BUILDING CLIMATE RESILIENCE

PRESENTATION



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Building Climate Resilience

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This briefing

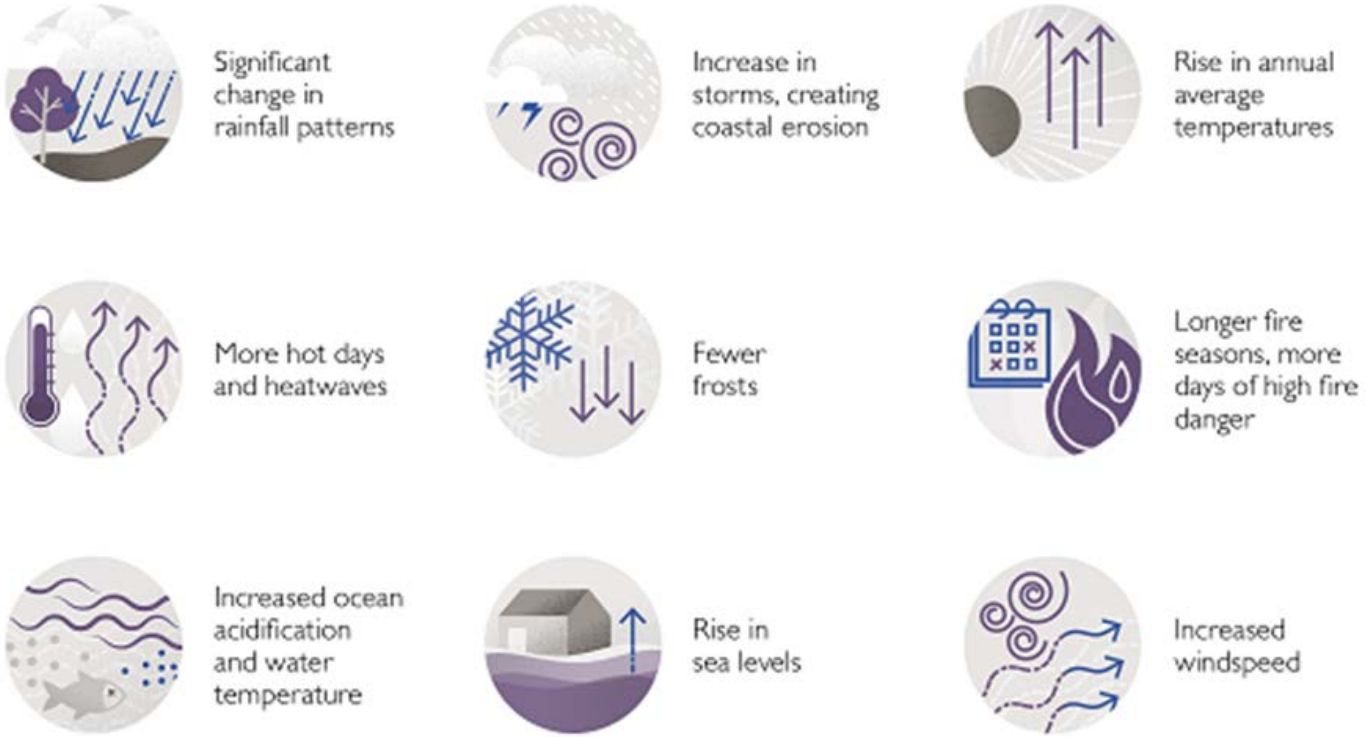
- Climate change in Hobart
- Key risks for Hobart
- What does a resilient City look like? (for discussion)

01

Understanding Hobart's Climate Impacts

With Climate Change:

- Increasing frequency and severity of extreme events



A changing climate – key indicators

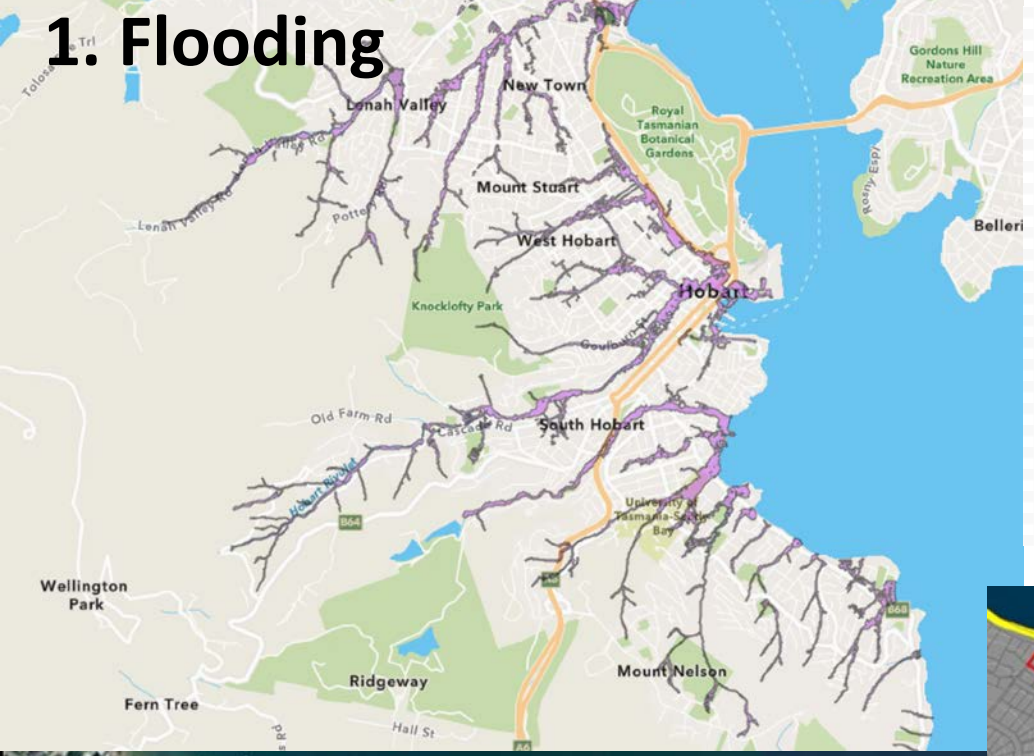
Climate change variable	"Current"	2030	2050
Temperature (annual average)	21.6°C in January and 11.7°C in July. Rise of 0.1°C per decade since 1950s	+0.6°C	+1.2°C
Cold temperature extremes	5 days with minimum <0°C	Decrease of 3 days with minimum <0°C	Decrease of 4 days with minimum <0°C
Hot temperature extremes	18 days >25°C	Increase of 4 days >25°C	Increase of 10 days >25°C
Bushfire	Cumulative forest fire danger index (FFDI)**: 1,700 – 1,850	1,800 – 1,950	1,900 – 2,050
Rainfall (annual average)	Annual total of daily precipitation (PRCPTOT) is 678mm	+8mm mm	+24 mm
Extreme rainfall and flooding[9]	49mm highest daily maximum (R1D), 78mm over five days (R5D)	+4mm R1D +9mm R5D	+7mm R1D +8mm R5D
Drought	16 consecutive dry days (CDD)	No change CDD	No change CDD
Wind and extreme storm events	500 year return period of combined wind gust speed: 38.6km/h	500year RP: 37.1kp/h	500year RP: 39.3kp/h
Sea level rise		+13 cm	+26 cm

Bushfire as the most significant impact

- Hobart is one of the most bushfire prone cities in the world and the most bushfire prone city in Australia.
- Hobart City Council has had a well-resourced and innovative fire mitigation program with the work done by the City considered world leading by eminent fire scientists.
- Bushfire is a function of **WEATHER**, **FUEL** and **TOPOGRAPHY.**
- Destructive fires can occur independent of drought.
- Risky for Hobart when:
  - wet springs followed by dry summers (= fuel)
  - synoptic patterns that bring strong, hot and dry winds from Central Australia and funnel them into SE Tasmania (the 'Fire Plume') & a blocking high over the Tasman Sea (=weather)
  - kunanyi (= topography)

With thanks to Jenny Styger (UTAS)

1. Flooding



2. Urban Heat Island Effect

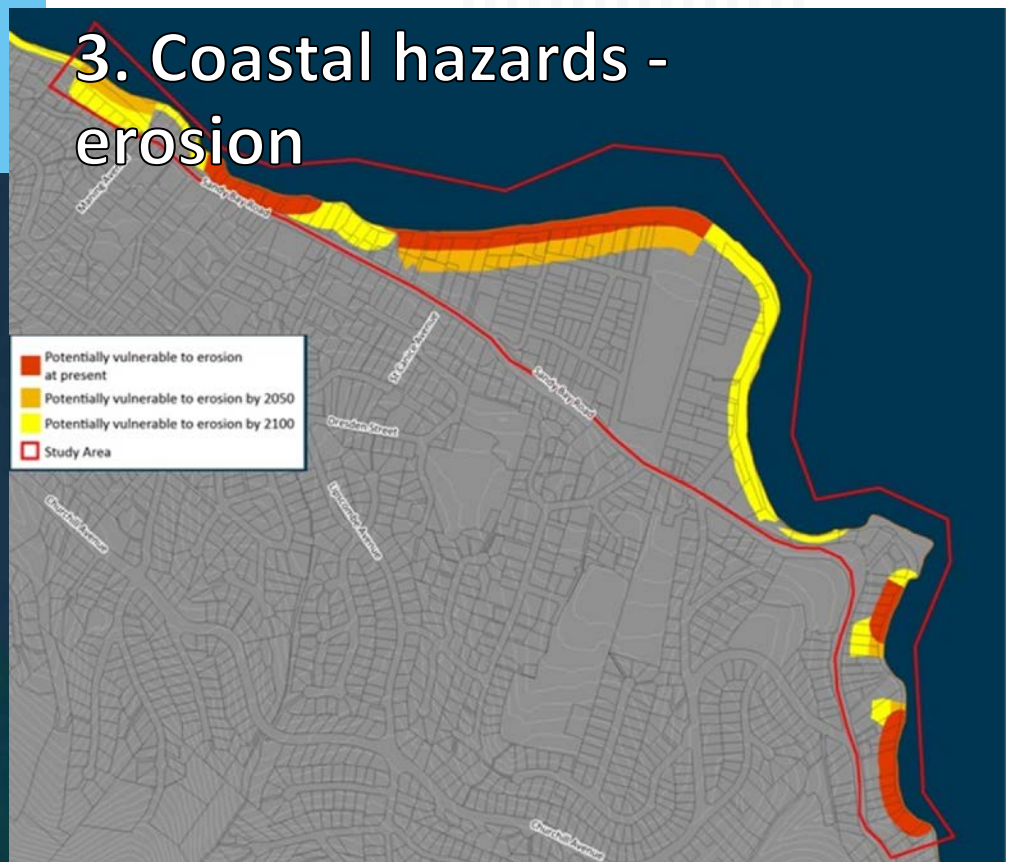
By 2050, Hobart will have 8 days above 30 degrees, compared to 4-5 in 2010.

Temperatures can be 10 to 15 degrees hotter in cities

Ambulance dispatches in Tasmania increase by 34% during extreme heatwaves, 10% during severe heatwaves and 4% during low-intensity heatwaves



3. Coastal hazards - erosion



Some terminology

Resilience	Resilience is the capacity of communities to withstand, resist, absorb, accommodate, recover, transform, and thrive in response to shocks and stresses, to realise positive economic, social and environmental outcomes. Resilience involves building adaptive capacity, enhancing preparedness, and implementing measures to reduce vulnerability and enhance long-term sustainability.
Adaptation	Adaptation refers to measures taken to adjust and respond to the impacts of climate change to reduce vulnerability and increase resilience. This includes strategies to manage risks, protect infrastructure, and support communities in adapting to changing conditions.

Climate hazard

The potential occurrence of a natural or human-induced physical event or trend or physical impact that may cause loss of life, illness or injury, as well as damage and loss to property, infrastructure, livelihoods, services, and the environment.

Physical risk

Risk of direct damage to homes, infrastructure, other assets and services, supply chains or market. Physical risks can be acute (event driven) or chronic (stresses).

Complex risk

Compounding, cascading and protracted risks. Events that result in a cascade of events, often worsening; events that are interrelate and events without a clear start- and end-point.

02

Hobart’s Key Climate Risks

Domain issues and themes

Natural Environment:

- Conservation
- Biodiversity
- Urban green
- Landscape
- Planning
- Recreation

Built Environment:

- Infrastructure
- Planning
- Health and Safety
- Heritage

Economy:

- Industry sectors
- Workers
- Training and skills
- (Un-)employment and growth

Social:

- Health
- Housing
- Education
- Service delivery
- Sports & recreation

Governance:

- Decision making
- Roles and responsibilities
- Financial sustainability
- Coordination
- Emergency management

Vulnerable groups

	Vulnerable groups	Hobart LGA	Tasmania
1	Low and very low income households (<$650/week)	15.7%	21.1%
2	People (at risk of) homelessness	At risk: 337 (0.6%), Homeless: 475 (0.9%)	At risk: 1,752 (0.1%), Homeless: 2,353 (0.4%)
3	People aged 65 and over	10,018 or 18.9%	116,634 or 20.9%
4	People with mental health condition (including depression or anxiety)	5,797 or 10.5%	63,861 or 11.5%
5	Very young children (0-4 years)	2,202 or 4%	28,277 or 5.1%
6	People working in high-risk industries (Health care and social assistance, Manufacturing, Public administration and safety, Construction and Retail Trade)	12,782 or 23.2%	122,722 or 22%
7	Renter households with rent payments greater than 30% of household income	2,561 or 33.5%	19,730 or 34.2%
8	Owner with mortgage households with mortgage repayments greater than 30% of household income	519 or 9.9%	7,311 or 10.1%

Major risks in Hobart - bushfire



- More frequent and intense bushfires may result in damages to houses, infrastructure, businesses and natural environment.
- The health and wellbeing of people is at risk too, and the ongoing mental stress may be prolonged.
- First responders, health and support workers are also at risk directly or indirectly, physically and mentally.
- Economic activity may be interrupted, some businesses may not recover.
- People may be unable to ensure houses and businesses as insurance premiums go sky high.
- Local government may not be able to keep up with the costs of infrastructure rebuilds, disaster preparedness and recovery. It may have to increase rates or reduce services.
- The community may lose trust in government and decision makers

Major risks in Hobart: floods and extreme heat



- Flooding and coastal risks may have similar impacts, but likely at a smaller scale.
- Extreme heat events will increase the demand for emergency and other health services.
- More people will suffer from health-related illnesses and injuries, sometimes this may result in death.
- Vulnerable people are especially at risk.

Heat is a major health risk

"In 2009, the terrible Black Saturday bushfires killed 173 people. What most Australians don't realise is that the crippling heat around the horrendous bushfires killed 374 people."

03

What could a climate resilient Hobart look like?

A climate-resilient City

1. A green city with cool spaces
2. A city that understands and manages the risks
3. Prepared for disasters, ready to recover quickly and equitably
4. Workers are supported, through difficult times
5. Council leaders are Council-risk mature

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BUILD CLIMATE RESILIENCE

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PRIORITY

Build climate resilience across the city to rapidly and effectively adapting to climate change, being prepared for extreme events such as bushfires, heat, floods and coastal inundation, and ready to recover afterwards.

GOALS

1

Disaster-prepared

2

Recovery-ready

3

A resilient Council

OBJECTIVES

Support existing and new buildings and infrastructure to withstand extreme events and climate-related shocks and stresses.

Develop disaster preparedness and climate adaptation initiatives with priority communities and those who require support.

Create publicly accessible spaces for extreme heat and other shock events.

Ensure that council resources are available to respond quickly, effectively, in collaboration with agencies and in line with best practice.

Empower communities by providing information and resources to help them recover swiftly.

Council ensures safe working conditions, support and adaptability in the face of more emergency situations that are complex and compounding.

DELIBERATION

- To what extent do you support the goals and objectives?
- What are the reasons for your level of support?

Use the worksheets to record your collecting thoughts. Make sure you find the right sheets for your table :)





REPORTING BACK