



NGA Newmarket

*Newmarket Connection
Viaduct Replacement Project*


Southbound Switch

Jeremy O'Brien

32 TRANSPORT AGENCY
EASTON HOLLAND
CONSTRUCTION CONTRACTORS
101 NEW ZEALAND
ROAD INFRASTRUCTURE
101 NEW ZEALAND
TOWN & TAYLOR
101 NEW ZEALAND

Overview


- 36-hour closure of SH1 southbound
- Saturday night to Monday morning
- 5,500 veh / hr midday Sunday
- Up to 75,000 vehicles affected



Overview



Overview



Overview



Overview

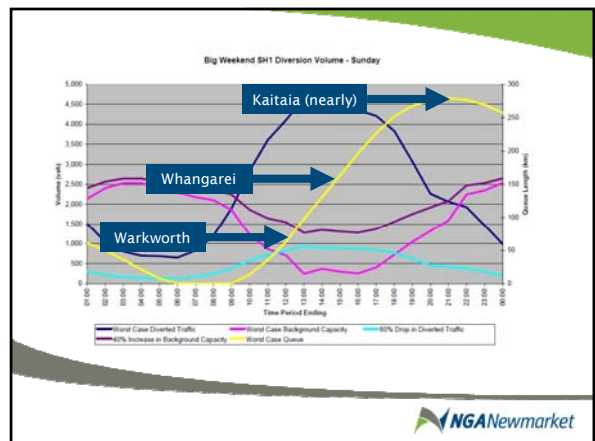
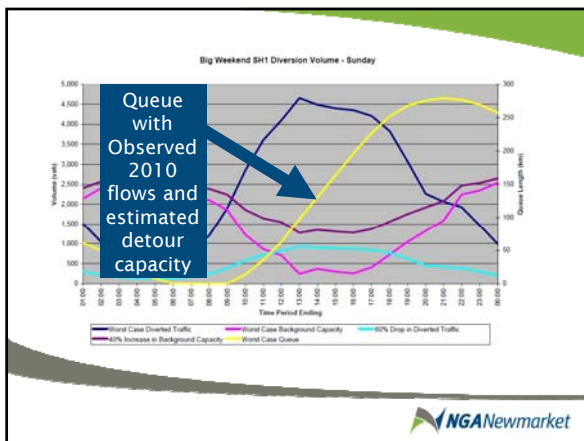
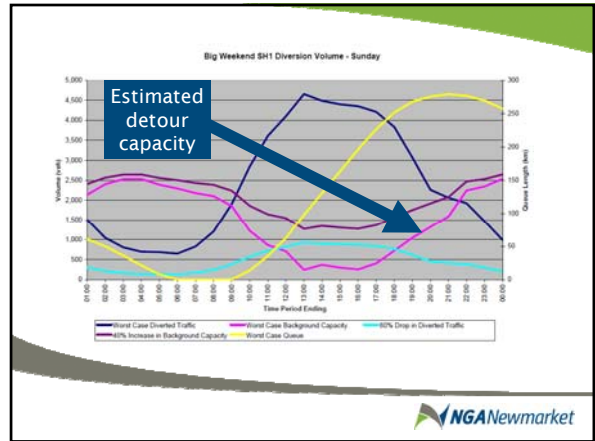
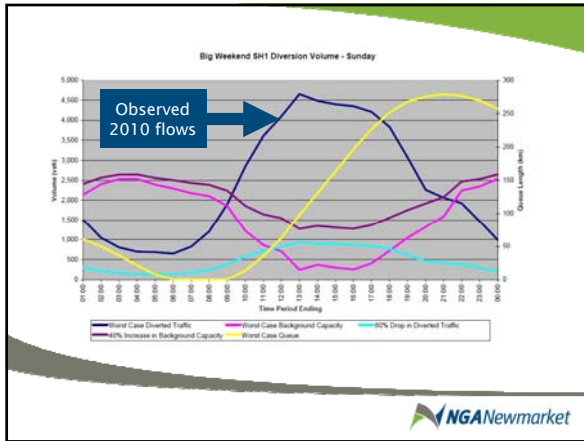
- The problem
- Process
- Strategy
- Lessons Learnt

Overview

- **The problem**
- Process
- Strategy
- Lessons Learnt

Possible traffic impacts

- Up to 5,500 veh / hr affected – what was the worst case scenario?
 - No diversion away from SH1
 - No trip suppression on wider network
- Resulting in:
 - Emergency services affected
 - Access to critical infrastructure impeded
 - Front page news



Need
At least 80% of usual SH1 Southbound traffic to not reach the detour route

Need
About 40% traffic on the detour routes to stay away

NGANewmarket

Not possible to mitigate effects with existing traffic demand

Must reduce traffic demand

Must find a way to check that demands will be reduced

NGANewmarket

Overview

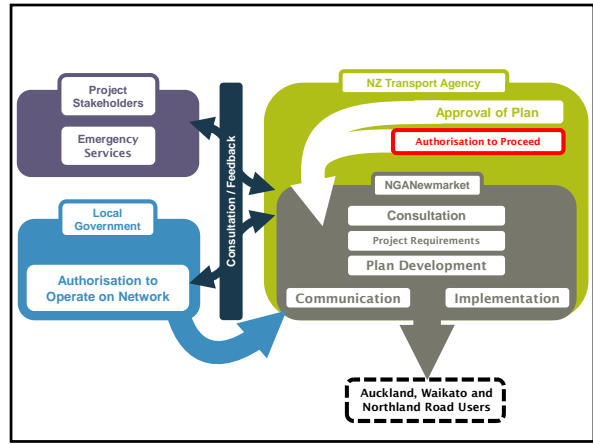
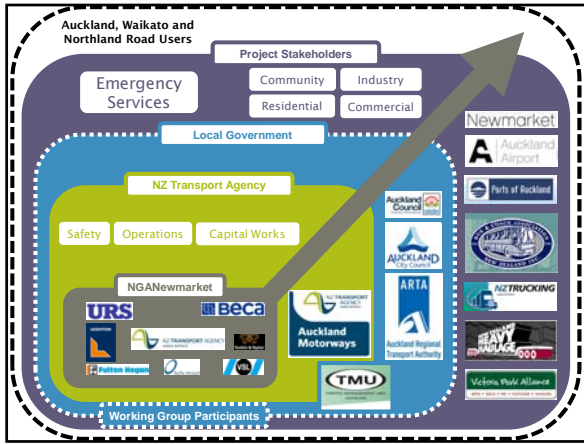
- The problem
- **Process**
- Strategy
- Lessons Learnt

NGANewmarket

Working Group

- 12 member team made up of NGA, NZTA, Auckland City, Auckland Motorways
- Responsible for collaboration and development of the communications and traffic management strategy

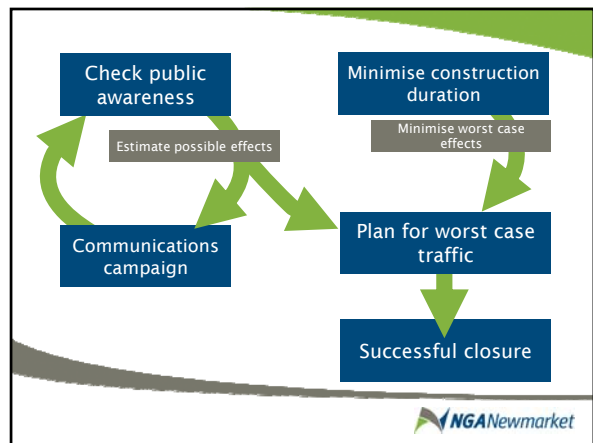
NGANewmarket

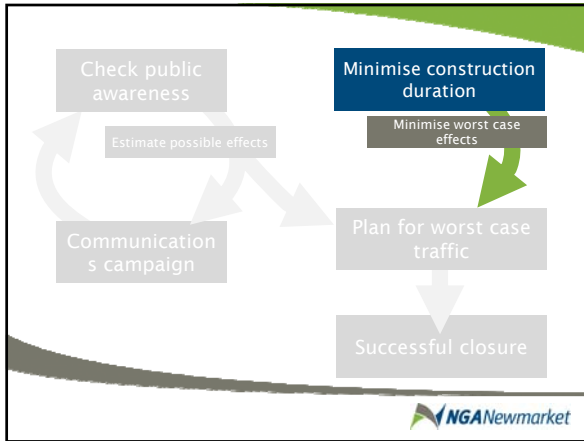


Overview

- The problem
- Process
- **Strategy**
- Lessons Learnt

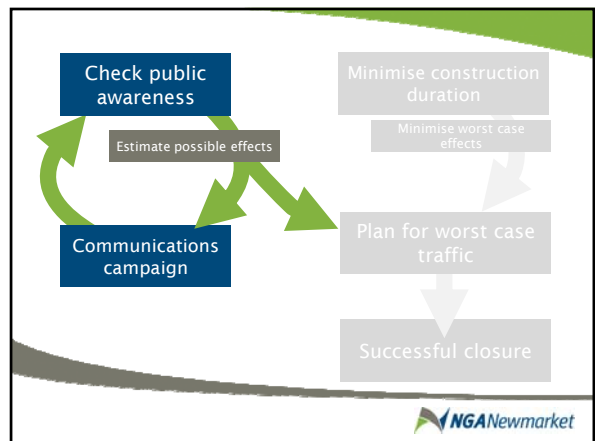
NGANewmarket





- ### Minimise Construction Duration
- 15-minute integrated programme between the various teams:
 - Traffic management implementation
 - Gantry shift – mobilisation / demobilisation
 - Gantry shift – gantry preparations
 - Pavement works
 - Detailed review by NGA team and discussion with project stakeholders on timing

- ### Minimise Construction Duration
- NGA developed initial construction programme which included paving on the weekend
 - **Collaboration** with AMA and NZTA identified opportunity to complete paving ahead of the weekend
 - Risk review allowed it to be adopted, which mitigated weather dependency



Communications campaign

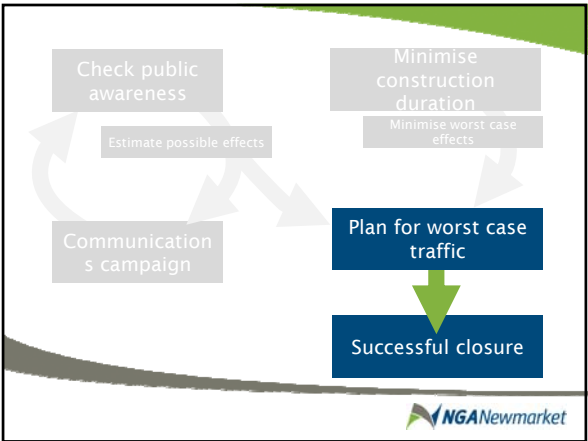
- **Traditional media:**
 - TV (live crosses, editorial)
 - Radio, newspaper, billboards,
- **Web 1.0:**
 - Website, HTML email
- **Web 2.0:**
 - Facebook, Twitter





Communications campaign

- **“Throw the kitchen sink at it”, except:**
 - NGA commissioned pulse surveys in the weeks leading up to the closure
 - 67% awareness one week before closure
 - NGA able to calibrate final week’s communications activities in response

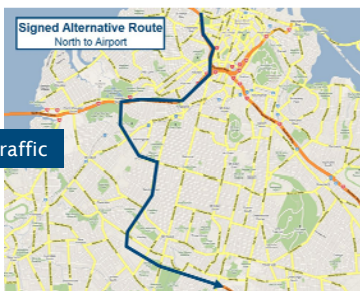



Traffic Management Strategy

- Divert people before they are trapped in the closure
- Close on-ramps to force traffic onto a range of detours
- Optimise the detour route for remaining traffic



Divert Traffic

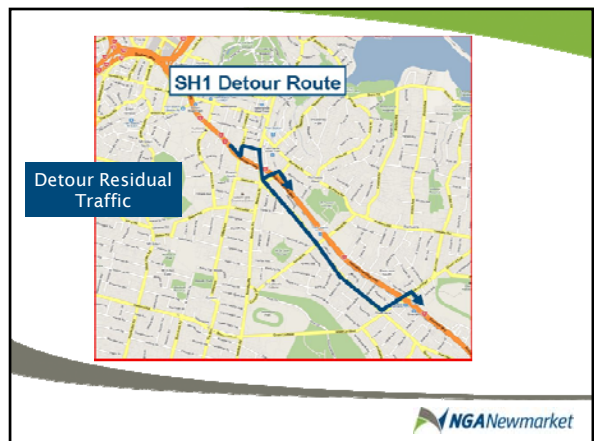


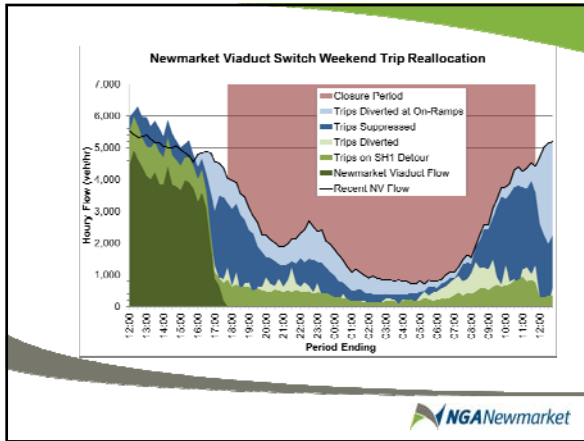
Divert Traffic



Divert Traffic







Outcomes of Analysis

- **Gantry VMS were key** - indicated by the relative success of diversions on SH16 compared with SH1
- **Road users will likely follow most direct route** (rather than detours)
- **Road users will follow detours more closely at night**

Outcome

- We estimate suppression of normal trips was around 70%
- Diversions and detours catered for between 10% and 40% of usual flow
- Acknowledge free trains certainly contributed to success

Overview

- The problem
- Process
- Strategy
- **Lessons Learnt**

Lessons learnt

- Need to define required authorisation to proceed in initial stages
- It will probably take more trips through the 'layers of the onion' than you think
- Communications will be successful if you link them to a physical structure
- Critical to create a feedback loop in your communications strategy



Too Successful?



The Working Group

- **Jeremy O'Brien** - NGA Communications and Traffic Management Team Leader (Beca)
- **Pauline Nobbs** - NGA Traffic Manager (Fulton Hogan)
- **Gez Johns** - NGA Communications (NZTA)
- **Tom Newson** - NGA Project Services Manager (NZTA)
- **Graham O'Connell** - NZTA
- **Mark Walker** - NZTA
- **Doris Stroh** - Auckland Motorway Alliance
- **Mitch Tse** - (Formerly) Auckland City Council
- **Erin Marsden** - (Formerly) Auckland City Council
- **Jon Varndell** - NGA Design Manager (URS)
- **Patrick Arnold** - NGA Construction Manager (VSL)
- **Ian Harbeck** - NGA Project Manager (Leighton)

