



The case for sustainable healthcare

In both Australia and New Zealand, the population is ageing, the tax-payer base is declining and serious health issues such as heart disease and diabetes are increasing.

Australian healthcare spending was \$170 billion AUD or 10% of Australia's gross domestic product (GDP) in 2015-16. Healthcare spending in NZ was \$16.2 billion NZD for the 2016-17 financial year. Hospitals typically use at least twice as much energy, and around six times as much water per square metre, than commercial office buildings. The costs associated with energy, water use and greenhouse gas (GHG) emissions continue to rise.

We must become smarter about stretching our healthcare spend and deliver the most efficient healthcare infrastructure to heal patients faster and more effectively and for healthcare professional productivity.

Healthcare providers have come to the GBCA and NZGBC asking for help to build more efficient, certified facilities.

Green Star certification provides an internationally-recognised mark of trust for the design, construction and operation of sustainable buildings.

Green Star provides government, owners, managers, staff, patients and the community with the assurance that they are gaining a building that is healthier and more productive for staff, patients and visitors, as well as being cost effective to run.

Green Star certification is available for new buildings (Green Star - Design and As Built), fitouts (Green Star - Interiors) or for the operational management of buildings (Green Star - Performance).

The many benefits of sustainable healthcare facilities – backed up by research, evidence and case studies – are detailed in *The Case for Sustainable Healthcare*, available at www.nzgbc.org.nz and www.gbca.org.au



More cost effective

- Green Star-certified buildings use 66% less electricity than average Australian buildings, 62% fewer greenhouse gas emissions, and use 51% less potable water.
- An analysis of Green Star-certified healthcare facilities showed that hospitals and healthcare facilities produce 57% fewer greenhouse gas emissions than average healthcare buildings.
- The World Green Building Council's Business Case for Green Building showed that a minimal 2% upfront cost to support green design can result, in life cycle savings of 20% of total construction costs.



Better places to heal

Research from green hospitals in operation shows:

- 41% reduction in average length of stay for patients in sunlit rooms over dull rooms
- 30% reduction in medical errors
- 11% reduction in secondary infections
- Faster recovery rates overall and reductions in pain medication.



If you have a patient who has a very positive journey, in an environment where they feel comfortable, and their needs are met not just on a clinical level, but are also supported at a social and spiritual level, their care journey will be optimised.

– Megan Gray, Project Director, Olivia Newton-John Cancer & Wellness Centre

Green Star-certified healthcare facilities are:



Better places to work

- Harvard University research found that green buildings improved productivity over 26%. A conservative estimate of improved productivity of 10% in a green building will lead to huge savings in large organisations such as hospitals.
- Pre- and post-occupancy studies published by the WGBC illustrate:
 - A reduction of four sick days per employee per year and a 27% reduction in staff turnover.
 - A 19% reduction in absenteeism.



We would very much like to work in healthy, well lit, energy efficient hospital buildings. I think most healthcare professionals would. All NZ healthcare buildings should be Green Star rated to help improve the value we get from buildings as long-term investments and to create environments in which our patients, families and staff thrive.

– David Galler, Intensive Care Consultant, Counties Manakau District Health Board



Can contribute to national emissions reductions targets

- Under the Paris Agreement, NZ has committed to reduce greenhouse gas emissions by 30% below 2005 levels by 2030, and Australia by 26-28% below 2005 levels by 2030.
- In Australia and NZ, buildings are responsible for around 23% and 20% of total emissions respectively. Healthcare facilities are one of the biggest energy users and sources of GHG emissions. Australia has almost 700 public hospitals and over 620 private hospitals. NZ has 87 public hospitals and 80 private hospitals. These figures, together with the growing number of aged-care facilities, makes the potential for savings significant.



Deliver accountability and credibility

- Green Star provides certainty and independent verification that benchmarks have been met, unlike buildings which claim to be 'designed to' Green Star standards without engaging in the certification process.



Green Star certification is the way to ensure that green designs are seen through to the built form. Without certification, architects and engineers tell us green measures are often value engineered out

– Andrew Eagles, CEO, NZGBC