Hort Innovation

media release

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GREENING OUR CITIES – REDUCING THE 'URBAN HEAT ISLAND' EFFECT

Heat in our cities impacts the health and wellbeing of residents. As cities and towns grow – greenery is lost and replaced with hard constructed surfaces. These surfaces absorb and retain heat causing an 'urban heat island' effect.

Hort Innovation's two-year research project - *Conveying the benefits of living turf - Mitigation of the urban heat island effect* – shows clear evidence of the benefits of living turf for mitigating the 'urban heat island' effect.

Hort Innovation's Head of Research and Development Byron De Kock said, "This information can be shared with communities, developers and governments to help them better understand how to manage urban landscapes and select land surface types that encourage the development of cool rather than hot cities.

"A choice of irrigated living turf can help to cool areas whereas bitumen and synthetic turf can create hot surfaces, which contribute to heat islands."

Mark Siebentritt, Director of Edge Environment, who managed the research project said, "Extreme heat kills more people each year than any other natural hazard. Yet we keep building hot cities. This is partly because we don't always understand the impact on urban heat of the materials we build with or how we manage the urban landscape"

The project team used modelling and simulation to determine how living and synthetic turf coverage can influence the temperature of urban environments.

Across study sites in New South Wales, Victoria and South Australia, the thermal performance of five landscape coverings were analysed: irrigated and non-irrigated living turf, short and long pile synthetic turf, and bitumen.

The irrigated natural turf measured 4.9°C cooler than the baseline average surface temperature.

Long pile synthetic turf was one of the hottest surfaces in the landscape measuring nearly 11°C hotter than the baseline average. These figures show that irrigated natural turf could be 15°C cooler than synthetic turf. Bitumen was also consistently hotter.

The results across all three capital cities confirmed that living turf provides a cooling influence on urban air temperatures compared with selected synthetic materials.

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