



Why to cool our streets?

Black-coloured roads and a lack of tree cover can increase the heat of our cities over 6 to 8 degrees

"We are now paying dearly for this extra heat. One sixth of the electricity consumed in the United States goes to cool buildings, at an annual power cost of \$40 billion. Moreover, a 5°F heat island greatly raises the rate at which pollutants-nitrogen oxides and volatile organic compounds emanating from cars and smokestacks – 'cook' into ozone ... The Los Angeles heat island raises ozone levels 10–15 percent and contributes to millions of dollars in medical expenses" AH Rosenfeld et al, 'Painting the town white – and green' MIT

Technology Review, 1997



"Of the total heat impact, the Urban Heat Island effect contributes approximately \$300 million in present value terms" Economic Assessment of the Urban Heat Island Effect prepared to City of Melbourne, 2012

Call to action:

- Marrickville Council, residents and the state government are considering a trial to cool our roads (Chelmsford, Albermarle, Oxford)
- To help or find out more, contact: Larissa Rahmilevitz **0451 484 744** or Michael Mobbs **0424 460 525**
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Cool roads can cool our cities, cut electricity bills and cut air pollution



The suburb of Village Homes in the city of Davis, California is 6 degrees cooler than the adjoining suburbs in summer. This is because the village contains 23 acres of greenbelts, orchards, vineyards, vegetable gardens, and edible landscapes: so the tree canopy regulates the natural temperatures. Since 1978 the village has grown over 24 per cent of its food in the streets and gardens. (For more information see <http://www.villagehomesdavis.org>.)

"Resurfacing New York City's roadways with asphalt containing a white aggregate, taking into account an estimated cost of \$59 million, saves energy consumers \$57.2 million annually, a payback period of just over one year". Rosenthal et al, 'Urban Heat Island mitigation can improve New York City's environment: Research on the impacts of mitigation strategies on the urban environment', 2004

A study in urban heat mitigation using green roofing shows that savings can be substantial. They estimated savings of \$105 million per year – \$23 million in direct energy savings and \$82 million in indirect savings – if cool roofs were constructed on every roof in New York City.



Chippendale trial: open grate asphalt filled with concrete slurry, providing a lighter texture to the pavement



"A minimum of 6.9 degrees and a maximum of 8.3 degrees temperature reduction is achievable at 1 pm in summer in Newtown Block"

Adam, M, A study of the urban heat island effect – investigating the effects and addressing the idea of a sustainable city at a micro-scale, 2014

Example of cool road