

ABSTRACT

This paper examines the first Eco-house that was built by the Wellington City Council (WCC) in 1995. With this project, the WCC began to take up the challenge to reduce the wasting of energy and material resources. The building is the result of an architectural design competition which was initiated by the WCC to promote sustainable urban design and architecture. The architects Anna Kemble-Welch and Martin Hanley won the competition for the Eco-house. Their built solution is a compact, user and environmentally friendly home of about 112m² that could be built for NZD 120,000.

This paper traces the different design and construction techniques used for the Eco-house. It explores the ideas pursued by the architects in terms of energy conservation, material resources and water conservation, as well as allogen aware design that is linked to sustainable architecture. This paper deals with how these theoretical ideas were transferred into the building itself and the desired effects of each solution.

Having outlined the design and construction techniques of the Eco-house, this paper provides a critical reassessment. The critique reveals which techniques were not evolved enough to yield the desired effects in terms of ecological design. It also illustrates developments in sustainable design since 1995 and offers suggestions on what might be done differently if a similar project was carried out today.

The paper shows that the Eco-house is still a landmark example for the theory and practice of sustainable architecture in Wellington, but the focus has grown since 1995. In some aspects material choices and building methods of the Eco-house are now dated, as well as the design process that needs to be revised to reach the goals of today's problems.