

# Urban Greening insights

for climate change action planning at LGA level

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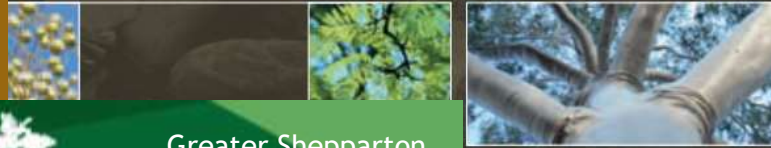
Lyndal Plant **URBAN FORESTER PTY LTD**

Brimbank

## Urban Forest Strategy 2016 - 2046

May 2016

## Tree Management Strategy



## Urban greening for a healthier west

URBAN FOREST  
STRATEGY  
MAKING A GREAT  
CITY GREENER  
2012-2032



Greater Shepparton

URBAN  
FOREST  
STRATEGY  
2017-2037  
APRIL 2017

OUR NEXT GENERATION:  
BURNSIDE'S URBAN FOREST



**Brisbane.**  
*Clean, Green,  
Sustainable*  
Celebrating our living city



CITY OF SYDNEY

## Urban Forest Strategy

City of Belmont

## Urban Forest Strategy

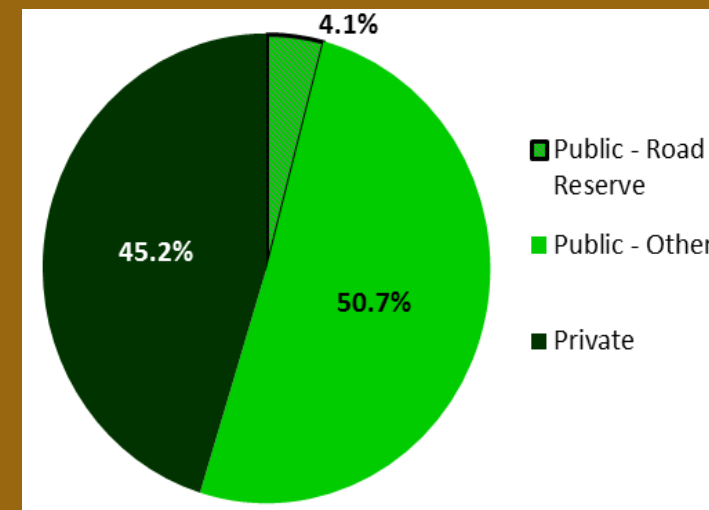
August 2014



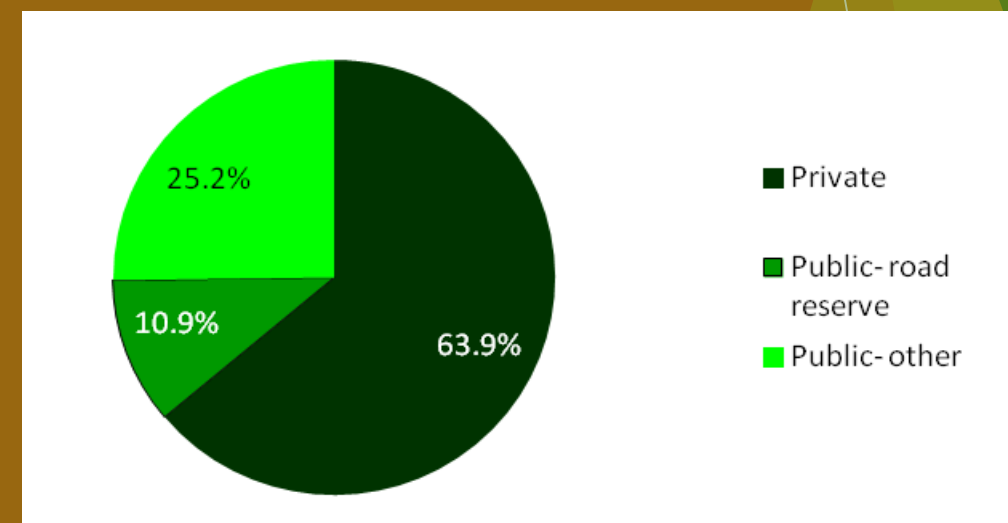




## Brisbane City wide tree cover



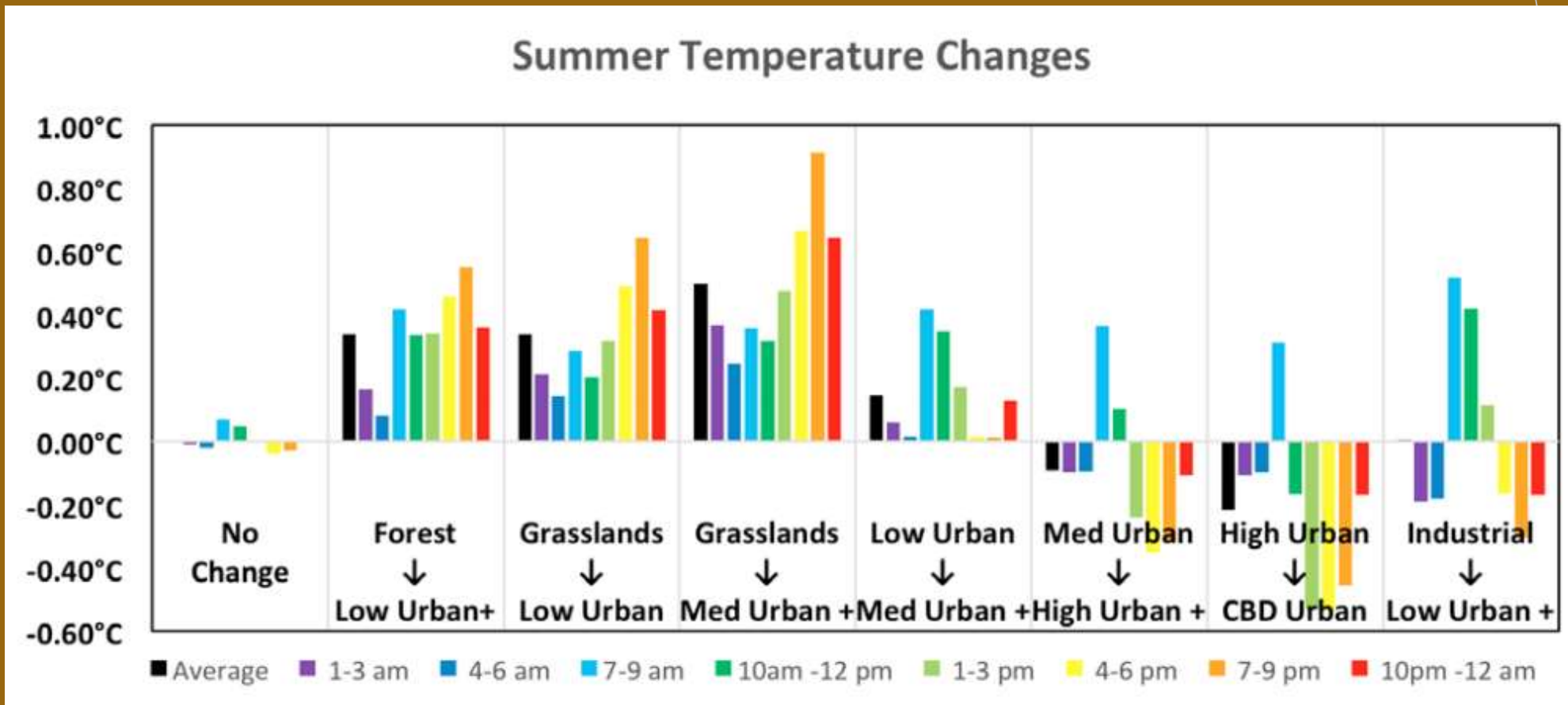
## Brisbane Residential tree cover



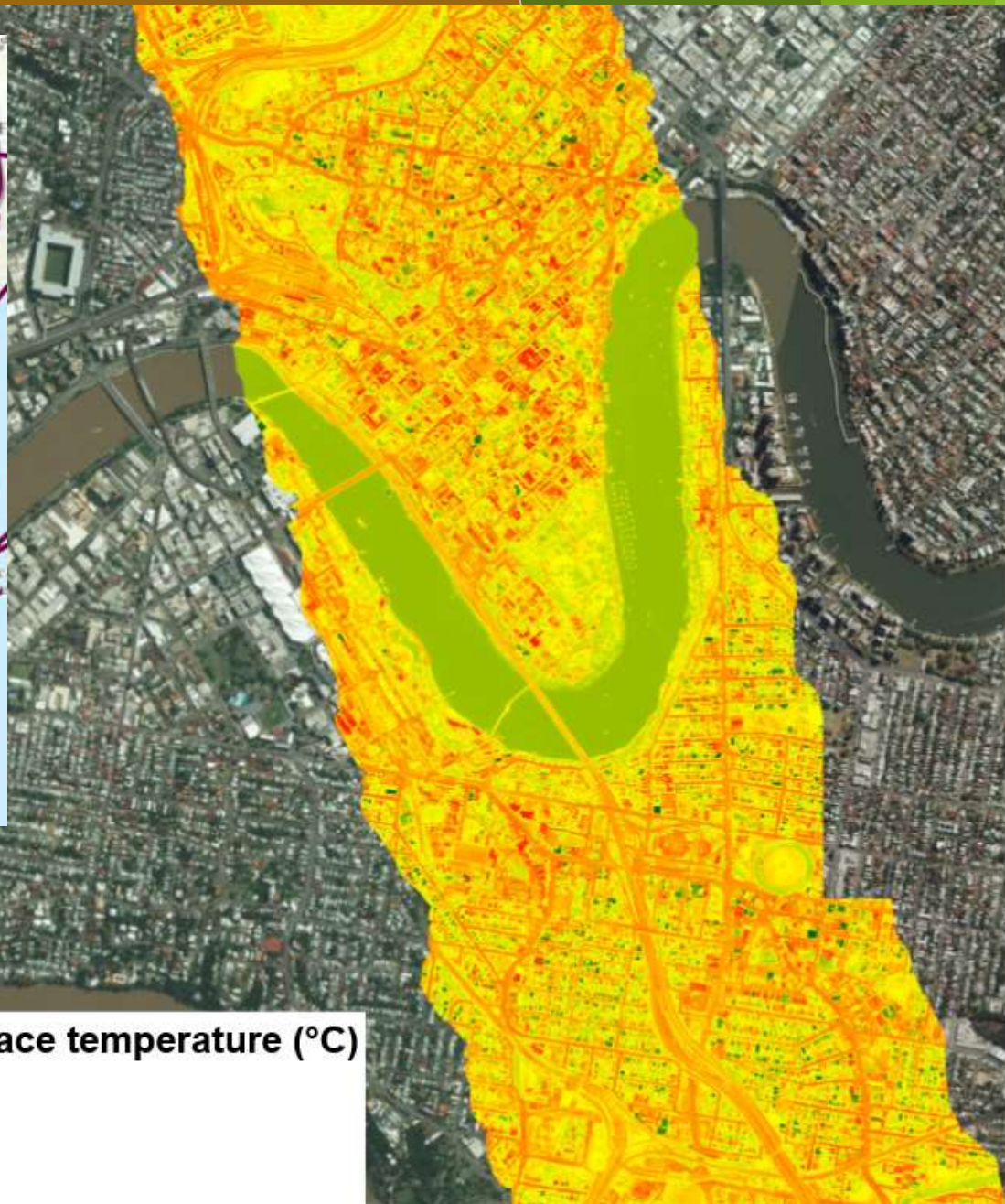
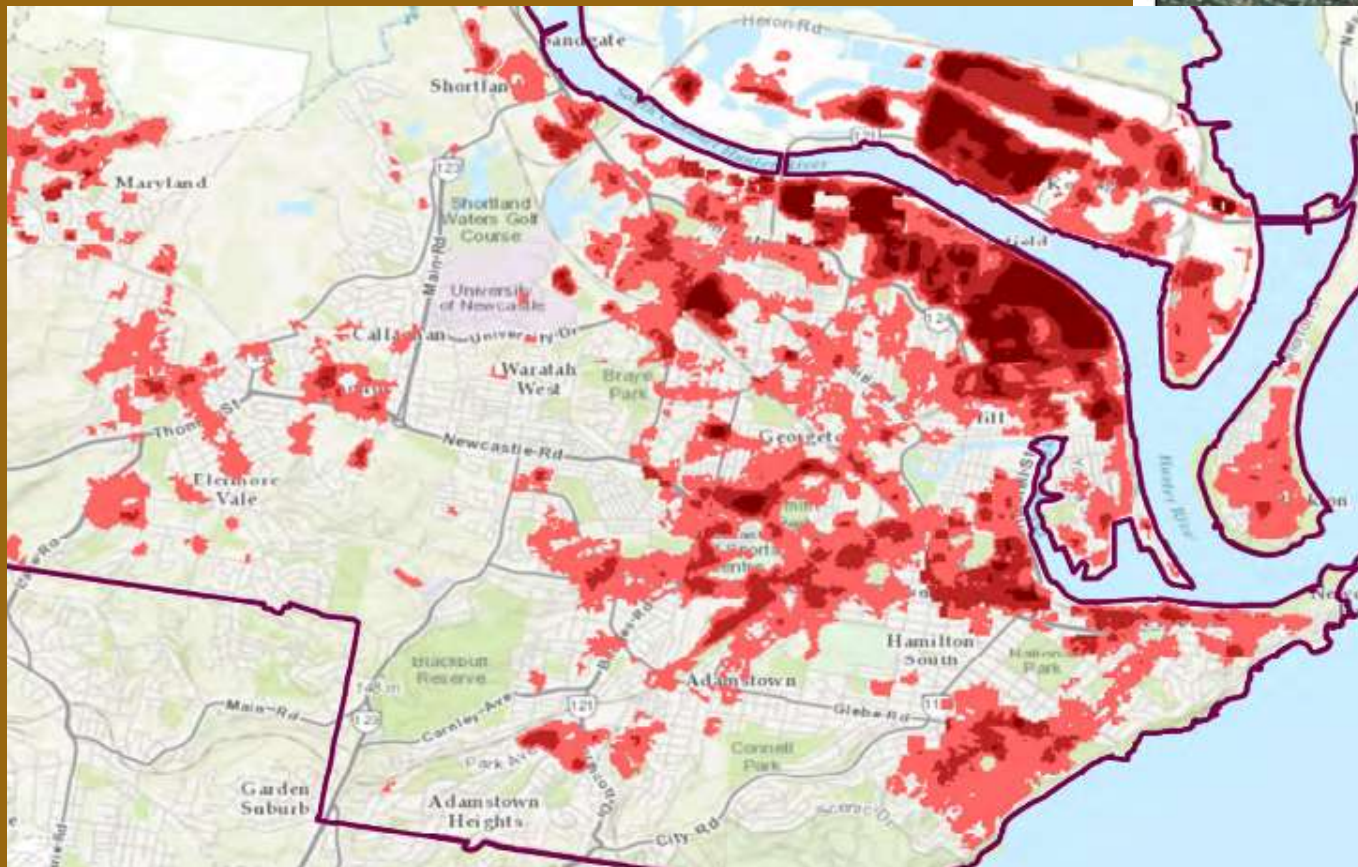
# Overview

- ▶ Our changing climate imperative for urban greening
- ▶ Learnings from others actions
  - ▶ “Neighbourhood Shadeways” - Brisbane
  - ▶ “Treemendous Trees” - Sunshine Coast
- ▶ 3 key points
  - ▶ “home-grown” evidence builds triggers for action
  - ▶ opportunities come in all shapes and sizes
  - ▶ challenge traditional constraints - with an outcome focus

# Changing climate imperative for urban greening

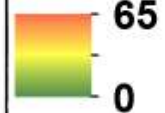


From "Adapt NSW - Urban Heat"



Urban Heat - surface temperature mapping

Land surface temperature (°C)



## CANOPY COVER



**35%**

*of councils have undergone a significant decline.*



**61%**

*of councils have had no significant change.*



**4%**

*of councils have undergone a significant increase.*

## SHRUB COVER



**16%**

*of councils have undergone a significant decline.*



**67%**

*of councils have had no significant change.*



**17%**

*of councils have undergone a significant increase.*

## HARD SURFACES



**ZERO**

*councils have seen a significant decline.*



**34%**

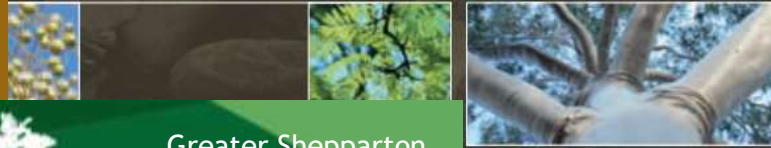
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# SYDNEY GREEN GRID

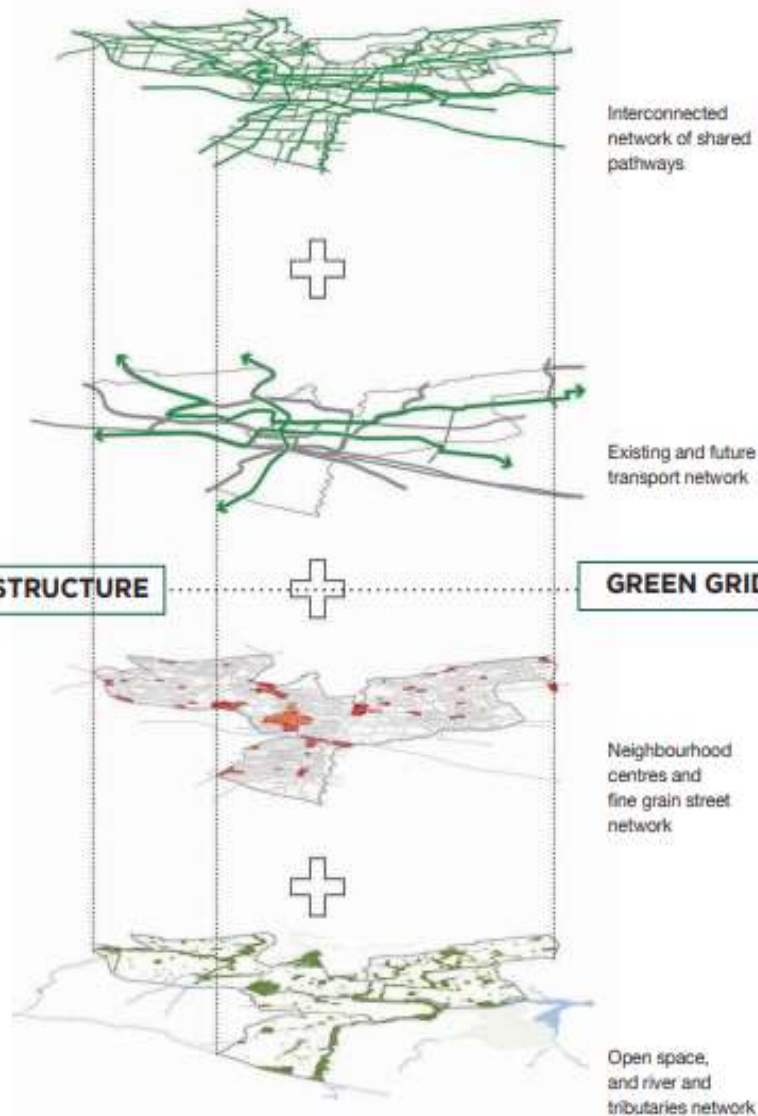
SPATIAL FRAMEWORK AND PROJECT OPPORTUNITIES

## Greener Places

NSW GA

GREEN INFRASTRUCTURE

GREEN GRID PROJECTS

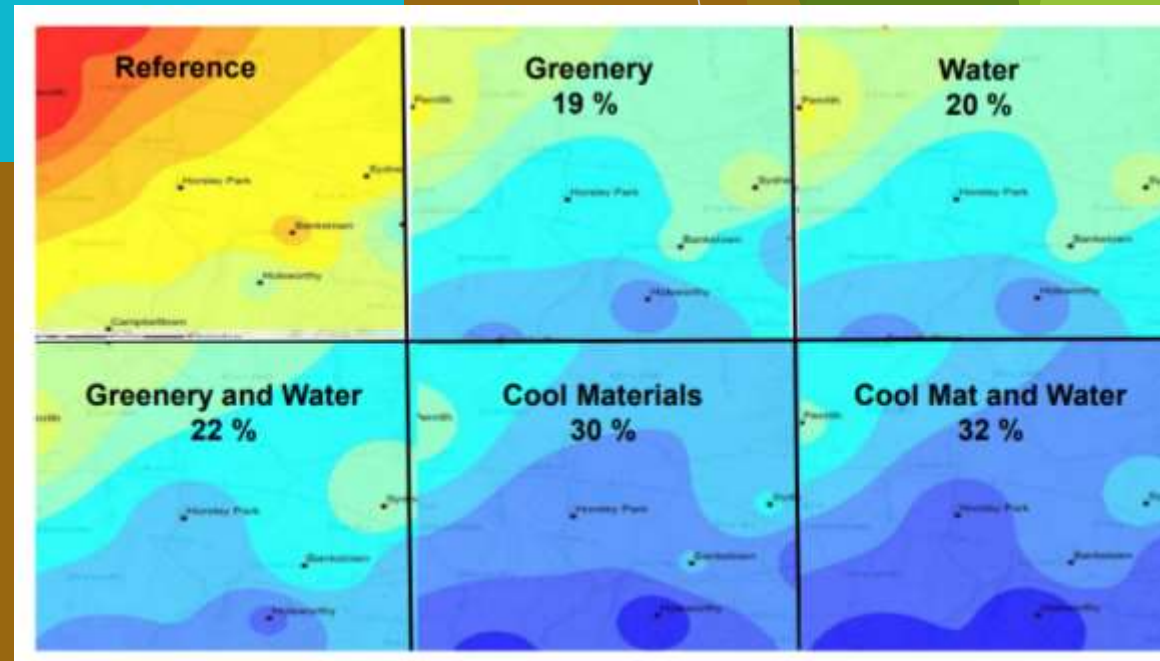




# Cooling Western Sydney

A strategic study on the role of water in mitigating urban heat in Western Sydney

- ▶ Measured by reduction in Cooling Degree Days (CDD)
- ▶ 1726 GWh in annual cooling load savings for residential and commercial buildings and
- ▶ maximum reduction of the peak demand of 5%, or 1.2GW



# Multipurpose GREEN INFRASTRUCTURE

- ▶ Shading /Cooling UHI effects \*
- ▶ Air quality improvement\*
- ▶ Carbon sequestration and storage\*
- ▶ Stormwater cleaning and runoff reduction\*
- ▶ Business vitality & work productivity
- ▶ Property value increase
- ▶ Sense of place and time
- ▶ Physical and mental health and well being\*





Environmental  
Benefits

Social Benefits

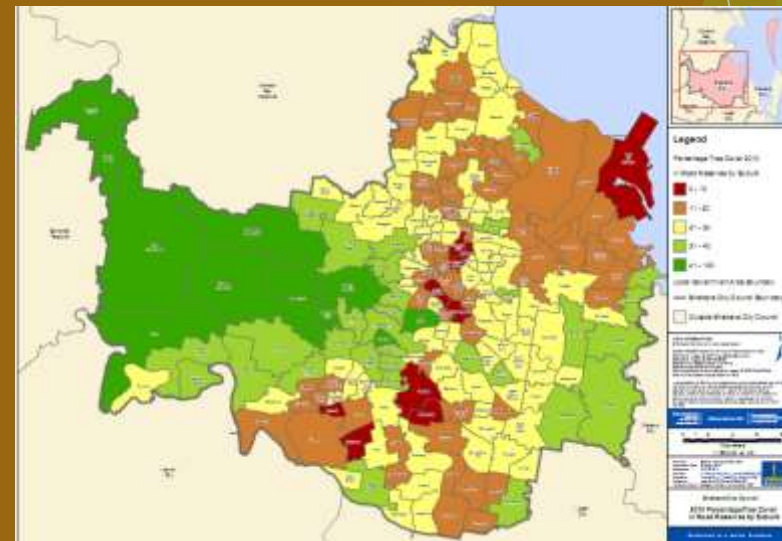
Economic Benefits

Challenges

Disservices,  
Liabilities, Risks

# Brisbane - “Neighbourhood Shadeways”

- ▶ Greener, cooler & attractive pathways to encourage walking and cycling
- ▶ Started with a link to an existing Council agenda.....added some evidence/measures/maps
- ▶ Baseline 35% footpath tree cover
- ▶ 50% target based on capacity and cooling effect
- ▶ Priority shade-hungry pathways in shade-hungry suburbs - “walk to” zones
- ▶ 10 years on - 50,000+ trees, 5,000+ community participants, 20% funded by others

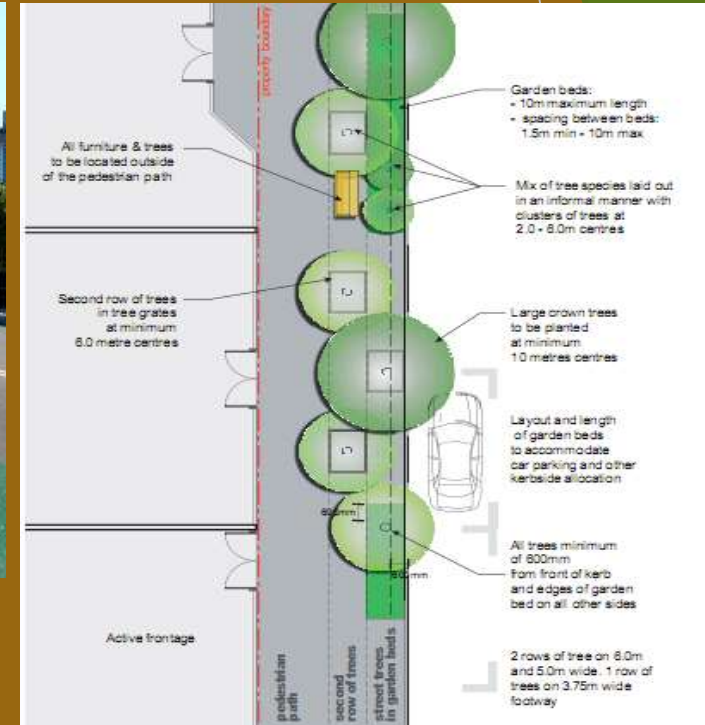


# Ingredients of success

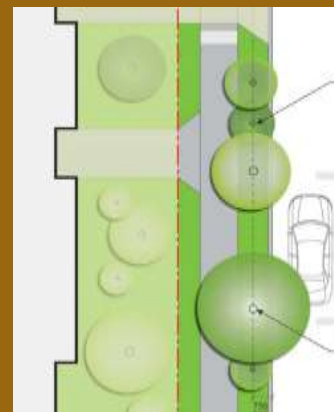
- ▶ Strong links to local LIVEABILITY
- ▶ Clear prioritisation
- ▶ Practical links to others programs that translated to
  - ▶ funding partnerships
  - ▶ allocation/design of space for trees
- ▶ Sensible tree species choices
- ▶ Community participation and political support
- ▶ Monitoring and evaluation- including business case for ongoing investment



# Helped change “business as usual” ...new streetscape design



City Boulevards

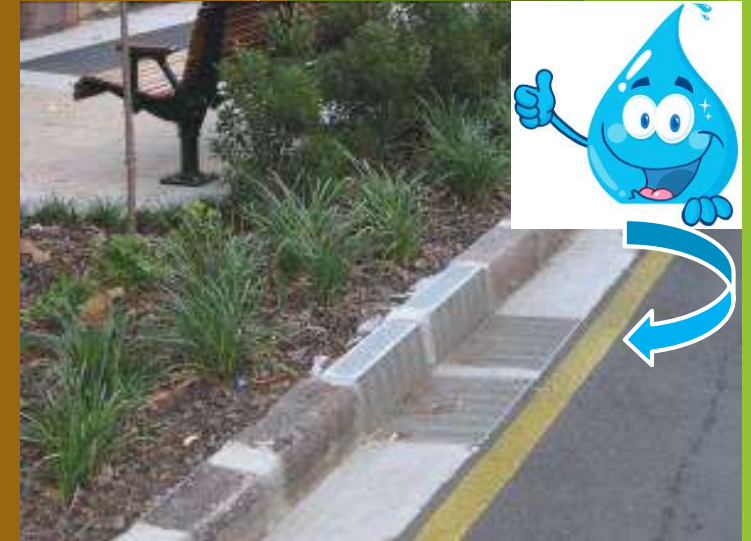


Mix of tree species laid out in an informal manner with clusters of trees at 2-6m centres

Residential streets

*City Plan 2014 -  
Infrastructure Design PSP*

....with more space  
for large, healthy  
long lived urban trees



# “Treemendous Trees” - Sunshine Coast



- ▶ used a combination of two and three-dimensional tree cover mapping considering percentage canopy cover and projected shade, foliage density and tree height.
- ▶ a “foliage score” for each of the 27 Local Plan Areas (LPAs) across the Sunshine Coast region,



## DRAFT Sunshine Coast Street Tree Master Plan An overview

November 2017 edition

The eight principles developed to guide future street tree planting on the Sunshine Coast are to:

**Ensure locally responsive species selection and placement** that reflects or complements existing character and design intent.

**Plant large canopy trees and groups of trees to build canopy** wherever space permits and conflict potential is low.

**Plant large canopy feature/anchor trees in strategic locations** (specifically engineered for tree planting if necessary) to enhance the sub-tropical look and feel of the region.

**Shade and cool major pedestrian routes, cycle ways, connections between community facilities and recreation reserves, and urban hot spots with street tree plantings.**

**Create attractive and coherent streetscapes through infill and extension planting** in avenues along major thoroughfares, lead-ins and entry ways.

**Reduce conflict potential through better tree selection and placement of street trees** and ongoing partnerships with internal and external stakeholders.



Example of tree planting priority 1:  
Plant trees where space permits and conflict potential is low.



Example of tree planting priority 2:  
Shade major pedestrian routes.



Example of tree planting priority 3:  
Infill and extend tree avenues on major thoroughfares.



## KEY POINTS

1. “home-grown” evidence builds triggers for action
2. opportunities come in all shapes and sizes
3. challenge traditional constraints - with an outcome focus



# Urban greening advice...



Office of  
Environment  
& Heritage

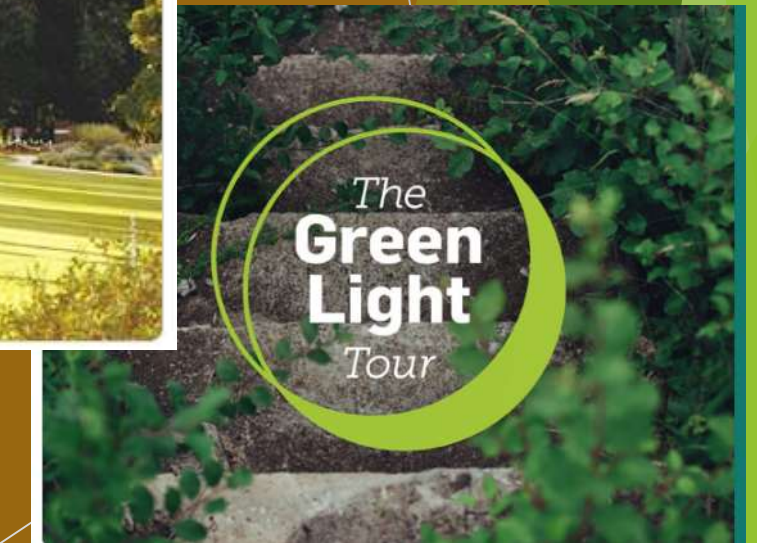
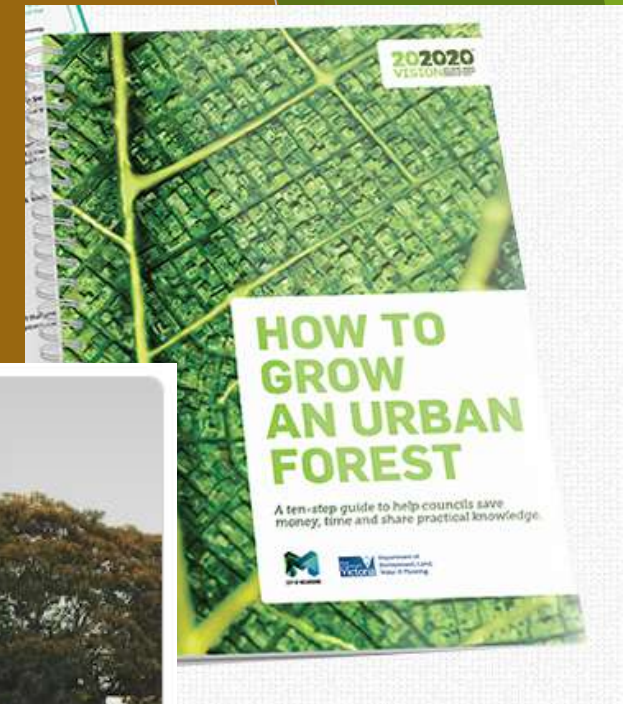
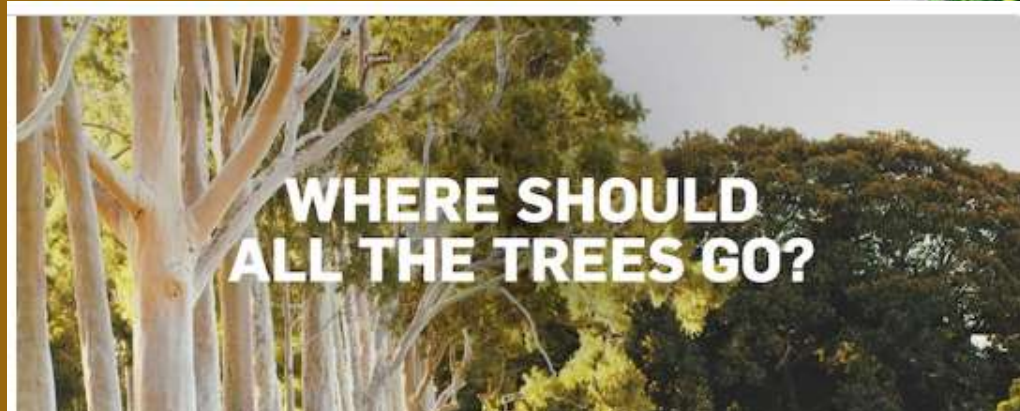



## URBAN GREEN COVER IN NSW

TECHNICAL GUIDELINES

# More urban greening advice...

- ▶ <http://202020vision.com.au/help-hub/>
- ▶ <https://treenet.org/>
- ▶ [www.urbanforester.com.au](http://www.urbanforester.com.au)





Streets are the  
**worst** and the **best**  
place to plant trees.

challenges

Gwilym Griffiths, Manager Urban Forest, Inner West Council