

HEAT MITIGATION OF LIVING TURF

Why does heat in our cities matter?

Urban heat has a major impact on how people live in our cities, with extreme heat killing more people than any other natural hazard. It also reduces the overall health and well being of the community and makes our economy less productive.

Cities around Australia have developed heat islands as they have changed from natural to built landscapes, replacing cooler green open spaces and trees with constructed materials that retain heat. Understanding how heat islands develop and how to cool cities can be done by knowing how different land surface types heat up during summer. This is especially important as our cities become hotter over the coming decades in response to climate change.

About the project

Hort Innovation funded a study, delivered by Seed Consulting Services, to understand the heat reduction benefits of irrigated turf compared with other land surface types in our cities. The study combined spatial information using thermal cameras with on-ground field studies in Sydney, Melbourne and Adelaide.

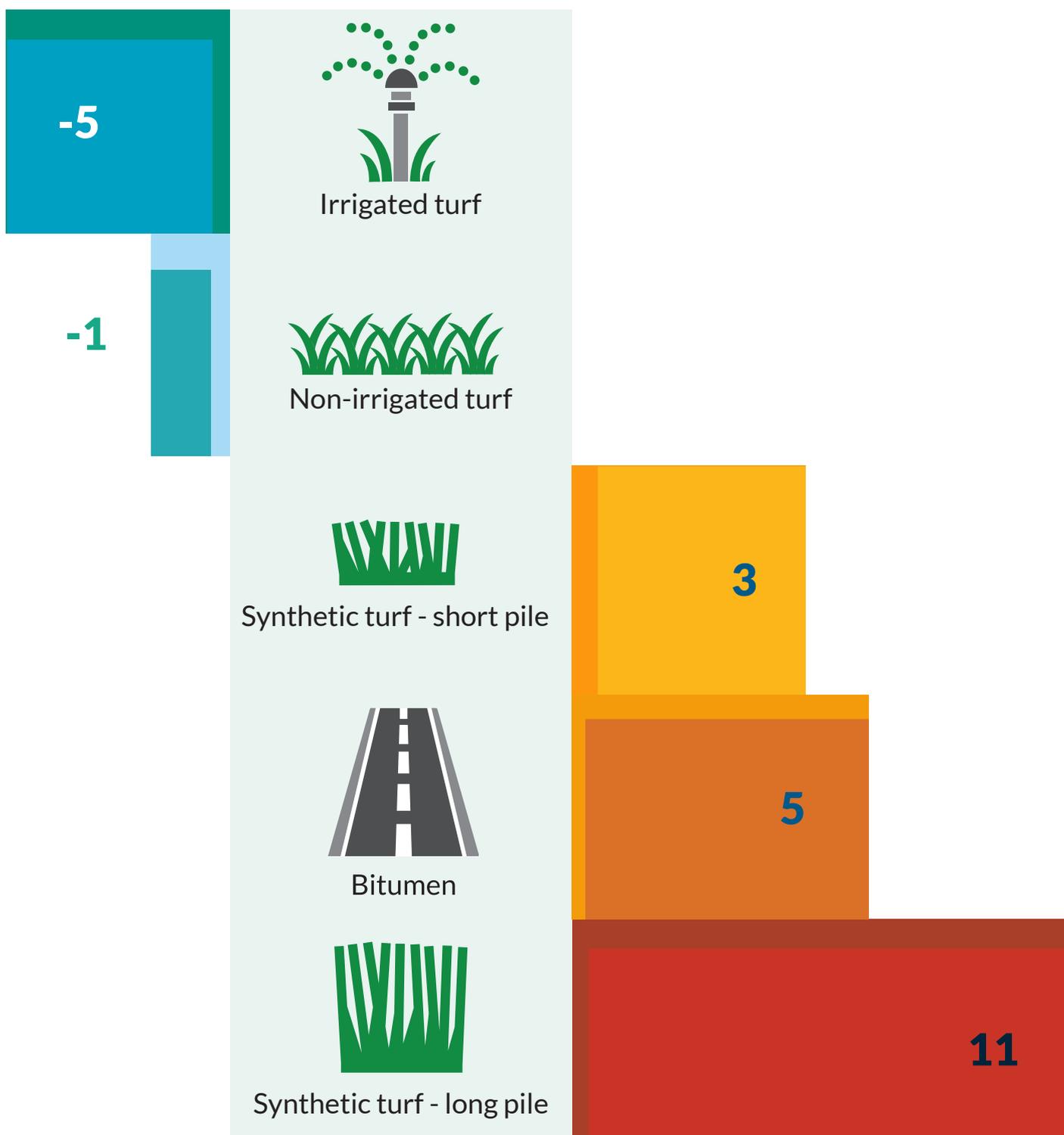
The project assessed the land surface temperature of irrigated turf compared with non-irrigated turf, synthetic turf and bitumen. The results across all three capital cities showed that irrigated turf had a much lower average surface temperature compared with non-irrigated turf, synthetic turf and bitumen (refer to infographic over the page). The project also found that living turf is cooler than city-wide average surface temperatures, whereas synthetic turf and bitumen are warmer than average.

How can the results of this study be used?

The results of this study show that planning and construction decisions made today are affecting how cool or hot our cities will be in the future. A choice of irrigated living turf can help to cool areas of open space, whereas bitumen and synthetic turf can create hot surfaces, which contribute to heat islands at a street and park through to city scale.

This information has been developed as part of the Hort Innovation Turf Fund project Conveying the benefits of living turf - mitigation of the urban heat island effect (TU18000), which has been funded using the turf R&D levy and contributions from the Australian Government. Hort Innovation is the grower-owned, not-for-profit research and development corporation for Australian horticulture.

Warming and cooling in degrees celsius of surface temperature



Full details of the research will be made available at www.horticulture.com.au/turf