

## Research Highlights

### Sustainable Settlements: Energy and Urban Form

An important focus of the work of the CBPS is on the planning and construction of sustainable human settlements. There are several current projects under this theme which seek a more holistic understanding of energy consumption in towns and cities. Stephen Pullen's research focuses on embodied energy and urban form, and has the overall aim of determining optimum configurations for urban development and renewal, to minimise resource consumption. Pullen's work is contributing to an ARC Linkage Project on 'Water and Energy Profiles for Sydney: Towards Sustainability' with Professor Bill Randolph, and the City Futures Centre for Research at the University of New South Wales. This project is deriving data on both energy and water consumption from a number of different urban dwelling configurations. Embodied energy information is being included in the overall analysis to give a clearer picture of total life cycle energy of various residential forms.

In related work Dr Alan Perkins of the SA Department of Transport, Energy and Infrastructure and Professor Steve Hamnett are extending the findings of Perkins' PhD research into the contribution which

different built environments and transport systems make to greenhouse gas emissions. A methodology for assessing the total life cycle transport and building-related energy consumption and greenhouse gas emissions from urban development has been developed. This is currently being applied to a series of case studies in the Adelaide city centre, to complement earlier case studies undertaken at suburban locations.



### Integrated Land Use and Transport Planning

Professor Steve Hamnett was a Chief Investigator (with Professor Michael Taylor of the Transport Systems Centre) on an ARC Linkage Project on 'Land Use, Travel Behaviour and the Viability of Different Forms of Transport' which was completed in 2004. The industry partners for this project were Planning SA and Transport SA. The project was successful in developing an innovative micro simulation model of individual and household activity

and travel patterns through the work of Min Xu whose PhD research was funded by the grant. This project was also successful in establishing a series of databases relating to land use, travel patterns, transport infrastructure, socio-economic characteristics and a variety of other factors relevant to the study of land use-transport relationships which can form the basis for further corridor and related studies. Funding has been sought for a further Linkage Project on 'Neighbourhood Quality and Accessibility' (Primerano and Hamnett), with Planning SA as the industry partner.

### Planning to Mitigate Bushfire Risks

Following the disastrous Eyre Peninsula bushfires in early 2005, Associate Professor George Zillante, in collaboration with Warrington Fire Research, was contracted to undertake a study of ways of reducing



bushfire risks through improved construction and planning approaches. A key element in the risk mitigation process is to provide policy-makers and decision-makers with the information and decision-support tools that facilitate effective risk management. A major outcome of this project was the development of a more rigorous approach to bushfire hazard mapping which will be incorporated into the forthcoming Ministerial Bushfire Plan Amendment Report.

### Housing and Social Mix

Dr Kathryn Arthurson is a Senior Research Fellow and is undertaking an ARC funded post-doctoral project on 'Social Mix and Social Exclusion in Disadvantaged Communities: Clarifying the Links between Policy, Practice, and the Evidence Base'. With Dr Keith Jacobs (University of Tasmania), Kathy has also recently co-authored an article on 'Social Exclusion and Homelessness' for a special issue of the journal 'Parity' and, with Dr Lionel Orchard of Flinders University, has

contributed a chapter to the book 'State of South Australia' (edited by John Spoehr), published in June 2005.

In February 2005, Kathy completed a paper on 'Conceptualising and Measuring the Housing Affordability Problem' with Michelle Gabriel, Keith Jacobs (University of Tasmania) and Professor Terry Burke (Swinburne). This paper provides crucial background analysis for the Australian Housing and Urban Research Institute (AHURI) collaborative research venture on 'Housing Affordability for Lower Income Australians', being undertaken by a number of Research Centres.

Kathy is currently co-authoring a book with Dr Scott Baum (University of

Queensland) on 'Understanding Disadvantaged Neighbourhoods: International Quantitative and Qualitative Approaches'. The latter activity forms part of the ARC Network for Research in Spatially Integrated Social Sciences for which Kathy and Scott are both chief investigators.

Debbie Faulkner joined the CBPS in March 2005 to work on a major AHURI project (CRV 2). The project is investigating ways in which housing careers are changing in Australia and the implications for government-provided housing assistance and policy. This project is jointly supervised by Professor Andrew Beer of Flinders University.

## International Activities



The CBPS has had a long involvement in training activities for planning and building professionals in developing countries, particularly in the Asia-Pacific region. Recent training courses include:

- **Planning and Environmental Impact Assessment**  
For the Ministry of Town and Country Planning, Fiji (February 2005)
- **Effective District and Provincial Planning**  
For government officers from Indonesia (AusAID/IASTP, May-June 2004) (with Monash University)
- **Sustainable Settlement Planning**  
Training modules for the government of Sarawak, co-ordinated by Flinders University (March 2004-July 2005)

## Selected Publications

- Arthurson, K (2004) **'Conceptualising Social Inclusion in Estate Regeneration Policy: What Part Does Public Housing Play?'**, Just Policy.
- Arthurson, K (2004) **'From Stigma to Demolition: Australian Debates about Housing and Social Exclusion'**, Journal of Housing and the Built Environment, Vol.19, Issue 3, pp255-270.

- Arthurson, K (2004) **'Social Mix and Disadvantaged Communities: Policy, Practice and the Evidence Base'** Practice Review, Urban Policy and Research, Vol.22 (1).
- Arthurson, K (2004) **'A Critique of the Concept of Social Exclusion and its Utility for Australian Social Housing Policy'**, Australian Journal of Social Issues special edition on Social Exclusion and Social Inclusion, Vol 39 (1), February 2004.
- Perkins, A. and Hamnett, S. (2005) **'The Significance of Urban Form**

- in **Creating More Greenhouse-Friendly Cities'** Paper to the Asian Planning Schools Congress, Penang, 12-13 September.
- Perkins, A and Hamnett, S. (2005) **'The Influence of Urban Form on a City's Total Transport and Built Environment Greenhouse Gas Emissions'** Paper to the American Collegiate Planning Schools Conference, Kansas City, 24-27 October.
- Pullen, S. and Hamnett, S (2005) **'Adelaide and Urban Sustainability'** Paper to the CIB Sustainable Building SE Asia Conference, Kuala Lumpur, April.

- Taylor, M.A.P.T, Xu, Min and Hamnett, S.L (2005) **'Microsimulation Modelling Of Travel Behaviour – An Alternative Approach For Detailed Study Of Transport And Land Use'** Paper to the 9th International Conference on Computers in Urban Planning & Urban Management, London, UK, June.
- Zillante G & England P (2005) **'Bushfire Mapping – The South Australian Experience'**, Paper for the AUBEA & COBRA International Conference, QUT Research week, Brisbane, Australia, 4-8 July.

- Zillante G & England P (2005) **'Bushfire & Development Discussion Paper'**, Planning SA (SA Government) Adelaide, Australia, July.
- Zillante, G. and Hamnett, S. (2005) **'Planning to mitigate environmental risks: An Australian case study of planning for bushfire prone areas'** Paper to the Eastern Region Organisation for Planning and Housing Conference, Yogyakarta, 19-21 September.

- Zuo J & Zillante G (2005) **'Project Culture within Construction Projects'**, Paper for the IGLC Conference (International Group for Lean Construction) Sydney, Australia, 19-21 July.

## CBPS Members



Dr Kathy Arthurson



Professor Steve Hamnett  
Director: Planning



Deborah Faulkner



Stephen Pullen  
Director:  
Energy and Built Form



Associate Professor  
George Zillante  
Director: Building

## Key Interest Areas

- Asset and Facilities Management
- Building Codes
- Building Surveying
- Bushfire Safety
- Continuing Education for Built Environment Professionals
- Development Assessment
- Embodied Energy in Buildings and Settlements
- Energy Efficiency in Buildings
- Fire Technology
- Housing Research and Policy Studies
- International Short Courses in Planning, Building and Urban Management
- Project Management
- Risk Management
- Strategic Planning
- Sustainable Settlements and Buildings
- Sustainable Urban Design
- Urban Regeneration

## New Staff members in Building and Planning

A number of new staff members have recently joined the Building and Planning disciplines at the University of South Australia and are beginning to make significant contributions to the work of the CBPS.

**Dr Jon Kellett**, Senior Lecturer in Planning, has researched and published extensively in the fields of natural resource management, environment, and energy. He has a particular interest in the transformation of cities and regions to sustainable energy systems and has carried out a number of funded research initiatives in this area for various client organisations including Greenpeace, the European Commission and local authorities in the United Kingdom.



**Dr Paul Maginn** has recently published a book on 'Urban Regeneration, Community Power and the (In)Significance of 'Race'' (Ashgate, 2004). He is currently editing a special edition of the journal *Urban Policy and Research* (forthcoming 2006) on 'Qualitative Research and Urban Policy Analysis: Reflections from the Real World'.



**Jeremy Coggins** has several years' experience working as a management and construction cost consultant in the UK and USA. He has also taught construction in Singapore for five years. Jeremy's research interests are in the fields of construction law and project management.



## Contact Details

**Professor Stephen Hamnett**  
Director: Planning  
steve.hamnett@unisa.edu.au  
(08) 8302 2297

**Stephen Pullen**  
Director: Energy and Built Form  
stephen.pullen@unisa.edu.au  
(08) 302 2753

**Associate Professor George Zillante**  
Director: Building  
george.zillante@unisa.edu.au  
(08) 8302 2379

**Centre for Building and Planning Studies**  
C/O School of Natural and Built Environments  
University of South Australia  
GPO Box 2471  
Adelaide, SA, 5001

CRICOS provider no: 00121B



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## Centre for Building and Planning Studies

### → 2004-2005 Activities and Highlights

The Centre for Building and Planning Studies (CBPS) was established in 1992 to undertake and encourage collaborative research, consultancy and professional development in construction management, urban and regional planning and related disciplines.

