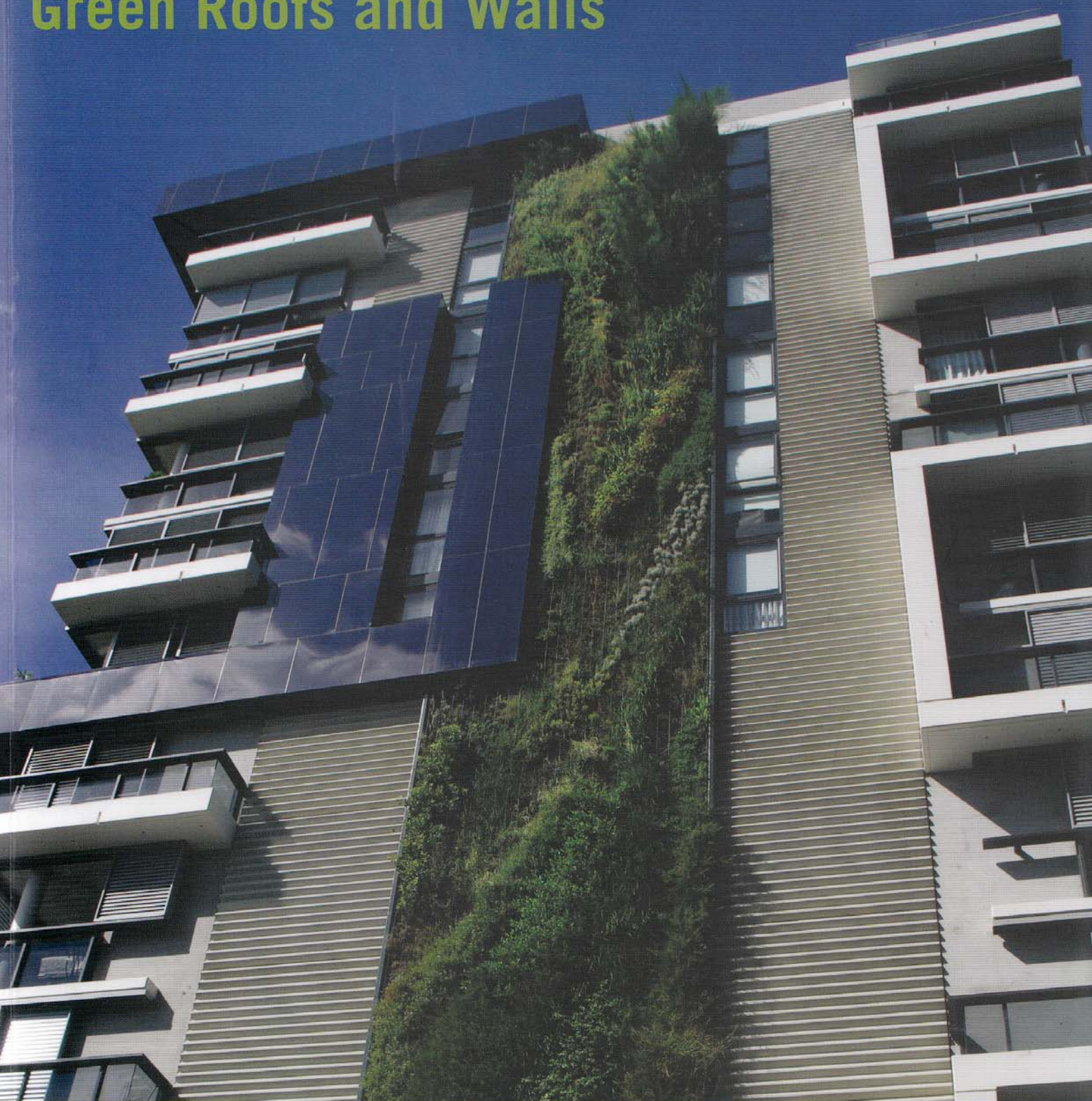
LIVING ARCHITECTURE

Green Roofs and Walls



Graeme Hopkins and Christine Goodwin

HEAD FOR THE HILL

In April of 2009, the Committee for Melbourne's Future Focus Group launched the 'Growing Up' Green Roof design competition to demonstrate and promote the benefits of green roofs on city buildings. This initiative was in response to the Committee for Melbourne's Future map 2030 Climate Change Taskforce recommendation to increase Melbourne's resilience to climate change by installing green roofs on city buildings, enhancing the city's liveability and its reputation as a centre for biotechnology, creativity, research and development, and culture.

The Future Focus Group short-listed three city buildings and called on landscape architects and architects to design green roofs for one or more of them. Through the support of a number of key sponsors and in-kind contributors, the most sustainable and innovative green roof design would then come to life on the winning building. The judging panel for the competition, chaired by Geoffrey London, the Victorian Government Architect, included representatives from VicUrban, Green Roofs Australia, Melbourne Water, Property Council of Australia (Victoria) and AILA (Australian Institute of Landscape Architects) Victorian Chapter.

BENT Architecture

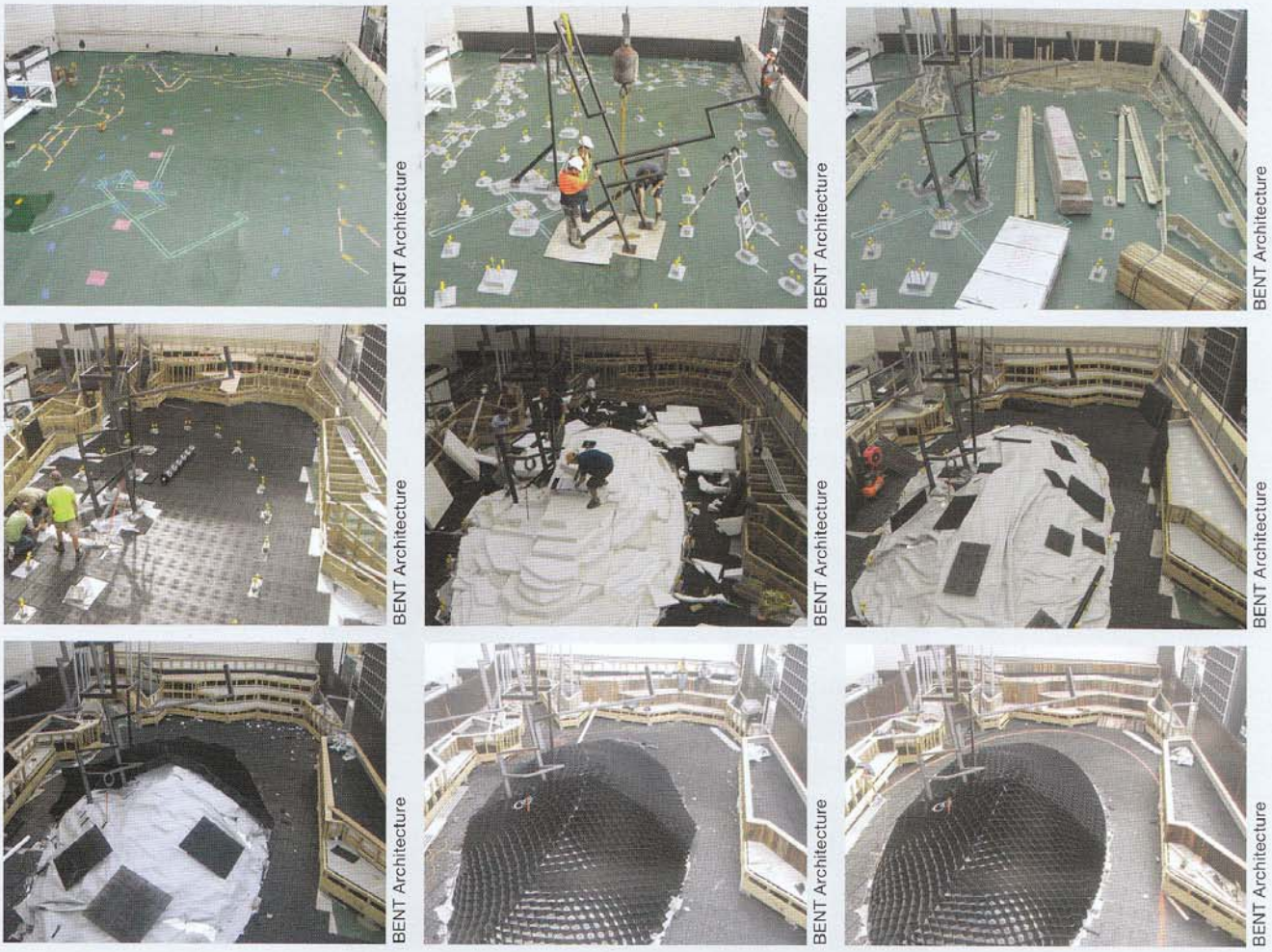
BENT Architecture

BENT Architecture

131 Queen St and BENT Architecture were announced as the winning building and designer on Thursday 7 May 2009 at the Australian Institute of Landscape Architects national conference. BENT Architecture's winning entry, entitled 'Head for the Hill', proposed a central landscaped hill, around which a singular circulation zone expands and contracts to create a number of gathering spaces of varying scales and orientations. Bound by edges of seating and planting, inhabitants are to be completely surrounded by greenery along a continuous experience of the roof. Traditional garden structures, such as a folly, gazebo and terracing create diversity along the journey. 'Head for the Hill' aims to showcase the environmental, social and economic benefits of green roofs through the creation of an oasis within the city – a place that is both connected to, and protected from, its surrounds.

In addition to the environmental and recreational benefits that the design offers, the building owners and the city at large, the proposal also performs a research function. Monitoring equipment, a centralised roof water collection and irrigation system and a micro-weather station will allow researchers from the University of Melbourne to collect green roof performance data that will be available for future use. Construction of the winning design is currently underway and is due to finish in mid 2010.

BENT Architecture



Living Architecture provides design inspiration and practical advice on green roofs and living walls, and shows how they can be used to adapt to climate change. Extensively illustrated with photographs and drawings, it highlights the most exciting green roof and living wall projects in Australia and New Zealand within an international context.

Cities around the world are becoming denser, with greater built form resulting in more hard surfaces and less green space, leaving little room for vegetation or habitat. One way of creating more natural environments within cities is to incorporate green roofs and walls in new buildings or to retrofit them in existing structures. This practice has long been established in Europe and elsewhere, and now Australia and New Zealand have begun to embrace it.

The installation of green roofs and walls has many benefits, including the management of stormwater and improved water quality by retaining and filtering rainwater through the plants' soil and root uptake zone; reducing the 'urban heat island effect' in cities; increasing real estate values around green roofs and reducing energy consumption within the interior space by shading, insulating and reducing noise level from outside; and providing biodiversity opportunities via a vertical link between the roof and the ground.

This book will appeal to a wide range of readers, from students and practitioners of architecture, landscape architecture, urban planning and ecology, through to members of the community interested in how they can more effectively use the rooftops and walls of their homes or workplaces to increase green open space in the urban environment.

ABOUT THE AUTHORS

Graeme Hopkins is a registered architect and registered landscape architect. **Christine Goodwin** is an artist with a research Masters degree in architecture. Each has over 30 years of diverse professional experience and together, through Fifth Creek Studio, they focus on living architecture, green roofs and living walls. Their practice includes design, research and experimental trials, and they have made numerous presentations at conferences and contributed to journals and books on living architecture and green infrastructure.

This book will be fundamental to the future growth of the industry in Australia. It has an excellent mix of plans and cross-sections with photographs and descriptions of design intent, and will appeal to a diverse reader base. The subject is relatively new in Australia but its recent growth has been enormous, making this book a much needed resource.

Sidonie Carpenter
Landscape Architect, Green Canopy Design Pty Ltd, and President, Green Roofs Australasia

This book brings the current knowledge on adding biodiversity and habitat to high density human communities, into sharp relief. It will be the springboard for future research and green (living) design into the coming decades and will be essential reading for practitioners of architecture and landscape architecture, and organisations charged with the responsibility to create sustainable communities.

Chris Daniels
Professor of Urban Ecology, University of South Australia

CSIRO
PUBLISHING

ISBN 978 0 643 09663 9