

# WTOC

# Wellington Transport Operations Centre



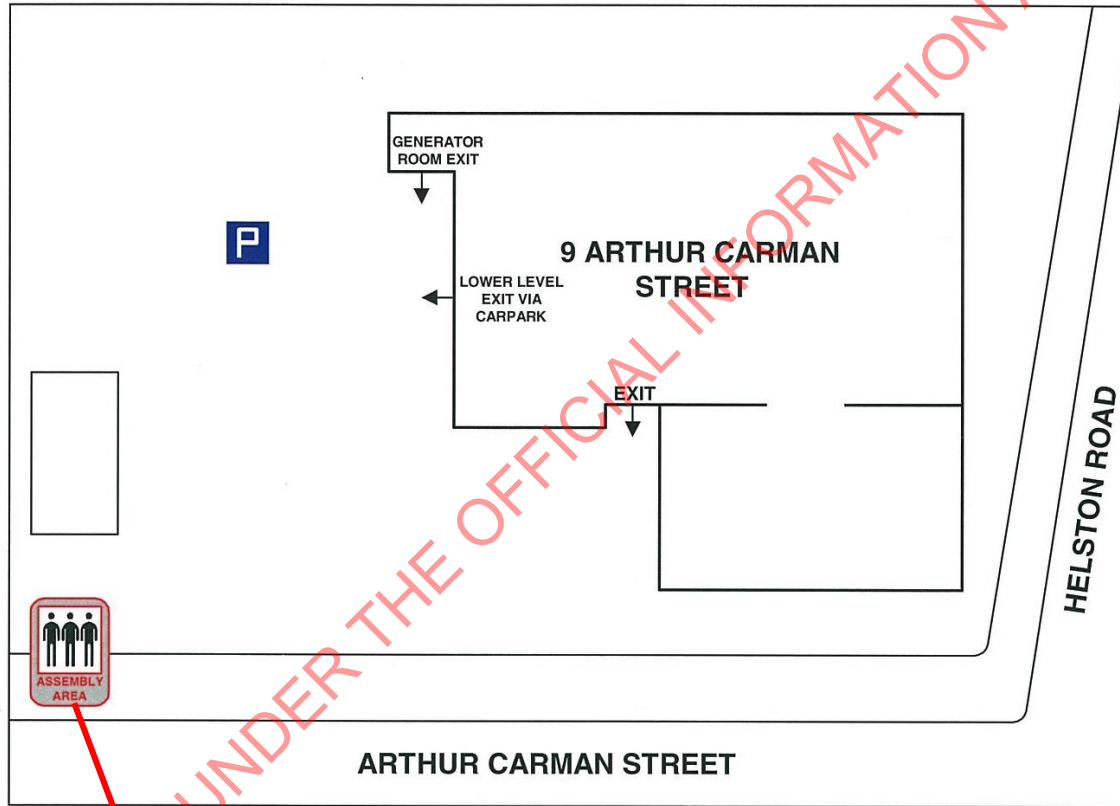
Absolutely Positively  
Wellington City Council  
Me Heke Ki Pōneke



# WTOC | In Case Of Emergency



## ASSEMBLY AREAS



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# WTOC | Area of Operations



There are 3 Operations Centers covering New Zealand:

- ATOC (Auckland)
- CTOC (Christchurch)
- WTOC (Wellington)

Exceptions:

- Lyttelton Tunnel
- Homer Tunnel



# WTOC | By The Numbers



YEAR	2014	2015	2016	2017	2018
Number of total unplanned incidents	8,460	9,989	10,517	13,437	14,284
Number of Official Unplanned incidents only	1,199	1,448	1,770	2,767	2,617
Road Closures	246	351	340	565	565



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# WTOC Operators | origins

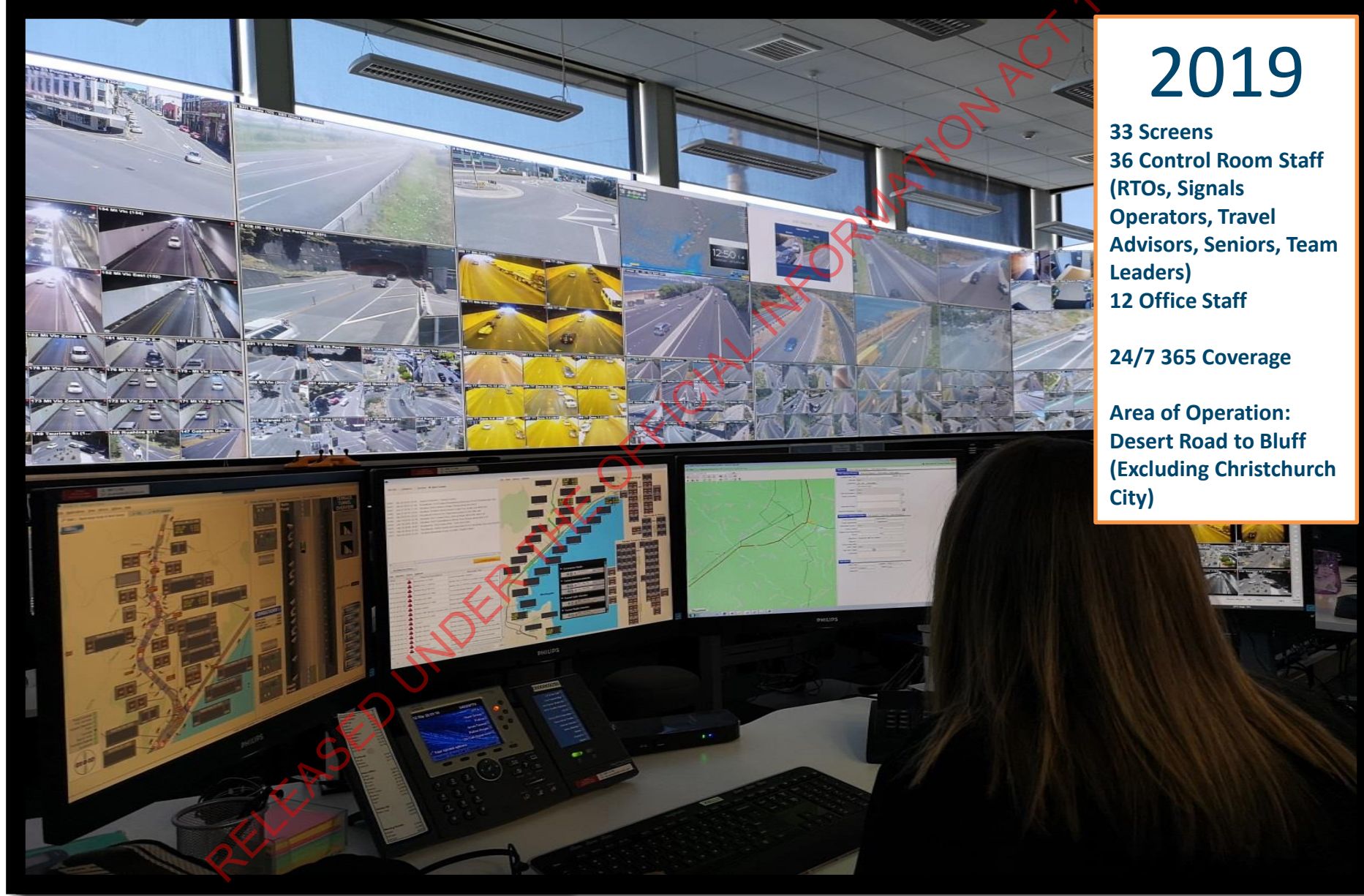


## 2019

33 Screens  
36 Control Room Staff  
(RTOs, Signals  
Operators, Travel  
Advisors, Seniors, Team  
Leaders)  
12 Office Staff

24/7 365 Coverage

Area of Operation:  
Desert Road to Bluff  
(Excluding Christchurch  
City)



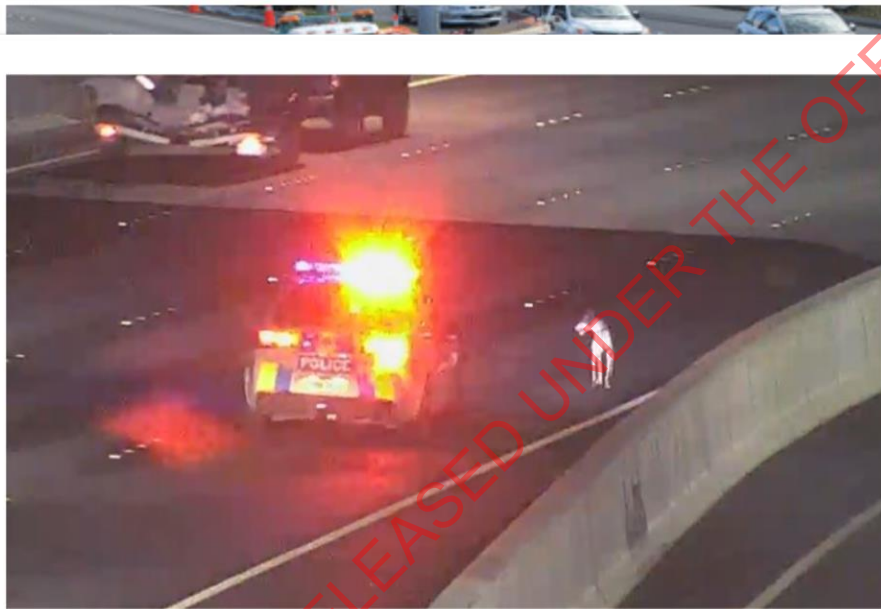
# WTOC Operators | planned events

- PUBLIC EVENTS
- ROADWORKS



# WTOC Operators | unplanned events

- CRASHES
- DAMAGE & RECOVERY
- UNEXPECTED BEHAVIOUR



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# WTOC Operators | unplanned events



**NZTRANSPORT**  
AGENCY  
WAKA KOTAHI





# WTOC primary tools



- ❖ 380+ Cameras
- ❖ 200+ Cameras Canterbury
- ❖ 200+ Variable Message Signs
- ❖ 120+ Lane Control Signs
- ❖ 300+ Traffic Signals



Above is a new Transport Department sign, alerting motorists to a traffic accident, Hutt motorway, Wellington 1955.

# WTOC primary tools | DYNAC

**Smart Motorway Automation Ctrl**

North	Man	South	Man
Current OP:	Man	Current OP:	Man
Rec OP:	WLG-11N	Rec OP:	WLG-17S
FT Resume		FT Resume	
Last Action Timestamp:	3 Jul 2018 16:13:06	Last Action Timestamp:	4 Jul 2018 09:46:06
Alarms Suppressed by philipn		Alarms Suppressed by samro	

**Bolton Street Southbound**

State: Closed

Control Monitoring Alarms

Close Open

**Trench NB**

70 70

51N1 51N2

**TERRACE TUNNEL INCIDENT**

OPERATOR HELP

Continue to check systems (deluge, evacuation, ventilation) and assist NZFS.

Fire

TRAFFIC PLAN SELECTION

Incident Lane

Close All

Current Incident: WLG-17-11-0009

Traffic Plan: plans/Terrace Tunnel Fire

Terminate Traffic Plan

DELUGE TIMER

0 Seconds

Activate Cancel

EVACUATION TIMER

0 Seconds

Activate Cancel

JET FAN MODE

NZFS Access

Air Flow North: Off

Air Flow South: Control

Max Flow North: 1.5 m/s

Max Flow South: .9 m/s

SYSTEM CONTROL

DELUGE TOC

FANS TOC

RESET INCIDENT

Reset

**OVERHEIGHT DETECTION ALARM**

**MONITOR CAMERAS**

**AND PREPARE TO CLOSE BARRIERS**

OVERHEIGHT ALARM MUST BE ACKNOWLEDGED PRIOR TO RESETING OHD FROM BARRIER POPUP

Wellington

Victoria St SB

**OVER HEIGHT VEHICLE**

**USE TERRACE OFF RAMP**

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# WTOC Operators | Cameras



# WTOC Operators | Cameras



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# WTOC primary tools | NIEMS

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### Map View

General Events | Roadworks | Incidents | SCATS | New

Location: Westpac Stadium

### Create an Event

Location Ends Here

Start Measuring Distance

Waterloo Quay, Pipitea, Wellington 6011, New Zealand  
01N-1068/5.02-I  
-41.28059494207509, 174.78008506168499

Kimbolton Road.

Crash  
SH6 - Paringa Bridge IV  
6232 Haast Hwy, Paringa 7886, New Zealand

### Time Tracking

ID: 173455

Service	Attending	Arrived	Departed
Police	<input type="radio"/>	08:57, 17 Mar 19	09:39, 17 Mar 19
Contractor	<input checked="" type="radio"/>	08:50, 17 Mar 19	09:26, 17 Mar 19
Ambulance	<input type="radio"/>	08:51, 17 Mar 19	09:17, 17 Mar 19
Fire	<input type="radio"/>		
Tow	<input type="radio"/>	09:26, 17 Mar 19	09:39, 17 Mar 19
AA/Assistance	<input type="radio"/>		

### Road Status

South Lane 1

08:50, 17 Mar 19 | 09:39, 17 Mar 19

### Activity

Timeline | Media Updates

09:52am Cellum Roberts: Media information for NIEMS  
Twitter: @NIEMS @NIEMS\_SoM

This #SH1 crash in Plimmerton has been now been CLEARED. ^CR

### Event Details

TREIS: 248893

Official

State Highway: 1 | Location Area: Plimmerton, Near the intersection with Pope St

Description: Crash | Expected Resolution: UNB3 further notice

Impact: Caution

Public Comments: Due to a crash blocking the southbound lanes, caution is advised when travelling this route.

Detour Route: Not applicable.

Unlock to make changes

### Map View (Bottom)

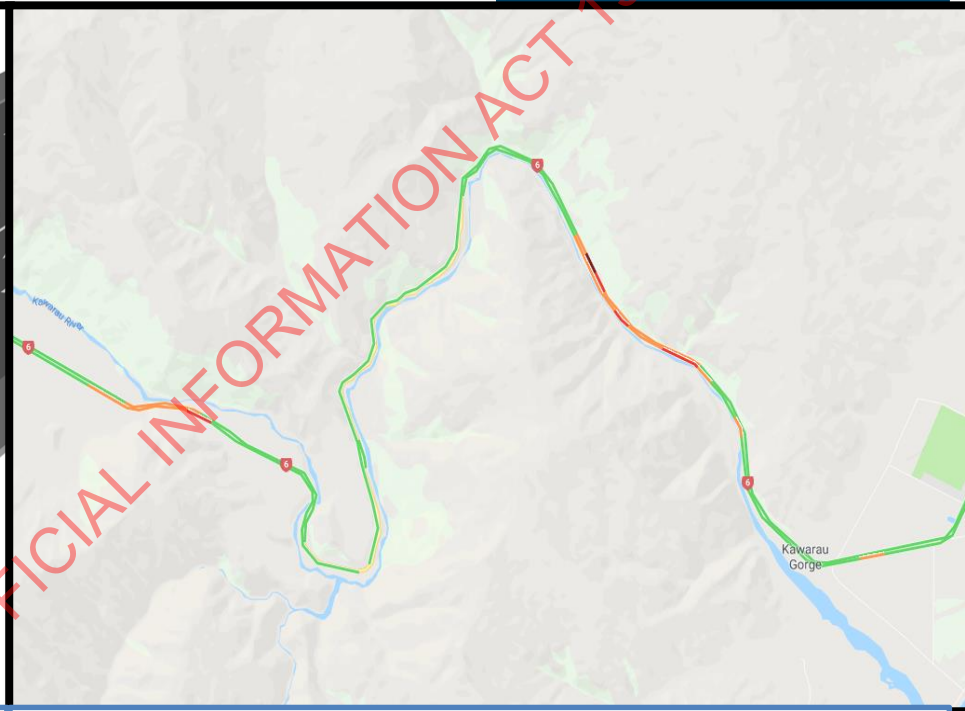
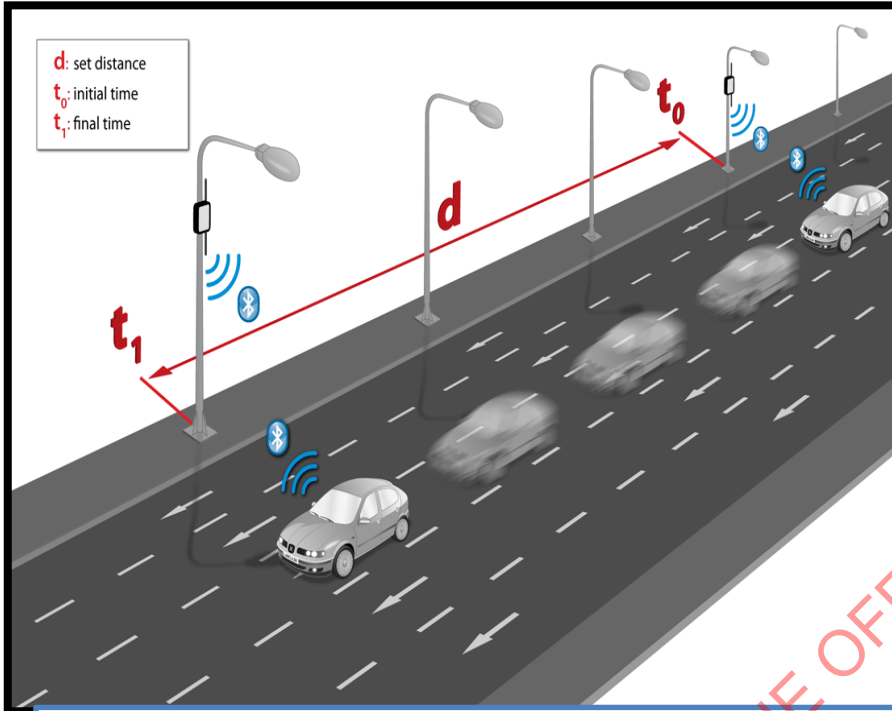
Intersection

Careful Garden Works

01N-1068/5.02-I

Google

# WTOC primary tools | EJT Signs



## Bluetooth

**Bluetooth** from vehicles and phones is used to take an average time from a set point A ( $t_0$ ) to a set point B ( $t_1$ ). The average traveling time from those vehicles is feed into the journey times that are displayed on the roadside VMS

## Google

**Google** Traffic works by analysing the GPS-determined locations transmitted to Google by a large number of mobile phone users. By calculating the speed of users along a length of road, Google is able to generate a live traffic map and we gather the average speeds from that.



## SCATS (Sydney Coordinated Adaptive Traffic System)

- 4 Traffic Signal Operators
- 1 Senior Traffic Signals Operator
- 1 Traffic Signals Team Lead

Managing 300+ Traffic Signals  
Between New Plymouth and  
Queenstown  
6am – 10pm 7 Days

The screenshot shows the SCATS 6 interface for TCS 6502. The main display area includes:

- Active plan:** A pie chart showing the distribution of traffic across three phases: A (69%, 55), B (16%, 13), and C (15%, 12). The cycle time is 80 seconds.
- Site operation:** A smaller pie chart showing the distribution of traffic across three phases: A, B, and C. The cycle time is 80 seconds.
- 3 PHASES:** A diagram showing the three phases of the traffic signal: A, B, and C.
- Map:** A map showing the location of the traffic signal at the intersection of SH1 and Whitford Brown Ave.
- System parameters:** A table of system parameters including TNZ Subsystem 15, Degree of saturation 60, System plan 1, Master subsystem, Link plan 3, Link none, Cycle plan none, Cycle time 80, and Required cycle time 80.
- Alarms:** A table of alarms including SC, IH, NF, and SY.
- Special facilities:** A table of special facilities including Z3,6.
- Site operation table:**

<A>		
B		
C	13	14
- Active offset:** 0 C
- Site Fallback:** 0
- MSS:** Master Isolated
- Region:** TNZ
- User:** User 0 - Level 0

# Travel Advisors | News and Social Media



What are you looking for?

4 Travel Information Advisors  
 1 Travel information Team Lead  
 Providing Travel Information  
 6am - 8:30pm 7 days a week

**NZTA Wellington**  
 @NZTAWellington  
 Real-time traffic information (6am-7pm Monday to Friday) to help you plan your journeys on the Wellington State Highway & Local Road Network.  
 Wellington, New Zealand  
 nzta.govt.nz/traffic  
 Joined October 2012

7,390 Tweets

19 Followers you know

449 Photos and videos

Locations	Incident	Free-flowing	Moderate	Heavy	Congested
SH1 MacKays Crossing (Raumati → Paekakariki)	<input type="checkbox"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SH1 Paekakariki → Pukerua Bay	<input type="checkbox"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SH1 Mana (Plimmerton → Paremata)	<input type="checkbox"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SH1 Paremata roundabout	<input type="checkbox"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SH1 Porirua	<input type="checkbox"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SH1 Tawa Interchange → Johnsonville	<input type="checkbox"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SH1 Ngauranga Gorge	<input type="checkbox"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SH1 Urban Motorway	<input checked="" type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SH1 Aotea Quay	<input type="checkbox"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SH1 Terrace Tunnel queue	<input type="checkbox"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SH1 Terrace off-ramp queue	<input type="checkbox"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SH2 Upper Hutt (Totara Park → Silverstream)	<input type="checkbox"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SH2 Melling	<input type="checkbox"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SH2 Dowse Interchange	<input type="checkbox"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SH2 Petone → Interchange	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
SH1 Vivian St	<input type="checkbox"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SH1 Kent Tce	<input type="checkbox"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SH1 Cobham Drive (City Bound)	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
SH1 Mt Vic Tunnel (City Bound)	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
SH1 Basin Reserve	<input type="checkbox"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SH1 Arras Tunnel	<input type="checkbox"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Sign Up Liked Message

More

Agency - Wellington

Highway 2 (northbound) prior to the Melling lights is in the left lane and causing significant delays. The queue is increasing and growing. Please be patient if you are stuck in traffic in this direction and watch your following distance.





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