

Boffa Miskell



Wind farm monitoring

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Three year's monitoring at an operating wind farm has substantiated predictions of the effects on birdlife.

— SEE PAGE 3.



The planner's role

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What are the specialist skills that planners bring to complex projects?

— SEE PAGE 5.



Small town revitalised

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Redeveloped public spaces are transforming Te Puke.

— SEE PAGE 8.

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Editorial:

Is offsetting sustainable?

A question relevant to many Boffa Miskell clients is currently being debated in New Zealand – how, under the RMA, to offset biodiversity values lost during resource development projects?

'Offsetting' has long been applied as a form of mitigation against loss – typically by protecting and restoring or recreating similar values at other locations.

The concept of 'no net loss' has recently been gaining traction in biodiversity offsetting programmes, together with an expectation that the affected biodiversity values will be matched with the values in the offset area – a 'like for like' approach.

In practice, I, and many other ecologists, have found this approach to be often impractical, or impossible, and very costly. First, it necessitates quantifying the biodiversity present and approximating the ecosystem functioning on the affected features in far more detail than previously required. Second, the sometimes wide-ranging search for potential offset areas has similarly escalated in scale and cost because equally detailed surveys must be carried out to determine whether (or not) the offset values are a 'like for like' match or have the potential to be.

This is further complicated by another offsetting objective – to find offset sites that are not yet currently protected and would benefit from restoration (i.e. they are not already in good condition). For big projects it is difficult to find suitable equivalent areas that are in a suitable state. Protecting existing good value has a debatably low return in the offset modelling. Creating new habitat is another option, but it is complex, time-consuming and cannot be guaranteed as a substitute for mature habitat loss.

In my view, biodiversity offsetting must be flexible, practical, sensible and affordable, certainly not an academic exercise.

The Department of Conservation is this year reviewing its *Guidance on Best Practice Biodiversity Offsetting*. I urge practitioners and stakeholders to take this opportunity to debate how the programme might be adapted to ensure its success and its cooperative uptake by practitioners.



Dr Vaughan Keesing, Senior Principal, Ecology

Boffa Miskell NEWS

autumn²⁰¹³

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COVER: Detail of the Waharoa (gateway) at the Te Puke heritage plaza. The carving was designed by the late Mullar Wirihana and completed by Manu Skudder. The amo (upright carvings) represent tupuna (ancestors) of the Tapuika and Waitaha iwi. Photograph by Morné Hugo.

ILLUSTRATIONS: P6, top left, courtesy New Zealand Transport Agency; P7, top right, by Mark Gee; P8, lower right, courtesy of Western Bay of Plenty District Council.

Edited by: Shona McCahon. Designed and produced by: DNA



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▼ A longfin eel (*Anguilla dieffenbachii*) captured and relocated at Long Bay. This is a threatened native species.



Moving fish out of harm's way

Native fish mortality: – is it an inevitable consequence of construction works in watercourses? Not if the fish are first moved out to alternative accommodation, according to Boffa Miskell freshwater ecologist, Eddie Sides.

"Many infrastructure and subdivision projects involve a myriad of development activities that affect waterways, such as installing new or temporary road culverts, constructing stormwater diversion weirs or reinforcing streambeds to protect subsurface tunnelling.

"Given that about two-thirds of native fish species are at-risk or threatened, moving fish out of harm's way is an easy, low-cost and low-risk way to achieve a great outcome for both the project and the environment," Eddie recommends.

Recently, at Long Bay, where Todd Property Group is developing a new urban community, Boffa Miskell ecologists moved over 250 fish – bullies, inanga (whitebait) and longfin eel – from a 30-metre-long section of stream. The fish, which occurred at a density of over 10 fish per square metre and included two at-risk species, would not have survived the damming, dewatering and excavation of their home habitat when a temporary stream crossing was constructed.

As Eddie explains, "We were able to capture a high proportion of the fish quickly and efficiently and move them a short distance to a suitable release habitat within the same stream."

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◀ Capturing fish for relocation at Long Bay, with the stream segment temporarily dammed.

Wind farm knowledge expanded

For the first time in New Zealand, the results of a long-term avian monitoring programme at an operating wind farm have been published: the results substantiating Boffa Miskell ecologist's predictions about how the working turbines would affect birdlife at the site.

The Boffa Miskell ecology team provided freshwater and terrestrial ecological services on Meridian Energy's 62-turbine West Wind Farm for ten years over every phase of the project, including the initial scoping and design-stage assessment of effects in 2003; the presentation of expert evidence at the Environment Court in 2005; further ecological advice and monitoring in 2005/06 prior to construction; and latterly, post-construction monitoring from 2009 to 2012.

Developing a methodology

"The assessment of wind farm effects on birdlife was particularly challenging because, back in 2004, there was no data specific to New Zealand avifauna," recalls Boffa Miskell ecologist Stephen Fuller. "So, we combined what we knew from international studies with our knowledge of the habitat utilisation and behaviour of New Zealand birds, and made the best judgements we could about the risk for each species."

The Environment Court accepted those conclusions, but stipulated a long-term post-construction monitoring programme as a condition of the resource consent.

"We soon found that the overseas monitoring methodologies, which had been developed in continental situations, didn't work on our rugged island terrain," Stephen says. "So, we had to either modify those methodologies or start from scratch and develop our own."

Methodologies were developed to measure bird abundance and diversity, record mortalities, and investigate carcass removal and searcher detection rates in order to obtain an estimated mortality rate for the wind farm.

Baseline avifauna data was gathered quarterly in the year before construction began, and then compared with the post-construction data which was gathered (fortnightly) over three years and reported annually to the Wellington City Council and Department of Conservation.

The post-construction results mirrored the pre-consent predictions, both in terms of the species and levels of mortality experienced.

"It was what we expected to see," says Dr Leigh Bull, Boffa Miskell specialist avifauna ecologist. "It was also pleasing to note that we were able to positively influence the wind farm design early on. The results endorsed the removal of four proposed turbines from around Makara Estuary; the only local pied shag habitat."

In developing the methodology, Stephen recalls being very aware of the considerable field time such a large multi-year project would require.

"Consequently, a key focus was to gather enough data to answer the key questions. For this site we believe we got the balance right".

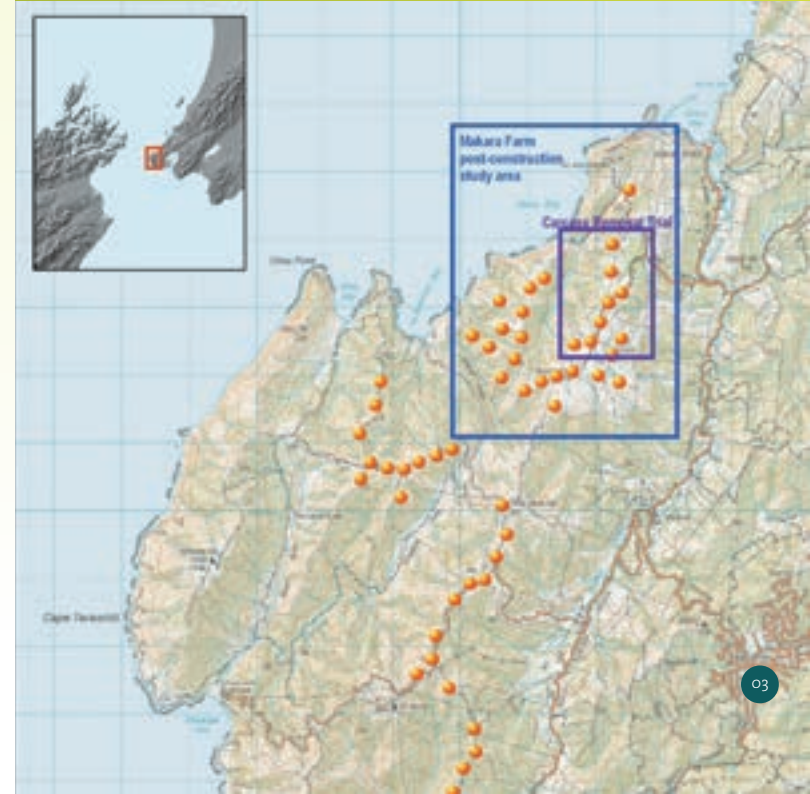
"We would like to thank Meridian Energy for allowing us firstly to test and develop our methodology on what was a very important site for them, and then allow us to make the study public via conferences and publication."

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(See also 'Science publication' p.7)



- ▲ A Victoria University ecology student carries out bird count baseline monitoring. The ecology students, trained and sub-contracted to gather the field data, gained invaluable practical experience.
- ▼ West Wind Farm: post-construction avian monitoring was carried out around 24 of 62 turbines, at the north end where native bird species activity was concentrated.



Looking ahead from Christchurch

The scope of design projects based in our Christchurch office is broadening again as the focus shifts from immediate earthquake recovery to development projects in Christchurch and the South Island.

"We've been pleased to assist clients realise their projects through a turbulent time," says Nik Kneale, Christchurch design team leader. "Now, we're working with clients and consultants on some exciting projects that are looking positively ahead, such as the St

Margaret's College master plan in Christchurch, the St Clair Hotel in Dunedin and public space design in Balclutha town centre."

A brief sample of the team's recent design projects follows.

Hazeldean Business Park



Partially developed before the earthquakes, work has resumed on this commercial site in Addington, an area now abuzz with activity in post-EQ Christchurch. In addition to the master planning and design and supervision of landscape works, Boffa Miskell is now also helping the developer, Calder Stewart Industries, to manage the earthquake repairs. (See also 'New premises', p. 7)

Russley Retirement Village



Boffa Miskell was first engaged by Retirement Assets Limited in 2007 to produce the landscape assessment, master plan and visual simulations included in the successful resource consent application for this popular

housing complex. Since then the design team has designed and supervised all the landscape works in the village's progressive development, which is now at Stage 9.

Christchurch City Mission



Recently opened by the Governor General, this purpose-built facility was designed before and built during the earthquake period. Boffa Miskell, working with Wilkie + Bruce Architects, was responsible for designing and supervising the construction of the outdoor environment. 'The Mish', as it is affectionately known to its clients, provides many social services to a wide range of client groups. Careful consideration for safety was needed at all stages and CPTED (Crime Prevention Through Environmental Design) was used in the landscape design to manage the numerous safety risks posed to staff, clients and the public within and around the facility's grounds.

"We were proud to assist such a well-respected social service organisation to achieve a successful outcome," Nik says.

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▼ Public consultation information for the Rolleston Town Centre Master Plan project.

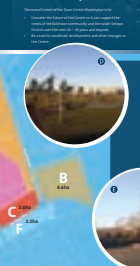
The story so far...



Why do we need to improve Rolleston Town Centre?



Why prepare a Masterplan?



What areas are we considering in the Town Centre Masterplan?



Christchurch suburban centre master plans

Boffa Miskell is currently assisting the Christchurch City Council in the preparation of two master plans under the Council's 'Suburban Centres Programme', with a focus on earthquake recovery as a means for creating resilient local communities.

In the **New Brighton Centre Master Plan**, Boffa Miskell's input has focussed on the urban design concept; aimed at building on the community's strong spirit and setting goals to achieve a future vision that will bring new optimism and life back to the centre.

Meanwhile, in the **Edgeware Village Master Plan**, Boffa Miskell's input has focused on built and public realm initiatives that will enhance the pedestrian environment and amenity of the centre and encourage and support future local business initiatives.

Both master plans are currently in draft form and undergoing consultation with the local communities and stakeholders.

Rolleston town centre master plan

South of Christchurch, the Selwyn District Council has engaged the Boffa Miskell Design Team to assist in preparing the **Rolleston Town Centre Master Plan**. Still in its early stages, the master plan will have to ensure the town centre can support the needs of both the rapidly growing town and the district-wide community over the next 20-30 years. It will be a tool to coordinate development, provide a benchmark for expected quality and assist the Council with individual development proposals.

The master plan builds on a number of principles that were established in the Rolleston Structure Plan, which Boffa Miskell prepared with the Council in 2009.

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Boffa Miskell planners are frequently involved in large projects that require multi-disciplinary input and the resolution of complex environmental planning issues. The recent NZ King Salmon Board of Inquiry case was one such instance, as Sarah Dawson explains.

NZ King Salmon wished to establish nine salmon farms in the Marlborough Sounds, of which eight were in locations where the current zoning prohibited marine farming. A change in zoning via a private Plan Change was requested for those eight sites and resource consent applications lodged for all nine sites.

What was your role?

I was primarily an advisor on the project team, working with our client and the legal team to fully consider the options and alternatives and build a case that was based on best resource management practice.

I assisted NZ King Salmon to systematically and thoroughly consider its alternatives, taking into account the relevant national and regional planning contexts, and asking: ‘Given the particular physical requirements of salmon farming, are there suitable locations already appropriately zoned?’ ‘What are the various resource management pathways available and which of those could NZ King Salmon reasonably take?’

When it turned out that the only suitable areas for salmon farming coincided with the prohibited areas in the Sounds, I helped NZ King Salmon to consider the strength of the resource management grounds for seeking the Plan Change.

This required understanding the business of salmon farming, its economic importance, and the resource management issues to be addressed during site selection and environmental assessment, which involved approximately 40 specialists.

Eventually, in presenting evidence at the hearing, I analysed the extent to which the application was consistent with the relevant statutory planning requirements and presented draft Plan Change provisions and conditions of consent for the Board to consider.

What were the particular planning challenges?

It was extremely complicated. As we were seeking to change a zoning that had gone through a public process, it was essential there was a sound platform for the Plan Change. Then there was the myriad of potential operational, resource management and planning issues that had to be addressed, in detail, for every farm. Integrating the wide range of experts' assessments into an environmental impact assessment and hearing evidence that took account of all those issues, was a huge task.

Was your role typical for planners in complex projects?

Yes, planners ideally bring a broad range of skills to the sorts of big, multi-disciplinary projects that Boffa Miskell planners specialise in. We can be most effective when, as with NZ King Salmon, we are involved in the project team right from the beginning – helping to build a consistent and thorough planning and resource management framework based on industry needs and best practice.

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IN PROGRESS...

...updates on projects that span a number of years.

Palmerston North City Centre Framework

Since October, Boffa Miskell has been helping Palmerston North City Council develop a cohesive framework for its city centre, which will help deliver the design drivers set out in its Urban Design Strategy.

The Framework project is intended to help coordinate public and private investment and includes establishing a new network of city centre streets and open spaces, as well as providing for future development.

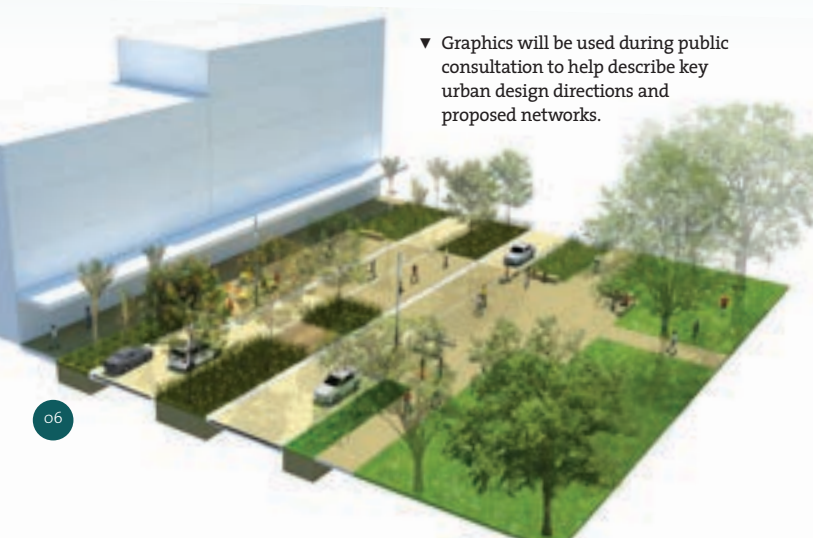
Boffa Miskell has been preparing and supplying visual and written material to help articulate the design intent and has facilitated a number of Council officer and councillor workshops.

Boffa Miskell Wellington design team leader Marc Tomes says the project is very much about working in partnership with Council officers.

“Together, we’re looking to deliver the city’s urban design aspirations of achieving a vibrant, caring, innovative and sustainable city centre by establishing and embedding high quality design outcomes.”

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▼ Graphics will be used during public consultation to help describe key urban design directions and proposed networks.



▲ The Waterview Connection project: twin tunnels will take the new motorway underground from the far end of the earthworks pictured, and the Shared Path walking/cycle way will link the southern area (foreground) to SH16 in the north.

Waterview Connection;

Boffa Miskell is the urban design and landscape architecture consultant to the Connected Alliance, responsible for designing and building the 4.8-kilometre ‘Waterview Connection’ motorway in west Auckland. The \$1.4 billion New Zealand Transport Agency (NZTA) project, which will include 2.5-kilometre twin tunnels, will complete the city’s ring route.

The landscape master plans were completed late last year; the detailed design of enhancements to various open spaces is underway; and landscape reinstatement works are being implemented as sections of earthworks are finalised.

Waterview Shared Path

The NZTA is funding a new shared pedestrian/cycle path beside Oakleigh Creek, as required by the Waterview Board of Inquiry.

Boffa Miskell is providing the landscape architecture, ecology and cultural advisory services within the Beca-led team designing the path and securing its consents.

The pathway will extend west Auckland’s wider path network, connecting to shared paths being developed within the main Waterview Connection project.

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Census mapping delivered!

More than 8000 maps were delivered on time to the Department of Statistics last October in preparation for the 2013 Census of Population and Dwellings.

The massive task completed by Boffa Miskell, in association with Wyatt & Wilson Print, involved hand-checking every map to ensure meticulous quality control standards (*Boffa Miskell NEWS* 25 & 29 also.)

When it came to Census time, Boffa Miskell GIS specialist Brian McAuslan, who had a major role in preparing the census maps, was one of the 7000 official census collectors who put the maps to their intended use. In his case, the job was complicated by the mobility of the population in the significantly earthquake-affected area he was assigned in central Christchurch, where people are still moving frequently.

CONTACT: Brian McAuslan
brian.mcauslan@boffamiskell.co.nz

New premises

Our Christchurch-based staff are looking forward to reuniting under one roof again, after working from two temporary premises since the February 2011 earthquake.

The new office will be in the Hazeldean Business Park in Addington, where Boffa Miskell has been providing developer Calder Stewart Industries with master planning and landscape development services for several years (see page 4).

Timing of the imminent move and the new address are still being finalised and will be advised as soon as possible.

Design Recognition

The Boffa Miskell-led 'One Latimer' entry, designed with Westbrooke Capital Partners Ltd and Sheppard & Rout Architects, was placed in the top 5 out of 58 world-wide entries and commended in the Christchurch City Council's recent 'Breath – The New Urban Village' design competition.

Competitors were challenged to submit innovative concepts for a new urban village in Christchurch that would provide a variety of medium density housing options and lifestyle choices based on sustainability and a strong sense of community.

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▲ 'The 'One Latimer' village concept: varied building forms with private and shared space.

Putting it on paper



The meaning of 'significant'

Boffa Miskell ecologist **Dr Vaughan Keesing** co-authored with lawyer Hans van der Wal, from Duncan Cotterill, an article in the December edition of *Planning Quarterly* entitled, 'Drawing the battle lines'. With

reference to a recent High Court case with which they were involved, they discussed the meaning of the word 'significant' in the context of resource management.

Science publication

Boffa Miskell ecologists often undertake original research in the course of their project work that is of a standard to be published in peer-reviewed scientific journals.

With Meridian Energy's support, ecologists **Dr Leigh Bull** and **Stephen Fuller** from our Wellington office co-authored with Dr Dalice Sim, from Victoria University of Wellington, an article in the February 2013 special wind farm edition of the *New Zealand Journal of Zoology*, entitled 'Post-construction avian mortality monitoring at Project West Wind' (see more, page 3).



Dr Leigh Bull



Stephen Fuller

Forums & sponsorships

Boffa Miskell is proud to have participated in and sponsored the following events that promote understanding or enhancement of the environment.

Rivers Group 3rd Annual Symposium, November 2012. Boffa Miskell sponsored this event at Lincoln University, where such topics as flood protection, sediment transport, ecology, community collaboration, cultural values and insurance were covered under a theme of, 'Our Rivers – The Supply Chains of Life'.



Moonrise over Mount Victoria lookout

Silhouetted against a huge full moon rising in a video that has gone viral on internet, the Boffa Miskell-designed Mount Victoria lookout in Wellington has had unexpected world-wide exposure.

The video was recorded by Mark Gee, a photographer with a particular interest in astrophotography. After much planning and many failed attempts, he succeeded in filming the moonrise on a clear night from a location 2.1 kilometres away. The result earned Mark a NASA 'Astronomy Picture of the Day' accolade.

Visitors are shown throughout the footage making good use of the lookout, which is a prime vantage point overlooking Wellington city and harbour.

See the video at <http://vimeo.com/58385453> and see *Boffa Miskell NEWS* 19 & 20 for more about the award-winning Mount Victoria lookout.

'Future Built Environments' 13-14 March, Auckland. During this two-day conference, two Boffa Miskell people presented papers. **Marc Baily**, Director and urban planner, asked the question, "Has Christchurch taught us anything?" with reference to the challenges of implementing the central city Blueprint and the relevance of the approach to other places in New Zealand.

Tim Church, Principal and urban designer, discussed 'The designer's role in housing affordability'.



Marc Baily



Tim Church

New life for Te Puke

“New Zealand’s smaller centres can be well designed, vibrant places, especially when their communities work towards a shared vision.”

So says Boffa Miskell landscape architect Morné Hugo, who led the two-stage design and implementation of a walkway, heritage plaza and playground development in Te Puke’s town centre for the Western Bay of Plenty District Council.

The project brought to fruition ideas in the Te Puke Town Vision of redeveloping and better integrating Jubilee Park, an important but previously under-used open space. The refurbished park is now linked to the main shopping street via the walkway and boasts a new terraced plaza, events stage and new destination playground.

Morné says, “By creating a new focal area, the town’s dynamics are changing in ways the community wanted; it all ties in with the town vision. We worked collaboratively with the council, community and contractors to resolve issues early and create cost-effective solutions.”

Those solutions included designing and locally manufacturing furniture and streetscape elements, including a multi-functional events stage, to reflect the character of Te Puke.

The walkway was opened in December 2011. A year later, the opening of the park redevelopment successfully accommodated 1,000 visitors.

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▼ The heritage courtyard/plaza in Jubilee Park: the strong central axis connects to the walkway and main shopping street beyond.



▼ The Waharoa (gateway) welcomes visitors to the Jubilee Park plaza/courtyard, having been relocated from its former position on the heritage walkway. (See front cover also.)



▼ Opening day: visitors approach the new events stage (centre) across the new plaza; Jubilee Park in the background.



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