



Submission by the New Zealand Green Building Council on the draft Christchurch Central City Plan

16th September 2011

Who we are

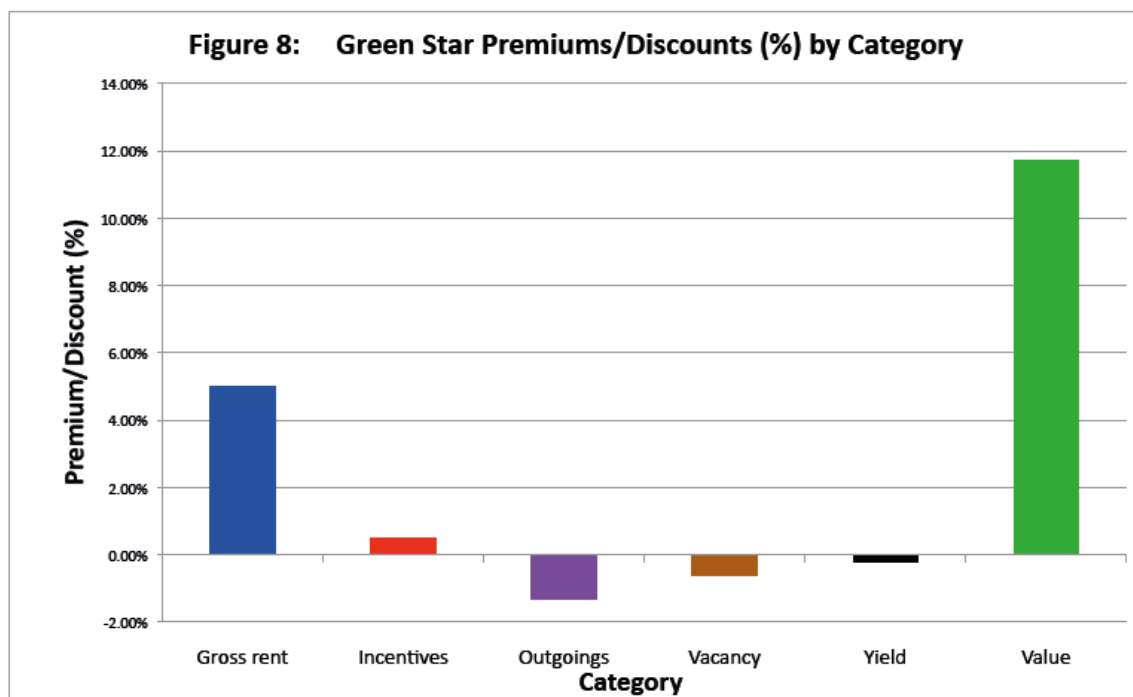
1. The New Zealand Green Building Council (NZGBC) is a not-for-profit industry organisation which leads green building initiatives in New Zealand. Our 450 organisational members include industry leaders committed to developing market based solutions that help deliver environmentally sustainable, innovative buildings for New Zealand. Our vision is that New Zealanders work and live in healthy, efficient, productive and sustainable buildings, today and into the future. To date the NZGBC has successfully introduced the suite of Green Star NZ rating tools for office, industrial, education and office fit out projects, as well as the Homestar residential rating tool in partnership with BRANZ.

Response to draft Central City Plan

2. The NZGBC would like to congratulate Christchurch City Council (CCC) for demonstrating bold leadership and producing a draft Central City Plan that sets out to deliver a more sustainable built environment. The draft plan presents Central Christchurch with an opportunity to set a new benchmark for urban sustainability and liveability in New Zealand. To ensure this is delivered, continued leadership and a clear vision will be required whilst the plan is finalised and delivered.
3. The community consultation that has occurred to produce the draft plan is commendable and it is encouraging to see many of the ideas received from the community expressed in the draft plan. The community vision for a Green City is a key theme to come out of this consultation and we urge CCC to ensure that this theme remains central as the Central City Plan is reviewed and finalised.

The business case for green building

4. There is a growing body of international evidence to support the business case for green building. It is crucial that this business case is clearly identified and effectively communicated to developers, property owners, investors, tenants, government and the Christchurch community.
5. Research demonstrates that the business case for green building includes economic benefits associated with reduced operating costs and higher returns on investment and also indirect benefits such as increased productivity, staff acquisition and retention and decreased absenteeism.
6. The Building Better Returns research report commissioned by the Australian Property Institute (API) and Property Funds Association (PFA) presents evidence highlighting the added value of green office buildings in Australia. Published in September 2011, the report analyses a portfolio representing 51 per cent of the total office market floor area in Sydney and Canberra. Key findings include:
 - a) A 5% premium in rents for Green Star rated office buildings
 - b) A 12% premium in values for Green Star rated office buildings
 - c) Premiums as a result of green building are also seen for reduced vacancy, reduced yields and reduced outgoings.



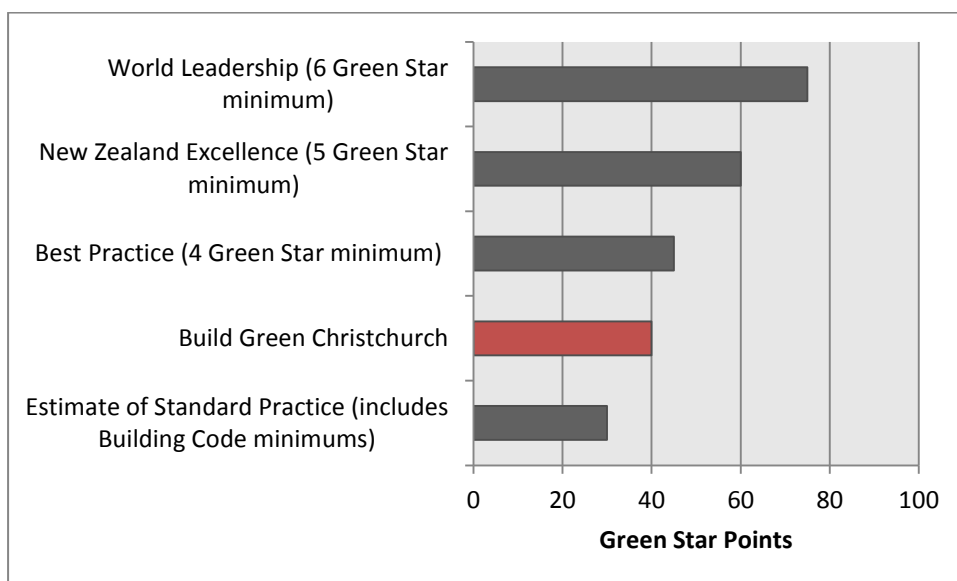
Source: Australian Property Institute and Property Funds Association, *Building Better Returns* (2011)

The Building Better Returns report can be downloaded from www.nsw.api.org.au

7. The draft plan (volume 2, page 13) identifies the reasons for the changes to the City Plan relating to the 'Build Green Christchurch tool'. It is suggested that these reasons are updated to identify the economic rationale for green building in addition to the environmental benefits.
8. In addition to commercial properties, there is now growing evidence in support of the economic benefits of greener homes. Professor Phillipa Howden-Chapman is one of New Zealand's most prominent researchers involved with quantifying the benefits of warmer, drier homes. In a 2004 study, Howden-Chapman demonstrated that an investment of \$1,300 to improve insulation in a typical New Zealand home would result in benefits worth \$3,110. These benefits were associated primarily with improved health and therefore productivity, of the occupants. View the report [here](#).
9. Christchurch is in competition with other cities in New Zealand and Australia to attract people, business and to grow its economy. Market trends suggest that in the near future green buildings will be the standard benchmark in the market rather than non-green buildings as the need to move towards a low-carbon and resource-efficient economy becomes ever more urgent. Therefore the question should be asked whether there is a business case for delivering non-green buildings that risk being inefficient with increased operating costs and reduced indoor environment quality that are likely to be functionally outdated and underperform the market in the near future.

'Build Green Christchurch' tool

10. The new Build Green tool that is being developed by the NZGBC for CCC is being driven by the local Advisory Group to ensure it is achievable, simple and cost-effective.
11. The current proposal sets a standard that is higher than Building Code / standard industry practice but lower than the Green Star standards, as illustrated in the graph below:



12. The NZGBC is concerned that due to the 'Build Green Christchurch' tool being developed at the same time as CCC has been consulting on the draft plan, we have not been able to engage in the level of industry consultation and transparency that is our preferred approach.
13. This has also lead to a negative view of the tool in the market due to uncertainty and lack of engagement. The feedback that we have received from members and key stakeholders is that they support the concept but are concerned about the lack of clarity. We are confident that had we been able to let industry see the current version of the tool, they would be significantly more supportive.
14. We will be providing a briefing to Property Council, CORE, and NZGBC members, and other interested parties in late September. At this briefing we will present a draft version of the tool and process for comment and feedback.
15. We also recommend that CCC agrees to the draft tool being made publicly available for industry to review in detail and provide comment on.
16. The assessment process is being developed to:
 - a. Minimize any potential delays to projects achieving Building Consent and Code Compliance
 - b. Align the process with existing documentation/approval processes.
17. The tool has been modified from the version included in the draft plan in response to Advisory Group advice, in the following ways:
 - c. Simplifying – Greatly reduced the number of environmental issues addressed and focused on critical issues relevant to Christchurch.
 - d. Increasing mandatory elements – Approximately half of the benchmarks will be mandatory, and the remaining credits required for the pass rating will be chosen based on what will work best for projects design, budget and tenant needs.

18. The draft tool is outlined below. It is proposed that buildings must achieve all the mandatory, and a proportion of the remaining points:

Services	• Ozone	Mandatory
	• Ventilation	Mandatory + 3 points
	• Water Use	Mandatory
	• Energy Use	Mandatory
	• Metering	3 points
	• Commissioning and Tuning	Mandatory + 1 point
Comfort	• Thermal Design	Mandatory
	• Daylight and Views	2 points
Facilities	• Recycling Facilities	1 point
	• Cyclist Facilities	1 point
Environment	• Site Management	1 point
	• Materials Selection	4 points
	• Green Space	4 points
20 points in total		

19. Both the standards within the tool and the assessment process are being developed to minimize any additional costs. Davis Langdon, cost consultants, are currently analysing whether there will be any additional capital cost associated with the standards, and the Advisory Group will test the documentation/process to ensure it does not exceed the \$10,000 benchmark established during scoping.

Implementation of the 'Build Green Christchurch' tool

20. We support the 'Build Green Christchurch' tool being a mandatory standard that new office, retail (shops, cafés, bars and restaurants), apartments and mixed use buildings within the Central City need to pass to become a permitted activity under the District Plan (volume 1, page 44).

21. Regulating green building standards through Local Authority policy is widespread internationally and the approach proposed in the draft plan for the 'Build Green Christchurch' tool is in line with international practice. In reaction to the draft plan, some parties are claiming that regulating green building practices through the 'Build Green Christchurch' tool is an extreme approach. We disagree with this view based on a mandatory approach being aligned with international practice and the tool setting an achievable standard.

22. The NZGBC is currently producing a research report for CCC that will identify and explore international examples of mandatory green building standards. This will further inform and prepare CCC for future discussions relating to the 'Build Green Christchurch' tool and its use as a mandatory standard.

Green Star Mixed Use

23. There are now Green Star rating tools available to rate office, education, and industrial buildings. To ensure the criteria are relevant to the building's primary use, buildings must have more than 80% of their floor area dedicated to these uses to be eligible.

24. It is anticipated that many of the new buildings in the Central City will be mixed use, and, due to proposed height restrictions, that many buildings will not have more than 80% of their floor area dedicated for office use.

25. As a result it is anticipated that only a small proportion of the buildings to be constructed as part of the Central City rebuild will be able to be rated under Green Star. As incentives are being proposed for Green Star rated buildings, this could create an inequitable situation. Therefore we strongly recommend that Council works in partnership with the NZGBC, and supports the expansion of the Green Star system to cover mixed use buildings.

Financial and non-financial incentives for green buildings

26. We support the principle of incentivising green buildings through a range of financial and non-financial incentives. To ensure that incentives are successful in Christchurch it is essential that CCC research and adopt an incentives programme that is tailored to the Christchurch development situation to avoid perverse outcomes and ensure that the potential for green buildings is maximised.

27. We support the CCC vision for a compact, vibrant and appropriately scaled Central City. However we are aware that there is significant industry concern regarding the proposed approach to height limits. As a result we have some concern regarding the proposed linking of additional height and volume incentives to achieving a 5 Green Star rating. We therefore recommend that CCC gives further consideration to the range of incentives options offered for Green Star buildings.

28. We support the Council's vision for a compact Central Business District (CBD) supported by business incentives, new regulation and well-designed streetscapes.

29. The draft plan Incentives programme (volume 1, page 130), under the title "Development and Reserve Contribution Rebates (Commercial)" proposes, "These rebates will be tied to the completion and successful certification of a Green Star compliant building, and will apply only to the Compact CBD and health precinct". We support incentives for enabling a compact CBD but

suggest that incentives for enabling green building should be decoupled from incentives for enabling a compact CBD.

30. We are concerned that through limiting Development and Reserve Contribution Rebate incentives for Green Star buildings to the Compact CBD and health precinct this may result in green building occurring predominantly in the Compact CBD and health precinct and to a lesser extent than in the rest of the Central City. We suggest that incentives for enabling green building should apply across the Central City.

Green Pledge

31. We applaud the Council's proposal to provide strong leadership in developing green buildings and encouraging businesses to build or use green buildings through a visible Green Pledge (volume 1, page 43).
32. We have received feedback from our members/ tenants in Christchurch that businesses would welcome the opportunity to commit to a Green Pledge through building, owning and occupying green building.
33. The NZGBC is currently involved in the process for bringing NABERS (an Australian performance-based rating system for existing buildings) to New Zealand. When available, we encourage CCC to incorporate NABERS into the Green Pledge and therefore encourage a commitment to measuring the operational performance of buildings.
34. The NZGBC would welcome the opportunity to work with CCC to build support and raise awareness for a Green Pledge amongst our members.

Housing

35. Homestar is a comprehensive, national, voluntary rating tool that evaluates the environmental attributes of New Zealand's homes. By providing an assessment methodology and certification process for houses, Homestar's objective is to contribute to the improved health, comfort and environmental performances of homes and therefore communities.
36. Homestar is a Joint Venture partnership between BRANZ and the NZGBC. Together, with assistance from Beacon Pathway, we led industry professionals across the entire building and construction sector including from government, to develop a single residential rating tool for New Zealand's new and existing homes.
37. We applaud the CCC vision for a housing showcase in the Central City (volume 1, page 82). It is critical that these homes demonstrate simple and affordable sustainability measures to Cantabrians against a nationally recognised benchmark.

38. We recommend that Homestar be used as the methodology for assessing the overall performance of prospective designs and then for certifying the finished products to highlight the performance features of the homes. This will help ensure maximum benefit from the showcase by identifying the significant design aspects and making these features repeatable and transferable to other building projects in and around the city.
39. We support the Council's vision to bring more people into the city to live and the proposed residential incentives package which aims to accelerate this (volume 1, page 80). We note that the incentives will be based around criteria to ensure quality design and strongly recommend that achieving a 7 Star Homestar rating forms part of the criteria.
40. Homestar is now fully developed for standalone houses. A small amount of further development work is required to extend the criteria to apartments and terrace housing. This development work is currently scheduled to occur in late 2011.

Education and training

41. Education and training is an important consideration if a green rebuild is to be successful. The draft strategy sets out a bold vision for the Christchurch rebuild that will require a significant change in thinking and practice across a diverse range of stakeholders:
 - To achieve support from the wider community, an understanding of the basic principles of sustainable building will be needed
 - To create momentum, building owners, investors, and tenants will need to understand the benefits of changing from 'business as usual'
 - To enable a green rebuild, the construction industry will require the knowledge and skills to build sustainably
 - To lead a green rebuild, council staff will require an understanding of processes and tools, as well as a good understanding of basic green building principles and the need to adapt the consenting process.
42. An understanding of sustainable principles and practices is essential at all levels to ensure quality output, high productivity, cost effective building solutions and streamlined processes. International examples, such as the London Olympics 2012 development, have shown that success requires an informed and capable supply chain, across a diverse range of sectors.
43. Discussions at the recent NZGBC industry event, Green City Dialogues clearly indicated that education and training should be a key focus in preparations for a green rebuild. It is suggested that the plan is updated to incorporate a strong commitment to the necessary upskilling and education about green building.
44. NZGBC has the expertise and capability to deliver a range of training courses in built environment sustainability. Training can be delivered in-house, at dedicated training venues, or through an online eLearning platform. We recommended that CCC work with the NZGBC to

ensure a range of training courses in built environment sustainability are delivered in Christchurch. These could include:

- ‘Build Green Christchurch’ tool training – understanding and applying the new tool
- Fundamentals in green building – the basic principles of sustainable building
- Building green toolbox workshops – modular training tailored to requirements
- Green building for contractors – practical knowledge for sustainable construction
- Retrofit green – improving the environmental performance of existing building stock
- Green products and materials – understanding the impact of product selection and application.

Support and adopt a Communities sustainability rating tool

45. In recent years rating tools to assess the sustainability of new communities/neighbourhoods/precincts have been implemented internationally following on from the success of sustainability rating tools for buildings.
46. In the USA, LEED for Neighborhood Development (LEED-ND) is administered by the US Green Building Council (USGBC) and BREEAM for Communities is established in the UK. In Australia, the Green Building Council Australia (GBCA) is currently developing the Green Star Communities rating tool.
47. The use of a communities rating tool would align well with the proposed approach outlined in the draft plan to organise the Central City into defined precincts and neighbourhoods (volume 1, page 63).
48. The NZGBC are currently investigating opportunities for developing and delivering a communities sustainability rating tool appropriate to New Zealand, this includes the Beacon Neighbourhood Sustainability Framework and adapting Green Star Communities to a New Zealand context.
49. We recommend that CCC work with the NZGBC towards the development and delivery of a communities sustainability rating tool that can be used to assess and enhance new development proposals to enable better outcomes for Central Christchurch.

Greening the Roof project

50. The NZGBC is identified in the draft plan as one of the organisations involved in the Greening the roof project (volume 1, page 42). We support the CCC vision to embrace green roofs and give Central Christchurch a modern garden city image.
51. The draft plan (volume 1, page 42) proposes that CCC will establish at least five showcase examples of green roofs/walls within the Central City early in the redevelopment. We encourage CCC to not only consider extensive green roofs with shallow substrates but to investigate a number of green roof types, substrate types/depths and planting specifications with leading

experts to ensure that potential benefits are maximised. The showcase examples should be designed to demonstrate a range of benefits including biodiversity enhancement, stormwater management, visual amenity, insulation and access to open space.

52. The draft plan (volume 1, page 42) proposes that financial incentives will be available to install green roofs on selected domestic and commercial buildings. We encourage the CCC to investigate past and present international examples of Local Authorities incentivising and regulating green roofs for new developments to ensure that the most effective approach is adopted for Christchurch. An overview of international examples can be viewed [here](#).

53. The draft plan (volume 1, page 42) proposes that the Council will develop local guidelines to promote green walls and roof gardens and that best practice guides will be developed to suit local conditions, plant species and building designs. We encourage CCC to continue with this approach to ensure that green roofs/walls offer the most benefit to the Central Christchurch context. We suggest that the best practice guides set requirements that must be met in order to access the proposed financial incentives for green roofs.

Recommendations

We would like to outline a number of key recommendations taken from our feedback above:

- i. The changes to the City Plan relating to the 'Build Green Christchurch tool' (volume 2, page 13) should be updated to identify the economic rationale for green building in addition to the environmental benefits.
- ii. The 'Build Green Christchurch' tool should remain as a mandatory standard that new office, retail (shops, cafés, bars and restaurants), apartments and mixed use buildings within the Central City need to pass to become a permitted activity under the District Plan.
- iii. We recommend that CCC agrees to the draft tool being made publicly available for industry to review in detail and provide comment on.
- iv. CCC should work in partnership with the NZGBC to support the expansion of the Green Star system to cover mixed use buildings.
- v. CCC should give further consideration to the range of incentives offered for Green Star buildings to ensure that linking Green Star buildings with additional height and volume incentives does not result in negative outcomes.
- vi. Incentives for enabling green building should be decoupled from incentives for enabling a compact CBD. Incentives for enabling green building should apply across the Central City with other incentives available for enabling a compact CBD.

- vii. CCC should incorporate NABERS (when available) into the Green Pledge and therefore encourage a commitment to measuring the operational performance of buildings.
- viii. CCC should work with the NZGBC to build support and raise awareness for a Green Pledge amongst our members.
- ix. Homestar should be used as the methodology for demonstrating simple and affordable sustainability measures in the homes featured in the housing showcase.
- x. Achieving a 7 Star Homestar rating should form part of the criteria to ensure quality design under the proposed residential incentives package.
- xi. The plan should be updated to incorporate a strong commitment to the necessary upskilling and education relating to green building.
- xii. CCC should work with the NZGBC to ensure a range of training courses in built environment sustainability are delivered in Christchurch.
- xiii. CCC should work with the NZGBC towards the development and delivery of a communities sustainability rating tool.
- xiv. CCC should not only consider extensive green roofs with shallow substrates but investigate a number of green roof types, substrate types/depths and planting specifications with leading experts.
- xv. Best practice guides for green roofs should set requirements that must be met in order to access the proposed financial incentives for green roofs.

The NZGBC does wish to appear and be heard at the public hearings.