

Meeting No. 16 Meeting Notes & Feedback 15 March 2007

1. Introductions

Thank you for your contributions to the 16th CCG meeting hosted by Peter Burges of Beca at their Vincent Street offices. We thank Peter and his team for their hospitality but the industry expertise he arranged to present to us today.

New Faces

Robert Mannis,	Director, 22 Degrees
John McShane,	Planning & Environmental Manager, Auckland International Airport Ltd
David Broad,	Director, DBC Construction
Hylton Wyndham,	Project Manager, Hawkins
Grant Massey,	National Development Manager, Mainzeal Property & Construction Ltd
Graeme Wilson,	Regional Projects Manager, Ministry of Education
Jennifer Wilson,	New Schools Facilitator, Ministry of Education
Don Pickerill,	Operations Manager, Naylor Love
Waren Warfield,	Managing Director, Resource Coordination Partnership

Following on from the excellent turnout last month at Northern Gateway, attendance again has reached a high with today's number being the highest to date.

2. House Keeping

a) Benchmarking Club

Information needs to be submitted for the Industry KPI's to be a workable tool. Any queries can be fielded to Amanda or Nicky.

b) Pathfinder Projects

Projects are still coming forward and more on the horizon. With the support of Roading New Zealand and CAE the projects are being developed in to a book of profiles and used as examples of best practice around the industry.

c) **Pathfinder Workshop** – the pathfinder workshop has been moved to the 20th April, the day after the April CCG gathering. More information will be forwarded. Any registration of interest in the workshop or pathfinder projects contact Amanda or Nicky.

d) Spreading our Wings

With Amanda relocating to Wellington in late March, we envisage the Wellington CCG to be up and running in May. Please forward contact details of parties you think may be interested.

e) Constructing Excellence

Amanda introduced Garry Miller formally of Connell Wagner as the new addition to the Constructing Excellence team. Garry has a wealth of experience in construction and facilitation.

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PRESENTATION 1 A Window on Beca Peter Burgess, Project Director, Beca



Beca, is a New Zealand owned company established in 1918. It is a company grounded in:

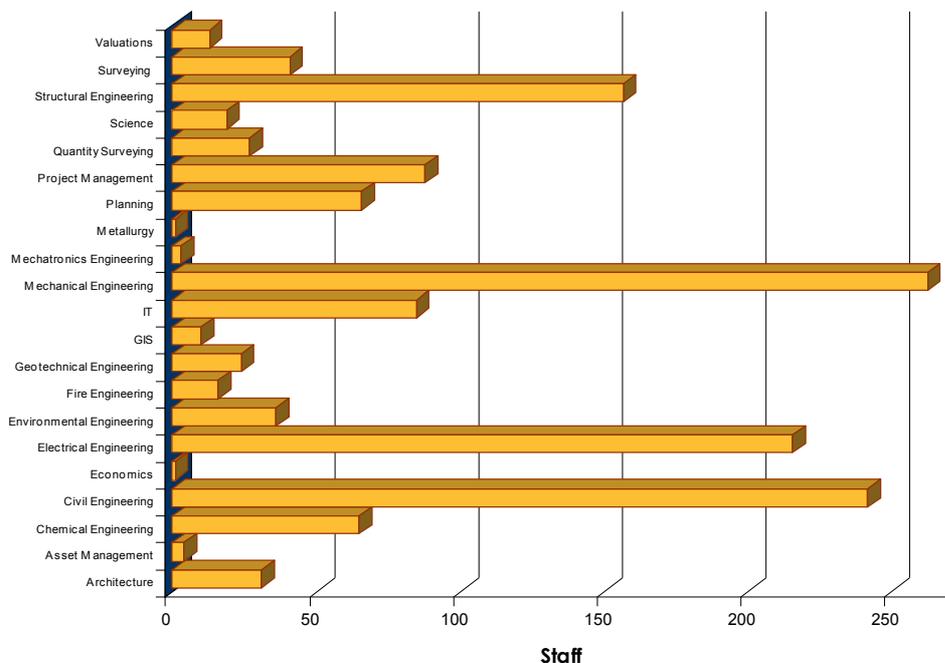
- A strong New Zealand heritage
- Involvement in the communities in which we work
- A sense of responsibility towards the environments in which we work
- A performance culture that values both technical excellence and a passion for innovation

- 1800 strong, employee-owned professional services consultancy specialising in engineering, planning, management and related services
- Projects delivered in over 60 countries
- Group revenue NZ\$180M (2005/06 FY)

What does Beca do?

Beca provides professional services through five specialist groups namely:

- Infrastructure
- Industrial
- Buildings
- Management Services
- Applied Technology



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PRESENTATION 2

Shayne Gray, Procurement Manager, Meridian Energy
Shayne is also the Project Director for Project Kumutoto

Project Kumutoto is the Meridian Wellington Office Accommodation project currently in progress on Wellington's popular water front.



Green Features of Project Kumutoto

- ★ Integrated design of building and services
- ★ Exposed structure at perimeter to absorb heat
- ★ Demand controlled heating, cooling and ventilation
- ★ 100% outdoor air supply with heat recovery
- ★ Solar water heating
- ★ Environmentally preferable materials selection
- ★ Efficient solar shading and active facades
- ★ Mixed mode' natural ventilation and air conditioning
- ★ Water efficient sanitary-ware (inc waterless urinals)
- ★ Heat pump heating and cooling
- ★ Rainwater collection and recycling
- ★ Predominantly daylight lit plus daylight control of lighting system

Building Management System

- ◆ Automatic control of solar blinds and sun louvers
- ◆ Integrated with security system
- ◆ Integrated with lighting control system
- ◆ Water use monitoring
- ◆ Automatic control of plant and systems
- ◆ Energy monitoring
- ◆ Automatic control of windows for natural ventilation

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Introduction to Meridian

Meridian - Keeping New Zealand new, with a commitment to being a sustainable company only generating electricity from renewable resources - wind and water. - Meridian's electricity generation is renewable – past, present and future.



Wind

- Te Apiti (55 turbines)
- Wellington wind turbine
- Whitehill Southland (42 turbines)
- Project West Wind (70 turbines proposed)

Hydro

- 8 hydro generation stations in the Waitaki chain
- NZ's largest hydro station in Manapouri

Co-generation

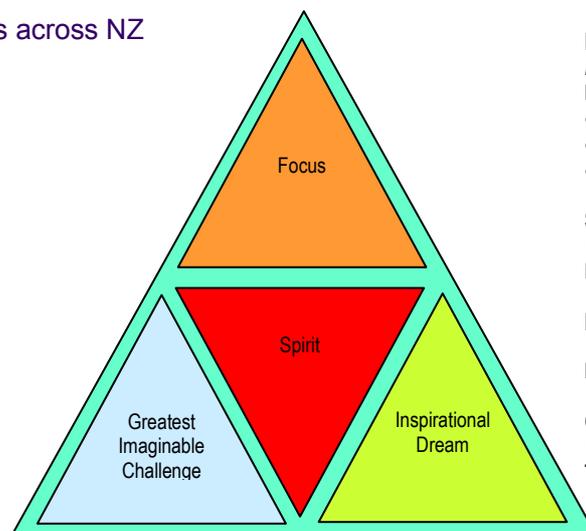
- Dunedin Energy Centre
- Winstone Pulp International (Ohakune)
- Auckland Hospital

Carbon Neutral

- Only NZ energy supplier with certified carbon neutral electricity
- **carboNZero** certification by Landcare

Core Business

- Generation, trading and retailing of energy and wider complimentary products and solutions
- Core activities supported by functions for growing the business and delivering corporate and technology requirements
- 200,000 customers across NZ



Focus

How we will achieve our goals

Embrace the Meridian Way

- Building rapport
- Commercially driven
- Acting on opportunities
- Being agile
- Forming hot-wired teams
- Dreaming of innovative solutions

Spirit

Who we are

Enterprising – Creative in working with energy

Inspirational Dream

Why we come to work each day

Energising quality of life

Greatest Imaginable Challenge (GIC)

What tangible things will we achieve

The Global Reference Company in Renewable Energy

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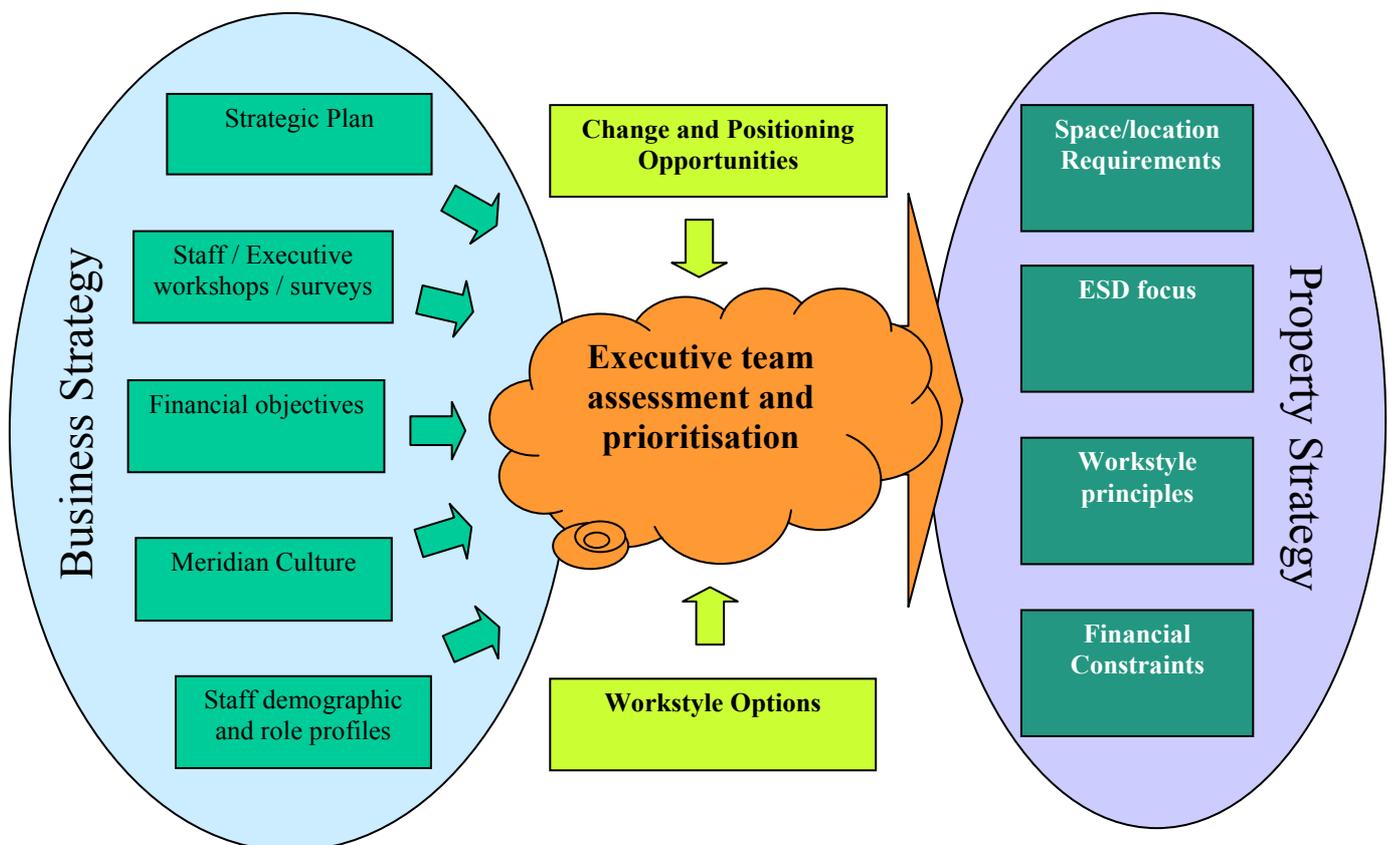
Project Kumutoto is very closely related to brand. It is seen as an opportunity to align corporate statement using office accommodation as a demonstration of the brand values represented by Meridian. In summary Meridian want to “walk the talk”. Meridian have taken their part in the puzzle as an active tenant, as the owner of the building is actually Dominion Funds.

Meridian needed the building due to lack of space currently between the multiple sights currently used. Meridian took it upon themselves to be an informed client so went through a process of self education by consulting the market. They wanted to appoint a green star accredited project manager which meant looking to Australia as at this time New Zealand’s Green Star Building code was not running. The project manager appointed was sent to Australia to become accredited. As opportunities arose Meridian hosted visiting sustainability experts and investigated other local sustainable building initiatives. They also made a point of engaging with New Zealand’s leading advisors in this area which in this case was Vodafone and East Tamaki Campus.



“Rita the Rata” is recognized from Meridians latest television advertising campaign.

Meridian had to develop their **business** strategy into a **property** strategy. The conversion demonstrates how they achieved this.



Business Strategies that impact on Working Environments and the associated workstyle principals are available in Shayne’s presentation, proudly displayed on our website: www.clientssuccess.org.nz

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Key Sustainability Goals of Project Kumutoto:

- Demonstrate the significance of the environment to Meridian in its pursuit of renewable electricity generation
- Reflect Meridian's operational philosophy in its office accommodation
- Point of Difference (recruitment & retention of staff)
- Encapsulate Ecologically Sustainable Development (ESD) as one of the important aspects of the project

Sustainability goals were set within a structured strategic framework that "balanced sustainability with functional requirements and cost effectiveness – *'getting the mix right'*"

Strategic Framework

'To achieve the physical embodiment of Meridian Energy's GIC (see page 4) by providing a work space that sets the standard for ESD, cost effectiveness and user experience'

Vision	Cost effectiveness	User experience	ESD
Goals	Demonstrate the value of ESD in a commercial context	Create a healthy safe and exemplar office building as a point of difference	Leverage our building to align with our brand and Renewables Strategies
Objectives	Total occupation cost neutral or better compared to a conventional (non ESD) commercial office development over a 20 year period	Office environment that improves user satisfaction to at least +5% A "wowness" factor	Energy usage of 80kwh/m ² /pa – 31kgCO ₂ /m ² /pa Water usage of 0.16m ³ /m ² /pa 4 ½ + Green
	Cost Programme Commercial	Working Indoor Environment Aesthetics Amenitie	Energy Water Conservation Material Management & Star

A standard commercial building uses 270 kilowatts per annum. By 2013 the standard will be aimed at 100 kilowatts but Meridian want to achieve 80 kilowatts with year. Hence design is absolutely fundamental to achieving this.

Observations

Corporate Responsibility – The initiative can be seen as a demonstration of Corporate Responsibility. It has required all market players to be pushed to varying degrees including designers, developers and construction.

Project Kumutomo is an example of tenant led demand for sustainable buildings – it just makes sense!

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Challenge the Market - The challenge to the market was to deliver a building solution that met the Meridian performance specification 100% without compromising one aspect over another - cost effectiveness, user experience, ESD

On target - On paper this has been achieved (much to the surprise of many observers!) however has yet to be proven in actual performance

Raising the Bar - Objective is that it will become common knowledge that:

“That’s the Meridian Building – you know, the environmentally friendly one!”

Other tidbits from Shayne’s presentation:

Once the building is complete its not going to look discerningly that it is distinctly a ‘green’ building.

A lot of sophisticated work was undertaken before even engaging in the market. When we did approach the market we said “this is what we are after, can you deliver it?”

“Yes, Meridian did tie the developer to achieving the energy goals of the project”, Shayne confirmed for a member of the group. “The developer was left to arrange the contractors however we were able to oversee this process so if we weren’t happy and it was not going to achieve the goals of the project we could step in.”

Shayne stated “We are buying a performance specification that just happens to be a building.”



Dandy the Dandelion, also from advertising campaigns.

Meridian wanted the “greenness” of Project Kumutoto to be a viable commercial decision; not an add on.

New Zealand Green Building Council – Case Study

[http://www.nzgbcservices.org.nz/resources/NZGBC Newsletter July 2006.pdf](http://www.nzgbcservices.org.nz/resources/NZGBC_Newsletter_July_2006.pdf)

Ministry for the Environment – Case Study (Performance Specification)

<http://www.mfe.govt.nz/publications/about/signals/issue8.html#meridian>

Manaaki Whenua Landcare Research – Environmental Research Services

<http://www.landcareresearch.co.nz/index.asp>

<http://www.carbonzero.co.nz/>

Meridian Energy Limited

<http://www.meridianenergy.co.nz/aboutus/newwellingtonoffice/default.htm>

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PRESENTATION 3

Green Star & Green Buildings

Alan Barbour

Beca Buildings – Associate and ESD Leader

NZ Green Building Council – Rating Tool Sub-Committee

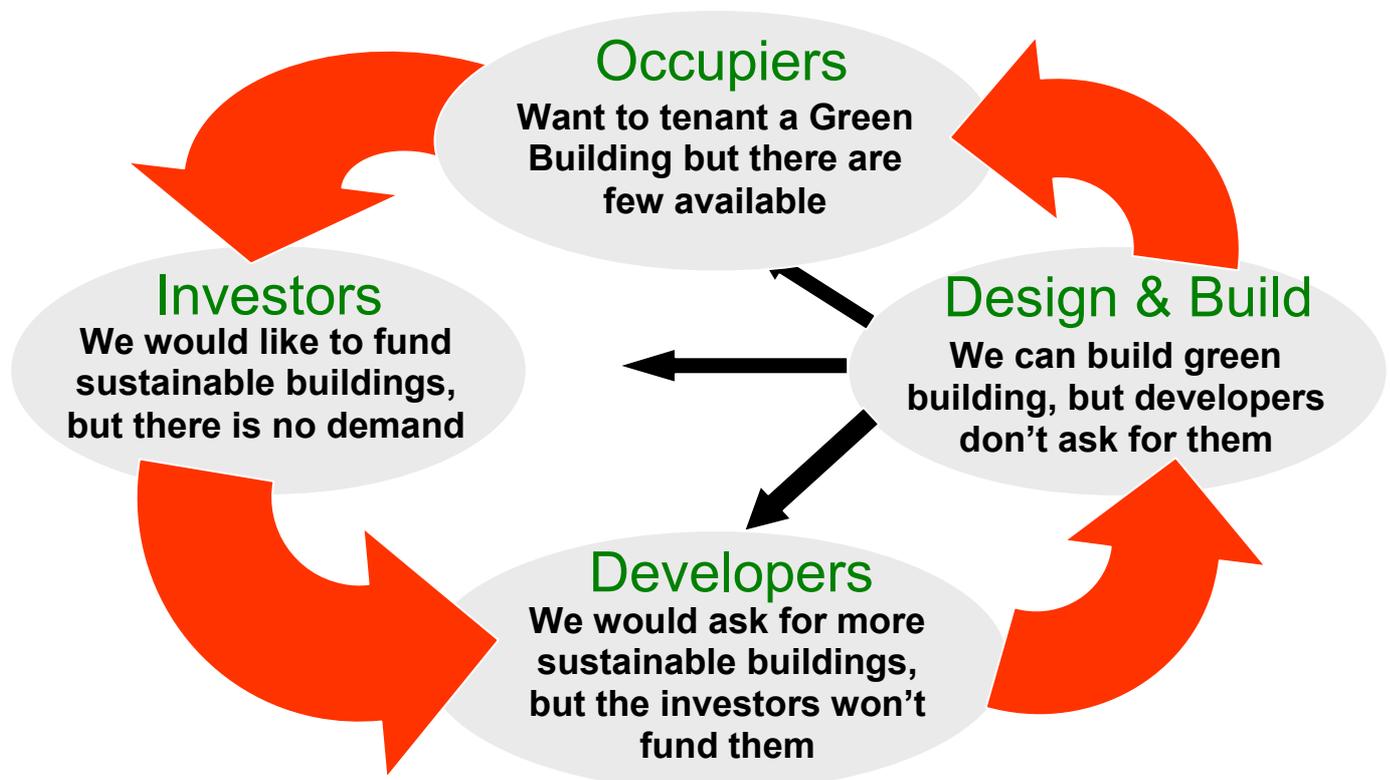


NZGBC Vision

New Zealanders work and live in healthy, efficient, productive and environmentally sustainable buildings, today and into the future...

NZGBC Role

The New Zealand Green Building Council's aim is to accelerate the development and adoption of market based Green Building practices. Following is a diagram of the current situation in New Zealand.



Currently NZGBC are working on:

- Communication Campaign
- Partnerships with Government
- Resource Development
- Develop Economic Case Studies
- Rating Tool

What is Green Star New Zealand?

It is New Zealand's rating tool, designed to assess the environmental impact of buildings, encouraging and rewarding initiatives that reduce that impact. Currently this rating tool is being benchmarked against the Australian tool so that there is parity between countries.

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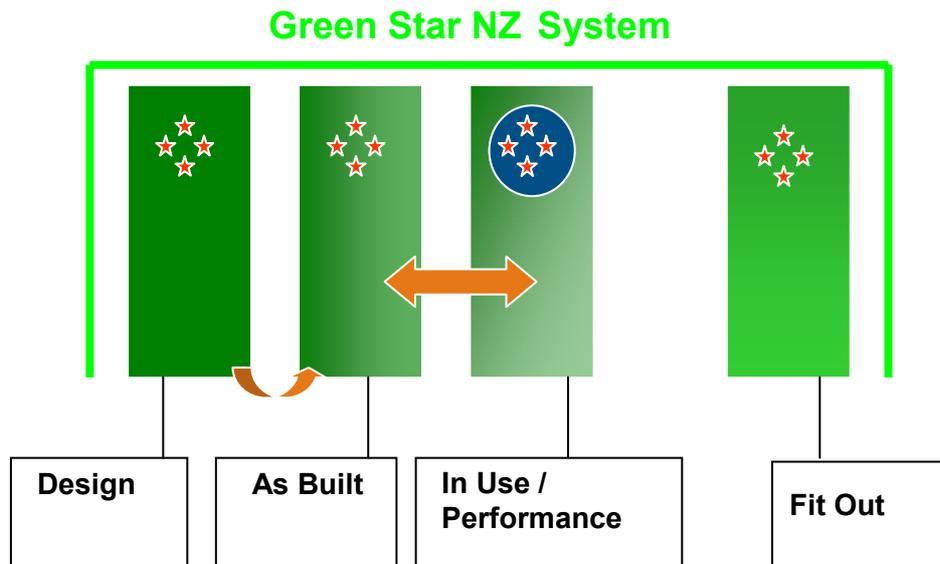
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The initial focus of Green Star is on office buildings. However the future stage is currently being set for:

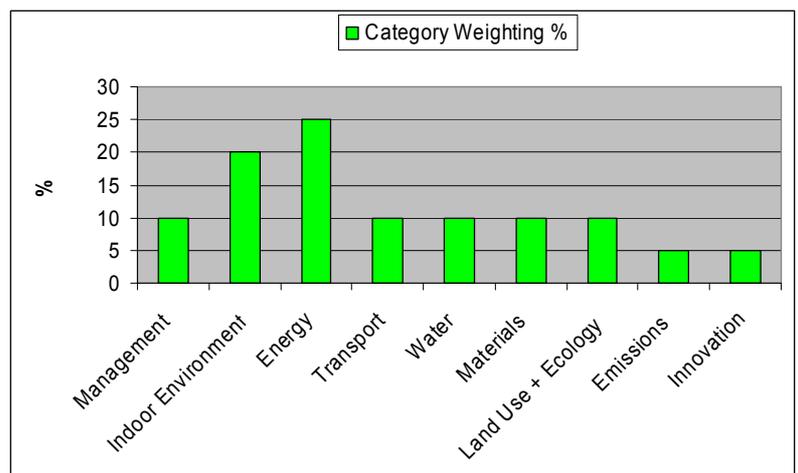
- ➡ Education
- ➡ Residential
- ➡ Industrial
- ➡ Other

Within the 'Office' category there are four tools, each reflecting a different phase in the building lifecycle;



The single score system has recently been updated, with Energy and Water efficiency percentages changing.

Management Systems	10%
Indoor Air Quality	20%
Energy Efficiency	25%
Transport	10%
Water Efficiency	10%
Materials	10%
Land Use & Ecology	10%
Waste ^ Emissions	5%
Total	100%
Innovation	5%



For a further breakdown of each section, visit www.clientssuccess.org.nz and view Alan's presentation.

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Rating	Score Required	Comment
1 Star ★	10	No certification
2 Star ★★	20	No certification
3 Star ★★★	30	No certification
4 Star ★★★★	40	Best Practice
5 Star ★★★★★	50	Excellence
6 Star ★★★★★★	60	World Leader

The Green Star rating tool is aimed at Best Practice.

The pilot of Green Star has been released and the official launch is scheduled for 4 April 2007.



What to do next? If you haven't already, join NZGBC

Up & coming....

- Green Star training in April
- Workshops & Seminars
- Upskill your Staff
- Product Information = Green Build
- Register your projects

A point to note: Green Star is not only about the design, its also about location.

Of interest: Copy, then paste the website below into your browser. It will take you to the Govt3 Sustainable Buildings website.

<http://www.mfe.govt.nz/issues/sustainable-industry/govt3/topic-areas/sustainable-buildings/index.html>

PRESENTATION 4

ESD - A Tenants Perspective

Jon Williams

General Manager Building Services

Jon is an advisor on the subject of 'green building' and in Jon's opinion Shayne Gray from Meridian is a very educated tenant in comparison with other tenants.

It's the investors and developers that are leading the drive to build "green building" and the tenants have to live in them. What does this mean?

Firstly, why go **GREEN** ?

- To be a good corporate citizen for clients and staff?
- To optimise opex?*
- To improve staff productivity?

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From a tenants point of view, focus on the effects of **Green** on staff productivity.

Variables affecting **Perceived Staff Productivity** the most are:

-  Comfort (including perceived control)
-  Responsiveness to need
-  Building size and depth (and ventilation type)
-  Workgroups and their layout in the space plan
-  Design Intent and how this is communicated to the users

Building Use Studies have concluded that Perceived Productivity varies with internal environment by

-17.5% to +15%

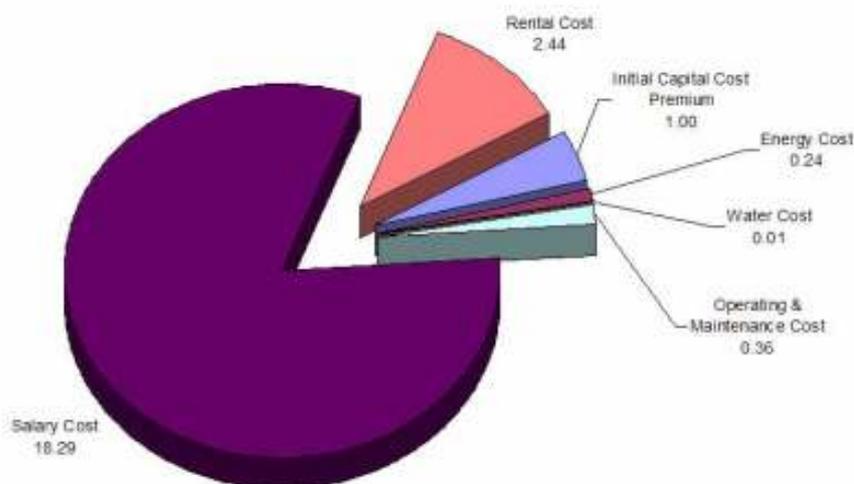
Tenants who have ventured on the Green Buildings path in the UK/Europe have experienced:

-  Reduction in Sick Building Syndrome
-  20-25% reduction in health complaints
-  Perception that daylight offices are healthy
-  Lower absenteeism
-  Increased motivation and productivity

When we take the above information into account, the following graph completes the picture.

Business Costs

Office building – 20-year present values



NB: Relative to the initial capital cost premium.

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Example – 4,000 sqm Office Building

	Green Office	Standard Office
Construction Costs	100 – 110%	100%
Annual Energy Costs	\$60k	\$107k
Annual Salary Costs	\$13.2 million	\$13.2 million
Energy saving achieved of \$50 - \$60k		
+1% productivity increase	-\$132k	n/a
+5% productivity increase	-\$660k	n/a
+10% productivity increase	-1.32 million	n/a

Some business benefits of **Green** buildings

-  Marketing Advantage - Protect and Enhance Reputation
-  Lower Annual OPEX cost
-  Increased Staff Productivity
-  Reduced Staff Turnover
-  Show commitment to Staff Welfare
-  Futureproof assets
-  Higher Asset Value, Higher Returns – Rent and Investment
-  Demonstrate commitment to environmental policy and SRI
-  Reduced Local, National and Global Impact
-  Reduce Planning Risks
-  Reduce Exposure to Future 'Green' Taxes

How **Green** do you go?

Jon recommends to keep practicality involved and a holistic view approach. For example: with Green Star, marks are received for being close to public transport facilities. The focus is on gaining Green star status but is it practical for the business to be near public transport? Other marks are received for reducing the number of carparks which encourages other modes of transport. Is this practical for the business? Restraint needs to be shown not to fall into the “ticking of the boxes” trap. This is why taking a holistic approach to green building will result in a practical and result orientated building. Another example we call all relate to is the use of plastic knives & forks on aeroplanes. To use metal would be better environmentally however because they have been flagged as dangerous weapons, they are no longer considered practical!

Increasing the Green Star rating target aimed at, leads to or opens risk to:

- | | |
|---|--|
| Increased cost (rent) | Increased risk of missing target |
| Diminishing return on payback | Increased build/rental costs |
| Staff acceptance of indoor environmental conditions | Fixation on “ticking the box” to get a star rating |

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Jon's presentation can be found on our website www.clientssuccess.org.nz and the presentation includes an example of ESD Option Analysis.

* opex = operating expenses

7. Next Meeting

19 April 2007, 9.30am – 1pm

ANZ National Bank Limited, ANZ Centre, 23 Albert Street

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Attendees

Meeting 16
15.3.2007

Robert Mannis	Director	22 Degrees
Ben Eitelberg	Project Manager	ANZ National Bank Limited
Graeme Birkhead	Company Director	Arrow International
Adam Tyrie	Engineering Manager Buildings	Auckland International Airport Ltd
John McShane	Planning & Environmental Manager	Auckland International Airport Ltd
Peter Burgess	Project Manager	Beca
Michael Ward	Principal	Carson Group
Garry Miller		Connell Wagner
Amanda Warren	Director	Constructing Excellence NZ Ltd
David Broad	Director	DBC Construction
William Whewell	National Property Manager	Department of Corrections
Hylton Wyndham	Project Manager	Hawkins
Ian Wheeler	Development Manager	Housing New Zealand
Grant Massey	National Development Manager	Mainzeal Property & Construction Ltd
Joe Hollander (Chair)	Director Strategic Facilities Management	Massey University
Anin Nama	Capital Investment Manager	Metrowater
Graeme Wilson	Regional Projects Manager	Ministry of Education
Jennifer Wilson	New Schools Facilitator	Ministry of Education
Karl Hutton	Manager, Network Provisions	Ministry of Education
Don Pickerill	Operations Manager	Naylor Love
Simon Guillemin	Manager: Strategic Projects	North Shore City Council
Gail Calder	Property Leader - Consumer Sales & Service	NZ Post
Stuart Wheeler	Principal Architect	Opus Architecture
Waren Warfield	Managing Director	Resource Coordination Partnership
Kevin Doherty	National Procurement Manager	Transit New Zealand
Doug Ray	OIP Project Manager	Vector

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