

## Heritage and Sustainability

### Policy

**The retention and conservation of heritage places has an important part to play in our actions to protect the environment, creating vibrant communities and sustaining local economies.**

### Background

The conservation of heritage places makes an important contribution to environmental, social and economic sustainability. The environmental sustainability benefits afforded by the retention of heritage places (through conservation and appropriate maintenance) include the substantial reduction in building, demolition and new construction waste, and the conservation of embodied energy in the existing buildings.<sup>1</sup>

Embodied energy is the energy consumed by all of the processes associated with the production of a building. The energy embodied in existing building stock is equivalent to ten years of the total energy consumption for the entire nation.<sup>2</sup> While it has been recognised as a global priority to continue to use existing heritage building stock, their energy efficiency can be improved.<sup>3</sup> Existing building stock has been regarded as a significant source of wasted energy in relation to energy consumption.<sup>4</sup> Actions to improve energy efficiency for heritage places – either as a particular goal for environmental reasons or as part of an alteration or adaptation – should optimise traditional building performance by reducing and monitoring energy usage and complying with relevant legislation.

### Environmentally sustainable heritage conservation

Sustainable development is integral to heritage conservation. Retaining heritage places amounts to a substantial environmental and financial saving in embodied energy, without the need for replacement building materials or the creation of waste. Recurring embodied energy savings increase dramatically once a building reaches over 50 years in age.<sup>5</sup> The reuse of building materials generally provides a 95% saving of embodied energy that would otherwise be wasted.<sup>6</sup>

Retaining building materials *in situ* has a much higher embodied energy saving than their removal and reuse. Some materials including bricks and tiles can suffer damage losses up to 30% in reuse.<sup>7</sup> Consideration should be given to the many simple and cost effective actions that can be undertaken to improve the energy efficiency of heritage places, including, where appropriate, the introduction of insulation and double or secondary glazing.

HERITAGE  
COUNCIL  
HERITAGE  
COUNCIL  
HERITAGE  
COUNCIL



### Socially sustainable heritage conservation

Heritage places contribute to the quality of life and cultural identity of local communities. Heritage conservation helps ensure viable, liveable and interactive communities for future generations through the retention of significant landmarks (such as the post office, court house, town hall, school, place of worship, public park and botanic garden) and heritage areas (such as residential neighbourhoods, and commercial and civic precincts). Consideration should be given to the retention of well-designed and cared-for streets that promote community interaction, provide a safe environment, enhance the character and comfort of the neighbourhoods, encourage people to walk for short trips and increase property demand and resale value.<sup>8</sup>

### Economically sustainable heritage conservation

Heritage conservation has the potential to assist local economies through employment opportunities (for specialised industries and as a result of population growth) and through generating additional investment. Equally importantly, the conservation of heritage places substantially reduces financial costs associated with the loss of embodied energy. Internationally, the retention of heritage places is an important financial consideration.<sup>9</sup> An economically sustainable outcome may therefore be achieved through the retention, conservation and adaptation of heritage places where it contributes to broader local and regional economic benefits.

### Action

The Heritage Council of Victoria and Heritage Victoria are working with the Building Commission and the Office of the Victorian Government Architect to document case studies and promote the contribution heritage conservation can make to sustainability.

## NOTES

- <sup>1</sup> S. Balderstone, 'Built Heritage: A Major Contributor to Environmental, Social and Economic Sustainability', Sustainability Discussion Paper, 1 August 2005, p.2, [www.heritage.vic.gov.au/pages/pdfs/sustainable.pdf](http://www.heritage.vic.gov.au/pages/pdfs/sustainable.pdf).
- <sup>2</sup> S. Tucker, 'Embodied and Lifetime Energies in the Built Environment', extract from the CSIRO online brochure at <http://www.dbce.csiro.au/ind-serv/brochures/embodied/embodied.htm>, 7 March 2000, p.1.
- <sup>3</sup> *Guide to Building Services for Historic Buildings: Sustainable services for traditional buildings*, The Chartered Institution of Building Services Engineers, London, 2002, p.1.
- <sup>4</sup> 'Member Survey: Energy Efficient Design in the Commercial Building Sector', report prepared by the Australian Institute of Refrigeration, Air Conditioning and Heating, May 2003, p.6.
- <sup>5</sup> D.D. Rypkema, 'Economics, Sustainability, and Historic Preservation' in *Forum Journal*, Winter 2006, vol.20, no.2, National Trust Forum, National Trust for Historic Preservation, Washington D.C., U.S.A., and excerpted in *Preservation Seattle: Historic Seattle's online monthly preservation magazine*, Public Policy, April 2006, p.5 at <http://historicseattle.org/preservationseattle/publicpolicy/defaultSEPT06.htm>.
- <sup>6</sup> Tucker, op.cit.
- <sup>7</sup> *ibid.*
- <sup>8</sup> C. Reardon & S. Woodcock, 'Introduction' in *Technical Manual: Design for Lifestyle and the Future*, 3<sup>rd</sup> edn., Commonwealth of Australia, 2005 at [www.greenhouse.gov.au/yourhome/technical](http://www.greenhouse.gov.au/yourhome/technical).
- <sup>9</sup> For example, the World Bank has stated that "the key economic reason for the cultural patrimony [heritage] case is that a vast body of valuable assets, for which sunk costs have already been paid by prior generations, is available. It is a waste to overlook such assets." quoted in Rypkema, op.cit., and see 'Cultural Heritage and Development: A Framework For Action in the Middle East and North Africa', World Bank, 2001, p.50, at [http://www.wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2001/08/04/000094946\\_01072504014633/Rendered/PDF/multi0page.pdf](http://www.wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2001/08/04/000094946_01072504014633/Rendered/PDF/multi0page.pdf).

---

Prepared by Dr David Rowe with Susan Balderstone, Joanne Day and Jim Gard'ner for the Technical Advisory Committee of the Heritage Council of Victoria.

Endorsed by the Heritage Council of Victoria, April 2008.

Published by the Heritage Council of Victoria, April 2008.

© Heritage Council of Victoria, 2008.

This publication is copyright. No part may be reproduced by any process except in accordance with the *Copyright Act 1968*.

Authorised by the Heritage Council of Victoria, 8 Nicholson Street, East Melbourne

ISBN 978-0-9805126-1-8

This publication was funded through the strategy, *Victoria's Heritage: Strengthening our Communities*.

For more information contact Heritage Victoria on 9637 9475 or at [www.heritage.vic.gov.au](http://www.heritage.vic.gov.au)

### Disclaimer

This publication may be of assistance to you but the State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication.