

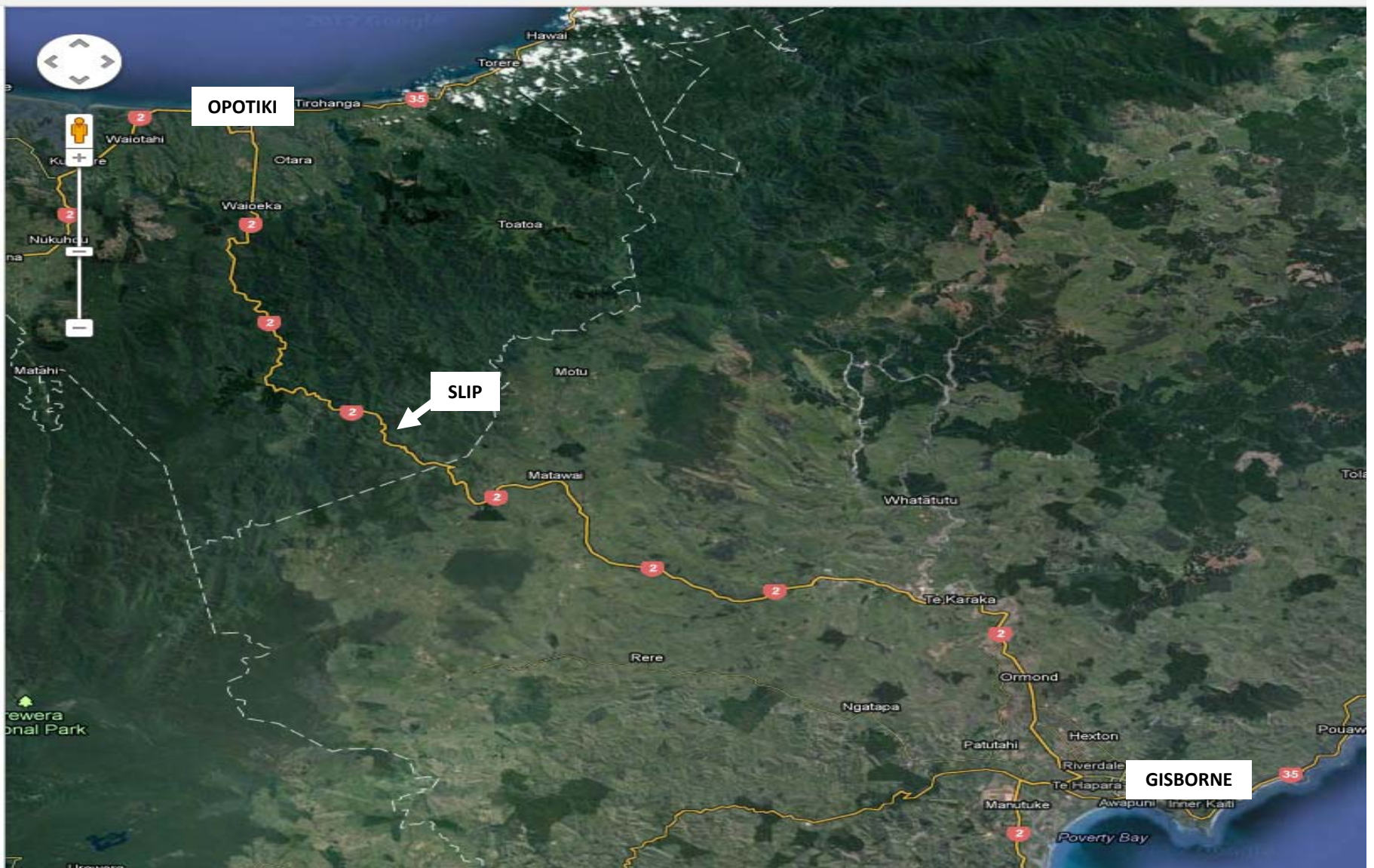
# Network resilience: update on opening the Gorge

**Road Controlling  
Authorities Forum  
27<sup>th</sup> April 2012**



**NZ TRANSPORT AGENCY**  
WAKA KOTAHI

# WHERE IS IT?



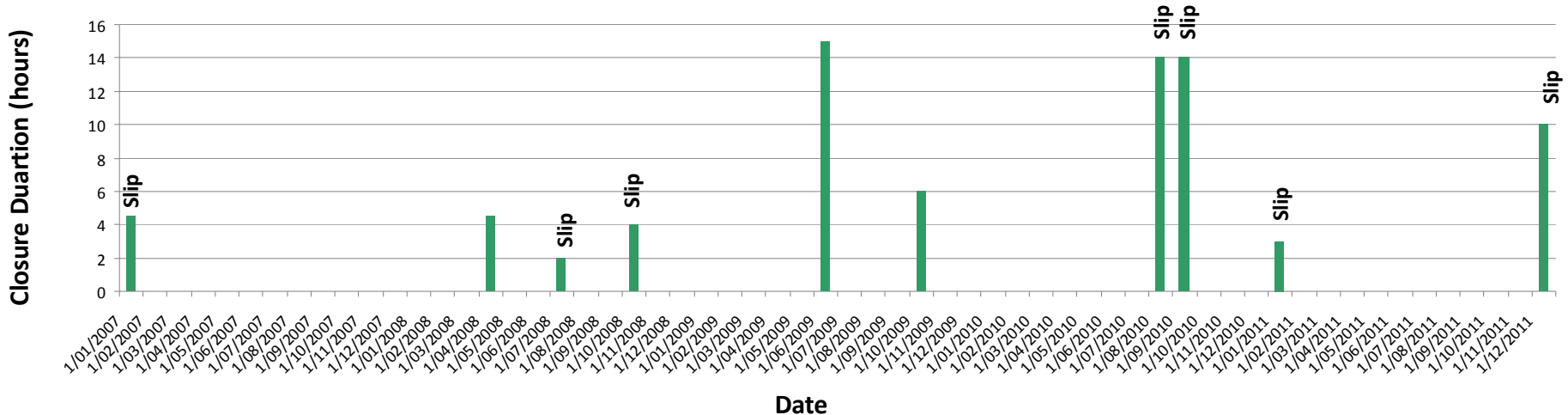
# THE ISSUES WITH THE GORGE

- The gorge cuts through ranges of steep-sided hills rising from 400 metres near the coast to 1000 metres inland
- The 57 km of the Waioeka Gorge consists of crushed and weathered greywacke rock and is immensely unstable
- The Gorge terrain is dissected by numerous fault crush zones which produce the larger slips.
- The SH at the slip site follows the incised valley cut by the Opato Stream i.e. very narrow
- The nature of the greywacke means that the slip material has moved some 25mm since the 3<sup>rd</sup> March (as at 18 April)



# THE HISTORY OF CLOSURES

## Waioeka Gorge Closures (2007-2012)



**Of these 11 gorge closures over the last 5 years, slips have been a direct cause of closure 7 times. The other four closures were caused by snowfalls or vehicular roll-overs**

**Last big closure (several weeks) was in July 1998**

**Contractor resources based in Opotiki to service the gorge**



# WHAT HAPPENED?

## FRIDAY 2<sup>ND</sup> MARCH:

- Slip consisting of some 10,000m<sup>3</sup> of soil occurs in the morning
- Road closed to allow for removal operation

## SATURDAY 3<sup>RD</sup> MARCH:

- Secondary, much larger slip occurs at 5:00pm bringing down approx 100,000m<sup>3</sup> of soil near Sandy's Bridge
- Of this, some 30,000m<sup>3</sup> of material created a rocky outcrop over the state highway  $\frac{2}{3}$  of the way up the slip
- Road closure continued indefinitely

# PROCESS FOR FIXING

**Week 1**

Investigated and initiated safe methods to break down the rocky outcrop and stabilise the slip

**Week 2**

Removed overhanging material at rocky outcrop; commenced slip removal operation

**Week 3**

Commenced removal of material to local temporary disposal site and started to construct temporary access

**Week 4**

Opened road to allow for one-lane access during daylight hours and continued to stabilise slip face by removing loose material

**Week 5+**

Opened road to allow for one-lane access 24 hours a day and started construction of access track up the face to enable team to remove the rocky outcrop

# IMPORTANCE OF OPENING

- Alternative routes via SH35 around the East Cape and SH5 through Taupo adding an additional 2.5 hours travel time per one way journey
- Local road alternative (Motu Road) not suitable for detouring traffic - closed
- Significant impact on businesses due to the increased travel times and loss of direct route between Opotiki and Gisborne
- Significant impact on Gisborne tourism market
- Significant Impact on locals residents



# COMMUNICATIONS AND FRONTING UP

- Treis updated immediately
- Detours set-up via SH 35 and SH 5
- Additional VMS signs put in place on SH2 at Paengaroa and on SH 30 east of Rotorua
- Dedicated website set-up
- Media releases issued every second day
- Stakeholder list established and daily updates issued
- Radio and newspaper interviews conducted
- Meeting held with affected transport operators
- Numerous site visits conducted





# LOOKING FORWARD...

- Continue work with excavation machines to remove the 30,000 cubic metres of slip material from the middle of the slip face (expected to take up to four weeks weather dependant)
- Move to clear the state highway of slip material
- Repair damage to the state highway
- Reopen fully to two lanes



# A VISUAL PERSPECTIVE













NZ TRANSPORT AGENCY  
WAKA KOTAHI

New Zealand Government







NZ TRANSPORT AGENCY  
WAKA KOTAHI

New Zealand Government



# THANK YOU



NZ TRANSPORT AGENCY  
WAKA KOTAHI

New Zealand Government