# Activating water sensitive urban design for New Zealand

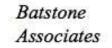
# WELCOME TO THE CHRISTCHURCH WORKSHOP!

Building better homes towns and cities science challenge















#### About us ... the research team







Batstone Associates







# principles of engagement

# About you ... the WSUD community

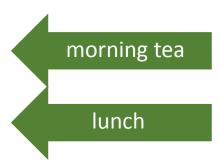
- your name
- your role and organisation
- how involved have you been in WSUD over the last few years?
  - scale of 1-5
  - 1 = hardly at all
  - 5 = extensively
- your burning WSUD issue: 20 words

# Your photos: the good, the bad, the ugly



# Programme

- why has this research been funded? Overview
- why have this workshop? Purpose
- what did you tell us? Survey
- walking tour
- debrief
- implementing WSUD where do we stand?
- working groups: what are the barriers to becoming a water sensitive city?
- wrap up: what we've done today
- where to from here?
- close at 3pm



# Why has this research been funded?

- WSUD's value proposition
- New Zealand is the right place
- Now is the right time

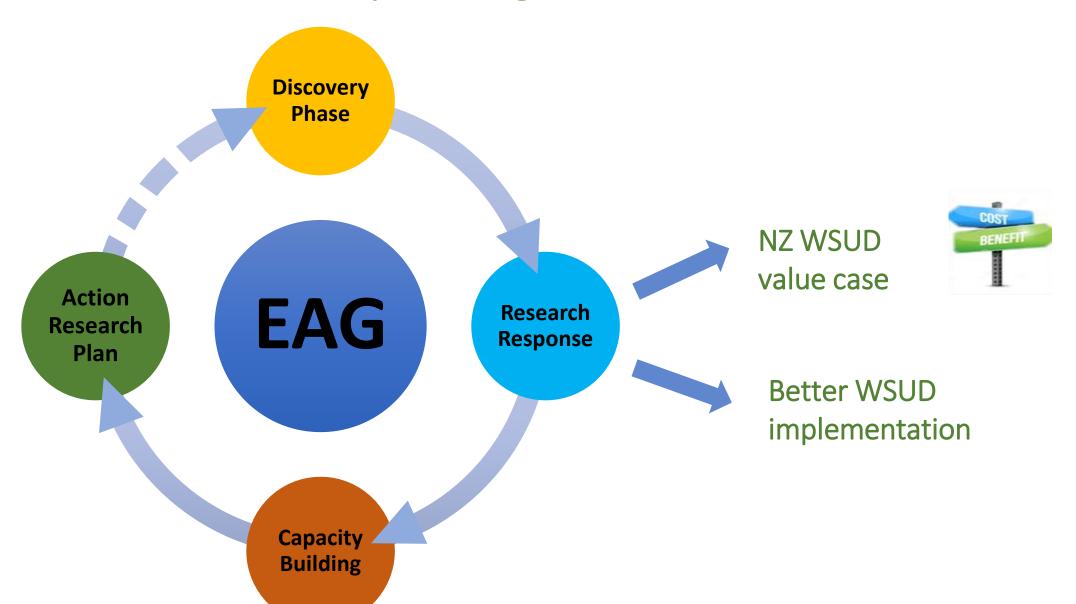








## WHAT are we planning to do?



#### HOW will this research make a difference?

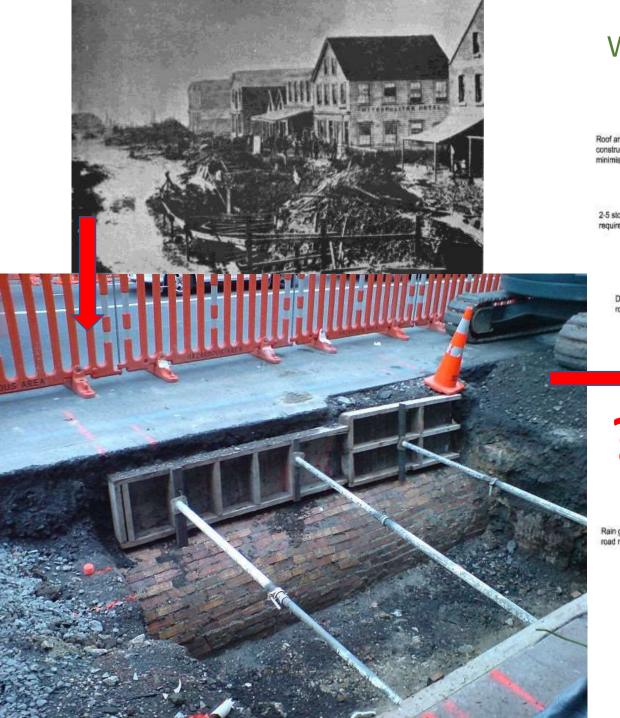
- active, capable, engaged NZ community of practice
- knowledge to address barriers
- longer term strategic research plan
- helping the National Science Challenge to achieve its objectives



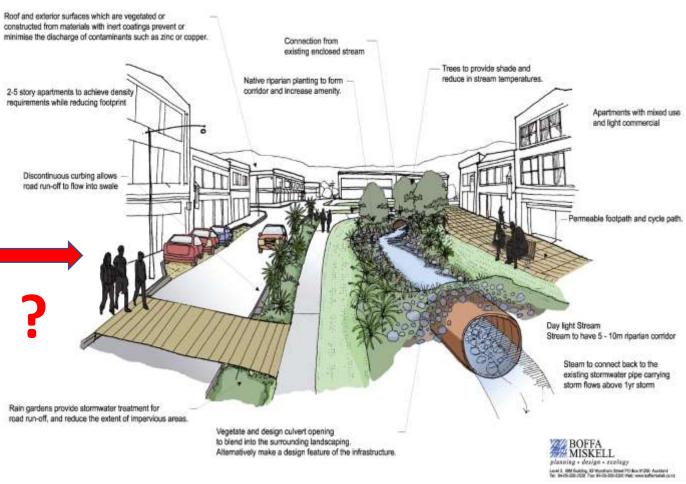








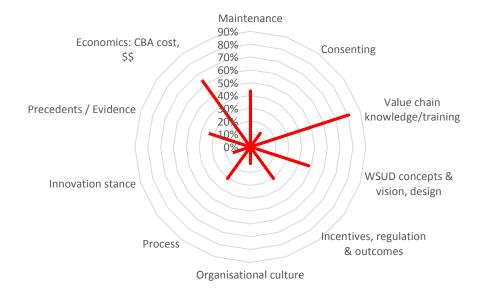
#### Where have we come from? Where are we going?



A design approach ...

# What did you tell us? Survey results

What barriers to WSUD do you find in your work?



## What barriers have you most recently experienced in a WSUD project?



What 'activating factors' were effective in your most recent WSUD experience or project?



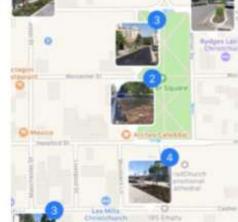
# What did you tell us? Survey results

- I consider the ability for local government, consultants, planners and constructors to become market leaders in WSUD/WSC is paramount to changing relationships with water through design.
- If there was a requirement to do WSUD there would be guidance, specifications, training and funding to make WSUD happen and work.
- Missing incentives. A targeted rate on impervious areas would start a thinking process how much impervious is really required and how this can be offset on site by using WSD.

#### WSUD walk: Christchurch

#### Key

- Dotted line indicates route
- 15 Numbers indicate sites of interest
- Arrows show direction of travel
- Red arrows indicate road crossings please take extreme caution



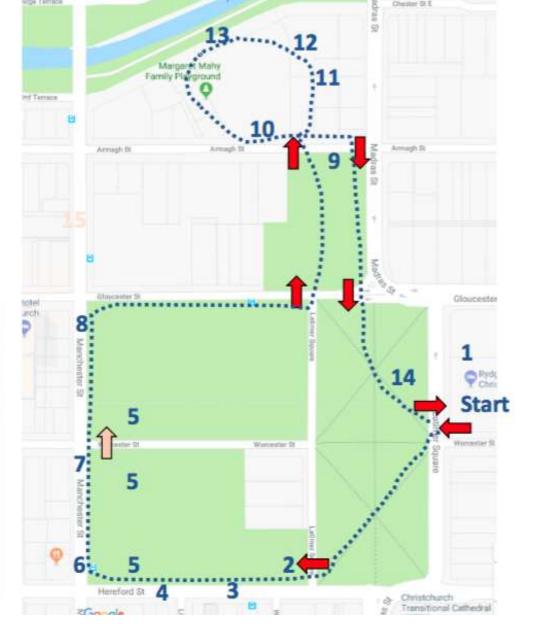








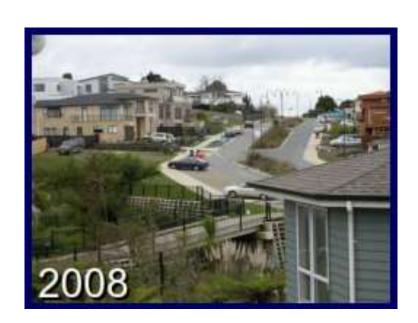




# Implementing WSUD – where do we stand?

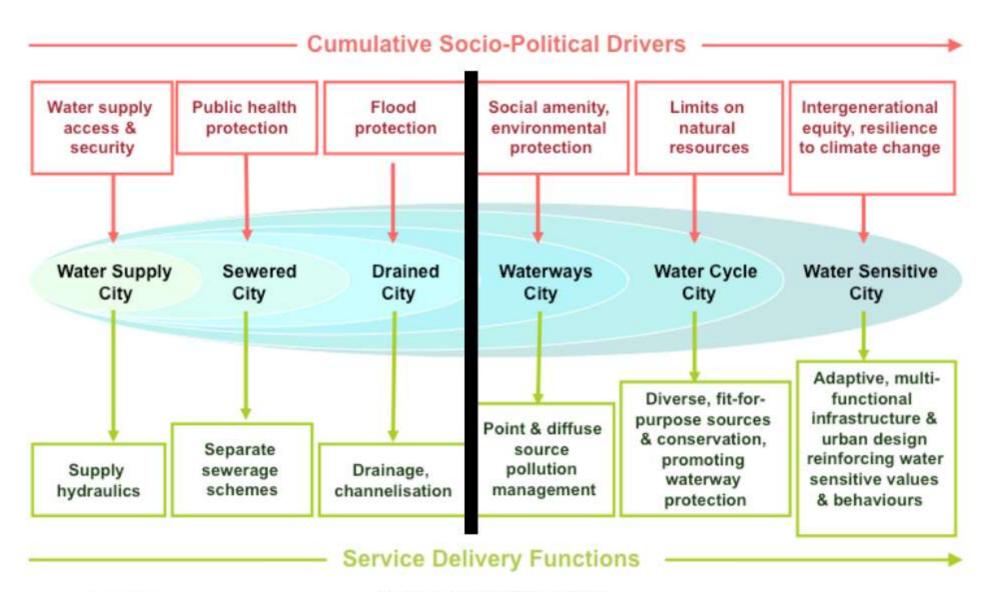








#### **Urban Water Transitions Framework**



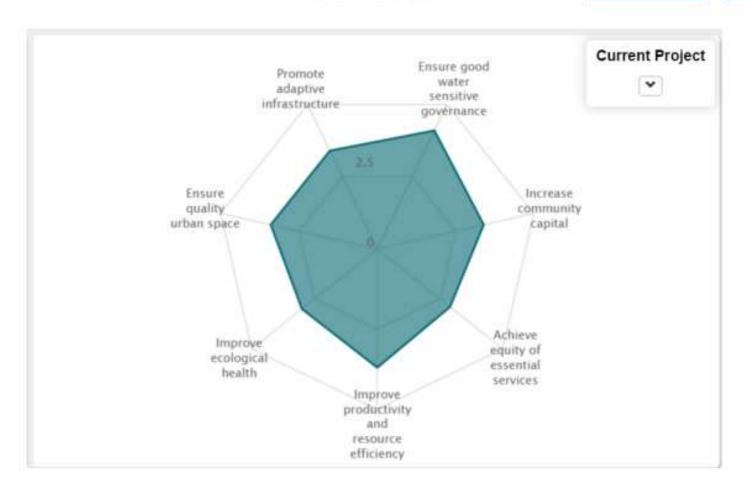


#### 7 Goals

Ensure good governance (7)

Increase community capital (5) Achieve equity of essential services (4) Improve productivity and resource efficiency (5)

Improve ecological health (4) Ensure quality urban space (3) Promote adaptive infrastructur e (6)





#### 7 Goals

Ensure good governance (7)

Knowledge, skills & organisation al capacity

Water is key element in city planning & design

Cross-sector institutional arrangement s &

Public engagement, participation

Leadership, long-term vision & commitment

Water resourcing & funding to deliver broad societal

Equitable representation of perspectives

Increase community capital (5)

Water Literacy

Connection with water

Shared ownership, management of water assets

Community preparedness & response to extreme events

Indigenous involvement in water planning Achieve equity of essential services (4)

Equitable access to safe & secure water supply

Equitable access to safe sanitation

Equitable access to flood protection

Equitable access to amenity values of water-related assets Improve productivity and resource efficiency (5)

Benefits across other sectors bc of water-related services

Low GHG emission in water sector

Low end-user potable water demand

Water-related business opportunities

Maximised resource recovery

Improve ecological health (4)

Healthy and biodiverse habitats

Surface water quality and flow

Groundwater quality and replenishmen t

Protect existing areas of high ecological value Ensure quality urban space (3)

Activating connected urban green & blue space

Urban elements functioning as part of the water system

Vegetation coverage

Promote adaptive infrastructur e (6)

Diverse self sufficient fitfor-purpose water supply

Multifunctional water infrastructure systems

Integration & intelligent control

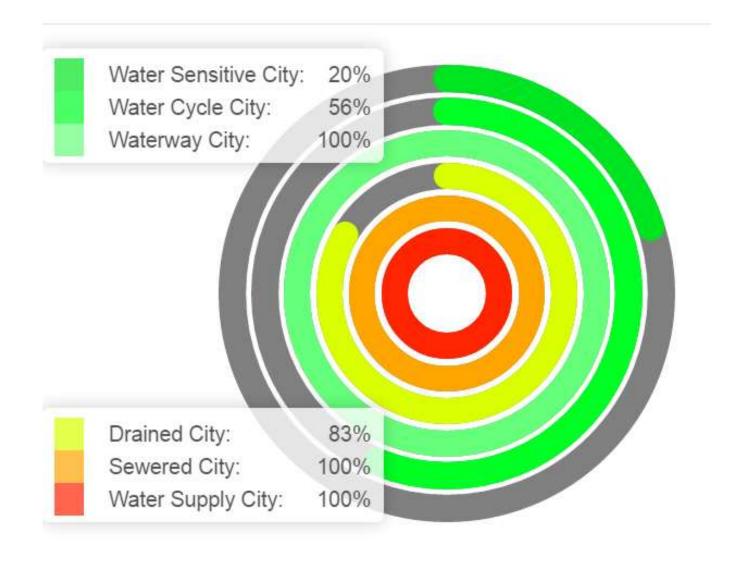
Robust Infrastructure

Infrastructure & ownership at multiple scales

Adequate maintenance

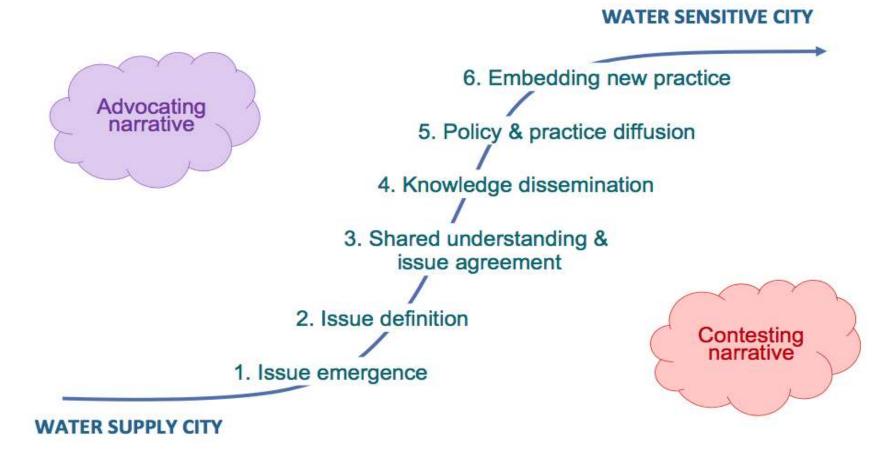
#### 34 Indicators

**City State** 



# What are the barriers to becoming a WSC?

#### **Transition Dynamics Framework**





#### **Transition Dynamics Framework**

**NEW PRACTICE** 

Advocating Narrative Prosperity & liveability Embedding new practice Solution too narrow Multiple benefits 5. Policy & practice diffusion Not feasible Responsibility 4. Knowledge dissemination Too expensive Solution 3. Shared understanding & issue Does not work agreement Cause 2. Issue definition Biased science 1. Issue emergence Problem No problem **Contesting Narrative OLD PRACTICE** 



Brown, Rogers & Werbeloff, 2017, A framework to guide transitions to water sensitive cities. Ch 9 in Moore et al., Urban Sustainability Transitions: Australian Cases – Int. Perspectives. Brown, Rogers & Werbeloff, 2016. Moving toward water sensitive cities. CRCWSC.

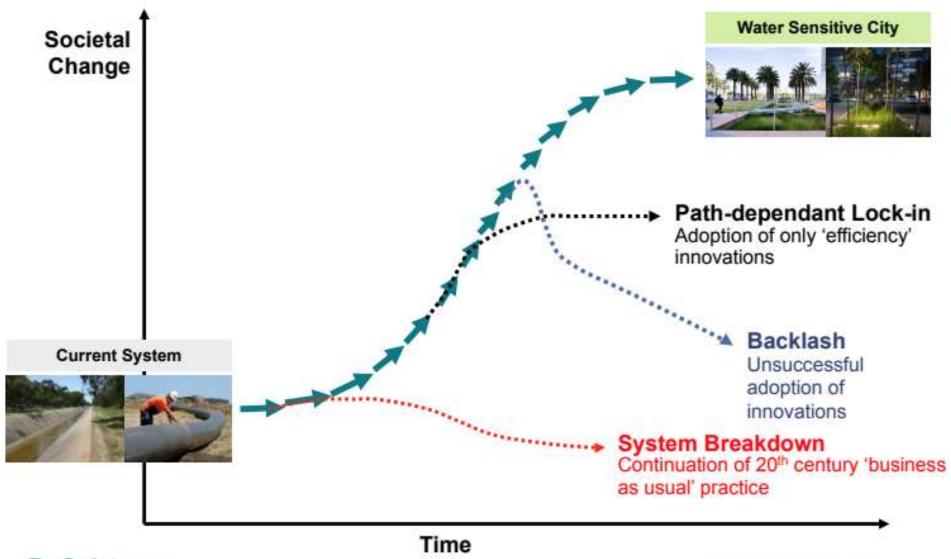
# What's an Advocating WSUD Narrative? Example

- water and land environments are healthy, protected and enhanced
- water is valued, used efficiently and resources are reused
- green-blue areas support beautiful urban spaces and healthy, safe, resilient communities
- New Zealand's urban character reflects its unique landscape and water environments
- multi-functional water systems are well-maintained and resilient
- all communities have equitable, affordable access to water system services for their health and wellbeing
- communities are engaged and empowered to participate in water decision-making
- water professionals work across institutional and sectoral boundaries collaboratively, transparently and innovatively
- infrastructure planning & development are coordinated & integrated to deliver multiple benefits
- people express kaitiakitanga: they understand, cherish and protect their local water environments

Domains of Change								
Actors Key networks of individuals	Bridges (Semi) Formalised organisations, structures & processes for coordination & alignment	Knowledge Research, science & contextualised knowledge	Projects Experiments, demonstrations & focus projects	Tools Legislative, policy, regulative & practice tools				

Transition phase	Champions	Platforms for connecting	Knowledge	Projects and applications	Tools and instruments
1. Issue emergence	lssue activists		Issue highlighted	Issue examined	
2. Issue definition	Individual champions	Sharing concerns and ideas	Causes and impacts examined	Solutions explored	
3. Shared understanding & issue agreement	Connected champions	Developing a collective voice	Solutions developed	Solutions experimented with	Preliminary practical guidance
4. Knowledge dissemination	Influential champions	Building broad support	Solutions advanced	Solutions demonstrated at scale	Refined guidance and early policy
5. Policy and practice diffusion	Organisational champions	Expanding the community of practice	Capacity building	Widespread implementation and learning	Early regulation and targets
6. Embedding new practice	Multi- stakeholder networks	Guiding consistent application	Monitoring and evaluation	Standardisation and refinement	policy and regulation

## How can we steer a city's WSC transition?



# Acknowledgements

Thank you to the CRC for Water Sensitive Cities for sharing this information with us, and to Briony Rogers for her assistance and expertise.



# Working groups: benchmarks and barriers

#### Overview

• 3 activities with separate instructions ahead of each one

#### **BENCHMARKS**

Activity 1: Benchmarking our WSUD stage:

- your city or part of it against the urban water transitions framework
- NZ in terms of phase of change in the transition dynamics framework

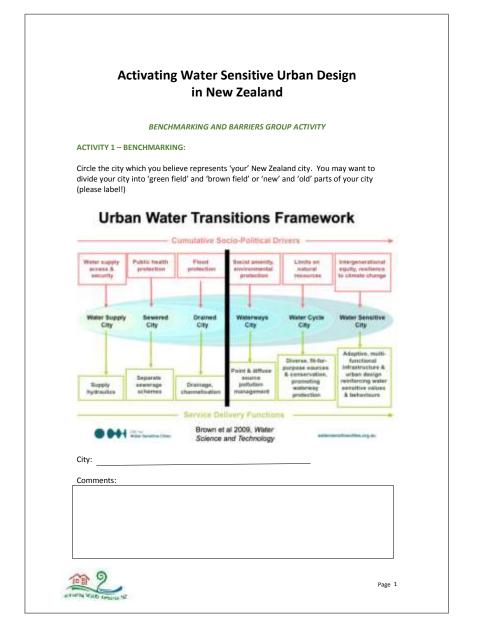
Activity 2: Ideas for Advocating Narratives:

**BARRIERS** 

Activity 3: Brainstorming barriers to WSUD

open discussion to wrap up

# Activities 1 and 2: Benchmarking



Handout pages 1-3

# Activities 1 and 2: Benchmarking

#### In your groups:

- appoint a spokesperson maybe a different one
- take 15 minutes to prepare a 2-minute presentation:

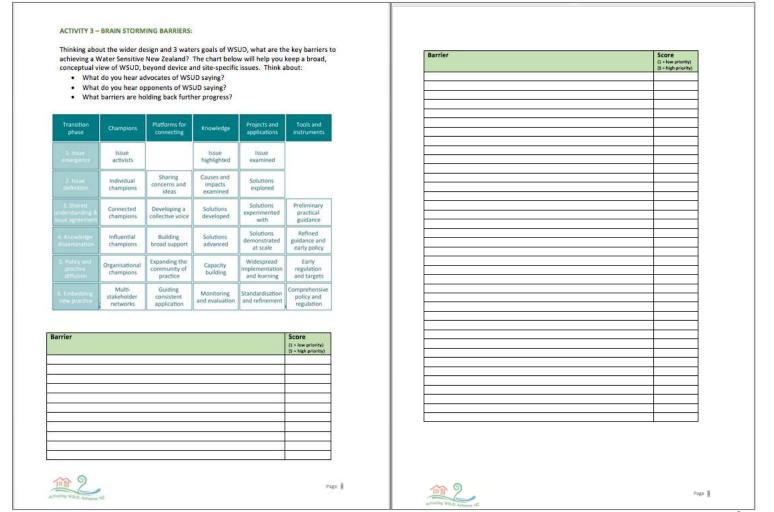
For Activity 1 (handout pages 1 and 2), tell us what stage of WSUD your group thinks:

- your city or part of it is in, against the urban water transitions framework
- NZ overall is in, in terms of phase of change in the transition dynamics framework

For Activity 2 (handout page 3), tell us what your group thinks about:

- what would your Advocating Narrative for WSUD look like?

# Activity 3: Barriers – what's stopping us from getting to a water sensitive city?



# Activity 3: Barriers

#### In your groups:

- appoint another spokesperson
- take 10 minutes to prepare a 2-minute presentation on what's stopping us from getting to the water sensitive city
- if you wish, you can:
  - score the severity of each barrier
  - score how easy it may be to address it

# Open discussion

# Wrapping up

# What did you tell us? Survey results

What barriers to WSUD do you find in your work?



## What barriers have you most recently experienced in a WSUD project?



# What 'activating factors' were effective in your most recent WSUD experience or project?



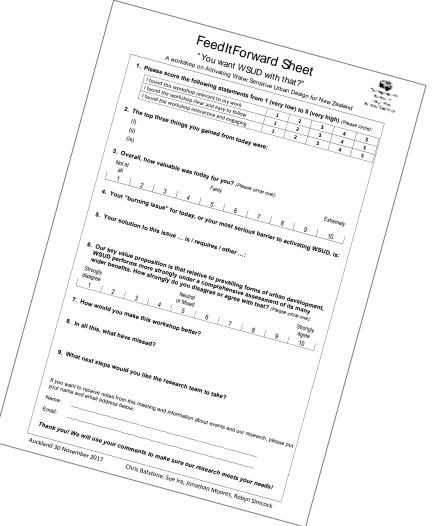
#### Where to from here?

- notes and handouts from workshop
  - emailed out to you
  - put on website <u>www.landcareresearch.co.nz/wsud</u>
- website and email information
  - survey results
  - information on WSUD resources
- next year's research
- report-back workshops in 2018

Staying in touch and doing better







# THANK YOU!







Batstone Associates







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