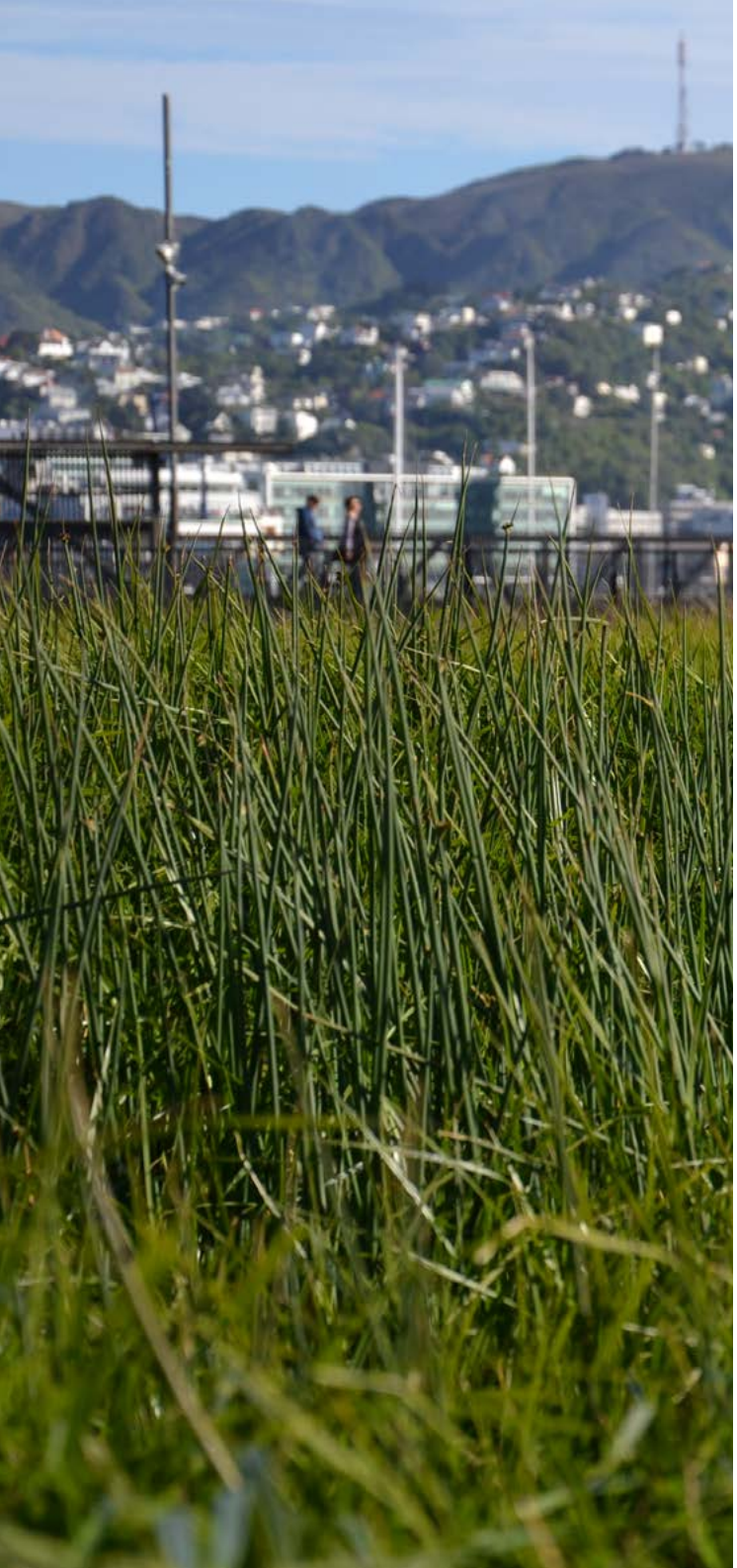
the sustainability society
a technical interest group of IPENZ

MORPHUM ENVIRONMENTAL LTD

Water Sensitive Wellington

Wānanga Whakaaroaro Wai

9 September 2014 | Forum Summary



This Water Sensitive Wellington inaugural forum brought together a diverse group of over sixty people representing the water community across the Wellington region to discuss the aspirations, opportunities and hurdles for Wellington's future water management.

Hosted by The Sustainability Society in partnership with Morphum Environmental and Hutt City Council, this forum provided generative conversation around what the water community needs to do in order to proactively enhance understanding, facilitate change and embed Water Sensitivity into an integrated future vision for the region.

The Forum featured the following contributors who provided their perspectives in order to stimulate the discussions held with the forum participants:

Formal welcome by **Morrie Te Whiti Love** (Te Atiawa, Taranaki, Ngāti Ruanui and Ngāti Tama)

Reina Solomon (Ngāti Toa)
Resource Management Advisor, Te Rūnanga O Toa Rangātira

Reina discussed the cultural significance of water and a functioning ecosystem to her iwi drawing from the historical connections to waterways including the smaller creeks, streams, wetlands, harbours and coastline. She also presented her aspirations for the future management of urban water.

Megan Wraight (Wraight and Associates)
Context and Vision for a Water Sensitive Wellington

Drawing on her extensive experience with the design and integration of Water Sensitive Urban Design into the public realm, Megan introduced the notion of a Water Sensitive Wellington and how it can transform the urban form. Using case studies from across New Zealand she discussed how the principles of Water Sensitive Design can be effectively integrated into public realm projects to provide multiple benefits. This included discussion on how the Wellington region may respond to future environmental, cultural and climatic challenges through an integrated and multi-disciplined approach.

Paul Blaschke (Victoria University)
Science in Support of a Water Sensitive Wellington

Paul summarised different strands of scientific knowledge around water-sensitive cities, focusing on water-related urban ecosystem services. He talked about work in the Centre for Sustainable Cities (Otago University Wellington campus) and its current 'Resilient Urban Futures' programme. Discussion centred on the linkages between urban engineering and wider questions of ecological health, public health, biodiversity and resilience.

Hayley Vujcich (Greater Wellington Regional Council)
Policy Drivers to Support Stormwater Management in the Wellington Region

Hayley outlined the approach that the Draft Natural Resources Plan for the Wellington Region will take for stormwater management. The Plan's focus is on the implementation of a system to be used by territorial authorities to identify problems and specific priorities and inform ways to address these that respond to water quality goals for our region's fresh and coastal waters. This will include looking at consenting large networks and working together on land use planning and good management practice in order to minimise the adverse effects of stormwater discharges.

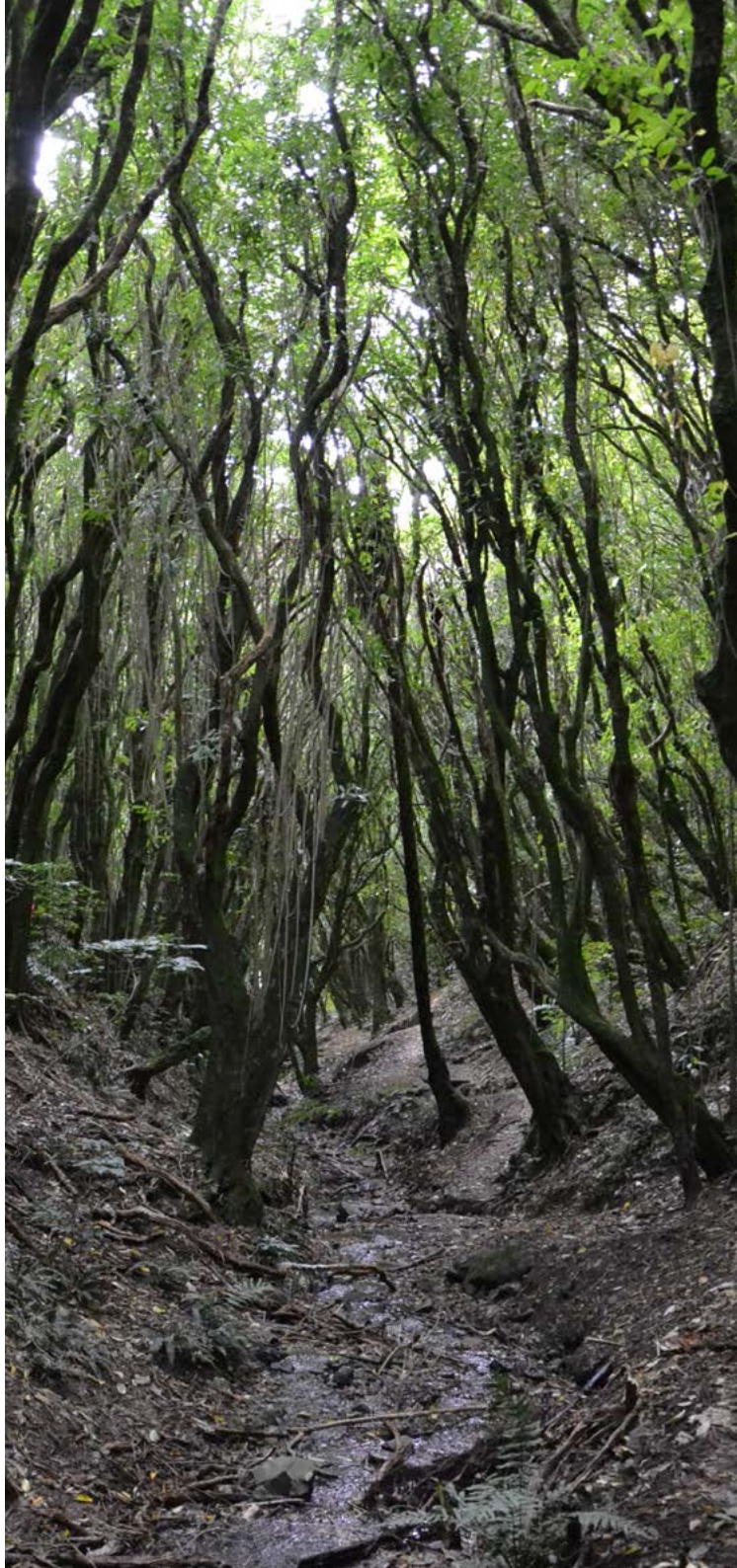
Stu Farrant (Morphum Environmental)
Implementation of Infrastructure and Strategies to Support a Water Sensitive Solution

Stu explored the institutional and technical challenges that Wellington faces in efforts to improve water cycle management and the tools to deliver Water Sensitive Urban Design across the region. He discussed critical design considerations which impact on sustained performance and how these need to be tailored for the Wellington-specific context. Discussion was had about the importance of strategic long-term planning, multi-disciplined collaboration, technical leadership and optimisation of limited opportunities to realise a vision of a Water Sensitive Wellington.

All presentations are currently available at
http://www.thesustainabilitysociety.org.nz

Organisations and communities represented through forum attendees included:

Greater Wellington Regional Council
Wellington Water
Kapiti Coast District Council
Wellington City Council
Hutt City Council
Porirua City Council
Upper Hutt City Council
Carrus
Boffa Miskell
BRANZ
Victoria University
Otago University
Harrison Grierson
Jacobs
Opus
Tonkin and Taylor
AECOM
Morphum Environmental
URS
Stormwater360
Studio Pacific
Pollen
Wildlands
Isthmus
Cardno
Wraight and Associates
Trelissick Park Group
Ridvan Developments
Treasury
Te Atiawa
Ngati Toa



Water Sensitive Vision, Urban Design and Research

The questions posed to the participants were:

1. "What is your water sensitive vision for Wellington in 100 years?"
2. "What is Wellington's unique story that can drive us towards this vision?"

Key themes from the discussion included:

Reconnect with the natural hydrology

- Communities need to know the streams (including those which have been piped), rivers and harbours and how to engage with them.

Water as a Resource

- Water needs to be viewed and valued widely as a scarce and valuable resource to be managed for community benefit rather than viewing it as a potential threat.

Integration – plan and design for multiple benefits

- We need to work to recognise and communicate the multiple benefits from the work undertaken in relation to the water cycle (while maintaining clarity around primary benefits).

Efficient usage of natural capital (e.g. Biodiversity, food gathering)

- We need to develop an understanding of the tangible benefits which can be realised through better water management and identify how these can be embedded in early planning for future projects.
- Recognise and exploit clear synergies with other local and regional policies, strategies and action plans to integrate water management with other interrelated initiatives and aspirations.

Telling the water stories

- Linking water to the Wellington creative identity through stories and art to increase community engagement.
- Creating Wellington specific stories around history, current and future aspirations of water.
- Make the water system visible for the community to understand and engage with.

Recreation

- Communities actively engaging with streams, rivers and coastal waters across the Wellington region.

Become world leaders in Water Sensitive Urban Design for steep catchments

“The proximity to water is everywhere across the Wellington region – affinity to water is part of our story.”

“As long as there is no value on water then any cost of cleaning it up is going to be perceived as high.”

“What is ‘wastewater’ – human waste has been cycled for as long as humans have around but suddenly we are contaminating with industrial and pharmaceutical waste it so it can’t be cycled anywhere. Shouldn’t we be separating solid waste from human waste as a first step?”

“Throwing things into the waterways has the been the quickest way to make it disappear, the Kumutoto stream was polluted within a couple of years of European settlement in Wellington.”

“We have to think about treating sewerage in a different way in the next hundred years (not continuing to create rivers of untreated ‘s%#t’ going out into Harbour).”

“We are currently paying for water by just a ‘lump’ in our rates – the value is masked and we don’t pay more/less based on how much we waste/use – why would anyone care?”

“It’s not that sexy really, people don’t get that excited about it, its like footpaths. Councillors get accolades for holding an arts festival or keeping the rates down not promoting fundamental things like water…”

“Are we saying that we want water across Wellington that can be swum in, drunk, where you see mussels growing? If so we have to agree that things have to be done very very differently and we need to educate people.”

“If the water that you are in, under, over and around is degrading…whether it be stormwater, freshwater, wastewater, seawater, we have always got to have it front and centre as a priority.”

"Historically we have spent so much time and effort with water trying to get it to do something it doesn't want to do... whereas if development occurs around the natural flow patterns... it becomes a lot easier and you don't lose that connection with the natural water system."

"Water treatment and water sensitive design needs to become the way it's done rather than that being the innovative part, it's the baseline."

"In Christchurch, the waterways have previously been fenced off and no-one from the community took any notice of them, then they started planting the edges of the waterways and people started taking down their fences."

"At the moment people have this strange concept that when it rains the water should disappear into a hole and never be seen again and they complain if it's flowing down the streets or ponding on their property... how do we change attitudes so water isn't seen as a nuisance?"

"People don't value water when it's in the stream but they do value it when it's coming out of a tap."

"We need to question the value we place on water – everyone should look at the rainwater falling as a valuable resource."

"Water isn't only a valuable resource; it's a life force."

"What about renaming pipes by the relic stream names... gets into people's consciousness... recognise that those are (or were) waterways... how can you get people excited about the ecological values of Drain 3B!"

"People don't care... as long as its not in my backyard they don't care... don't people see those waterways as part of their identity? We need to take deep pride in our local waterways."

"One of the most compelling arguments is climate change and emergency management... communities have really learnt from Christchurch. The emergency management office is going out into all local communities to talk about what they can share, what resources they can pool... getting a rising acceptance of self sufficiency... we should make the most of that idea of resilience, that you can have your own water supply."

Policy and Governance to Facilitate Change/Barriers

The questions posed to the participants were:

1. "How can councils develop policy and governance to support evolving water cycle management?"
2. "What practical and philosophical barriers exist which impede transition to water sensitivity?"

Key themes from the discussion included:

Policy and Governance

Regional integration and collaboration

- Seeking consistencies across TA's while still allowing flexibility for the nature of the different networks.
- Share issues and planning across boundaries as water doesn't respect institutional boundaries.
- Governance to tackle multifaceted issues at a catchment scale.

Holistic, adaptive engagement in systems and issues

- Acting further up the pipe to embed water sensitivity throughout the catchment.
- Project lifecycle – include and engage all contributors to ensure sustained and cost effective function.
- Integrated three waters strategies to enhance overall system efficiencies.

Consider carrots and sticks to encourage change

- Lower consent fees for developers doing the right thing.
- Internalise 'off-site' costs of development.

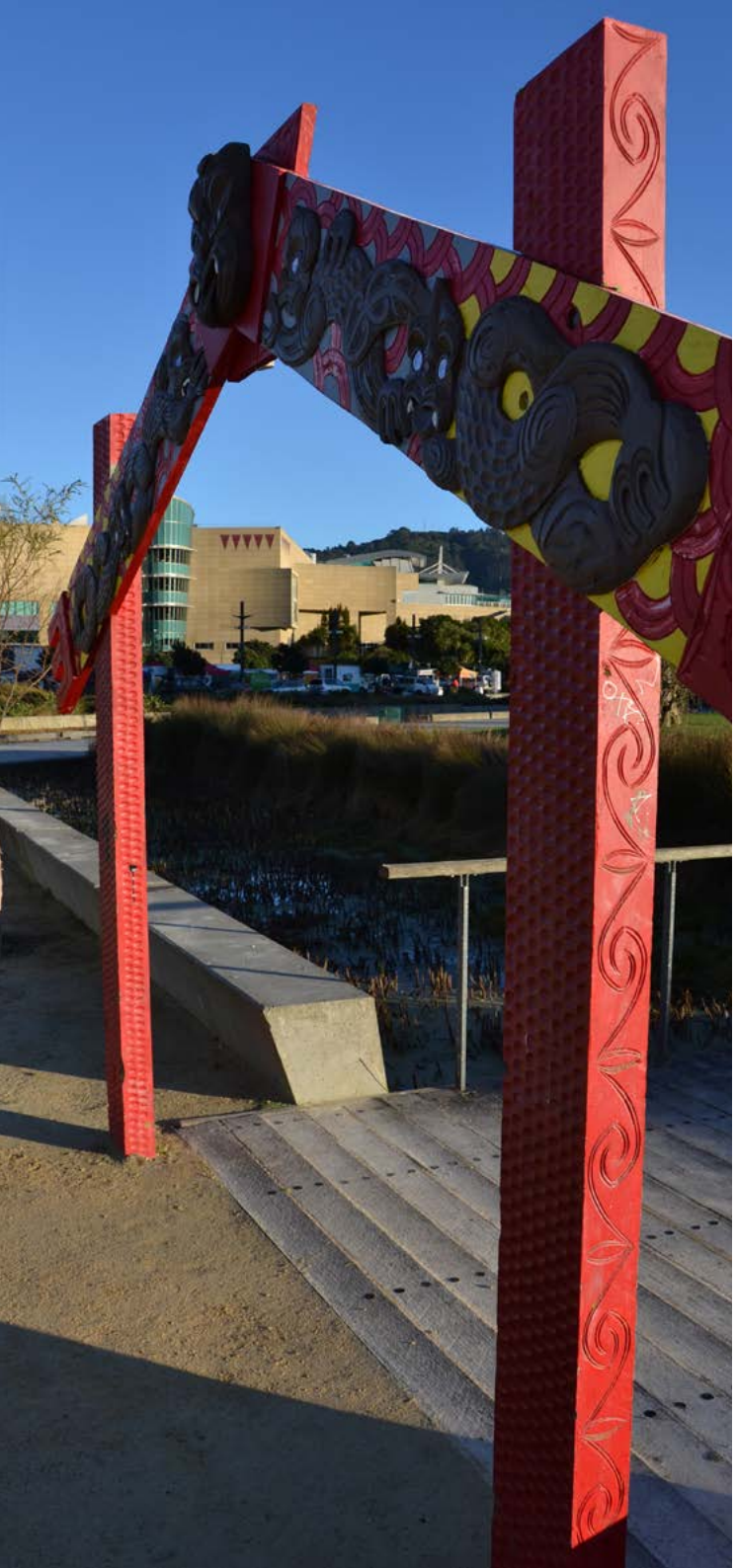
Barriers

Lack of a values based vision

- There is a disconnect between what people expect and what they are willing to pay for.

Reinventing the wheel

- Wellington needs to actively seek lessons learnt and best practice from across the region, New Zealand and elsewhere in the world where water sensitivity has been successfully implemented at a range of scales and complexity.



Political

- The issue is too politicised locally - there is a need to build a strong overarching national mandate and implementation strategy.
- Approach to consultation – inviting input on a preordained solution vs. upfront, authentic engagement around an issue to ensure that an informed community can contribute to the future strategic decision making around water.
- Competing issues.

Financial

- Availability and allocation of funds to 'non standard' water system interventions and planning which is focussed on a new paradigm of performance measures.
- Difficulty with valuing (economically) intangible attributes and benefits in comparison to the current cost benefit model– uninformed assumptions that water sensitive design solutions cost more when appraised under current financial framework.
- Current models that set short timeframes for investment recovery based solely on CAPEX, OPEX and depreciating value not well suited to analysis of more complex integrated systems.

Policy framework

- Overly hierarchical and complicated structure of rules and processes make it difficult to champion innovation.

Institutional inertia

- Resistance to innovation and strong defaults to business as usual to reduce perceived risk.
- Silos within and between Councils stifle cross disciplinary integration and efficiencies.

Community-wide apathy

- "We don't have a problem, we have infinite water resources."

"We probably need to be a bit more willing to move away from what we see as the certainty of existing design systems."

"We have a lot to gain from the Iwi perspective, their approach to stewardship that goes right back to the source point... if you are always just trying to catch the issues at the bottom... being an ambulance at the bottom of the cliff... we need to control things higher up the system."

"Should this be on a national level so not give all TA's any choice? Shouldn't this be a national approach... everyone has local issues but the basics of how people receive their water is the same."

"When we talk about our water cycle we are talking about our weather and what's going to drive this is climate change...much more intense rainfall....too much water and on the other side too little water...our cities will be faced with too much and too little of something and we keep just focussing on the too much...bigger networks etc....to shed what could be seen as a resource, but at the moment is probably a waste product. It has got to somehow recognise the change in the watercycle to say actually we have got to manage it differently in our environment."

"So hard to get good ecological outcomes when you are being so driven by bad policy and slow uptake (e.g. subdivision guidelines)."

"Currently there are so many different rules, so many places that don't have any rules and I am the meat in the sandwich – I have developers pushing on one side saying why can't we do this (often good ideas), the rules have just changed on us and policy and consents on the other side. Different councils, different consent rules... it is a bit of a mishmash with far too many loopholes."

"Encouraging the Council teams to work together as I think silos exist a lot, everybody needs to be communicating up and down the chain."

"Why are we designing systems that require such intense maintenance and management? Why can't we be designing natural systems that are more self-sustaining?"

"Change of behaviour takes such a long time, I have seen a lot of systems come in, 5 years later just about ineffective, 10 years later gone, whereas from an engineers point of view you put a pipe in the ground...water goes in there and goes out there into the sea, it's a long term solution which doesn't have much worry about educating the community about what their role is, it's an easy solution."

"The traditional approach is about separating the three waters and managing for efficiency, almost certainty, having that conservative known network whereas increasingly cities are looking towards more adaptive systems with multiple benefits."

"The role of regional council providing overarching rules/guidelines that all of the Councils could fit within...it seems like Wellington Region has been missing that in comparison to some of the other regions."

"The consenting process real issue – rules in District plans only defining if something is compliant or not, and if it's not, then it's open slather."

"Housing affordability is a big issue and if WSUD is seen as an added cost to development, not only in terms of construction and lost yield from the site...we are competing with another important issue that we are trying to deal with."

"How do you really engage the community through consultation when most of the time only a certain sector of the community responds?"

"There are also lots of assumptions about what developers will choose to do but if you give them a clear path where they know the hoops they need to jump through and the risk is quantified, so it is integrated into their business case and they can still make money, I think we would be surprised."

"Every council makes its own decisions about what to do about climate change and when to apply it... some Councils start talking about 100 year flooding for parts of towns that will be probably be submerged in a hundred years time with sea level rise... why bother?"

"People have much more complex assets in their home but because they perceive that these things are doing a job for them they are quite happy to get a serviceman out every few years whereas they have expected that a stormwater asset should be something invisible, under the ground."

"Outside of territorial authorities there are other organisations (like NZTA) who are setting standards and instituting their own best practice.... Councils need to look to where that work is already being done."

"We need to be a little bit less greedy about what we want in terms of land, we have stop squeezing streams into little narrow corridors and expecting them to behave naturally and when they don't, wanting to pipe them."

"People strongly want change, they are signalling that they want primary not secondary contact with their water quality and stormwater management."

"There are also lots of assumptions about what developers will choose to do but if you give them a clear path where they know the hoops they need to jump through and the risk is quantified, so it is integrated into their business case and they can still make money, I think we would be surprised."

(Kapiti examples of water strategies) "... regionally that's where we need to be going so why is so hard to get to that scenario across the region?"

"Our current model tries to push away from internalising the external environmental costs (the downstream effects) at the development stage (passing maintenance to Councils which have impacts on rates) e.g. developers planting beautiful raingardens and then disappear, five years later you go back and they have disappeared because the people who have got the responsibility for maintaining it, the property owner, has not appreciated what their ongoing role is."

"What changes the game for people is the cost and benefit stuff, Treasury needs to do a different type of analysis that shows the cost of NOT doing something – opportunity cost, changing the lens... what will it cost future generations...really robust information to support water sensitivity...we also need a new language in order for people to hear those messages."

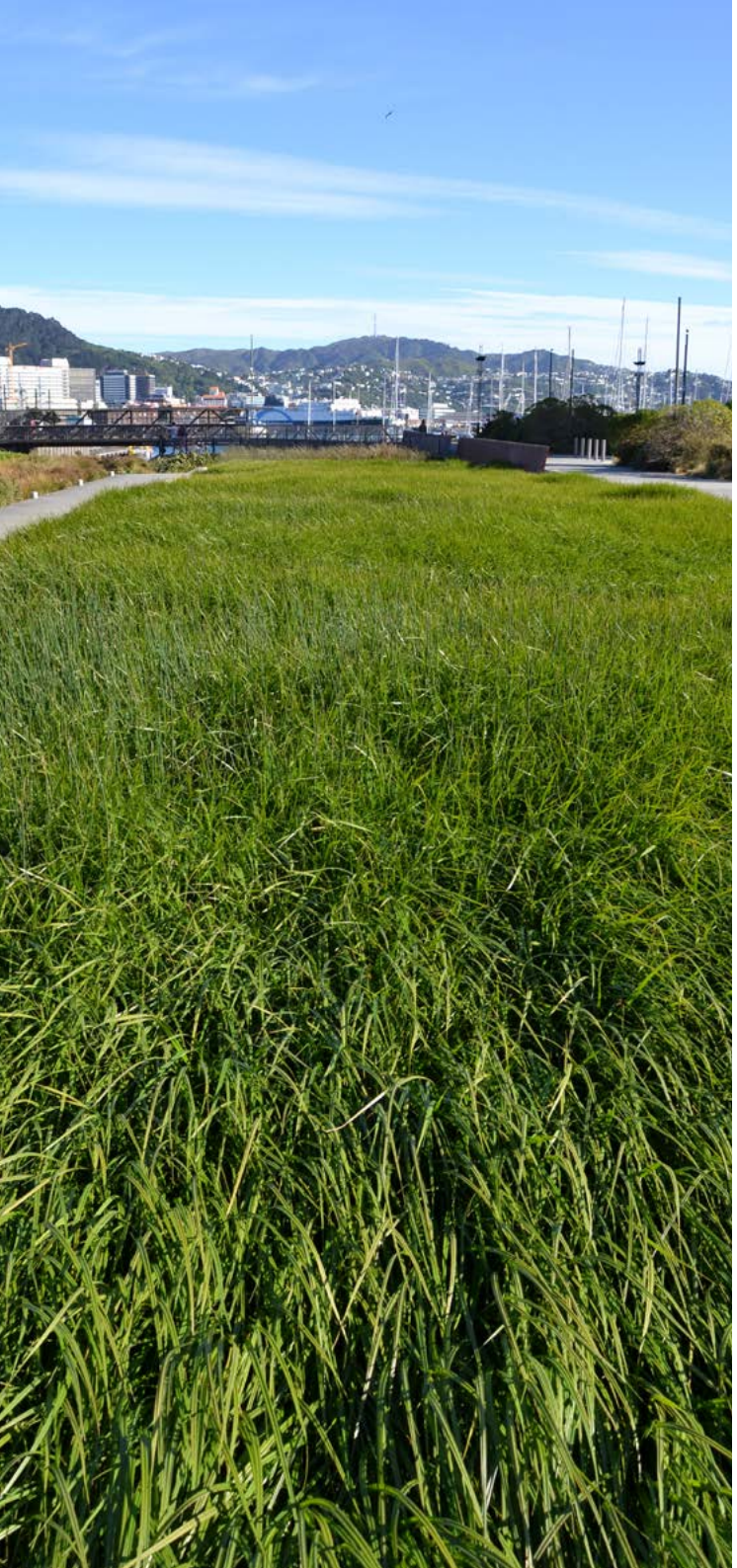
"How much of this stuff needs to be regulated and how much can occur as good practice in the industry?"

"Changing people's expectations, obviously Council is seen as a service provider but it doesn't have to be that way, what happened to people looking after their own water catchment...there is so much more there can be done on a small scale than can be done on a large scale."

"There is big disconnect between the rates people are paying and the services they are receiving from their Councils.... There is bridge there in terms of education that still needs to be made.... New Zealanders generally do value clean beaches and healthy urban environments, I am not necessarily convinced that they associate paying higher rates with improvements to those things."

"We need one regional set of rules – but people are scared of the One Council idea, they don't want to lose their local identity."

"One of the design philosophies of WSUD is about slowing down water. The stormwater system, gravity, big pipes is about moving things quickly through our environment and somehow we have to find some clever solutions for actually integrating those two, we obviously don't want flooding but we don't want to create drought cities as well."



Implementation to Support a Water Sensitive City

The questions posed to the participants were:

1. "What needs to happen to support long term strategic planning and implementation for progression to a water sensitive city?"
2. "What are the critical next steps that have to be taken by this Wellington water community to move towards water sensitivity?"

Stories

- Communicating stories of success (policy and implementation) with clear community benefits.
- Generate positive storytelling in media and community to create a broader public engagement in water assets and cycle.

Awareness and education

- Build public awareness, acknowledgement and active engagement in the issues and potential solutions.
- Targeted Council engagement to increase internal awareness, technical understanding and benefits of more integrated strategic planning and project implementation (ahead and in support of the Whaitua process is a good opportunity).

Integration and collaboration

- District and regional integration of policy, planning and design standards, to support consistency with functional performance and long term operation. Engaged involvement of Wellington water (formerly Capacity) fundamental to achieve this.
- Look at existing national and local guides/frameworks (i.e. Wellington and Kapiti) to be rolled out further rather than complete reinvention.

Cost/benefit

- Build more effective understanding and communication of cost/benefit (including comprehensive multi criteria assessments) for integrated water sensitive solutions.
- Change values and economic modelling approach to reflect evolving paradigm and recognise complexities associated with intangible benefits/costs.
- Research and articulate opportunity costs/costs of inaction (Treasury).

“We have spent our whole lives in a drain city, if we are urban people, we haven’t really appreciated that we live in a catchment with a water cycle because it just seems abstract… it’s quite a process to break that down.”

“We could do open days or tours of the city water or wastewater infrastructure to build awareness of what it takes to have water come out of the taps.”

“Whaitua process is an opportunity to bring the community together. In those whaitua local farmers, Fonterra, iwi… they are talking better than they have in a long time.”

“Lots of issues that don’t necessarily complement each other…What do we want more broadly across the Wellington region and how does water fit into that? We run the risk of water sensitive story pushing on in isolation otherwise.”

“We underestimate the community. It is assumed that people won’t want to pay for anything but the practical experience is that people will if they really understand. If we communicate this effectively we could get the submissions of support for rate increases.”

“What if councils turned off the water supply for a day a year, that would bring the value of water to everyone’s attention!”

“The shortage of water last year was really cool, it was actually a really good thing and my understanding is that even now people are being careful about water. Bringing this to the attention of ordinary people, the implication for all of us in our own households is huge.”

“One good thing to come from the PPPs in the UK – developers had 30 year leases on their buildings so when they were looking at materials they didn’t want something with only 15 year lifespan because they would have to replace things….a shift from a politician’s 3 year horizon to a developer’s 30 year horizon. That makes a completely different decision logical.”

"What are the DIY and low cost options for residential water retention? (ala raingardens) We need to promote these, put them onto something like the Mitre10 videos."

"There is a role for central government, it seems silly to have investigations and reporting be done at a regional level...using expertise at a regional and local level but unifying it at a national level."

"Treasury's role to challenge all of the councils around the country as to whether they have done all that they can in terms of demand management before they build that new infrastructure."

"If we can get away from thinking there is a quick fix, that constrains us in terms of what the vision might be...if you can accept that it might be a 100 year plan....floodplain management plans are 40 year plans and that's a relatively short timeframe when you think about how long built infrastructure is in the environment for. It's taken 150 years for these problems to be created so if we had an idea what the vision is and laid out what the first steps that's all we need. Some of the technology we need to solve those problems doesn't even exist yet"

"One of the challenges is to engage with people who aren't already passionate about water....assigning a value to it like putting water meters on or charging them for disposing of waste or maybe charging them for the size of their impervious area on their property turns everybody into someone who is passionate about stormwater"

"What do we know already and what have people already told us? One of the first things is to review the information that we have already got about infrastructure, about values, about what the characteristics are for the environment... to understand what the next steps are."

"We have a problem with the media's negative reporting, everything is about what it costs, there is definitely media education to be done. Who is in the best position to change that negative reporting?"