

Cooling our suburbs one street and home at a time

COUNCIL NAME

Western Sydney
Regional
Organisation of
Councils, supported
by Blacktown,
Hawkesbury and
Liverpool City
Councils

WEB ADDRESS

wsroc.com.au

SIZE

8,872 square
kilometres

POPULATION

2,175,000+

FUNDING PROGRAM

Increasing
Resilience to
Climate Change

Overview

Cool Suburbs is a rating and assessment tool that aims to improve heat resilience in urban planning and development. From individual lots to precinct master plans, the Cool Suburbs tool informs decision-making during the entire development process. Cool Suburbs uses a system of credits to assess and reward the heat resilience of urban designs at various development scales.

The development of the rating system was supported by an expert science panel, with representation from four universities, that synthesised the most up-to-date urban heat science into an easy-to-use platform.

Background

Heat already kills more people in Australia than any other natural disaster, including floods, cyclones and bushfires. In fact, NSW Health research has found severe heatwaves in Greater Sydney cause an increase in mortality of up to 13%.

Western Sydney, home to more than 2.5 million people, is typically 6-10°C hotter than the rest of the city during extreme heat events. Climate modelling predicts that, by 2070, communities in Western Sydney will swelter through an additional 20 days of 35°C or more over the course of a year.

As the race to rethink the design of our suburbs for a hotter climate accelerates, the Western Sydney Regional Organisation of Councils (WSROC) has rolled out Cool Suburbs, a rating tool that guides best practice heat resilience in design and development. The tool can be used for assessment and approvals, policy and planning and is part of WSROC's Turn Down the Heat strategy.

Implementation

"Heat has cumulative and cascading impacts on our communities, economies and ecosystems," says WSROC's Project Coordinator Judith Bruinsma. "But the decisions we make during planning and design can help us to mitigate these impacts."

The Cool Suburbs collaboration between WSROC, Resilient Sydney and the Greater Sydney Commission, was supported by an expert science panel with representatives from Monash University, Melbourne University, University of NSW, Western Sydney University.

The expert science panel helped WSROC to translate the best available urban heat science into a practical scoring system. "Cool Suburbs fills a gap by synthesising urban heat science into an easy-to-use platform," Judith explains. Cool Suburbs provides best practice guidance on everything from solar orientation to wind direction, cool materials to greenery.

The tool can support various scales of development – from individual lots to entire precincts – and guide all stages of the development process.

Credits guide the development of cool streets, for instance, that offer shade, suitable irrigation and porous pavements.

Cool homes are rewarded for passive cooling strategies, for example, for carefully considering shading from tree canopy or by selecting cool materials like light-coloured roofing that reflects rather than absorbs the heat.

At the master-planned community level, projects are recognised when streets are laid out to channel cool breezes, when existing tree canopy is retained, or when green and blue open space is designed to reduce local air and surface temperature and improve outdoor thermal comfort.

Outcomes

WSROC specifically chose an Excel-based platform so that it could be easily integrated into other rating tools, like Green Star or BASIX in the future.

Developers have already piloted Cool Suburbs and have shared positive feedback, and WSROC is now developing case studies to showcase the tool's application on real world projects.

“We want Cool Suburbs to be embedded into policy, practices and planning. Working with the development industry is the next step to make it happen.”

While most credits apply to the whole of Sydney and the state, some specifics around wind and solar orientation are unique to Western Sydney and its climate zone.

“We consider this a prototype, and we continue to test some of the credits, and to collaborate with our project partners to improve Cool Suburbs so we can scale it up nationally and embed it in existing rating tools and policy.”

Key Learnings

Cool Suburbs rewards market leaders which can encourage the ‘first followers’ to embrace best practice. However, WSROC recognises this can only be done in tandem with regulation to bring the laggards along.

“We know not all developers in Western Sydney are meeting best practice and we need a suite of measures – tools to reward best practice, incentives and strong regulation - to ensure communities aren't left behind.”

More information

Download the [Cool Suburbs tool](#), [Urban Heat Planning Toolkit](#) or WSROC's [Turn Down the Heat Strategy](#).

Contact

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