

A vibrant garden scene featuring a variety of plants. In the foreground, there are large, broad green leaves and clusters of bright red flowers. To the left, a large, rounded pink flower is visible. The background is filled with more greenery, including tall, thin plants and a wooden trellis structure. The overall atmosphere is bright and sunny.

2° Degrees: zero-carbon city and country

Planning for growth in a changing climate

Climate Crisis = Place Crisis

How do we adapt
our placemaking quickly
and collectively?

Climate adaptation starts in PLACE



BlueCare
Tangara
Retirement
Living
Ph. 3846 7130
35 Sussex St

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

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

by Pam Burke, John Mongard and Bob Speirs
in collaboration with the Kurilpa community
November 2019



*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 from readily available public sources and provide a base for communities to work and collaborate on climate adaptation at the neighbourhood scale. Equivalent maps can be prepared to run similar workshops in any part of Australia.

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 of a coastal region. In the foreground and middle ground, there are large, rectangular agricultural fields in various shades of brown and tan, interspersed with green patches of trees and smaller water bodies. A winding river or canal system flows through the landscape. To the left, a densely packed urban area with many small buildings is visible, extending towards a sandy beach and the ocean. The sky is a clear, 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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Peri-urban not suburban?



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Brolga Lakes

71 hectares
of degraded land

50%
for Koala
conservation areas

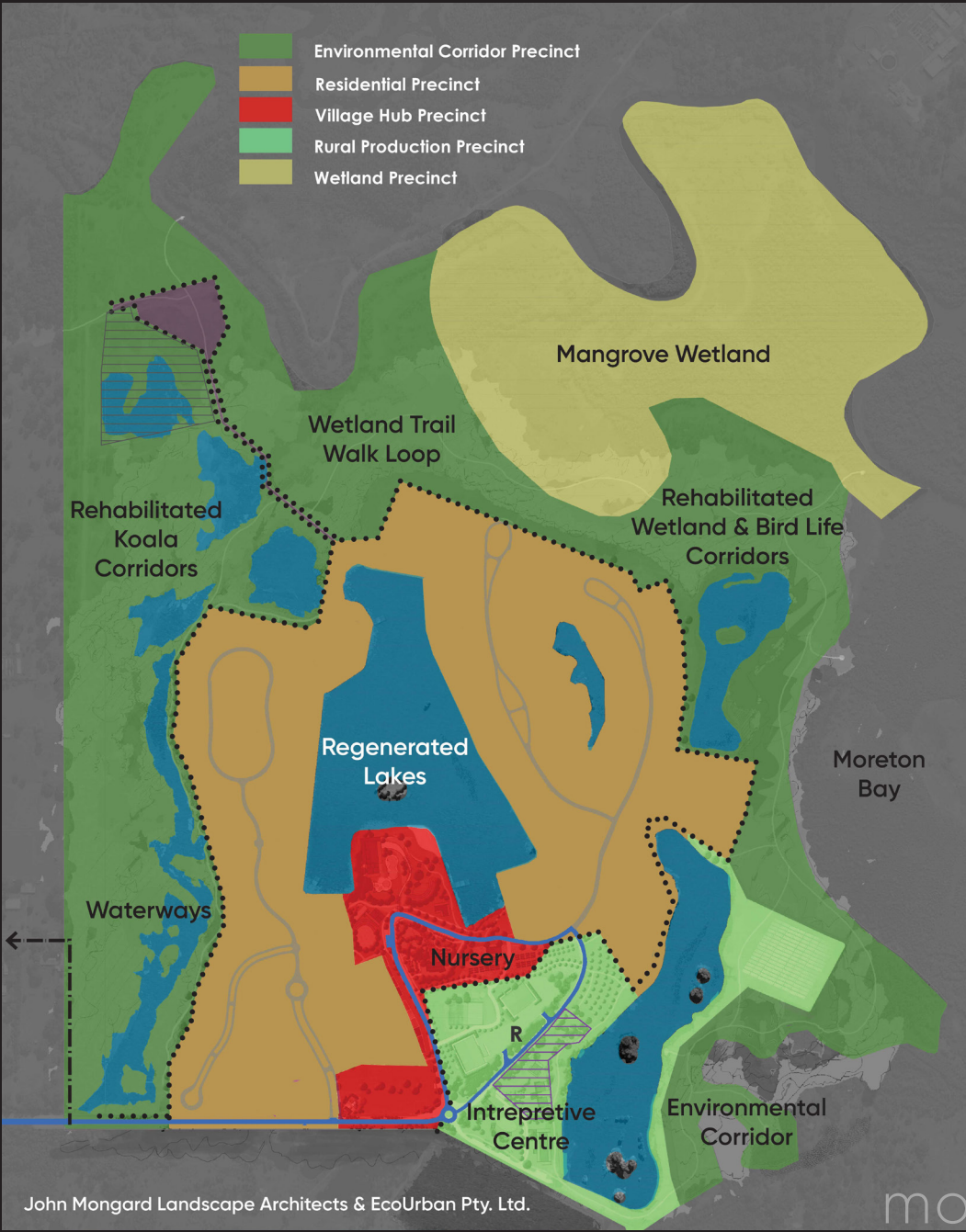
90%
of development area to
regenerated landscapes

100,000
trees grown on site nursery

Brolga Lakes



- Environmental Corridor Precinct
- Residential Precinct
- Village Hub Precinct
- Rural Production Precinct
- Wetland Precinct



A bright, sunny residential street scene. In the foreground, large green leaves of a tree are visible on the left. In the middle ground, a group of children are playing on a paved area. A white car is parked on the street. The background shows houses and more trees under a clear sky.

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)

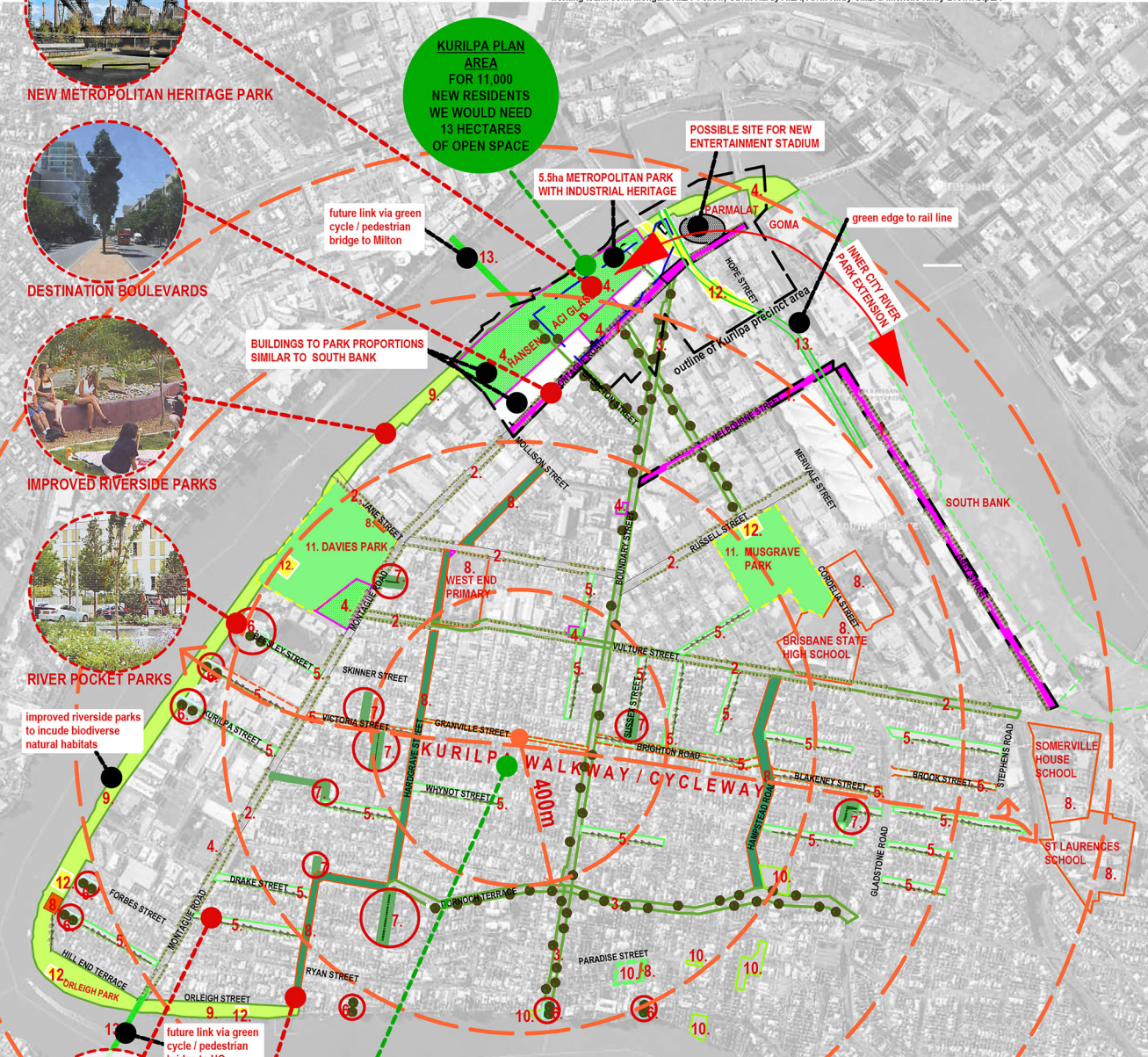
10 billion
more trees currently lost
than planted every year

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

GREEN SPACE STRATEGY

WEST END, HIGHGATE HILL & SOUTH BRISBANE

working team: John Mongard AILA Fellow, Gavin Hardy AILA, Alvin Kirby CMLI & Michelle Kirby-Brown DipLA



Heat + Water + Landscape + Food =

Green Space Strategies:

Through community action in the next ten years we can draw down carbon by creating green space plans throughout Australia.

11 hectares:

Underutilized crown land in the Kurilpa neighbourhood that could be re-purposed into green space and biodiversity areas.

Local biodiversity

A photograph of a paved path lined with lush, diverse vegetation. The path is flanked by various plants, including trees and shrubs, creating a dense and green environment. The lighting is bright, suggesting a sunny day. The overall scene is a well-maintained garden or park area.

Verge In Kurilpa Peninsula

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Food and the city



30%
of our carbon footprint is food

50%
of food is currently wasted

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

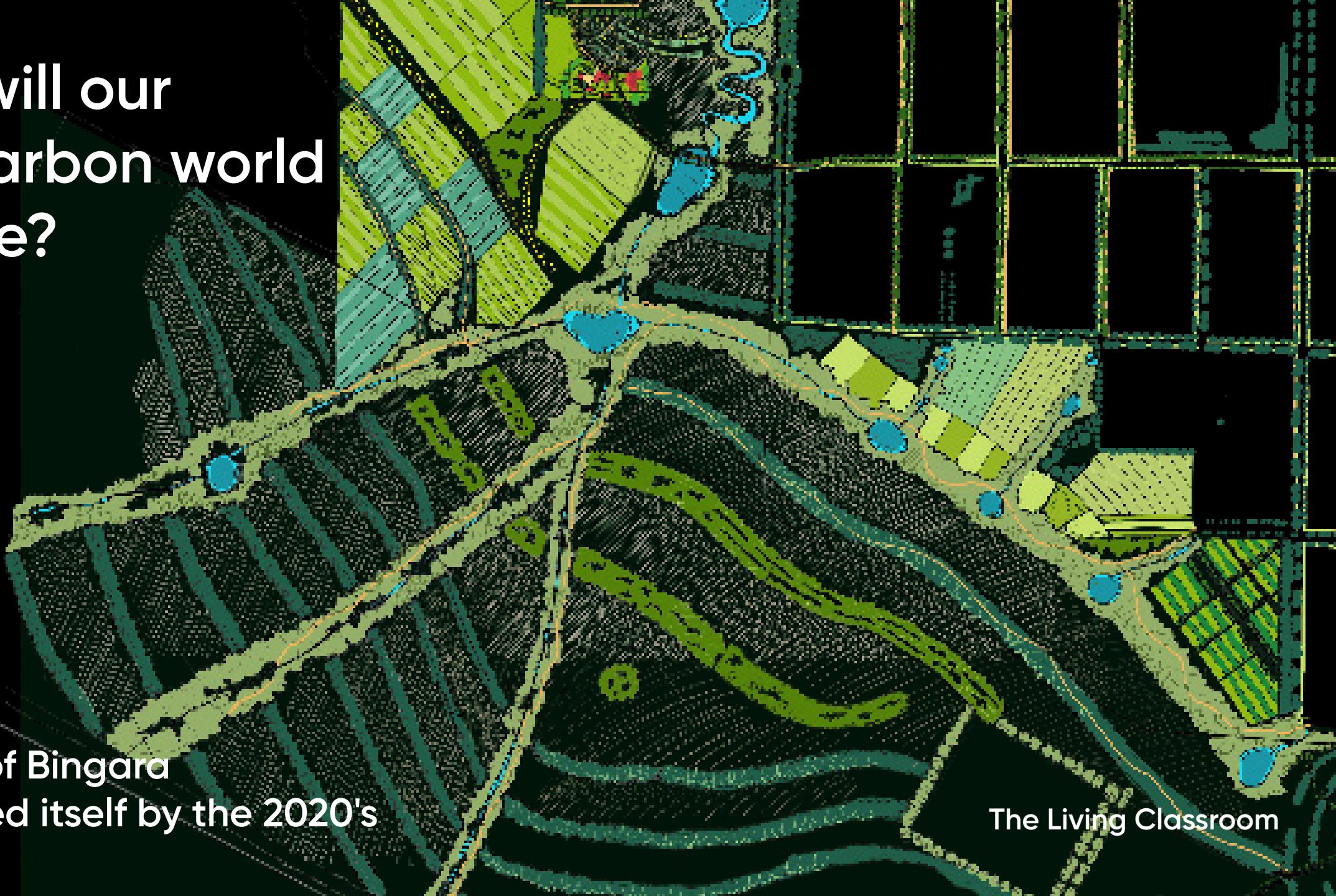
0%
is the world's current food capacity
beyond 2°C heating

(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 the 2020's

The Living Classroom



A heat map of Brisbane, Australia, illustrating the urban heat island effect. The map uses a color scale from blue (cooler) to red (warmer). The central urban core is predominantly red and orange, indicating higher temperatures, while the surrounding areas are yellow and light blue, indicating lower temperatures. The map is overlaid with a black outline of the city's boundaries and major roads.

Heat

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



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)

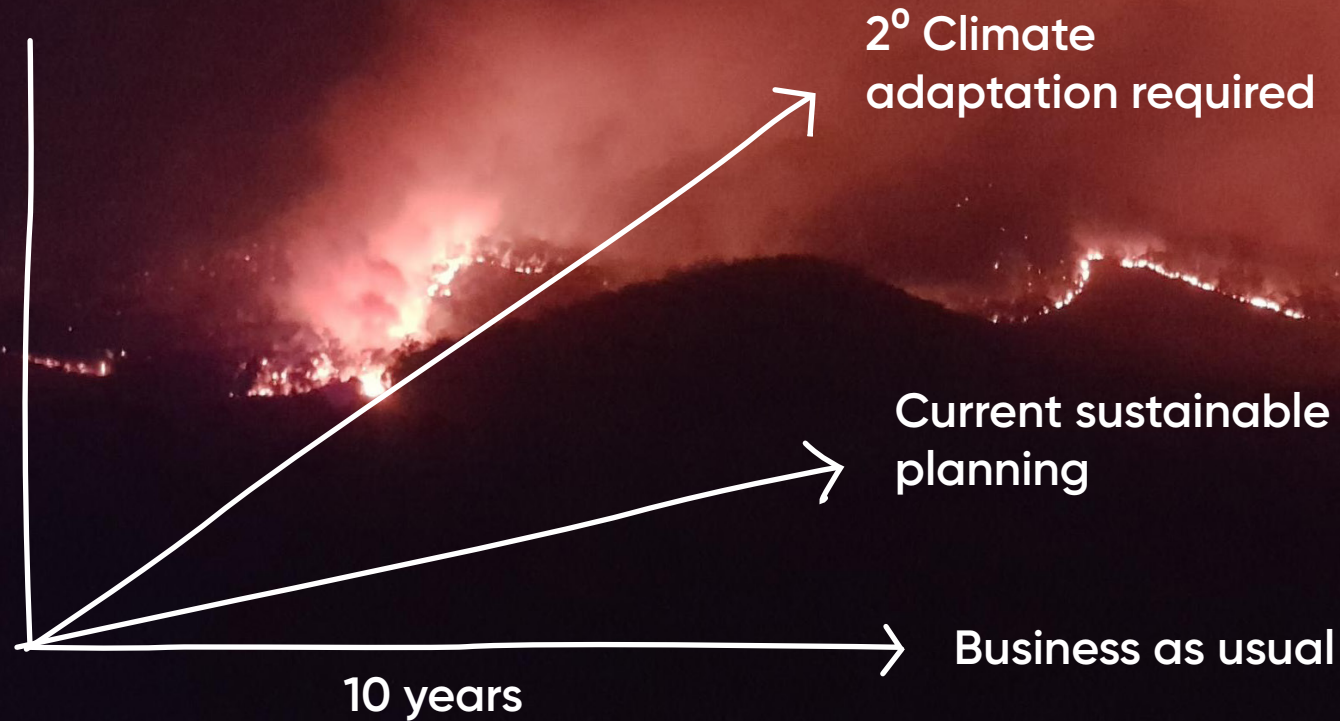
Water



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



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



A transformational shift in planning and design is required now