



Your Say
Adelaide

COOL ROAD ADELAIDE PROJECT

Consultation closes **5:00pm, Friday, 28th Feb**

PROJECT INFORMATION

Dark bitumen roads contribute to heating cities and urban areas – known as the urban heat island effect. To combat this, we are considering ways to make our cities more comfortable for everyone.

The project will pilot the performance of three cool road surface products on a road in Adelaide CBD this summer. The three products are CoolSeal by GuardTop as well as JetCool and JetBloc by Fulton Hogan. These are also road preservation products, used to lengthen the life span of a road and therefore increase the timespan between having to dig up and relay.

The treated pilot road will be monitored to see how the different products reduce surface and ambient air temperature, as well as the experiences of local residents, road users, pedestrians and businesses.

The project will provide evidence to support the City of Adelaide and other councils to make informed decisions about the application of cool road surface products across South Australia.

The Cool Road Adelaide project is a Climate KIC Australia project delivered in partnership with the City of Adelaide and South Australian Department for Environment and Water.

This project was also made possible with in-kind support from Fulton Hogan.

Cool Road Adelaide Project

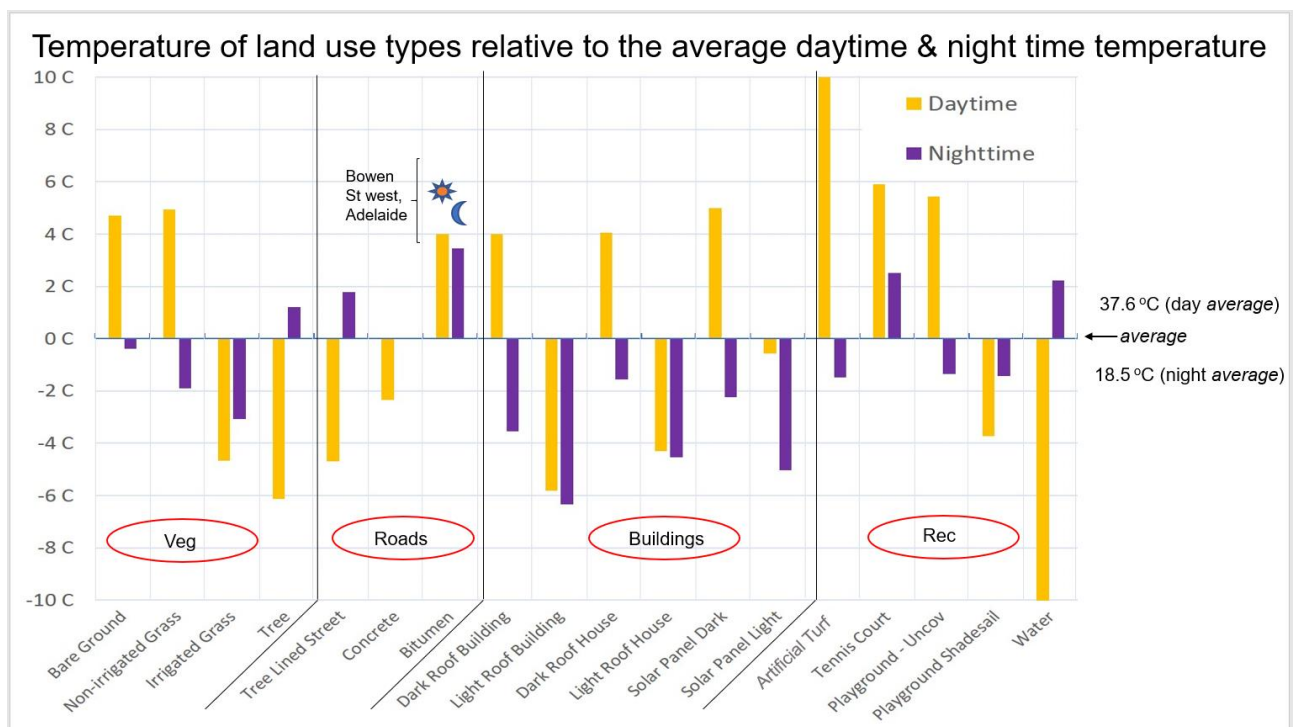
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Background

The urban heat island effect is an extensively documented climate issue experienced in many Australian cities. Concrete buildings and asphalt roads create heat islands that can be significantly hotter than temperatures in the surrounding suburban and rural areas. Because the number of extreme heat days is predicted to increase significantly over the next few decades, and the urban heat island effect has been shown to be exasperated by climate change, Council is working to understand and reduce heat islands.

A [Heat Mapping Tool](#) is publicly available which assesses how all suburbs are affected on hot days and nights. The City of Adelaide is using this data to inform its planning and design, for example in tree planting and choice of materials in public spaces like playgrounds, parks and pavements. Residents and businesses can consult the tool to understand how heat exposed their property is.

Below is a graph that depicts the average land surface temperature for a range of different surfaces measured across the Heat Mapping study area. Bitumen is one of the consistently hot urban surfaces both day and night, covers a wide part of our city, and is directly controlled by Council.



We are currently conducting a Cool Road Adelaide project, a trial of three cool road surface products.

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The trial project involves applying three cool road surface products (a fourth patch will be left as a control) to Bowen Street West and measuring them for cooling benefits over summer 2019/2020. The road preservation qualities will be evaluated over the longer term.

Bowen Street West was found to reach 43.3°C(☀️) during the day and 23.2°C(🌙) at night in the above-mentioned heat mapping study. Both temperatures are higher than the regional average for bitumen roads.

The trial will include the collection of land surface temperature and ambient air temperature measurements before and after the products are applied. During a trial of one of these products in another Council area, a study has found on average a 6.1°C cooling on the surface of the cool surfaced road, compared to a brand-new bitumen road.

We will collect the ambient air temperatures at different heights above the different surfaces.

The data collected will be used to understand the benefits of these products for land surface temperature and air temperature and model potential cooling effects over a larger area. We will ask the community for feedback about the project via a survey, after the road coatings have been on the road for approximately over 1 month in summer.

Timeline

We undertook pre-application surface temperature measuring in December 2019, application of coatings in mid-January 2020, and a community survey and post-application surface temperature measuring will be carried out in February 2020. The final project reporting is due in April 2020.

Frequently Asked Questions

Why was this location chosen?

We chose a study site that already has a bitumen road, receives reasonably uniform heat profile, contributes to a local hot spot, will cause minimal impact to residents and traders and will inform future urban cooling options around the Adelaide Central Markets, our city generally and other regions.

Are the road coatings safe to walk and drive on?

We have ensured all three cool road surface products have passed the standard skid and slip testing for vehicles and pedestrians.

Will the surfaces cause glare?

There will be a visual change to the road. Community survey results regarding one of the products gathered by other metropolitan Adelaide Councils suggests glare is not a significant issue. However, the possibility of glare and other inconveniences to our community is why a piece of land with minimal nearby neighbours was chosen and why we are gathering your feedback on the products.

It sounds like a potentially inefficient and expensive way to reduce urban heat. Is Council going to expand the trial by putting a cool surface product on every road?

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All three of the coatings are versions of seal coats which are standard road preservation products. The primary purpose of seal coats in the past has been to extend the life of roads, therefore reducing the cost of road laying and maintenance over the long term. If the trial is deemed successful, the products may be used for both road preservation and urban cooling reasons. Any future cool road surface product applications will be conducted after a thorough cost benefit analysis. There are also road bitumen suppliers who are currently researching heat reflective bitumen products which may be a product option in years to come.

We are installing, considering and testing other urban cooling methods such as plantings, street trees, green walls and arbours, stormwater capture and use and misting for events, amongst others.

What products are you using?

We are applying two products from [Fulton Hogan JetBloc](#) and JetCool. Both of these have previously been used in the aviation industry but not urban or suburban roads. The third product is [CoolSeal](#), supplied by [SuperSealing](#), which has been used extensively in Los Angeles and is undergoing trial on some streets within Charles Sturt and Salisbury Council areas.

It seems a lot of trouble to go to cool things down a bit?

We know heat affects people's wellbeing and behaviour. If, in hot weather, we can reduce the air temperature by even 1-2°C it can increase people's desire to visit and walk around our city, exercise, enjoy outside dining and events and move between shopping venues. There are also other potential benefits like better quality roads for longer with reduced maintenance costs, reduced energy costs for surrounding buildings, and the prevention of heat-related illnesses.

How do I provide my feedback?

There are a number of ways in which you can provide feedback:

Feedback Form (attached to this information pack)

Online

yoursay.cityofadelaide.com.au

Contribute your feedback via the [Online Survey](#).

Email your comments to yoursay@cityofadelaide.com.au.

Written Submissions

All written submissions must be received by 5.00pm on the date advertised and should be addressed to:

Community Consultation
Cool Road Adelaide Project
GPO Box 2252, Adelaide SA 5001

What happens next?

We will acknowledge your feedback either by email or in writing.

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All feedback received by 5:00pm Friday 28th February will be analysed and reported on as part of our research. A project report will be produced but will not identify any one respondent.

If you have provided an email address, we will inform you of the study findings by June 2020.

For enquires please contact:

Tanya Roe

Senior Consultant Sustainability

T: 8203 7701

E: t.roe@cityofadelaide.com.au

Or visit yoursay.cityofadelaide.com.au



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FEEDBACK FORM

Feedback period closes at **5:00pm, Friday, 28th February.**

This form can also be completed online at yoursay.cityofadelaide.com.au.

Q1. Do you think the Cool Road surface products have helped to make the local temperature feel cooler?

- a) ☐ Yes
- b) ☐ No
- c) ☐ Don't know

Q1.a. If yes, by how much at these times of day? (please circle)

- | | | | | | |
|------|-----------------------------|------|--------|------------|-------|
| i. | Morning | None | Little | Moderately | A lot |
| ii. | Middle of day | None | Little | Moderately | A lot |
| iii. | Early evening | None | Little | Moderately | A lot |
| iv. | After the sun has gone down | None | Little | Moderately | A lot |

Q2. Have you been able to change any of the ways you use the local area due to the Cool Road surface products?

- a) ☐ Yes
- b) ☐ No
- c) ☐ N/A

Q2.a. If yes, please give example(s):

Q3. Do you know of any ways that others have been able to change how they use the local area due to the Cool Road surface products?

- a) ☐ Yes

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b) ☐ No

c) ☐ Don't know

Q3.a. If yes, please give example(s):

Q4. Do you believe there are any other benefits or concerns about the use of these Cool Road surface products?



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Q5. Please rank the Cool Road Surfaces #1, #2, #3 and Traditional Road Surface in order of preference and explain why:

a) Most preferred..... Why

b) Why

c) Why

d) Least preferred Why

Q6. Do you think we should implement heat reflective roads on other streets?

a) ☐ Yes

b) ☐ No

c) ☐ Don't know

Q6.a. Why?

Q7. Do you think other materials such as footpaths, walls and roofs should be made from more heat reflective type materials in the future?

a) ☐ Yes

b) ☐ No

c) ☐ Don't know

Q7.a. Why?

Q8. Do you have any other comments about the Cool Road Adelaide project or urban heat?

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Providing contact details in a feedback form is optional. However, we ask for this information because we want to know a little more about who you are and how you use the City to ensure we get a higher quality of data to go along with your feedback. The data will help us analyse feedback from specific groups (e.g. age, gender, City users), which in-turn will provide a richer and more valuable response to help Council make decisions.

First Name:		Last Name:	
Email Address:			
Address:			
Business/Organisation Name (if applicable):			
Gender:	☐ Male ☐ Female ☐ Other Identity	Year of Birth:	
Are you a City of Adelaide Ratepayer?		☐ Yes ☐ No	
Please tell us how you participate in city life (tick all that apply):			
☐ Work	☐ Live	☐ Shop	☐ Play (e.g. leisure, recreation, entertainment, dining)
☐ Study	☐ Tourist	☐ Own a Business	
Please indicate your main areas of interest (tick all that apply):			
☐ Council Services & Programs	☐ Open Space & Recreation	☐ City Design, Planning & Development	☐ New & Future Projects
☐ Social & Community Issues	☐ Policy, Budget and Management Plans	☐ Environmental Issues	☐ Arts & Events in the City
Please indicate the locations that are of interest to you (tick all that apply):			
☐ North Ward	☐ Central Ward	☐ South Ward	

[Your Say Adelaide](#) is Council's online consultation website. It is your chance to be kept up-to-date and provide feedback on areas of the City that interest you. Would you like to be signed up to Your Say Adelaide online and be emailed when there is an opportunity to have your say on areas that are of interest to you?

☐ Yes ☐ No

Please Note: If you've ticked Yes, you will receive an email to your nominated e-mail address above to confirm your new account.