

2° Degrees: zero-carbon city and country

The future Brisbane
through the lens of greenspace:
nature, landscape and food.

Why do children have to strike to make us save the planet?

Make Earth



COOL Again



PLEASE

WE NEED YOU TO MAKE DECISIONS THAT WILL HELP OUR WORLD FOR THE NEXT GENERATION

Climate Crisis = Place Crisis

How do we adapt
our placemaking quickly
and collectively?

Climate adaptation starts in PLACE



We love our families, friends
and special places:
Let that drive neighbourhood
climate adaptation.

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Communities are drivers of climate action

We need to give them the tools to help them adapt their places and worlds



A template for neighbourhood climate adaptation



*Shifting Climate /
Shifting Places*

2° Degrees: Design for Climate Adaptation
A collaborative Process for neighbourhood action
By John Mongard

| Specialising in community and urban design |
JOHN MONGARD LANDSCAPE ARCHITECTS PTY. LTD.
The Design Block, 89 Grey Street, South Brisbane, Queensland, Australia 4101
Email: mail@mongard.com.au | Web: www.mongard.com.au
Phone: +61 7 3844 1932 | Fax: +61 7 3844 3250
A.C.N. 059 324 113



Kurilpa Climate Strategy
A climate resilience strategy
for the people and places of the Kurilpa Peninsula in Brisbane

By Pam Burke, John Mongard and Rob Spence
in collaboration with the Kurilpa community
November 2018



*Shifting Climate /
Shifting Places*

2° Degrees: Design for Climate Adaptation
Key Neighbourhood Maps
by John Mongard Landscape Architects, November 2019

These key maps were prepared to provide a clear, concise public resource and provide a base for communities to work and collaborate on their response to the neighbourhood's climate adaptation maps and to prepare to respond to the climate change in the year of 2019.

Kurilpa Climate Strategy:
a collaborative process for
neighbourhood action


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This desert land

Indigenous Australians have known for millennia how to live without leaving a footprint on this land. Droughts, fires and episodic flooding were all part of their way of life. We need to relearn how to survive and thrive in even hotter and dryer landscapes... Where there are more frequent storms and flood events. Where we can also create local food.

(after John Williams, The Guardian, 4 /10/19, p.28)

We need to relearn our landscape: its soil, its plants, its very nature. We will need to be self-reliant and resilient local communities, much like the old days. We need to learn how to nurture the landscape and create local food as if it really matters for our survival.

An aerial photograph showing a coastal region. On the left, a beach and ocean are visible. The land is divided into various zones: a dense urban area with buildings and roads, a large area of agricultural fields in shades of brown and red, and some green forested areas. A winding river or canal cuts through the landscape. The sky is a deep blue.

How do we change the prevalent pattern of our growing cities, without destroying the very landscape which will support us into the turbulent future?

"We have squandered our fertile, high rainfall lands around our coastlines: instead of growing food, we have chosen to use these lands for urban sprawl, tourism and hobby farms. We have pushed out into an arid, infertile continent drained its rivers and cleared its fragile forests in order to make food in a place where there is high risk of failure and destruction."

(John Williams, The Guardian, 4 /10/19, p.28)

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Is this the city of the future?



Green Wattle Gardens,
Burpengary, Qld

Casey City,
Victoria

Craigmore,
Adelaide, SA

Glenmore Park,
Western Sydney, NSW

Large houses + small lots + less garden = heat stress + big carbon footprint + waste + lost nature

= 2 degrees +

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Imagine a world where you
and your children can live...

To make this place, we will need to
adapt our communities, places,
energy, transport and
manufacturing production
to be zero carbon.

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The trees may
save us

37% of carbon draw down
can be achieved with natural
landscape based solutions

(<https://www.naturalclimate.solutions/the-science>)

1 trillion new trees
can cancel **60%**
of all current emissions

(Bastin et al, Science 2019)

10 billion
more trees currently lost
than planted every year

(McAlpine, C, Guardian 1/11/19, p.24)

Food and the city



30%
of our carbon footprint is food

50%
of food is currently wasted

(Guardian 30/8/2019, p.24)

0%
is the world's current food capacity
beyond 2°C heating

(Smith P. in Guardian 16/8/2019, p. 23)

What will our zero-carbon world look like?

The town of Bingara
aims to feed itself by 2020

The Living Classroom



Incorporation

An architectural rendering of a futuristic city. The foreground features a prominent, tall, cylindrical building with multiple horizontal layers of greenery, resembling a vertical farm. To its right is a smaller, cylindrical building with a similar green facade. The city is densely packed with various buildings, some with solar panels on their roofs. In the background, there are large, curved, glass-enclosed structures, possibly greenhouses or indoor farms. The city is situated near a body of water, with a bridge visible. The sky is a warm, orange-brown color, suggesting a sunset or sunrise. The overall style is a detailed architectural drawing with a focus on green architecture and sustainable urban planning.

Landscape and agriculture incorporated into metropolis vertical growth high-tech solutions.

Negotiation

Landscape and agriculture negotiated into metropolis horizontal growth but greener.

Ref: (Marot, S. Taking the Country's Side Agriculture and Architecture, Polígrafa and Lisbon Architecture Triennale, 2019)

Infiltration



Landscape and agriculture permeate gaps in metropolis business as usual growth with grassroots infiltration.

Ref: (Marot, S. Taking the Country's Side Agriculture and Architecture, Poligrafia and Lisbon Architecture Triennale, 2019)

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Secession

Nature and agriculture become drivers of new worlds 'unplugged' settlements with self-supporting systems.

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Ref: (Marot, S. Taking the Country's Side Agriculture and Architecture, Poligrafa and Lisbon Architecture Triennale, 2019)

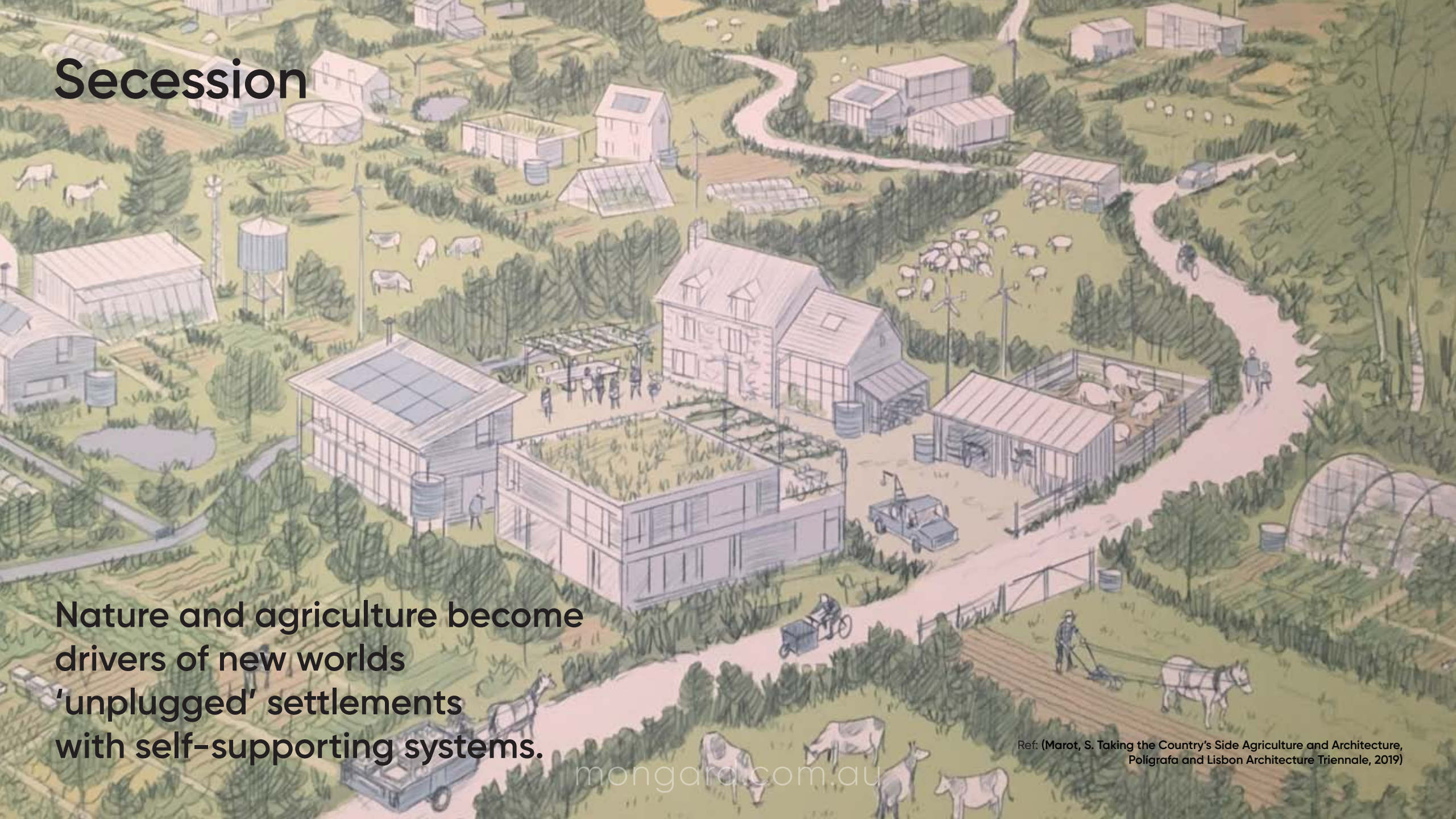




Image Ref: <https://www.citylab.com/design/2016/01/copenhagen-parks-ponds-climate-change-community-engagement/426618/>

Copenhagen: Zero Carbon by 2030



25% Growth

42% CO₂ emissions reduction

15% reduction in heat consumption

66% of city trips not in cars

Ref: (<https://www.theguardian.com/cities/2019/oct/11/inside-copenhagens-race-to-be-the-first-carbon-neutral-city>)

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Heat strategies



2°C Summer heat reduction through:
30% soft / natural / permeable landscape areas in cities
35% cool paving

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(www.lowcarbonlivingcrc.com.au)

A heat map of Brisbane, Australia, illustrating the urban heat island effect. The map uses a color scale from light yellow (cooler) to dark red (warmer). The central urban core is predominantly dark red, indicating higher temperatures, while the surrounding areas are lighter yellow and green, indicating lower temperatures. The map is overlaid with a black outline of the city's boundaries and major roads. The word "Heat" is written in large black letters in the upper left corner.

Heat

**"Urban heat island:
evenly distribute landscape
to maximize cooling and
counter heat stress."**

Local biodiversity

A photograph of a paved path lined with diverse plants and trees, illustrating local biodiversity. The path is flanked by lush greenery, including various shrubs, grasses, and trees. The scene is brightly lit, suggesting a sunny day. The path leads into the distance, where more trees and a glimpse of a building can be seen.

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Verge In Kurilpa Peninsula

From Hampstead Road to Hampstead Common:

1Ha new green space



as bitumen

action



Biodiversity strategies



Urban forests and urban sponge parks are a community priority in renewal of industrial lands in inner city West End.

Water



The Blue & Green Strategy in the The Green Space Plan identifies ideas for managing local flooding in the West End peninsula.



Peri-urban not suburban?



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Brolga Lakes

71 hectares
of degraded land

50%
for Koala
conservation areas

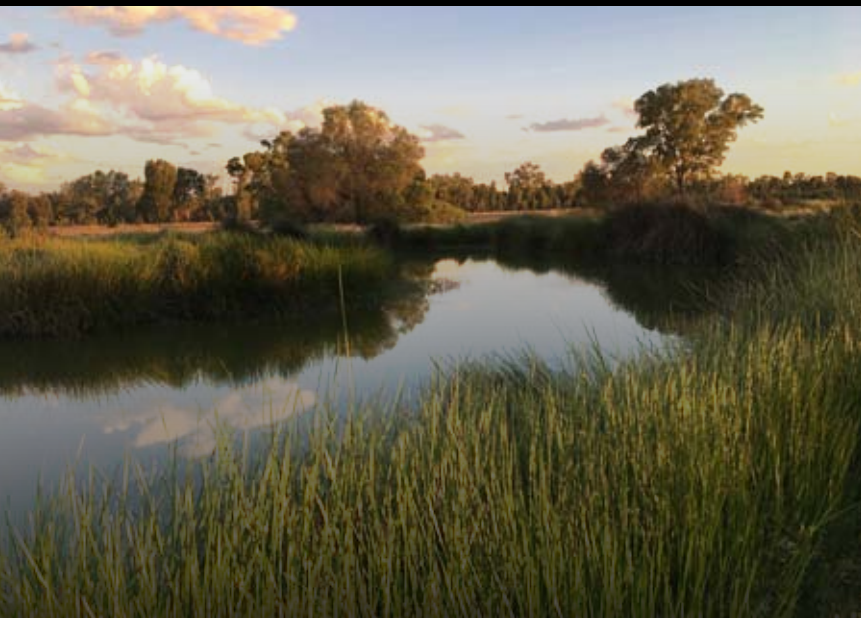
90%
of development area to
regenerated landscapes

100,000
trees grown on site nursery

Brolga Lakes

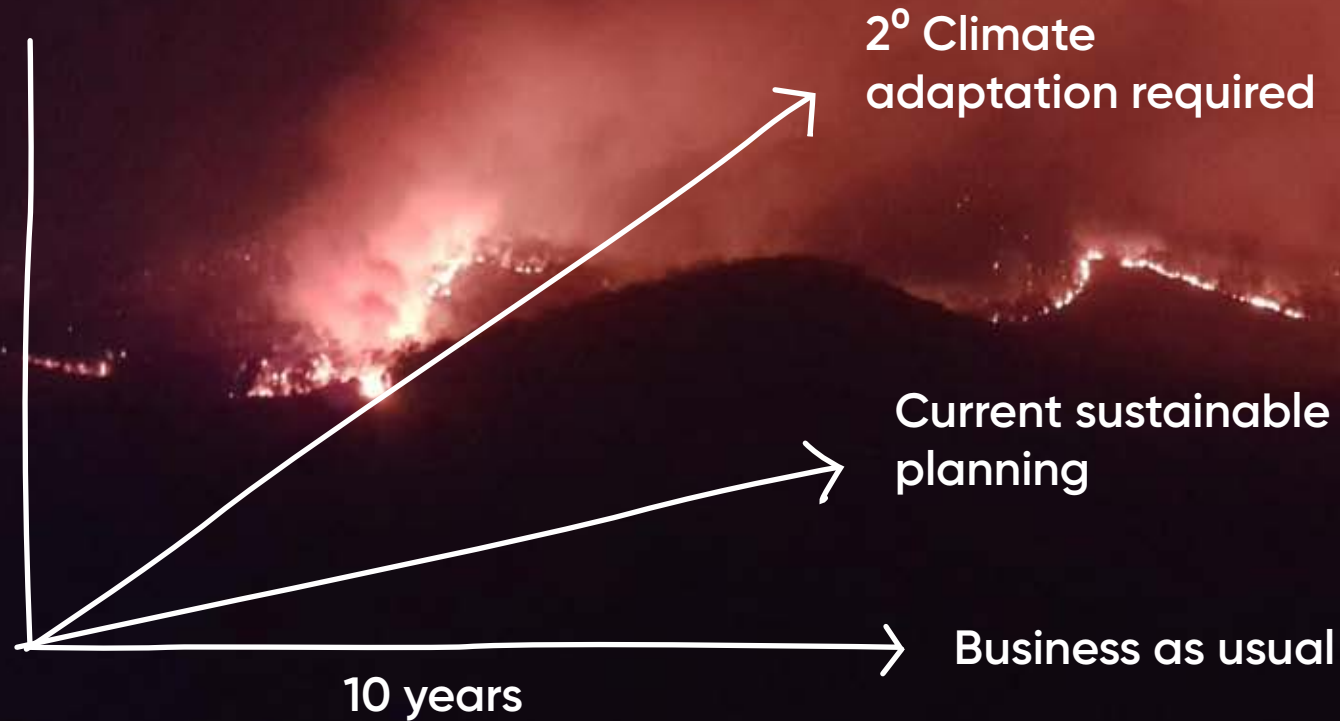


Wasted water



All wastewater is a valuable resource in the landscape.

Shifting climate / shifting places: Design led or disaster led?



A transformational shift in planning and design is required now