



**New Zealand's first 'Green Branch' demonstrates that incorporating 'Green' principles can be simple**

## The National Bank Green Branch

**Client:** The National Bank Blockhouse Bay

**Contractor:** Format Interiors

**Architect:** ASC Architects

**Publication Date:** January 2009

**Region:** Blockhouse Bay, Auckland

**Sector:** Retail

**Project Construction Timescale:** Dec 2007 to July 2008

**Form of Contract:** NZIA SCC1

**This Pathfinder Project is evidence that you don't need to wait on a rating system to adopt green initiatives. With the willingness of the whole team, a multidisciplinary approach and greater front end planning it is easy to incorporate sustainable features into your next project.**

### Background

The National Bank Senior Project Manager, Ben Eitelberg saw an opportunity to do something different when The National Bank decided to build a new branch at Blockhouse Bay.

This was the bank's first new building in over 10 years and *"sustainability was the route to go as it coincided perfectly with the Bank's commitment to becoming carbon neutral by 2009"*, explained Ben. This decision resulted in the new base build incorporating as many economically viable ESD features as was possible.

### Successful Outcomes

In addition to the regular key performance measures of cost, time and quality, community outcomes were treated with high importance as was the necessity to have the right team in place, working well together. This pathfinder Project is a good example of what can be achieved by using a preferred supply team in an integrated manner.

### Selecting the right team

Bringing the right team together was key to achieving a sustainable outcome. The National Bank, with longstanding supplier, ASC Architects selected Format Interiors, a preferred contractor, who in previous projects showed their commitment to sustainability through their own waste management initiatives and involvement in green housing projects.

LEED Certified architect, Dean Shwedyk who was the Project Architect and Jacques de Lange, the Contractor, openly brought their knowledge and expertise in their areas to the table.

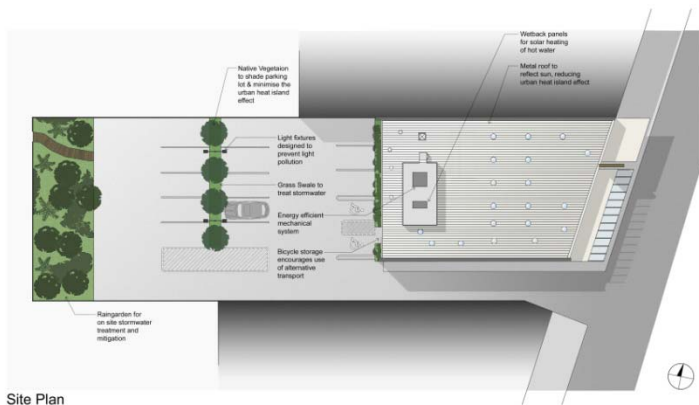
The team quickly found that there was no Green rating tool specific to retail in NZ, or equivalent model overseas.

Rather than stop there, the Client gained assistance and support from Georgia Myers, National Sustainability Manager at Jones Lang La Salle and with the help of the team the brief for the project evolved.

Connell Wagner was added to the team, specifically for their expertise in integrating sustainable features with water use and ventilation, although not a regular supplier for the Bank. The majority of the supply chain were established long term suppliers for the Bank.



**Senior National Bank Project Manager and CCG Steering Group member, Ben Eitelberg proudly demonstrates just one of the the branch's recycling activities.**



Site Plan



Site Section

**Site Plan and Section showing some of the ESD features**

**The Team’s willingness to work together**

The National Bank realised the need to make changes to the procurement and delivery process to reflect the multidisciplinary nature of sustainable building. To this end, the Contractor was brought on board during documentation to help in the design decision process. Ben understood the need for greater levels of documentation and detail that was required to be resolved at an early stage. This was fully supported by both the Architect and Contractor. *“I think it is essential that sustainable buildings require a more multidisciplinary approach, because everything is so interrelated”* Graeme Scott, Architect.

This had an additional benefit of creating a strong team ethic and meant that when challenges arose during construction, everyone was committed to finding a solution as a team. *“If people made a mistake we actively pursued ways to correct it. We all worked to a common goal of achieving a good quality project”* Jacques de Lange, Contractor.

**Relationships with established suppliers create a win-win outcome**

The Client typically employed established suppliers who benefit from this arrangement with regular income and work. In view of this long-term relationship the Client proposed that suppliers investigate and contribute to achieving a sustainable building at no additional cost to the Client. In return, the suppliers could use this as an opportunity to research, trial new product, and then market it. Two key examples were the cabling company, Teltrac Communications who installed an environmentally friendlier data cabling, even though the cost to the cable company was higher. In addition, the signage company researched and installed LED exterior signage for the bank – their first.

**Community Involvement**

Active involvement with the local community informed and updated the locals during construction. This helped the community accept the impact of the building work and the changes that incurred as a result. *“We worked hard in getting the community to understand what we were doing. As a company we involve ourselves in being more than just a builder”* Jacques de Lange, Contractor.

This was fully supported by the Client and shows that sustainable practice went beyond environmental and started to embrace a wider vision by incorporating social sustainability into the team’s practice.

**Key Client Actions**

This project demonstrates a number of areas where the client showed leadership and made key but simple changes to the procurement and delivery process to achieve the desired outcome of new ideas resulting in a sustainable branch. These included:

- **Client leadership:** The Client drove the decision towards creating a sustainable building.
- **Selecting the right team:** The Client realised the importance of selecting the right team, particularly the Architect, Contractor and specialist Engineers who were all interested in achieving a sustainable outcome.
- **Keeping it simple:** A key Client driver for success.
- **Regular site meetings:** Where the Client was always part of the decision process
- **Early Contractor Involvement:** Realising and changing the process to include the Contractor’s input into the design phase.
- **Detailed Planning upfront:** The Client understood that sustainable buildings require greater detail at the front end of the project.
- **Buy-in from the operations team:** The client achieved buy-in from potential staff members, who were aware that they would have to operate in a different environment. The staff have been very supportive and shown a willingness to change their behaviour and adapt to the different sustainable practices adopted.



**The completed branch Interior showing daylight diffuses and adjacent flourescent lights on adjustable light sensors**



## Keeping it Simple

Without any specific ESD benchmarks to work from, a mixture of common sense and what was appropriate formed the decisions of what sustainable features were to be adopted.

The client had two mottos, one was *“to gain the best value by spending as little as you can and achieving as much as you can”* and the other was *“it was okay to fail, but I want to know we tried”*. This gave the team licence to explore options and stretch the boundaries without fear of repercussions.

The National Bank with expert advice, addressed life costs, and while they realised that sometimes they had to pay more initially, would benefit in the longer term. The result was that *“the Bank adopted simple green initiatives, small effective changes – they adopted green initiatives for the right reason to save energy and the environment rather than trying to be impressive”* Jacques de Lange.

## Time

The commencement of the construction was stalled by a month. Instead of starting in December, work began in January due to a delay in the approval of the Resource Consent application. However, during construction all the key milestones were achieved. Where lost time was incurred, for example, during excavation, they reprogrammed the schedule and were able to meet the completion date. They even experienced torrential rain in the last two weeks prior to hand over which meant that achieving those last finishing touches was a challenge, but one which was well met by the team.

## Cost

The costs were managed and communicated well. The Client had developed their own internal project delivery process where they monitored the risk and established ways to mitigate or minimise it. Involving the Contractor early in the process to work on the budget during the documentation ensured that costs were controlled and the project was economically viable. These steps, along with the consultants input helped the project to be delivered within budget.

Whilst performance targets were proposed, ultimately the Client was prepared to take the risk that the additional money being spent on ESD features would produce a result.

## Quality and Health & Safety

A high level of quality was achieved. Where there were issues with some of the supply chain, the Contractor ensured that the work was completed to meet the required standard. The Contractor providing a safe, tidy and efficient site supported the quality of work. According to Ben, *“they are one of the neatest contractors, and have a great reputation for his commitment towards safety on site”*. There were no reported accidents during this project.



*The roof showing the Sola Tube Skylights which provide natural light to the interior*

## Key principles for repetition

- All key team members were able to call upon good technical, managerial skills and environmental expertise to be able to deliver this building
- Early involvement of the Contractor in the design and documentation phase.
- Active Client involvement in all key decisions
- Simple, common sense approach towards sustainable outcomes.
- A key consideration during the project was Health and Safety on site.
- Informing the community of the impact of the construction and the building



*The rainwater harvesting tank for the toilets and cleaner's sink*

## Summary of Benefits

This project demonstrates that strong client leadership, a central and inspiring goal, (Green Branch) engaging a team of preferred suppliers and integrating them around the product, i.e. the branch directly and indirectly impact upon not only the common drivers of Time, Cost, Quality and Health and Safety but also push beyond these basic requirements to enable the project to achieve improved whole of life costs, environmental and community impact.

## Lessons learned

As in all projects, there are always aspects which can be improved and which the team can take on board for future projects. Key lessons to take forward from this project have been identified as:

- The right skills:** It is important for the team to ask the right questions, especially when adopting innovative practice. This also means making sure that the suppliers have the right skills, particularly if they don't have experience in sustainable features. For innovative work, the right company is more important than necessarily going with the status quo. This may mean that established suppliers partner with another supplier or are able and willing to invest in R & D.
- Integrated team planning:** It is advisable to have relevant supply chain involved in the forward planning
- Community outlook:** The role of the builder is extended beyond building toward social involvement, particularly in small communities
- Integrate sustainable practice:** According to the Contractor, the best way to begin integrating sustainable practice starts with your own housekeeping. The first steps are to minimise waste, address inefficiencies, make simple decisions to minimise energy, careful material selections and support and work with like-minded people
- Achieving Quality Standards:** Learning that you can do things a little different and break 'retail rules', especially when your aim is to create a better outcome. It is important to sell your story and inform people why you are breaking the rules as they are more willing to actively support it.

## Possible improvements

- Prior to construction spend more time on reviewing the detailed documentation with all the key parties involved.
- Meet the locals early – good relationships will enhance acceptance within the community. One suggestion was to set up a web base communications record of the construction progress and impact to the community.
- Greater emphasis on the supply chain on delivering the work without remedial.



Street view of the Bank

## Sustainable features included:

Water efficiency	stormwater treated/rain garden
	rainwater harvesting tank – toilets and cleaner's sink
	low use plumbing fittings
Solar Water heating	Passive solar heating on roof to provide hot water to the shower and basins
Shading strategy	Metal roofing with high reflectivity and emissivity
	Asphalt shaded by vegetation to reduce urban heat island effect
	Exterior sunshades allow limited direct solar radiation to penetrate windows
Heating and Cooling	Efficient HVAC Air-conditioning in Front of house/fresh air to Back of House
Lighting strategy	Natural sunlight – Sola Tube Skylights
	lights furnished with photo-sensors, allowing artificial light levels to be adjusted automatically when natural light levels are sufficient
	All site lighting designed to avoid light pollution
Vegetation	Rain garden (100mm deep overflow into storm water drain)
	Plant strip in parking lot to provide shading for cars/bicycles
	All site planting selected to avoid irrigation and also promote natural habitat
Cabling	Teltrac trialling new to NZ, environmentally friendlier data cabling
Signage	LED technology, more efficient and not common in exterior signage in NZ
	Reduced lighting illumination times
Renewable resources	Sustainable growth timber – joinery and architectural features
	Fabric/Carpet – good quality NZ wool
Materials	Waste management on site during construction
	Paint – Low Volatile Organic Chemicals
	Window frames – recycled aluminium
	Gib- 20% reuse of materials
	Asphalt – uplifted and reused when resurfacing
	Long-run roof sheets and corrugated cladding – contain 12% recycled iron
	Onsite timber – reused for fencing
	Recycling – provision to separate in kitchen
	Compost bin in rain garden



format interiors



asc architects

For further information visit  
[www.constructing.co.nz](http://www.constructing.co.nz)

