



Turn Down the Heat

Working together to create cooler more resilient communities

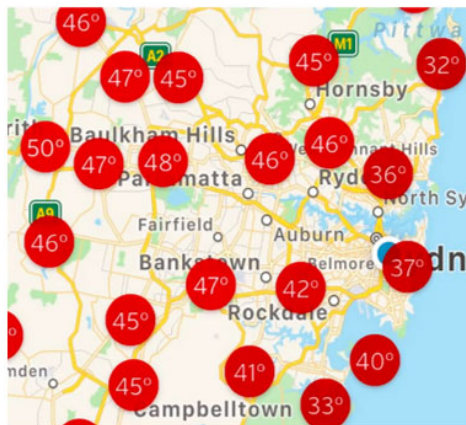
Turn Down the Heat | A collective approach to heat

Working together to create cooler, more resilient communities.



People living in Greater Sydney
can survive and thrive in a
warming climate and during
extreme heat events

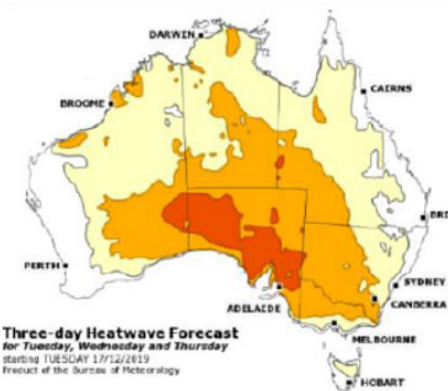
Heat and Western Sydney | What do we mean by heat?



Climate



Urban heat islands



Heatwaves

The issue of heat is multi-faceted, with multiple drivers.

Heat and Western Sydney | Impacts

Heat kills more Australians than fire, flood and storms combined

Heat has cumulative and cascading impacts on the operation and productivity of city systems. Western Sydney residents rate heat of equal concern to bushfires. (Heat Smart survey, 2020).



80%
suffered
loss of
sleep

58%

worried about
electricity costs



34% felt
distressed
or
mentally
stressed

32%

lost power to
their home

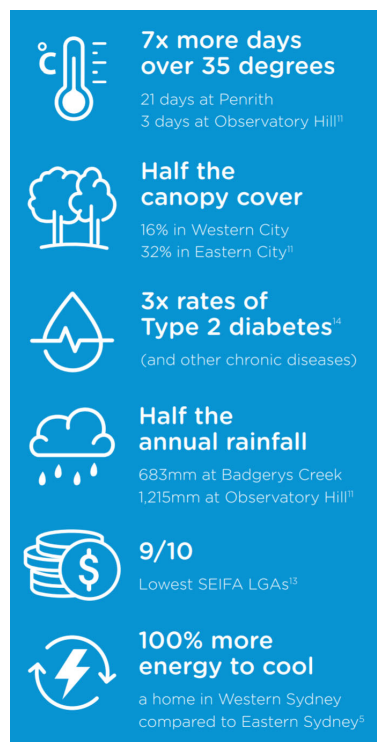


28% felt
unwell or
sought
medical
advice

24%

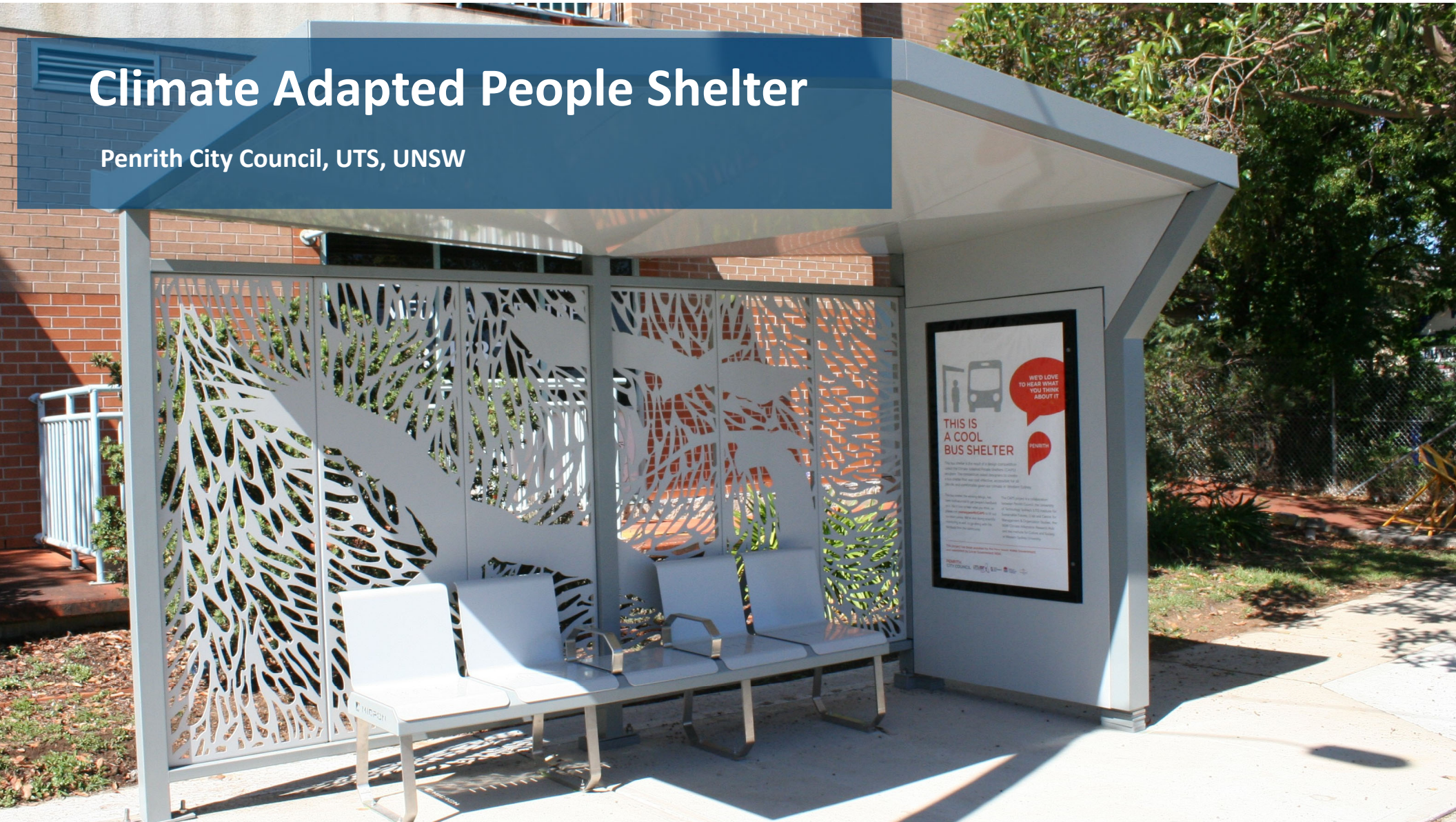
had transport
disrupted

Survey conducted by WSROC in May 2020. Respondents were from the general population, and most were not considered at-risk individuals.



Climate Adapted People Shelter

Penrith City Council, UTS, UNSW



Turn Down the Heat | Strategy and Action Plan



Strategic driver	Implemented
Take action together	Ongoing collaboration across sectors
Cool with green space and water	Climate Resilient Canopy Species selection and passive irrigation for resilient urban canopy
Design and plan to cool the built environment	Urban Heat Planning Toolkit Guidance for councils to address heat in planning policy and plans Cool Suburbs Tool Voluntary decision support and design guidance tool Future Proofing Residential Development Assess performance of compliant dwellings against future climate projections
Build a community that is healthy and prepared	Heat Smart <ul style="list-style-type: none"> Community awareness and preparedness building Resilience Framework: Recommendations for heatwave management

Focus
2023 - 2024

Greater Sydney Heat Taskforce

Heat Smart City Plan: 5-year plan outlining coordinated arrangements for building heat resilience, and implementation of supporting projects.



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Cool Refuge Trial

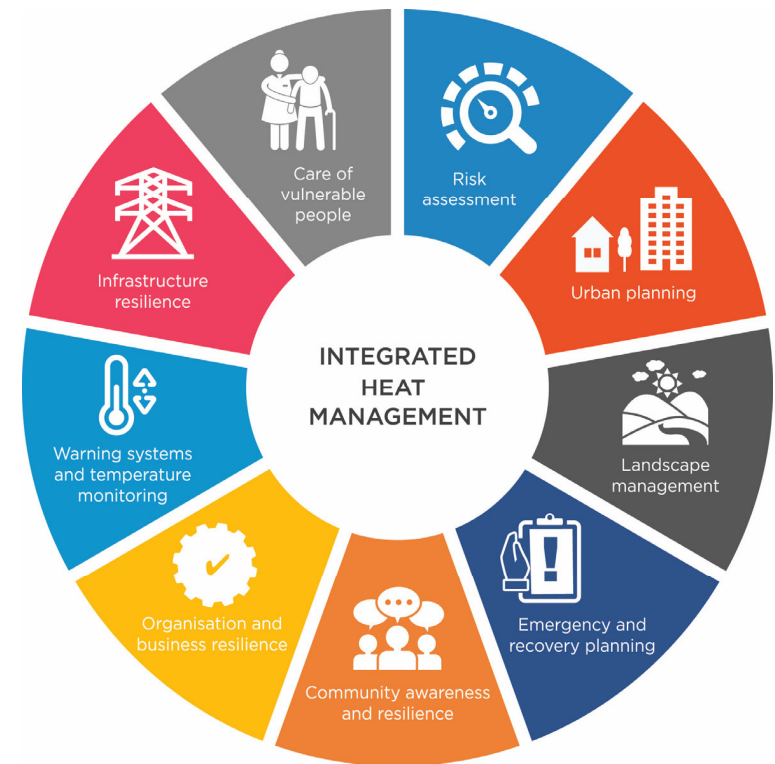
Blacktown City Council, Red Cross



Heat hazard management | Gaps

Despite high number of heat-related deaths, we aren't planning for heat in the same way as other hazards.

- We aren't measuring heat impacts – *health, social, economy, environment*
- No lead agency for heat risk management in NSW
- NSW Heatwave Sub-Plan limited to warnings/information sharing
- No standard guidance on risk assessment/treatment
- Roles and responsibilities are unclear
- Limited emergency planning for heat
- Health and community sectors have limited involvement in emergency planning.



Heatwave| Comparison to other hazards (NSW)

Hazard	Bushfires (RFS)	Flood (SES)	Heatwave (None)
Prevent	<ul style="list-style-type: none"> • Fire risk mapping • Hazard reduction burns • Evacuation routes • Planning rules <ul style="list-style-type: none"> - Water tanks - Clear zones - Material choices 	<ul style="list-style-type: none"> • Flood risk mapping • Flood levees/dams • Evacuation routes • Planning rules (1 in 100) <ul style="list-style-type: none"> - Minimum floor height 	None <ul style="list-style-type: none"> • First local government controls introduced 2021.
Prepare	<ul style="list-style-type: none"> • Local emergency planning • Public awareness campaigns • Clean gutters, replenish water 	<ul style="list-style-type: none"> • Local emergency planning • Public awareness campaigns • Sandbagging, elevating valuables 	None
Respond	<ul style="list-style-type: none"> • Public warnings • Door knocking • Evacuation centres • Back burning/fire fighting 	<ul style="list-style-type: none"> • Public warnings • Door knocking • Evacuation centres 	<ul style="list-style-type: none"> • Public warnings • Extend opening hours swimming pool/library.
Recover	<ul style="list-style-type: none"> • Support programs • Infrastructure rebuilds 	<ul style="list-style-type: none"> • Support programs • Infrastructure rebuilds 	None

Research | Gaps

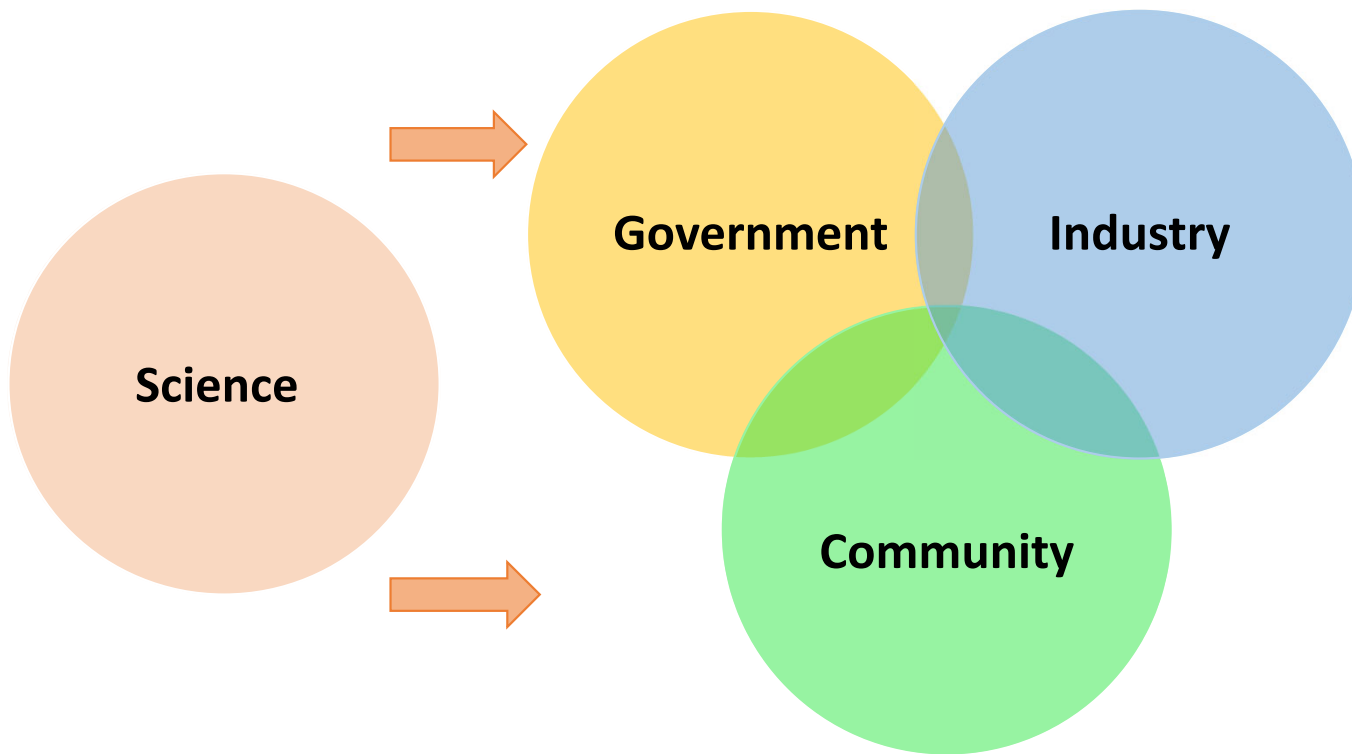
1. **Heatwave definitions** – Hazard definitions are currently based on statistics rather than what is actually posing risks (e.g. duration, humidity, adaptation).
2. **Data collection** – If the issue is not measured, it can't be quantified or understood
3. **Quantify the costs of heat** – physiological, social, economic and environmental.
4. **Risk assessments** – heat risk is not being measured holistically.
5. **Thermal safety standards** – Australia does not have minimum thermal safety standards for housing. What should these be? What are the costs of inaction?
6. **Social practices** – Social practices and behavioural adaptations are important contributors to risk and adaptive capacity.

Cool Streets Trial

Blacktown, City of Parramatta, Campbelltown
Western Sydney University



Science | Translating into practice



Science | Grounding in place

Design

- Contested spaces
- Potential negative outcomes
- Maintenance

Policy

- Bushfire risk
- Austroads guidelines
- Biodiversity

Cultural

- Negative view of trees
- Aesthetic preferences
- Detached houses
- Cultural blindspot

Economic

- Cost of change
- Housing affordability
- Feasibility of scaling up



A photograph of four people standing under a large, modern playground canopy. The canopy is made of blue and white fabric panels supported by a white metal frame. The people are standing on a paved playground area. In the background, there are other playground structures, including a green and red circular sculpture and a blue slide. A sign on the grass in the foreground reads "UV Smart, Cool Playground" and lists the partners: Cumberland Council, Cancer Council, and Western Sydney University.

UV Smart Cool Playground

Cumberland Council, Cancer Council, Western Sydney University

Summary| Challenges to addressing heat

- A relatively new policy issue (poorly understood and conflated with other issues)
- Not seeing the whole picture (e.g. focus on greening at exclusion of anything else will not solve the issue)
- Data gaps – Limiting our understanding of the magnitude of the problem, and preventing appropriate resourcing to be allocated.
- Governance – Heat stretches many domains, not one entity has overall responsibility
- Cultural blind spot
- Translation of research into practical application



Thank you Questions?

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