

Australian Ethical Investment: best practice waste management at Trevor Pearcey House

Introduction

Trevor Pearcey House is a 19-year-old building in the Fern Hill Technology Park, Bruce, in the Australian Capital Territory. The refurbished block has become the new head office for Australian Ethical Investment and has been designed to be an exemplary green building.

Australian Ethical Investment (AEI) is an Australian investment company which specialises in environmental and socially responsible investment. AEI's philosophy is to promote ecologically sustainable and socially just enterprises through careful investment and to improve the ethics of corporate Australia.

Trevor Pearcey House is rated by the Green Building Council of Australia (GBCA) as a six-star Green Star building, the first to achieve a six-star rating in the Australian Capital Territory and the third in Australia. One aspect of the project that resulted in a six-star rating was the commitment to re-use and recycle materials from the demolition phase of the project in the fit-out of the building. A recycling rate of greater than 80 per cent by weight was achieved and there was additional recognition for innovative ways of incorporating re-used and recycled materials into the building. Use of recycled and re-used material

Waverley Council substituted 15 tonnes of glass cullet into the road projects, 7.5 tonnes into asphalt and 7.5 tonnes into concrete.

Use of recycled and re-used material

The architects and construction managers Cobul Constructions worked collaboratively to ensure as many materials as possible were re-used in the construction. This included:

- electrical wiring
- ducted skirting
- power point and switch face plates
- partition wall studs
- plasterboard and frames for windows and doors
- internal doors, door handles, door stops and internal glass blocks
- carpet tiles, which were re-used and supplemented with more recycled carpet tiles (Ontera Carpets)
- steel hanging frames and mesh found in the ceiling space which were re-used to make a bike enclosure
- 90 per cent of the joinery cupboards being made from old cupboards found in the building
- recycled timber used for feature floors and walls.

Some of the recycling led to inspired elements within the building such as two walls made from old timber palettes and, most notably, art work made from old computer mother boards.

Drivers and benefits

Drivers:

The key driver for the sustainability of the building was the overall philosophy of the client, Australian Ethical Investment. The GBCA's Green Star tool was used both as a driver and as a measure of achievement. Although the Australian Capital Territory Government does implement the 'No Waste by 2010' regulation as part of the development application process, the Green Star requirements were more stringent, set a higher standard and superseded the Australian Capital Territory Government regulation. The main drivers for achieving high recycling and re-use rates were:

- Australian Ethical Investment's business philosophy and commitment to sustainability
- a target of six stars on GBCA's Green Star rating tool
- the Australian Capital Territory Government's 'No Waste by 2010' policy

Benefits:

The main benefits for Australian Ethical Investment have been demonstrating their commitment to their philosophy and the attention they have received for being early adopters and innovators. Reclaiming and recycling materials is intuitively less costly, however the extra labour cost balances out the savings. The material cost savings, particularly from the carpet, were spent on other aspects of the sustainable design.

Problems and challenges

The client's brief stipulated that costs must be balanced and that the cost must not exceed that of a conventional fit-out. In this way the challenge was to balance how far to go with recycling and re-use without affecting the budget.

From the architect's point of view, specifying recycling of materials can be seen as a risk as it is hard to define the extent of recycling that can take place until the project is underway. Specifying recycled materials from the demolition requires that the design team accurately documents the demolition material as it comes out of the building, and that it is carefully handled and stored for re-use. This requires careful management of the project and close cooperation between the client, design team and contractors.

Solutions

Collard Clarke and Jackson Architects are experienced in recycling and re-using materials from demolition. It has become standard practice for them to consider the opportunity for recycling and re-using materials from demolition. Commitment to recycling and re-use across the project team is key to delivering high recycling and re-use rates. Having an experienced and motivated project team who are willing to collaborate and apply innovative thinking delivers optimal recycling and re-use rates.

Opportunities for other projects

Every building fit-out project is different, with different construction and demolition waste products offering new opportunities for innovative re-use. The lessons learned by the project team responsible for this project will carry forward to future projects and enable the architects and builders to consistently achieve high construction and demolition recycling and re-use rates and to reduce costs and time during the design, specification and construction of a building.

Contacts and links

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References and links

Much of the information in this case study has been taken from the *Environment Design Guide*, an initiative of the Australian Institute of Architects

<http://www.environmentdesignguide.com.au/pages//content/cas--case-studies/cas-50-australian-ethical-investment-headquarters-6-star-green-star-office-refurbishment-canberra.php>

Consultation

Howard Pender, Australian Ethical Investments, June 2011

Kevin Miller, June 2011

Robin Mellon, Green Building Council of Australia, June 2011

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