



CB FEATURE - Bob Burnett Architecture – Homestar Rating

BUSTING THE MYTHS ON ENERGY EFFICIENT HOMES

By **Rachel Smith**

“I am looking forward to our first winter here,” says Bob Burnett.

Bob expects to be energy positive over the course of the year, and describes the buildings at 9 and 11 Church Square in Addington as a culmination of his life work to date – that is 30 years as an architectural designer and 16 years since he founded Bob Burnett Architecture.

Energy efficient homes, mainly on the Port Hills, have been the mainstay of the firm since its inception. The beauty of their office and demonstration home at 11 Church Square is in its design, the feel of its interior spaces and its simple lines, with the home being the first to receive a 10 Homestar Built rating from the New Zealand Green Building Council.

“We are very design focused. This home is a really good example of how everything works together in an integrated design,” he says. “Achieving a 10 Homestar Built rating is really hard, but a zero energy house is not rocket science.”

The two homes are constructed from readily available materials, with their success all about how they are put together and the construction details, to create what Bob describes as a high performance thermal envelope.

“There is a huge amount to think about in a well-designed home – much more than just energy and sustainability,” says Bob. “The house needs to have design integrity, function well and should also look and feel good with an appealing aesthetic, as well as deliver longevity, durability, weather tightness and earthquake resilience.”

Concealed in a cupboard under the stairs of number 11 Church Square is the plant room which is part of the secret to no power bill. There are 18 PV solar panels and a new saltwater battery backup. Solar energy powers a heat pump which supplies hot water to both the hot water cylinder and the hydronic underfloor heating.

Thermal energy is stored in the larger than normal special type of hot water cylinder, and also the thermal mass of

the fully insulated concrete slab – as this is provided by solar power, Bob considers both as secondary batteries. A daylight sensor means the system is off at night, and eliminating thermal bridging or leaked heat, means a cosy

20°C is maintained even when there is a frost outside.

The three-bedroom home has a footprint of 140sqm and uses a new Gibfix® framing system, which significantly reduces the amount of timber used and allows room for more



insulation – a system which Bob says is set to become industry standard. The design includes everything from insulated edges of the concrete floor slab, a solar wall linked to an energy recovery ventilation system and recessed European style uPVC windows, to combined rainwater and

grey water systems, water-efficient fittings and a solar-powered electric-car charging port.

“It is a myth that it is too expensive to build well-designed, energy efficient homes,” says Bob, who is seeking to share their innovations through the Superhome movement. “These demonstration homes are modest, affordable homes.”

The aim of the industry-led Superhome movement is to bring together like-minded people from the industry, to create awareness and influence better standards in

mainstream home builds. More people are joining nationwide everyday.

The health implications of living in cold, damp homes is something that Bob has personal experience of in post-earthquake Christchurch, and this has strengthened his resolve to share knowledge on how things can and should be done better.

The recent Exemplar Homes Tours, supported by the Christchurch City

Council, saw around 2000 people visit a range of properties across the city. Each of the homes showcased sustainable, innovative and affordable design, and all were the work of just some of the companies involved in the Superhome movement.

“People were able to touch, feel and experience these homes,” says Bob, with the chill of an autumnal day highlighting their warmth.

Bob says the current New Zealand Building Code meets only a 3 Homestar rating, with the completed build in practice lower than this due to poorly installed insulation in 75 per cent of homes. Such is the impact of even small errors, that Bob installed the insulation

himself at the 10-star home.

“We need to be thinking of not just the initial cost but the ongoing cost of living in and maintaining these homes, and return on investment,” says Bob. “Masses of amounts of money is being squandered on building unhealthy homes which harness homeowners to large power bills.”

The completed demonstration projects have led to new territory for Bob Burnett Architecture, including designing 6 Homestar rated medium density social housing for the Christchurch City Council.

For more information, visit www.10star.co.nz, www.superhome.co.nz, or talk to the team at Bob Burnett Architecture about your specific design - call 0800 002 674, visit www.bbarc.com and Facebook.

“It is a myth that it is too expensive to build well-designed, energy efficient homes.”



“Masses of amounts of money is being squandered on building unhealthy homes which harness homeowners to large power bills.”





Canterbury Rebuild, Canterbury

01 Jun 2016, by Rachel Smith

General News, page 28 - 990.00 cm²
Magazines Trade - circulation (Monthly)

ID 609053443

BRIEF ADNZ(W)

INDEX 1

