

Water, water everywhere – but not where you want it

New Zealand is blessed with an abundance of fresh water. As the country's most plentiful natural resource it gives us a competitive advantage over other countries; particularly in our primary and tourism industries. However, we are facing increased environmental and economic pressure to ensure we have the right amount of water in the right place at the right time.

In its 2011 briefing to the incoming Minister, the Ministry for the Environment pointed to significant lost opportunities from an inefficient water allocation regime. Managing water more effectively through irrigation has the potential to increase agricultural exports by over \$4 billion a year by 2026 (NZIER). But our current 'first in first served' approach has led to over-allocation. The Government-sponsored Land and Water Forum (LAWF) is exploring allocation regimes that make the best use of water over time; particularly the use of market mechanisms.

Central government's role will be establishing the right incentives and regulatory framework. It's not all down to Government though. Communities and users will also need to change existing practices – and storage of water will become increasingly important. At the local government level the Minister of Local Government and the LAWF are looking at the right governance structures to ensure governance is effective and

efficient. At its core this will involve early collaboration of stakeholders.

The LAWF was to report to Government in April 2012 on methods, tools and governance arrangements to set limits on water use to manage quantity and quality. However it won't be until September that the more difficult recommendations from the LAWF will be revealed (such as the potential for a Water Commission). Other Government initiatives underway that are likely to impact on resource management include a review of spatial planning outside of Auckland, collaborative plan making where an approved process would circumvent "fresh" appeals to the Environment Court, a review of Sections 6 and 7 of the Resource Management Act and any consequential amendments later in 2012. All these considerations could impact on the Government's approach to managing our water resource. In addition, local government reform is high on the agenda; and initiatives such as examination of the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Bill, and introduction of an Environmental Reporting Bill will also have an impact.

Beca has been involved in key aspects of this work programme and the reforms. Associate Planner Phil Gurnsey was on the Technical Advisory Group reviewing Section 6 and 7 of the RMA, and together with Planning Director Graham Spargo he provided evidential support and analysis

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of spatial planning initiatives outside of Auckland. Beca has also completed case studies and a stock take for the Ministry for the Environment's monitoring review programme.

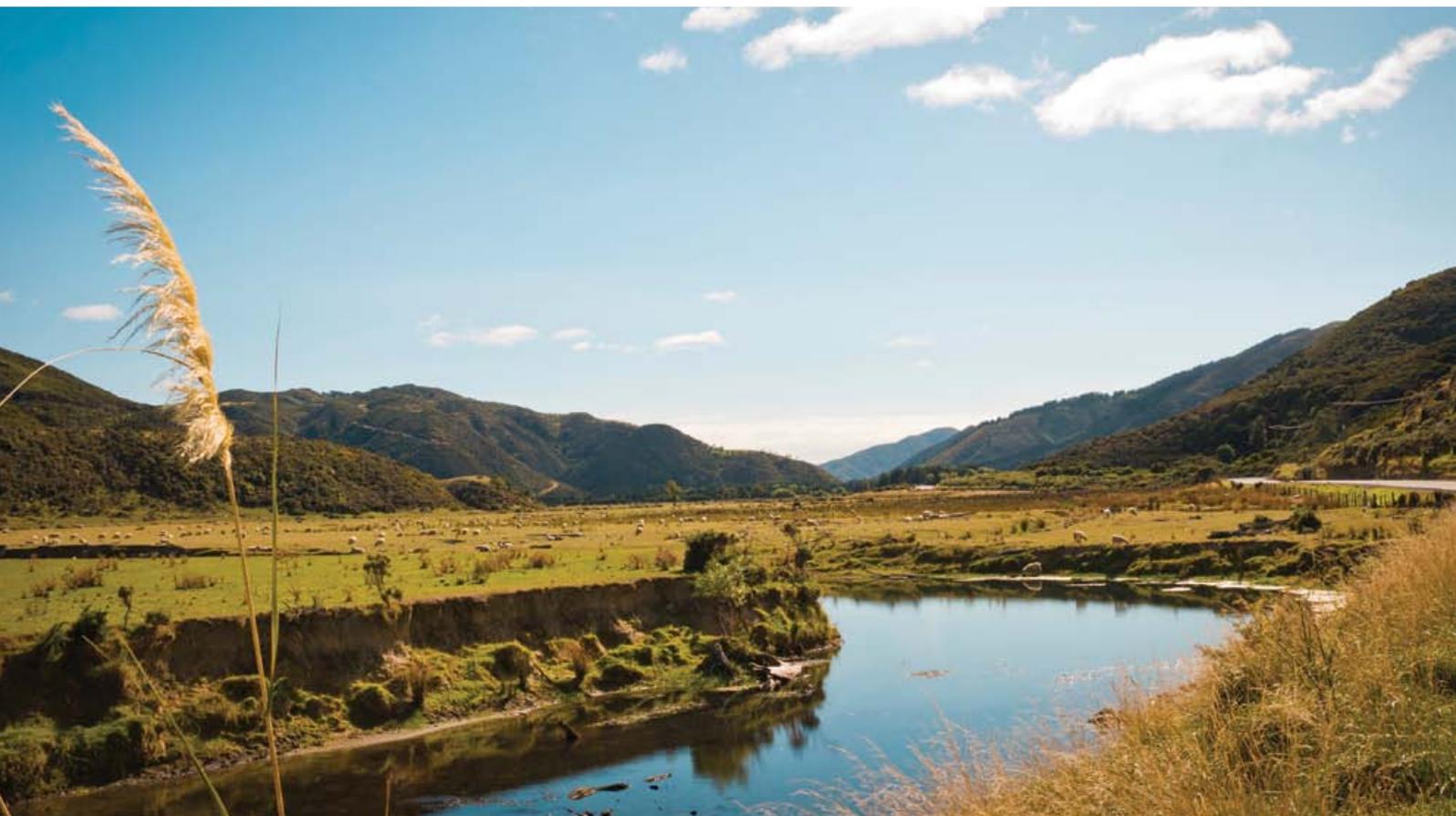
Beca has also been looking at the implications and drivers for its clients. We work closely with the industrial and manufacturing sectors to implement cost effective water efficiency measures, and are well positioned to advise our clients on the future direction of water reform. For example, we are working on the Kapiti Coast to develop a long term plan for water supply and have also recently completed integrated catchment management plans for the Auckland catchments of Whitford and Beachlands.

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New People

We have recently had several new and highly experienced senior and intermediate people join our Planning team. Watch this space as we profile them over the next few editions of Urban Scrawl.



Phil Gurnsey

Based in Wellington, Phil has 20 years' experience in resource management. He has worked in Environment Canterbury, the Ministry for the Environment, and in the Office of the Minister for the Environment and Climate Change Issues. Phil has led reforms of the Resource Management Act and also co-ordinated the government programme on climate change.

Phil's current projects include supporting the Waikato River Authority on the funding of projects under the Waikato River Clean Up Fund, the Ministry of the Environment Monitoring and Review Project, and preparing the assessment for environmental effects for the Kapiti Coast Water Supply Project.

Phil believes Beca's innovation and multi-disciplinary nature adds value to policy development. "We have some highly skilled people who, through their knowledge of delivering very large infrastructure projects, can bring real world insight to complex policy problems."

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Andrew Henderson

Planning Associate Andrew recently joined Beca's Christchurch team after almost two decades in the profession. He has provided statutory planning advice to several private sector and local government clients, is an accredited hearings commissioner and has participated in and chaired many hearings over the past five years.

Andrew's professional standing is demonstrated by his engagement to provide professional training to other planners by the Ministry for the Environment as well as the New Zealand Planning Institute. He has also prepared and delivered training sessions on resource management practice for senior planners, other professionals and politicians.

Andrew brings his solid reputation to Beca, and relishes the opportunity to apply his expertise to the planning context and response to the Canterbury earthquake recovery, as well helping to further develop Beca's South Island planning capability.

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Paul Jemmeson

Paul recently joined Beca's Melbourne team as a technical leader. His remit is to grow the planning business in Australia and help deliver projects across the full range of statutory and strategic planning services. He aims to provide a more integrated service with our engineers, focusing on major development approvals, structure and master plans, site selection and feasibility studies.

Paul is currently working on strategic planning for the Wallan Structure Plan, and is also looking at encroachment issues for the Port of Melbourne.

Paul believes Beca backs up its tenacious values with a positive approach to achieve strong results, and is excited about the team's future growth in Australia. "Beca Planning is in a fascinating space with the potential to grow matched by our ability to diversify and become more active in new markets. We have an opportunity to create a niche planning, design and property portfolio that maximizes value to new and existing clients."

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Beca

Urban Scrawl



Graham Spargo

Editorial

Graham is a Technical Director - Planning in the Wellington team. With wide-ranging experience in the Resource Management Act, Local Government Act and Land Transport Management Act, Graham's career spans a variety of senior roles within local government, as well as a diversity of urban and infrastructure projects through consulting and expert advisor assignments.

The talk around the traps in Wellington is about the continuing focus of the New Zealand Government on delivering better public services and on creating an environment that encourages private sector investment and activity to help grow the economy. This focus has resulted in actions that have included streamlining regulation, implementing more efficient or innovative procurement, on making 'back office' savings and moving capability and resources to the front line.

In this issue, we provide some comments on what this means for us in a few areas, based on our experiences. These areas include planning and resource management, infrastructure development, natural resource allocation and local government.

We discuss Beca's contribution to the National Infrastructure Plan developed by the Treasury. We also comment on public private partnerships (PPPs) which are providing innovative approaches to providing the infrastructure that New Zealand needs. With the

recent announcement of a PPP to deliver and operate a new prison at Wiri, this is an approach that we're likely to see considerably more attention paid to.

Beca has developed a strong reputation as a participant in alliancing models to deliver large roading projects around New Zealand. The alliancing model teams the client and delivery agencies in an innovative approach that creates incentives across the whole team to successfully deliver complex projects. Beca was involved in a substantial alliance to deliver the first of the Roads of National Significance, the Victoria Park Tunnel, and we profile the project in this issue.

Another of the Government's priorities is the re-build of Christchurch following the earthquakes. Working with the SCIRT Alliance, Beca is deeply involved in the rebuilding activity. Part of successfully rebuilding a community is reestablishing normal patterns of life and finding things to celebrate. Beca entered the Ellerslie International Garden Show, one of the country's preeminent events that draws domestic and international visitors to Christchurch in just this spirit with "Max's Pipe Dream". Paul Roper-Gee reveals his vision and experiences in creating this winning garden.

Finally, one of the biggest resource challenges that we think New Zealand will face in the next decade is the allocation and use of water. Phil Gurnsey outlines just why this is worth the energy that is being put into this area.

Editorial

The future of infrastructure development in New Zealand

Pipe dream is supreme at Ellerslie International Garden Show

Victoria Park Alliance – delivering Auckland City's first motorway tunnel

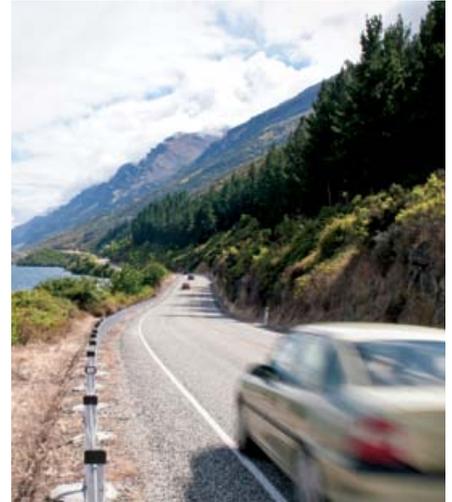
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New People

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The future of infrastructure development in New Zealand



Last year Beca was privileged to be able to work with the National Infrastructure Unit at the NZ Treasury on the second edition of the National Infrastructure Plan. The purpose of the Plan is to improve investment certainty for businesses by increasing confidence in current and future infrastructure provision. It is the first attempt to provide a long term picture about our future infrastructure needs, how they could be provided and the sorts of principles that should guide decision makers in the future.

While the Government prepared the plan, it is not a capex plan of Government projects. This is because New Zealand like many other developed economies has a number of players involved in infrastructure provision. This includes Government agencies, local Government, and privately owned companies.

Typically, we often think of the big infrastructure challenges being about “finding the money”. However, the larger challenge is more about the analysis of the investments we make in infrastructure and the relative benefits of one investment over another. The Plan seeks to promote a broader approach of network thinking. That is, to raise our perspective to look at a whole network and the benefits investing in it will deliver, rather than just individual capital projects. A network approach forces us to look at aspects like how we use assets, who pays for them, and whether we can use different tools and target investment at places where business and other users are prepared to pay.

Another challenge is the different delivery mechanisms that are often touted for infrastructure. Currently, PPPs are getting a great deal of attention. While PPPs are not really about finding a new source of money, it so happens that this occurs. PPPs



Manukau Harbour Crossing Alliance

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are about being really clear on what the end user wants, what the public versus private good components of a project are, and specifying the outcomes that need to be achieved over a specific period. The Beca team has had experience in working as part of consortia delivering infrastructure projects in new and innovative ways. These models – such as PPPs, Alliances and BOOT schemes, require planners and others working on the project to take a larger perspective on outcomes. Too often we focus on the process or output – the real challenge is to focus on what we really want to deliver.

In this vein, we need to see our infrastructure challenges in a different light. We often talk about transport challenges, of land use/transport integration, or the

water network. But we need to begin to look at these challenges from a city, rural or industry perspective. In other words, the way we invest in and use these networks of physical and social infrastructure in part determines our economic success.

In the same way that economic reforms in the agricultural sector in the 1980s created significant gains in rural or agricultural productivity, we need to rethink our infrastructure and cities. Clearly signaling long term strategies for infrastructure and the growth of cities has been a really important change over the past few years. The National Infrastructure Plan, Auckland Spatial Plan and rebuild plans for Christchurch signal what we hope is a more consistent focus on delivering outcomes through collaborative, high level strategic thinking.

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A proud moment for Paul Roper-Gee



Pipe dream is supreme at Ellerslie International Garden Show

The Ellerslie International Garden Show, established nearly twenty years ago, was purchased by Christchurch City Council in 2007 to enhance the city's international reputation as the "Garden City". It is staged every year in Hagley Park. While last year's event was cancelled due to the earthquakes, this year, as a sign that Christchurch is determined to get back to business, the event ran as scheduled.

To our great delight, Beca took out the Judges' Supreme Award 'Best in Show'. We designed and managed the construction of an exhibition garden titled "Max's Pipe Dream - An Engineer's Garden". Led by Paul Roper-Gee, Beca's Landscape Architecture team designed the garden, which was inspired by the story of Max Smith, project engineer for the Mackenzie Basin's Upper Waitaki Hydroelectric Power Scheme.

The Beca team imagined what Max Smith might have created as his garden in Twizel,

using local construction materials and plants from the surrounding landscape. The design team consulted Max during the development of the garden and were inspired by the large scale structures of the power scheme and how they were well integrated into the Mackenzie landscape. The design sought to capture the essence of this integration by contrasting large man-made pipe structures with the natural forms of the local native plant species. A few of the local exotic weed species – Lupins, Pines and Willows – were included for their colour and texture and to create a talking point.

The garden was originally planned for the 2011 Flower Show, which was cancelled days before opening due to the earthquake on February 22. The project team included specialists in landscape architecture, water, lighting and structural engineering and they were keen to come back this year to complete what felt like 'unfinished business'.

Convener of Judges, Landscape Designer Jim Fogarty, said the garden was a "clear cut winner. It was popular with the judges; it is fun, innovative and well styled. The garden has a great message for the people of Christchurch about how to re-use materials and combine these with contemporary, industrialised materials but pull it all together in a very professionally styled way," he said. The judges said the garden also captured what was unique and quintessentially Kiwi.

Beca would like to pay tribute to the support of key sponsors GSL, Hynds, Fulton Hogan and Lusit who helped to make the dream a reality.

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Victoria Park Alliance – delivering Auckland City’s first motorway tunnel

The Victoria Park Tunnel (VPT) aimed to eliminate the last major bottleneck in Auckland’s central city motorway network between the Auckland Harbour Bridge and Newmarket – boosting vehicle capacity by 6,000 and 8,000 vehicles in each direction respectively.

The project was the work of the Victoria Park Alliance, consisting of New Zealand Transport Agency, Fletcher Construction, Beca, Higgins and Parsons Brinckerhoff. In July 2009, the planning team, led by Andrea Rickard of Beca Planning, was faced with the task of getting things going as quickly as possible on this, the first of the Roads of National Significance.

The planning team was tasked with:

- Establishing a review team with the (then) Auckland City and Auckland Regional Councils
- Negotiating property agreements for temporary and permanent occupation of Council-owned land with the Auckland City Council

- Getting a detailed suite of management plans in place quickly
- Seeking alterations to existing resource consents and gaining several new consents
- Organising and attending a number of community open days and information sessions
- Attending Council and Community Board meetings
- Gaining approvals for the relocation of a water main as part of the enabling works, and
- Providing a multitude of bits and pieces of planning advice.

And all of this had to happen “as soon as possible”.

Working on an Alliance team dedicated to making it happen meant the impossible became the possible. The project was fully opened in April 2012, three months ahead of schedule and the planning team played a critical role in getting things going early.

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