The City of Melbourne

Green infrastructure and flood management in a growing city

Delta Cities in Times of Climate Change
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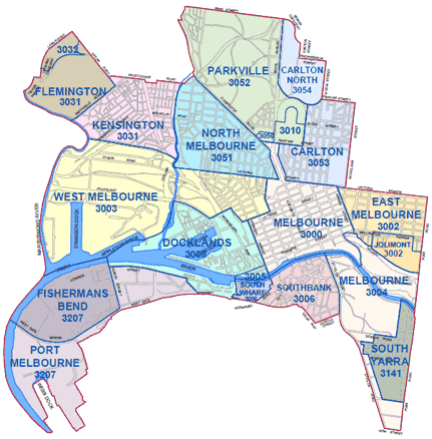
City of Melbourne

- 37.6 square km
- 100,611 Residents (2011)
- 805,000 visitors per day
- Over 1 million international visitors per year
- Almost doubling the residential and working population over 30 years



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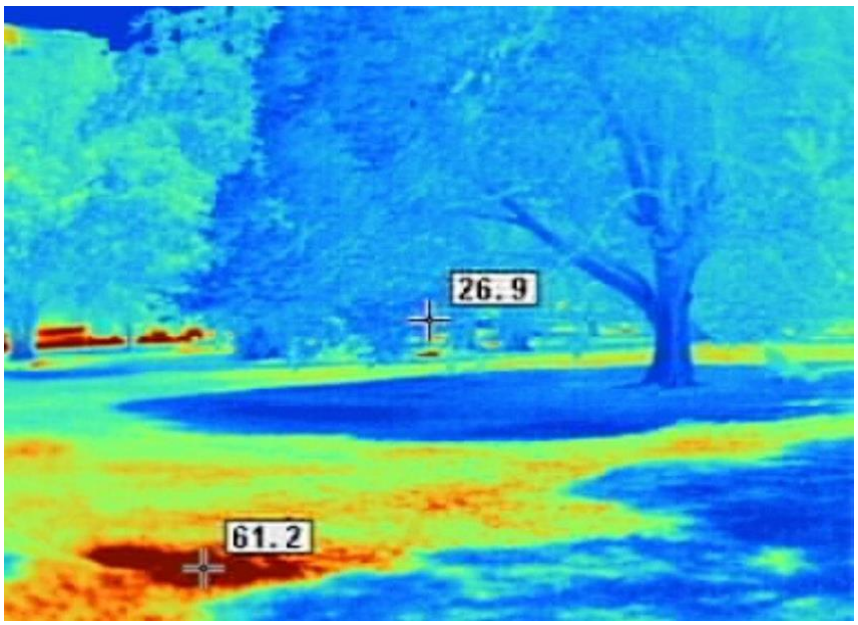
Thermal imaging – parklands



Our Goal

Strategically transforming our landscapes to respond to current challenges and to a dramatically different climate and population

To have ‘a city in a forest, rather than a forest in a city’

Useful life expectancy – current scenario

Overall

23% loss in 10 years

39% loss in 20 years

Heritage landscapes

35% loss in 10 years

58% loss in 20 years

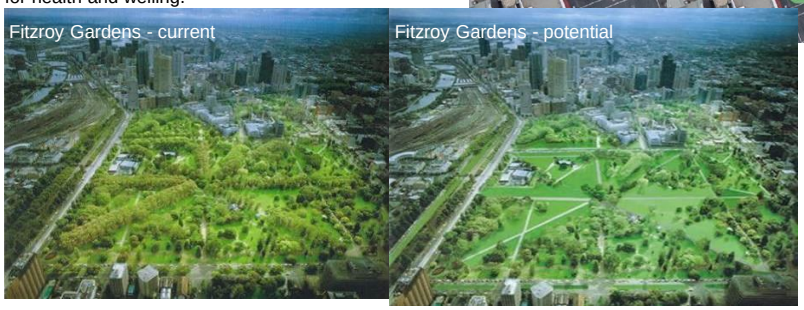
- 1 year to10 years
- 11-20 years
- 21-30 years
- 31-60 years
- 61+ years
- To Be Determined

Tree Health, Canopy Cover and Species Composition

Strategy 1: Increase canopy cover
Target: Increase public realm canopy cover from 22 per cent to 40 per cent by 2040.

Strategy 2: Increase urban forest diversity
Target: The urban forest will be composed of no more than 5 per cent of any tree species, no more than 10 per cent of any genus and no more than 20 per cent of any one family.

Strategy 3: Improve vegetation health
Target: 90 per cent of the City of Melbourne's tree population will be healthy by 2040
Design for health and welling.

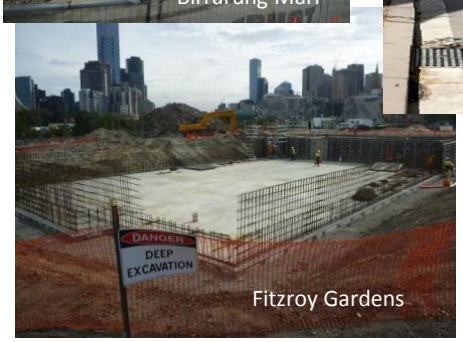


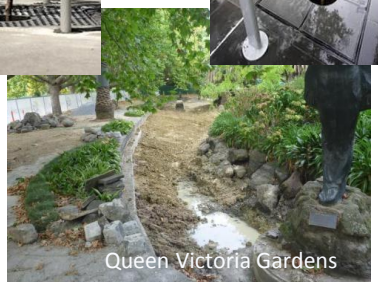
Focus Areas

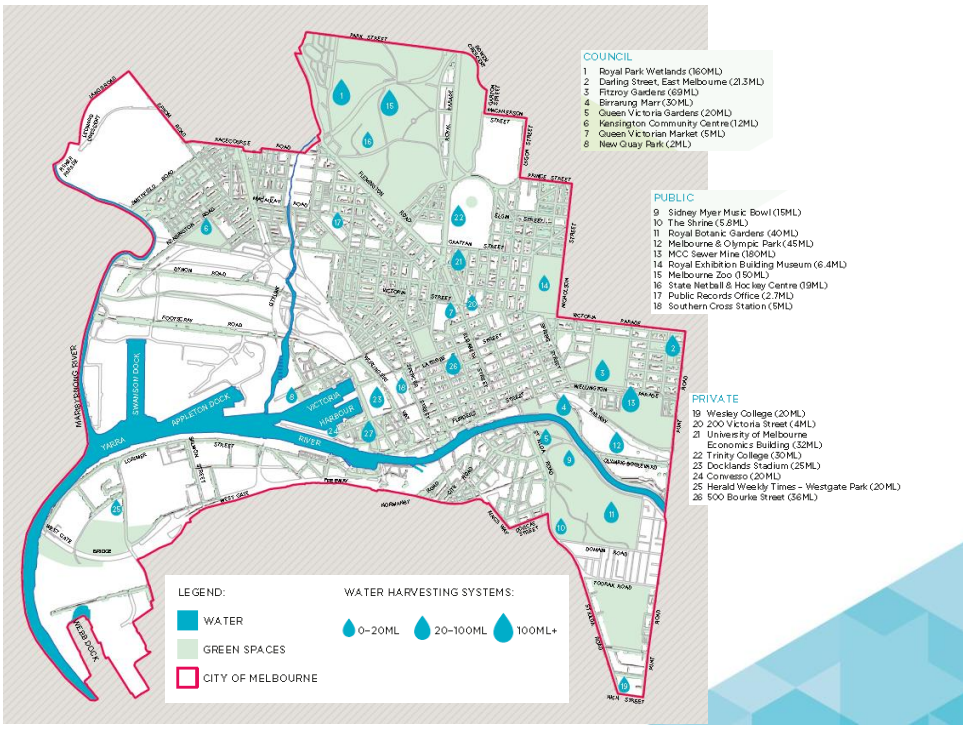
- Water Use
- Water in the Environment
- Liveability (including affordability, population growth & health)
- Climate Change Adaptation & Flood Management

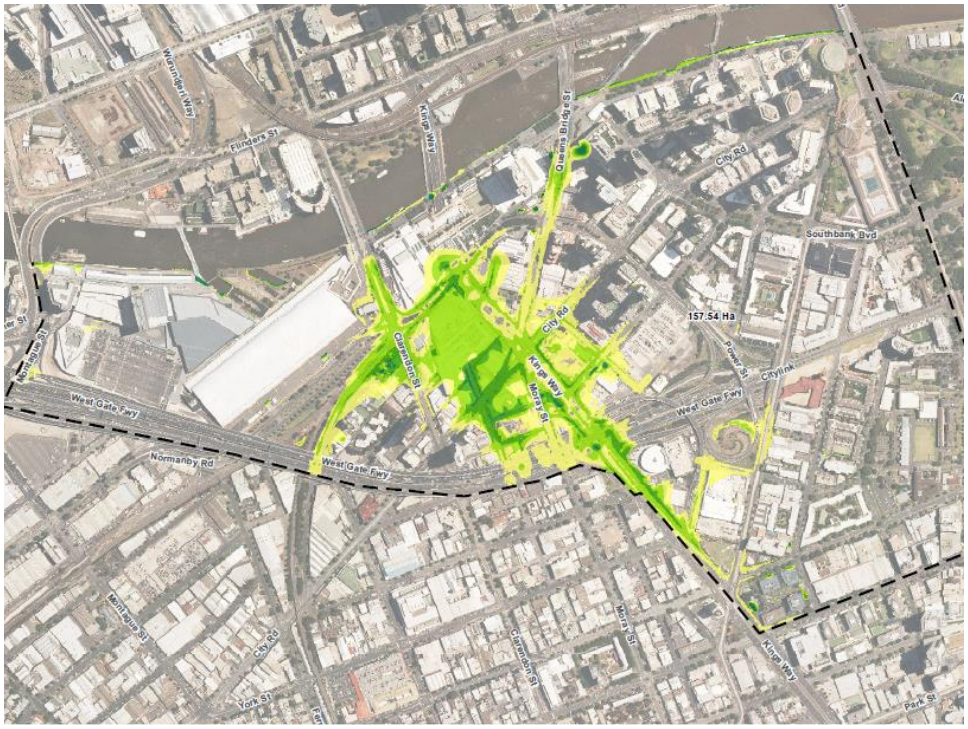
Section	2018 targets	2030 targets
Water use	Water use ▪ Council: 30% of all water use sourced from alternative water sources ▪ Municipal: 8% of all water use sourced from alternative sources	Water use ▪ Council: 50% of all water use sourced from alternative water sources ▪ Municipal: 20% of all water use sourced from alternative sources
Water for the environment	Water quality ▪ 20% reduction in Total Nitrogen contributed to the waterways from the municipality of Melbourne's catchment (baseline year 2000)	Water quality ▪ 30% reduction in Total Nitrogen contributed to the waterways from the municipality of Melbourne's catchment (baseline year 2000)

Stormwater Harvesting Projects and Water Sensitive Urban Design





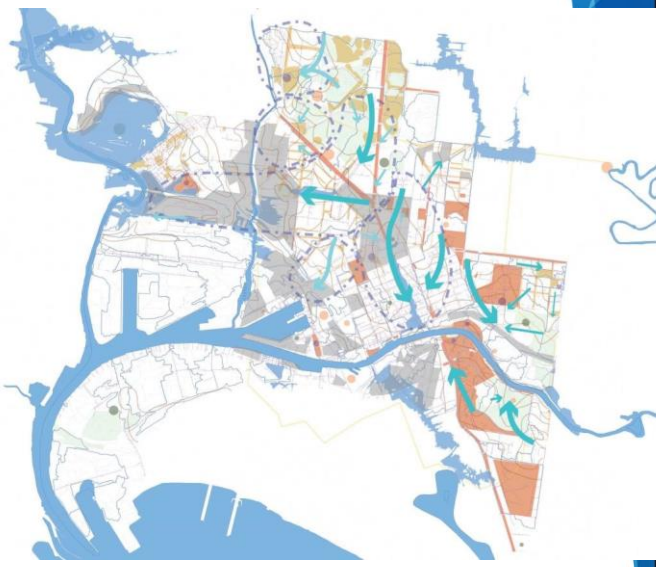




Summary

This map summarises the key overlays that effect flood mitigation and irrigation requirements.

- Water accumulation areas
- Flow direction
- Contours (10m intervals)
- Existing alternative water sources
- High priority irrigation needs
- Medium priority irrigation needs
- Future Growth Areas
- 100 year flood area
- Pipe services



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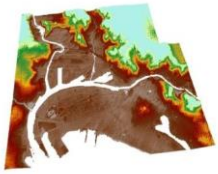
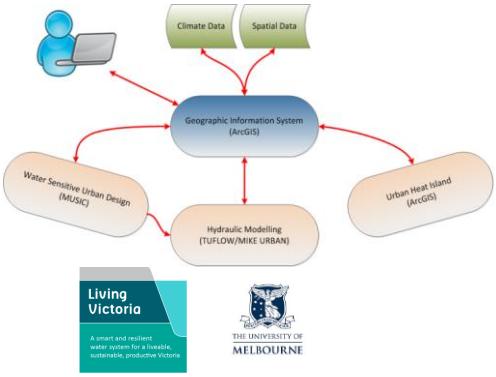
Elizabeth Street Catchment

Existing / Known / Expected Opportunities

Integrated Climate Adaptation Model





A GIS-based decision support tool for future flood and extreme heat mitigation planning. It will:

- Integrate real terrain data, climate data, hydraulic and hydrologic models.
- Run climate scenarios to model the impact of extreme events.
- Simulate defined green and grey infrastructure interventions
- Visualise different flood & heat mitigation interventions and outcomes for the City of Melbourne.

Questions?

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