

White roofs cool for Melbourne

The City of Melbourne has commissioned the University of Melbourne to help building owners assess the benefits of white roofs – which absorb less heat and keep buildings cooler during hot days – in the metropolitan area.



Credit: Copyright John Miller/istock

The aim is to help residential, commercial and industrial building owners determine if white roofs are suitable for their buildings and guide them through the best materials to use.

The research monitored the temperatures of five test buildings at the university's Burnley Campus for performance with and without white coatings. The buildings with white roofs experienced significantly cooler temperatures, both on the exterior and interior.

Lord Mayor Robert Doyle said Council had already put the research into practice by trialling a white roof on its ArtPlay building.

'There has been a lot of talk about the energy consumption benefits of white roofs and we commissioned the University of Melbourne to undertake this research so we could get a local perspective on how white roofs can work in our city,' he said.

Councillor Cathy Oke said commercial buildings in the city would benefit most from the new advice.

'White roofs can cool commercial buildings by three per cent on hot days, which helps reduce the urban heat island effect and improve the health of city users,' she said.

Dr Dominique Hes, a senior lecturer at the University of Melbourne in sustainable architecture who led the research, explained that when painted white, roofs reflect heat away from a building rather than absorbing it.

‘Reflective white paint on commercial building roofs reduces the energy used to cool the building. Melbourne’s CBD has over 3 500 000 m² of lettable commercial space,’ she said.

‘If the roofs of these buildings were painted white, the city could in theory reduce its CO₂ emissions by 4.5 million megajoules per year, 1.5 million kilos of CO₂ or 3 million black balloons.

‘White roofs are a low-cost solution in making buildings more sustainable, particularly older buildings. And if our air-conditioners are not working as hard, there are financial benefits for building owners as well.’

Source: City of Melbourne/University of Melbourne

More information

[City of Melbourne Cool Roofs Guide.](#)

From ECOS online <http://www.ecosmagazine.com/?paper=EC12170>