
Dr Ata Tara
Philip Belesky
Dr Yazid Ninsalam
Sustainable Australia Party
For your vote to count, remember to follow the instructions on your ballot paper.

Stop Over-Development

Vote for better planning to stop over-development.

Policies for better planning to stop over-development:
- Return real planning power to local communities
- Deliver new community infrastructure before more housing developments
- Reduce population pressures by lowering immigration from 200,000 p.a. back to 70,000

For more information visit:
SustainableAustralia.org.au/planning

Sustainable Australia is an independent party from the political centre. We stand for:
- A sustainable environment and population
- Better planning to stop over-development
- Affordable housing for first home buyers and renters
- Secure jobs via a more diverse economy

Policies and candidates:
SustainableAustralia.org.au/vic

Better, not bigger.
View from Shrine of Remembrance
Shrine of Remembrance
5 years
On-the-ground Locations

La Trobe Street (eastbound)
On-the-ground Locations

La Trobe Street (eastbound)

Concerted relationships or chaos?
On-the-ground Locations

La Trobe Street (eastbound)
Visual Bowl as the hollow three-dimensional Space/Volume around a defined observer point (TARA et al. 2018).
DLA 2018 - Interrogating Urban Renewal Scenarios using Skyline Analysis in Fishermans Bend, Melbourne
Beyond Viewshed
Existing Viewshed Analysis in ArcGIS (single function)
Limitations: Gives you visible surfaces
\( \theta = \text{Elevation Angle} / 3Dd = 3D\text{ Distance to skyline} / 2Dd = 2D\text{ Distance to object} / h = \text{perceived height} \)
Unwrapped Skyline Graph – Elevation Angle
Unwrapped Skyline Graph - Sightline Distance
Clouds are not spheres, mountains are not cones, coastlines are not circles, and bark is not smooth, nor does lightning travel in a straight line. (Mandelbrot, 1983)

How "complicated" a self-similar object is?
Background

Coastline Paradox (Fractal Dimension)

Great Britain: $D = 1.25$
Australia: $D = 1.13$

Background

**Box-Counting Method** (Quadtree decomposition)

FD = 1.88

FD = 1.81

FD = 1.95
Background
Facade Articulation

- Existing
- Bulk
- Proposed
- Modified

FD = 1.69
FD = 1.74
FD = 1.83
FD = 1.82
MRI Of Brain
Fractal Dimension of Brain Volume

FD = 2.678

Fractal Dimension
which method?

MRI Of Public Space

Brain Of Public Space
Selected Viewpoints for Analysis

Point Cloud 2018

City Model (LoD2)
Comparison of Two Public Spaces

a1. Existing Condition

a2. Future Condition

Future developments

Existing vs Future
More complex

State Library Forecourt (SLF)

Queen Victoria Market (QVM)
Comparison of Two Public Spaces

Existing vs Future
More complex?

Future change
Unwrapped Skyline Graph
Elevation Angle
Unwrapped Skyline Graph
Sightline Distance
Hypothesis: higher heights = higher complexity?
Results & future:

- Quantification of variables (calculate magnitude of change);
- Numerical Comparison of spatial characteristics of public spaces;
- Limitations in estimating FD (bottom of bowl / setbacks);
- Medium Density–NIMBYISM (research on sense of overdevelopment by including public perceptions)
Visual Impact of Urban Form (Real World Project)

Client: City of Gold Coast

Date: 2019

Aim: Review of City Plan Building Height Overlay

Outcome: Study of 16 view corridors and defining height thresholds and impact levels
16 view corridors thresholds
Elevation Angle (0° - 52°)
Azimuth Angle (0° - 360°)

Projection of Visual Bowl

Sightline distance
High: 1303.45
Low: 11.9736
Towards Managing Visual Impacts on Public Spaces

Dr Ata Tara
ata.tara@rmit.edu.au