Clean Air and Urban Landscapes Hub

National **Environmental** Science Programme

Research brief:
Enhancing urban greening

CAUL RB01 Enhancing Urban Greening | July 2016

How can government policies and individual landowner decisions better protect existing urban greening and encourage more?

This research note is particularly relevant for policy-makers and managers at all levels of government who are responsible for urban land-use planning. It is also of interest to land and property developers in the private sector and landowners in general.

Background

Urban greening is an inclusive term for a wide range of spaces within cities. It includes public open spaces such as parks, sports areas and nature reserves; transport networks or the corridors along roads and public transit; the gardens or landscaped buffers around or on public and private buildings, and their car parks; and areas such as wetlands and grasslands.[1, 2, 3, 4] Urban greening may take the form of *green infrastructure*, *open space planning*, *urban forest or tree strategies*, and *green roofs or walls*.[5, 6, 7, 8]

Governments and advocacy groups have a broad understanding of the benefits of urban greening. They describe their policies, strategies, programs or regulations as having the potential to positively impact biodiversity, public health outcomes, air quality, urban amenity, community building, urban resilience and / or ameliorate the impacts of climate change and more specifically urban heat island effects. The specific details of these benefits are described in a separate research brief.[9]

Currently a vast number of policies exist which have direct or indirect influences on urban greening at the federal, state and local levels. However the academic literature rarely addresses the role of land-use planning and policies in contributing to the protection of urban green spaces and increases in urban greening on both public and private land.

Focus

Research work undertaken by the Clean Air and Urban Landscapes Hub will explore existing regulatory tools in state and local land-use planning systems which encourage, or block, urban greening, particularly through land-use planning and development. This work will specifically look at how land-use planning and future urban development impact on urban trees, on both public and private land. The research outcome will be to propose improved approaches to planning and regulating development to increase urban greening.

Detail

Specific tasks that will be undertaken by the Clean Air and Urban Landscapes Hub include:

- A national review of local, state, and federal government policy enablers and barriers to protecting and enhancing urban greening through land-use planning and development.

- Identifying and mapping key actor groups in protecting and enhancing urban greening.

- Identifying, compiling, evaluating and deploying existing datasets on urban land-use and urban greenery with metropolitan wide scope.

- Overlaying the mapping of urban forest canopy cover onto the spatial land-use data to analyse housing consolidation, land-uses, green space and greening capacity.

- Developing a method for determining targets and tools for greening to 2030, 2040, 2050, at metro scale and resolved at a suitable sub-metro local scale (e.g. LGA).

Expected Outcomes

The research work will develop a framework for urban greening practices and policies which includes both achievable targets and the local contexts in which these targets operate.

The work will document the current extent of urban greening in a number of Australian cities, and develop protocols through which this mapping can be extended further.

A specific case study will be the extent of urban forest canopy cover and documenting how this component of urban greening can be positively or negatively affected by new development.

As a result of this case study, the project will propose a process to develop goals for urban greening and the tools by which these might be achieved, particularly through local government land-use planning regulations. The policy framework will be considered within the context of current practices and resources, ensuring that implementation is realistic.

About the **CAUL** Hub

The Clean Air and Urban Landscapes Hub is part of the Australian Government's National Environmental Science Programme. The remit of the CAUL Hub is to undertake "Research to support environmental quality in our urban areas". This includes research on air quality, urban greening, liveability and biodiversity, with a focus on practical implementation of research findings, public engagement and Indigenous Australian participation. The CAUL Hub is a consortium of four universities: the University of Melbourne, RMIT University, the University of Western Australia and the University of Wollongong.

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