

NZ Transport Agency

# Stormwater Workshop

April 5th 2016

Venue: Te Rauparaha Arena, Paramoana Street, Porirua (see map on the next page)

The NZ Transport Agency would like to invite you to a Transport and Stormwater workshop to learn more about and discuss a number of key topics.

Places are limited. Please RSVP by the 24<sup>th</sup> of March to: [environment@nzta.govt.nz](mailto:environment@nzta.govt.nz)

## AGENDA

13:30 – 13:50	Tea and coffee
13:50 – 14:00	Welcome to Workshop and introduction to Session One and Two – <i>NZ Transport Agency</i>
14:00 – 14:15	All the Light We Cannot See – secrets of a traffic light’ – <i>Keith Calder (Porirua City Council)</i>
14:15 – 14:30	Questions
14:30 – 15:10	<b>Session Two:</b> Risk assessment of road stormwater runoff research presentation – <i>Laurie Gardiner (MWH) and Jonathan Moores (NIWA)</i>
15:10 – 15:30	Questions
15:30 – 15:50	Break
15:50 – 15:55	Welcome Back and introduction to Session Two – <i>NZ Transport Agency</i>
15:55 – 16:35	<b>Session Three:</b> Stormwater Wetlands, Ponds and Plants – Operational Delivery Tips and Tricks – <i>Peter Mitchell (Auckland Motorway Alliance) and Neal Perrott (Wetland Solutions)</i>
16:35 – 16:55	Questions
16:55 – 17:00	Wrap up – <i>NZ Transport Agency</i>

Please see the next page for directions to the venue.

## ROADING AND PORIRUA HARBOUR WORKSHOP

Tuesday 5<sup>th</sup> April 2015

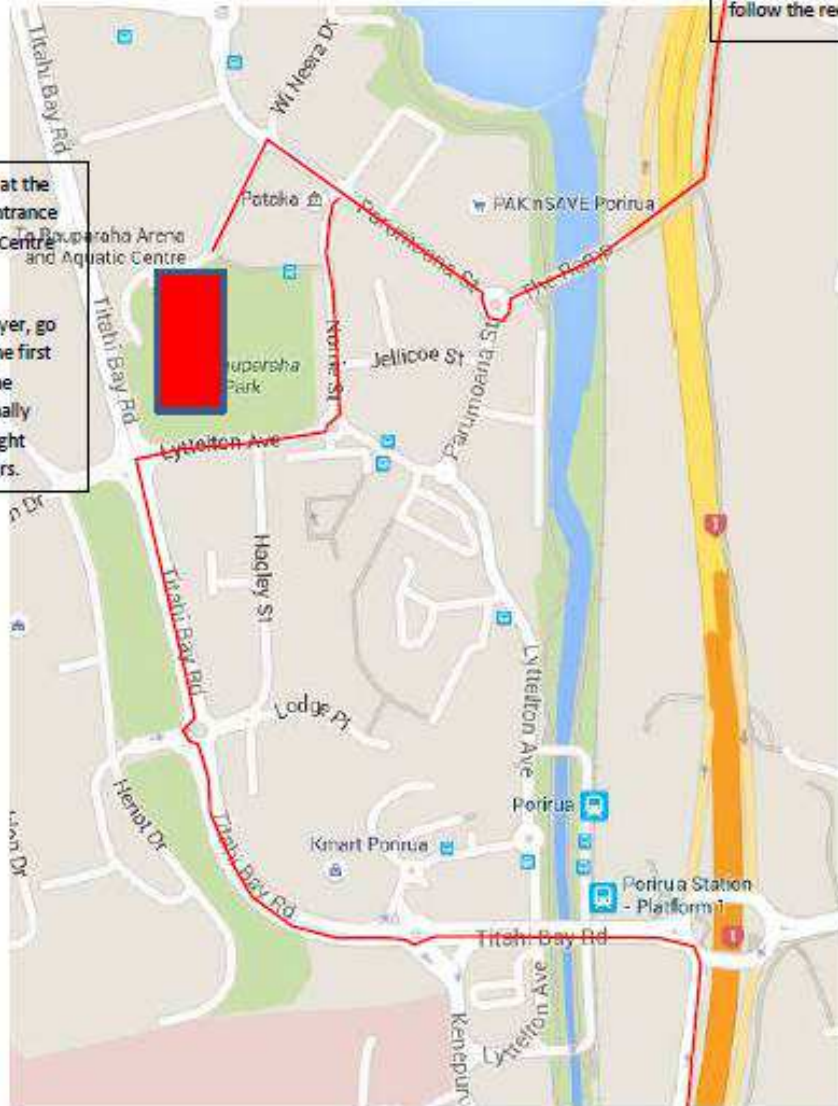
Theatrette, Floor 2 Te Rauparaha Arena, Porirua

SH1 from Paremata.

Coming from the north, take the Porirua City/Titahi Bay off ramp and follow the red line on the map.

There is plenty of parking at the Arena. The parking and entrance to the Arena and Aquatic Centre is on the northern side.

Once entered the main foyer, go straight ahead and take the first set of stairs on the left. The theatrette is in the diagonally opposite corner to your right once at the top of the stairs.



SH1 Porirua Motorway from Wellington.

Coming from the south, take the Porirua City off ramp and follow the red line on the map.

NZ Transport Agency

# Stormwater Workshop

April 5th 2016

Venue: Te Rauparaha Arena, Paramoana Street, Porirua (see map on invitation)

Please RSVP by 24 March 2016 to: [environment@nzta.govt.nz](mailto:environment@nzta.govt.nz)

## **Session One:** All the Light We Cannot See – secrets of a traffic light

*Keith Calder (Porirua City Council)*

13:50 – 14:30

The Porirua Harbour and Catchment Strategy and Action Plan came into being in March 2012. It's vision is " *a healthy catchment, waterways and Harbour, enjoyed and valued by the community*". There are three key objectives of the Strategy to make the vision a reality:

1. Reduce sedimentation rates.
2. Reduce pollutant inputs.
3. Restore ecological health.

Keith Calder is the Porirua Harbour Strategy coordinator and is tasked with coordinating the various strategy actions to meet these objectives. He will give an overview of the current Porirua Harbour environment and challenges it faces around stormwater. There are a suite of Strategy actions that Keith shall touch on including a Catchment Sediment Reduction plan, community education and research and monitoring.

## **Session Two:** Risk assessment of road stormwater runoff research presentation

*Laurie Gardiner (MWH) and Jonathan Moores (NIWA)*

14:30 – 15:30

Road runoff can have potentially significant adverse effects on aquatic receiving environments. Contaminants in stormwater discharges from the road network are complex and include fuels, additives, oil, grease and brake and tyre residues containing a variety of toxic and ecotoxic components, including heavy metals and organic compounds. Receiving environments of stormwater from roads include streams, rivers, lakes, wetlands, estuaries, harbours and the open coastline. The characteristics of each of these different types of water body influence the fate of contaminant inputs, how they are assimilated and therefore their sensitivity.

Reflecting the need for cost-effective ways of prioritising the management of stormwater in relation to the risk of adverse effects, the NZ Transport Agency commissioned MWH in association with NIWA to develop a screening model that addressed the following research question:

*Under what conditions is stormwater run-off likely to cause adverse environmental effects?*

Building on earlier research, the aim of this 1-year study was to revise and enhance the Transport Agency's Vehicle Kilometres Travelled (VKT) screening tool for road runoff to allow its wider application to rivers/streams and coasts/estuaries, and with provision for factoring in the effects of pathway attenuation, traffic congestion and non-road pollution sources. While the principal intention was to develop an improved screening method for road networks, a secondary objective was to describe ways in which the method could be extended to provide for an absolute risk assessment in relation to established effects thresholds.

The Road Stormwater Screening (RSS) Model developed in this study provides a robust, consistent method for establishing the relative risk of adverse effects from road runoff that can be applied anywhere in New Zealand using existing datasets.

The RSS model should be of assistance to the NZ Transport Agency and territorial authorities in screening and prioritising areas of the road network for improved management of road runoff. The risk-based approach used in assessing the impact of stormwater discharges on receiving environments aligns with current development by regional councils to move towards a risk-based stormwater consenting regime in support of the National Policy Statement for Freshwater Management.

Laurie Gardiner and Jonathan Moores will present the findings of this research, including the Porirua Harbour case study. They would welcome any feedback on the model and its potential application from an end user perspective.

### **Session Three: Stormwater Wetlands, Ponds and Plants – Operational Delivery Tips and Tricks**

*Peter Mitchell (Opus and Auckland Motorway Alliance) and Neal Perrott (Wetland Solutions Ltd)*

15:50 – 16:55

In the Wellington Region there are few constructed stormwater wetlands and ponds. This is mostly due to the current lack of regulatory/legislative need in which case the assets have historically fallen into the “nice to have” category rather than “must do”. It is considered less a question of if, but when wetlands and ponds will become more widespread in application within the Wellington Region.

Healthy stormwater wetlands and ponds can provide a number of performance functions that can be clearly linked to catchment and receiving environment issues, risks, and outcome needs such as water quality management, erosion management, flood control, and protection of the aquatic receiving environment. Stormwater wetlands and ponds can deliver an array of good performance capabilities that are closely aligned with important customer outcome values; social (e.g. amenity value), economic (e.g. support development viability), cultural (e.g. protect/restore/enhance, water quality, Mauri, mahinga kai), and environmental (e.g. ecology, biodiversity, habitat).

Stormwater wetlands and ponds are already an important component of the NZ Transport Agency's national asset, and pending state highway roads of national significance in the Wellington Region (Makays to Peka Peka, Transmission Gully, Peka Peka to Otaki) will include a number of new wetlands and ponds that are in varying phases of delivery.

Reliably functional and healthy wetlands and ponds require some important considerations during the delivery lifecycle to ensure that good safe and whole of life value of the asset is achieved. This includes some important planning, design, construction, handover, and operational activities. Peter Mitchell (Opus and

Auckland Motorway Alliance) will present a focus on some important considerations and practices which can help to positively influence the successful delivery of Stormwater wetlands and ponds, such as:

- Important lifecycle considerations
- The importance of good consistent and meaningful performance and condition data
- The 4 R's - the right activity, at the right place, at the right time, with the right risk
- Operational monitoring and maintenance delivery tips and tricks

A very important component of healthy wetlands and ponds is good landscape management. The importance of good landscaping is often an underestimated component of wetlands and ponds. Good landscaping includes having the right balance of plant species whilst maintaining a pest plant and weed free environment. This requires having the right people and resource for the asset and activity delivery needs. Neal Perrott (Wetland Solutions Limited) will present some important landscape factors associated with successful operational delivery of Stormwater wetlands and ponds, such as:

- Planting specifications
- Plant identification
- Pest plant and weed control activities
- Safe operational delivery activity

Peter Mitchell and Neal Perrot will present some 'tips and tricks' that will help towards successfully delivering effective and efficient Stormwater wetlands and ponds. The session will allow time for questions.



*See invitation for the full agenda and venue directions*