



Clean Air and Urban Landscapes Hub

National **Environmental Science** Programme

CAUL Hub

An introduction to the research of the
Clean Air and Urban Landscapes Hub



What is the CAUL Hub?

The CAUL Hub is the Clean Air and Urban Landscapes Hub, a new consortium funded by the Australian Government's National Environmental Science Programme (NESP). The mission of the CAUL Hub is to undertake research to support environmental quality in urban areas.

The CAUL Hub is a partnership of four organisations: the University of Melbourne, RMIT University, the University of Western Australia and the University of Wollongong.

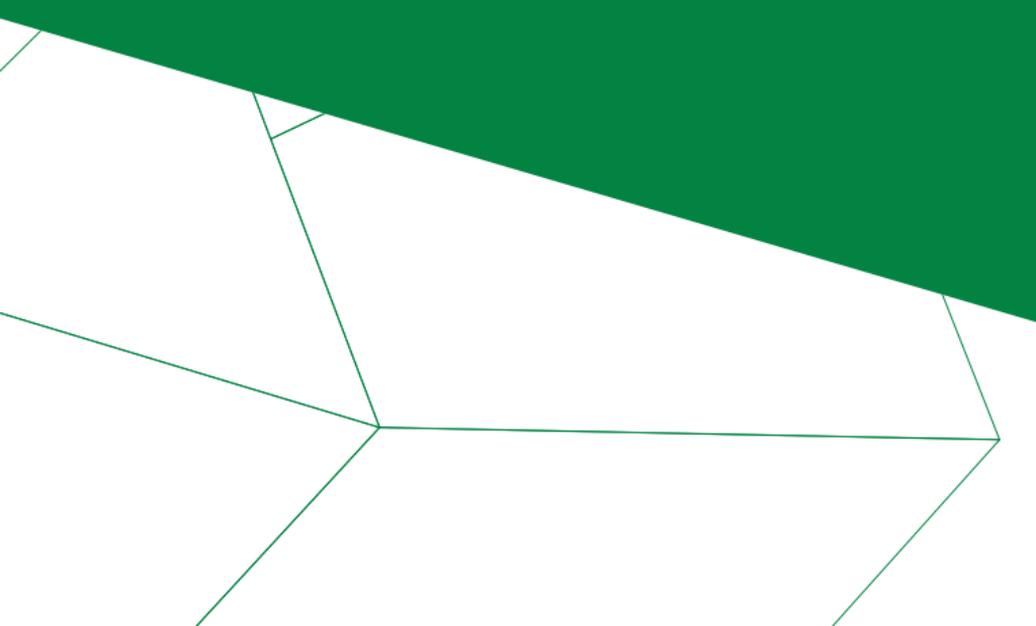
Hub leadership and governance

The CAUL Hub is led by atmospheric scientist Professor Peter Rayner, an internationally recognised expert on air pollutants. Deputy Hub Leader is Dr Kirsten Parris, one of Australia's leading urban ecologists.

Peter and Kirsten are supported by a world leading research group of experts from each of the partner institutions. An independent steering committee chaired by Rob Turk of ARUP ensures oversight by key stakeholders.

Acknowledgement of Traditional Owners and Country

The CAUL Hub acknowledges Australia's Traditional Owners and pays respect to the past and present Elders of the nation's Indigenous communities. The CAUL Hub honours the deep spiritual, cultural and customary connections of Traditional Owners to the Australian landscape.



CAUL Hub projects

The CAUL Hub is undertaking four major research projects. Underlying all of these projects is a framework for gathering, testing and presenting high-quality data sources.



Photo: Anna-Lena Arnold



Photo: Cecily Maller



Photo: Brenton Shaughnessy

Photo: City of Melbourne



Air Quality project

The CAUL Hub is undertaking research to understand the causes of poor air quality in urban areas. This project is focusing on both outdoor and indoor air quality.

The initial focus of this project is the Western Sydney region, a significant urban centre with a complex mix of air quality issues. The project aims to develop techniques for use in urban areas across Australia.

Urban Greening project

Green spaces in urban areas are essential to liveability. They provide health benefits for residents by improving recreational spaces, reducing energy costs through a reduction in the 'heat island' effect and enhancing the environmental values of cities with habitats for biodiversity.

This project is studying a range of urban greening strategies in order to improve urban greening practices and management. This project will utilise a range of trial sites across Australia.

Liveable Urban Systems project

Transport networks, green space and urban design are some of the systems that underpin the liveability of our cities. Just as important are the interconnections between these systems. This project takes an integrated approach to study their collective impact on urban areas in order to improve future planning.

The Urban Systems project focuses on the cities of Sydney, Melbourne and Perth as case studies.

Urban Biodiversity project

Cities are often built in highly biodiverse areas yet urban construction leads to a loss of ecological communities. Australian cities remain relatively rich in biodiversity but conserving this into the future is a significant challenge.

Practical techniques for humans sharing the urban habitat with other species include the protection of habitat and biodiversity as well as engaging urban residents with nature in the city, and measuring the benefits they derive from everyday encounters with urban biodiversity.

Why the CAUL Hub?

The sustainability and liveability of urban environments are keys to Australia's economic prosperity and population health. Yet cities are the most complex interactive systems humans have constructed.

Understanding how to increase and integrate green infrastructure and reduce the environmental impact of buildings and transport requires research expertise covering air quality, urban ecology, urban planning, urban design, public health and green infrastructure. CAUL's knowledge translation and data sharing skills will connect scientists, policy makers, industry, business and citizens.



Photo: Brett Robinson

Contribute to the CAUL Hub

The mission of the CAUL Hub is to undertake research to support environmental quality in urban areas. To ensure that our research is relevant to government, industry and citizens we are actively seeking the participation of all of these groups in order to shape our research plans.

If you would like to register your interest in the work of the CAUL Hub, provide feedback on our projects or participate in forums and citizen science projects, please visit the CAUL Hub website at www.nesurban.edu.au



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