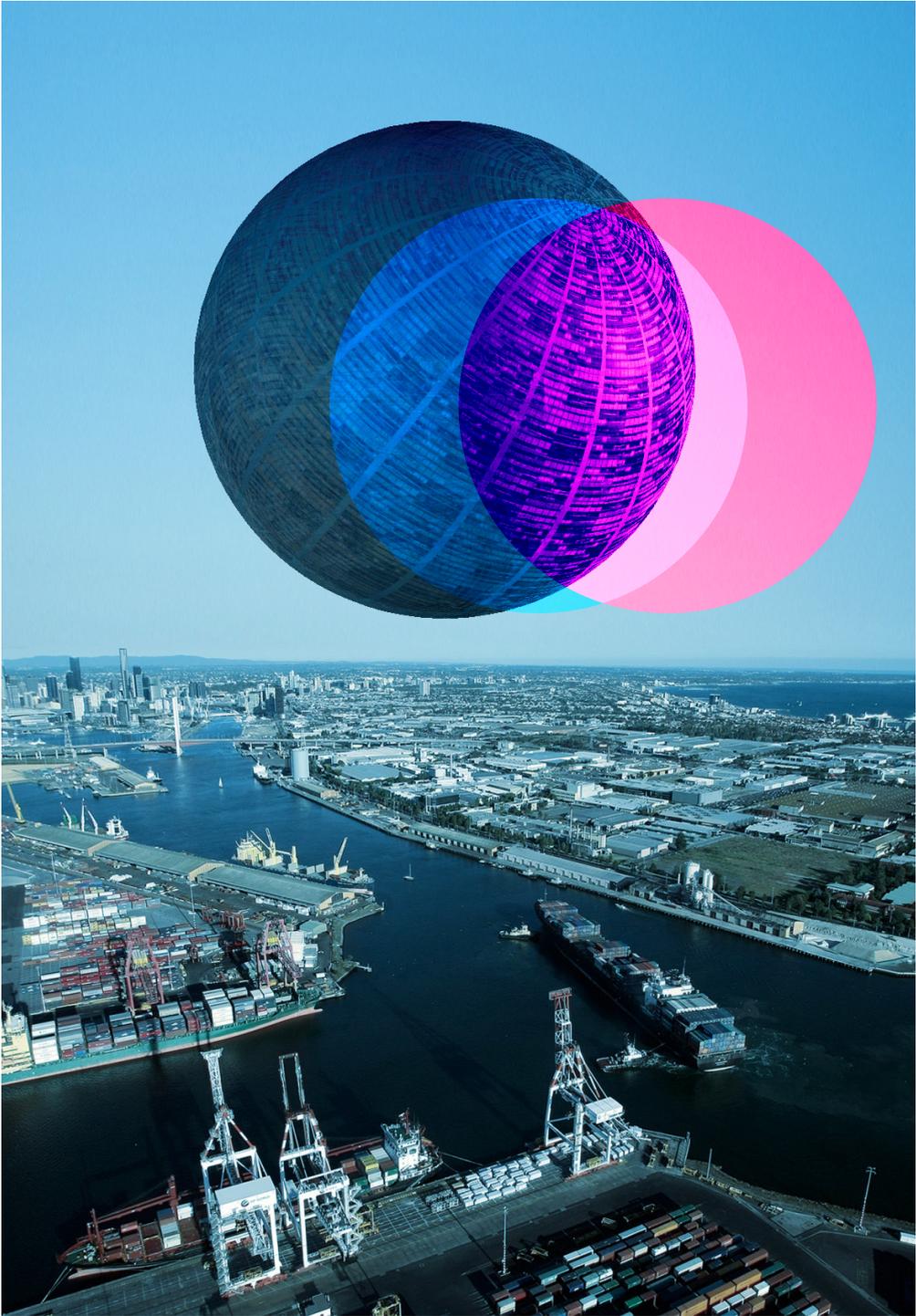


# hundredyearcity



**By 2050, Melbourne's population will pass 7 million.** The waters of Port Phillip Bay will rise by half a metre, at the very least, and temperatures will be, on average, three degrees warmer.

Melbourne will be ill prepared – sprawling, profligate and vulnerable. But it will remain – it will prevail – in chief because of a tiny, shining jewel at its heart. This collection of architecture and infrastructures crowded around the mouth of the Yarra will provide Melbourne with much of its power, almost all of its water, its food and consumables, its culture and vitality. It will provide Melbourne with *life*.

This is a studio about its forecasting, conception and design. This is a studio around the **Hundred Year City...**

## Design Studio – The Hundred Year City:

The river twists and turns to face the city. It looms suddenly, massive, stamped on the landscape. Its light wells up around the surrounds, the rock hills, like bruiseblood.

Its dirty towers glow....

How could we not see this approaching? What trick of topography is this, that lets the sprawling monster hide behind corners to leap out at the traveller?

It is too late to flee.

-China Meville, Perdito Street Station

The city has a habit of sneaking up on us – emerging, in its complexity, when we are least expecting it; least outfitted to engage with it. As a discipline, architecture is continually blindsided by the city – to the point where the whole of the latter half of 20<sup>th</sup> century could be conceived of as a catastrophic planned retreat from the metropolitan problematic<sup>1</sup>. Yet as methods of discerning the city, of conceptualising the urban remain as necessary as ever, architects are forced back into an engagement with these kinds, and scales, of sites.

And the need, locally, has never been more pressing. Melbourne’s population is forecast to grow beyond 5 million by 2030 – and eclipse this figure by 2050, when the metropolitan population is projected to sit somewhere between 7 or 8 million. Official responses centre around resounding rhetoric; intensification, densification and transport orientated development. Yet the actual approach to growth, across multiple governments, has been the release of monumental tracts of outer-suburban land. This has seen the expansion of the city’s boundaries by nearly 50,000 hectares since the increasingly ill-named urban growth boundary was established in 2003.

Such low density growth<sup>2</sup> in the face of increasing climate challenges – water shortages, raging bushfires, increased fuel prices and decreased food security – seems perverse. That this expansion should be in the mould of established, car-centred, detached greenfield development appears doubly so. This does not even begin to take into account the incredible carbon footprint of households (whether inner urban or suburban) across the city – or our vast, out-of-scale per capita contribution to greenhouse emissions.

The looming pressures of our current century – both the visible and the invisible unknowns – demand more than a ‘business as usual’ attitude to the city.

New models, and new approaches, are desperately needed. We need a course that moves beyond the market, that can exist outside of the three year election cycle.

We need a plan for a **Hundred Year City...**

## Site:

One hundred years ago, the coastal mudflats of Fishermans bend – the band-ed wasteland of effluvia that marked the unaltered arc of the lazy Yarra Yarra – were home to the nests of migratory sea-birds, a handful of ramshackle shanties occupied by the itinerant workers of the old docks, and little else besides. Now it is the site of a tremendous urban design undertaking – a contiguous precinct providing upward of 50,000 new dwellings and 25,000 new jobs; a conceptual extension of the CBD that aims to overlay the financial, legal and political strengths of the old Hoddle grid onto the variegated industrial territory to the south and the west of the city proper.

This is a very straightforward approach to development. Yet Fisherman's bend, and with it the various territories of the container terminals and the old Coode Island storage yards, represents an unescapable opportunity to rethink what it means by density, low-carbon, and ultimately, the *urban in Melbourne*.

What could it be in another hundred years? How can we move beyond thinking of it as just another green or brownfield development? How can we be optimistic, projective and, most of all, critically imaginative in our forecasting and design?

How do we work toward the city of 2113?

How do we build the **Hundred Year City**?



## **Brief:**

The project proposes a micro-city of at least **150,000** new residents, and commensurate employment opportunities across the Fisherman's Bend Development Area and its surrounds. The city will beat existing zero-carbon urban approaches – at the barest minimum offsetting the carbon footprint of the CBD. Beyond this, the micro-city might serve as an organ for the remediation of potable water, the generation and storage of power, the growing of sustainable foodstuffs, the supply of novel manufactured goods for the metropolitan area and a concerted focus for emergent and innovative industries. The micro-city will integrate with the social and cultural frameworks of the existing city.

However, these ideas alone will not encapsulate the project. Three crucial elements distinguish the hundred year city from other low- carbon footprint developments are its conception as an entire system; the adoption and application of a mindset that treats waste as resource; and the aggressive search for and application of synergies across all scales of the project.

The development of this micro-city will be carefully pegged against a series of integrated benchmarks using a new holistic simulation and projective modelling tool, MUtopia.

## **Benchmarks:**

### ***Density:***

*Residential Density: 200 pers. / ha*

*Employment Density: 80 pers. / ha*

### ***Transportation Mode Share:***

*Car – 10% | Public Transport – 40% | Walk and Cycle – 50%*

### ***Energy:***

*100% of all power requirements to be generated internally from renewable sources. Minimisation of energy consumption to be paramount.*

### ***Socio-economic:***

*Housing affordability and new models of ownership will inform all residential approaches in the micro-city.*

### ***Waste:***

*50% of the metropolitan per capita average; Re-use 100% of green and organic waste for on-site composting or energy production; 80% of the rest to be, construction-phase waste to 20% by volume, planning for 80% re-use or re-cycling when obsolete, and eliminating any potentially toxic components.*

## Semester Overview:

The urban renewal area is subdivided into four precincts that present an array of complex challenges – with remarkable variation between and within precincts in the age of built fabric, overlay considerations, lot size and orientation, environmental remediation requirements, transport access and infrastructural outlay. The neighbouring port areas present their own idiosyncrasies. In this manner, the sites can be considered, not only as exemplary ‘live’ projects, but as a kind of ‘Melbourne in miniature’ – a test-bed for future development and remediation across the greater metropolitan area. This necessitates working over a variety of scales.

The semester will involve a threefold investigation of the Fishermans bend site. After an involved design for locations within the established Montague + Lorimer precincts, you will zoom-out to establish broader design principles before zooming back in to develop 2-5 ha precincts in the Wirraway and Sandridge precincts. All group and individual design development will integrate with a shared MUTOPIA model.

### 1. Montague & Lorimer

Aiming toward exemplary design that will set the tone for further activity in the development area, you are tasked with developing an emblematic urban approach across a 1-3 ha micro-precinct.

Integrative industries or new creative clusters (makers labs, rapid prototyping workshops, start-up spaces) will be investigated and assimilated into the design as a model for smarter, more local *living* industry.

### 2. Urban Renewal District

Moving beyond the precinct, you will consider broader interactions between the proposed site and the existing city – over temporal, as well as spatial territories. Nothing is concrete – the terrain is infinitely plastic, to which the continuing geo-engineering of the Yarra bears testament. Large scale future-casting and speculation will be engaged with - Does the Westgate Bridge remain? What happens to the ports or Coode Island? Does the new site parasitise the old city?

As your engagement with MUTOPIA deepens, the tool will be used to model and render evocative and critical utopic/dystopic images of these approaches and outcomes.

### 3. Wirraway and Sandridge

Learning from both the broad and the narrow scales, approaches for new precincts (5-10 ha) in the industrial Wirraway and Sandridge precincts will be pursued. This work will be undertaken individually.

## Technical Skills:

This semester will introduce MUtopia – a software package developed for large-scale, holistic precinct planning. MUtopia will be used to assess and reinvestigate the relationship between your precinct designs and the broader city. The generative/parametric design tool *CityEngine* will also be utilised, alongside ESRI's ArcGIS software suite.

No prior knowledge of these tools will be required.

## Expected Outcomes:

The studio will impart;

- a thorough understanding of the complexities involved in designing at the urban scale;

- a conception of the key players in policy and planning and their relationships and responsibilities;

- an appreciation of emergent parametric urban design and visualisation systems;

- a critical and political attitude toward development and large scale urban design.

## Class Structure:

Classes will run between 5:00 and 8:00, Mondays and Thursdays. José Alfano will be available to lead design critique and guide project development on the Monday evening. Thursday will function as an informal crit session and provide a venue for technical/skilling questions.

## Tutors:

**Jose Alfano** is an Associate Director at Fender Katsalidis Architects and a Fellow and Associate Professor in the Civil and Environmental Engineering faculty at the university of Melbourne. He has over twenty years of experience in working with (and against) government over vast urban territories - projects that run from the realisable and achievable, to the projective, future-fantastic.

**Tom Morgan** is a currently lost in a PhD with a focus on historical, politicised projective images of the city, and the manner in which they can be re-harnessed by contemporary technologies of representation.