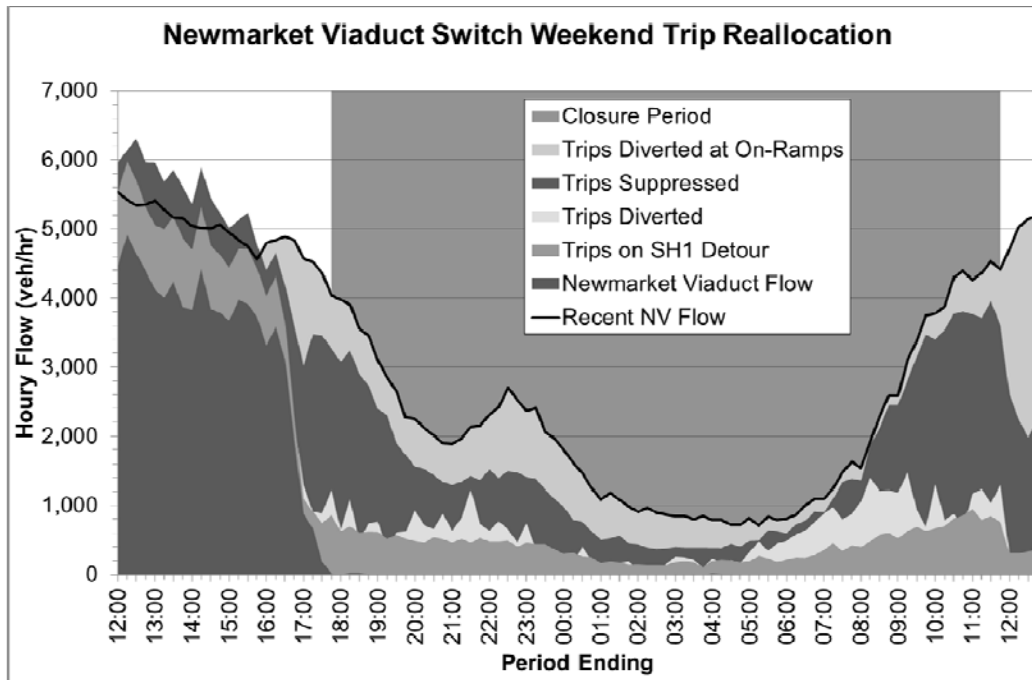
The HTML email format pioneered by NGA for the ‘Slow Down over Newmarket’ campaign provided valuable integrity to the campaign in a format that was both engaging and commonly used amongst our target groups.

The works strategy included extensive contingency planning for breakdown, inclement weather and advanced works which minimised the duration of the works. The traffic management strategy included a network of diversions designed to distribute the traffic effects, a prioritised and divided series of detour routes and significant signal optimisation works.

Ultimately it was the innovative and comprehensive communications campaign that captured attention and educated road users to stay at home; 70% of the trips that would normally pass over

the viaduct stayed off the road network. Free train travel offered by ARTA was well received and contributed to the diversion of trips; however it is not clear by what extent. This success is a testament to the collaborative and inclusive approach employed by NGANewmarket. **Figure Three** shows an estimate of the SH1 trips diverted, detoured or suppressed.

Figure Three – Estimate of SH1 Trips Diverted, Detoured or Suppressed



Conclusion

While the approach of communicating to successively wider groups of stakeholders was broadly successful, NGA failed to fully identify the correct approach to achieving authorisation to proceed until late in the planning process. Resulting last-minute changes caused difficulties with the working group and for project stakeholders. For activities of this scale, NGA recommends early identification of the 'required authorisation to proceed', which will allow for better alignment during initial phases of planning and consultation.

Planning for the closure highlighted how important it is to identify key stakeholders' needs and objectives prior to development of a strategy or operational plan. Unification of Auckland Council will result in correspondingly larger key stakeholders, which highlights the criticality of identifying Council and the council controlled organisations' needs and objectives in the initial stages of consultation. It is necessary to work closely with Council in the preparation of consultation material that will inform the broad range of internal stakeholders within Council.

Acknowledgments

NGA acknowledge team members and stakeholders who assisted in planning, implementing and responding to the closure. NGA acknowledges the emergency services who very obliging and supportive to NGA during planning. Graham O'Connell, Kathryn Musgrave, Mark Walker, Doris Stroh and the teams at NZTA, TMU and AMA. Mitch Tse, Erin Marsden, Barry Williams (formerly of Auckland City Council) and Kate Marris (formerly of ARTA) who represented local authorities in dealing with our often last-minute demands. We would like to acknowledge NGA's community stakeholders including the Newmarket Business Association, business owners and residents for their patience and understanding during construction on the viaduct. Finally, NGA also acknowledges the road users of the Auckland Region for responding to our communications.