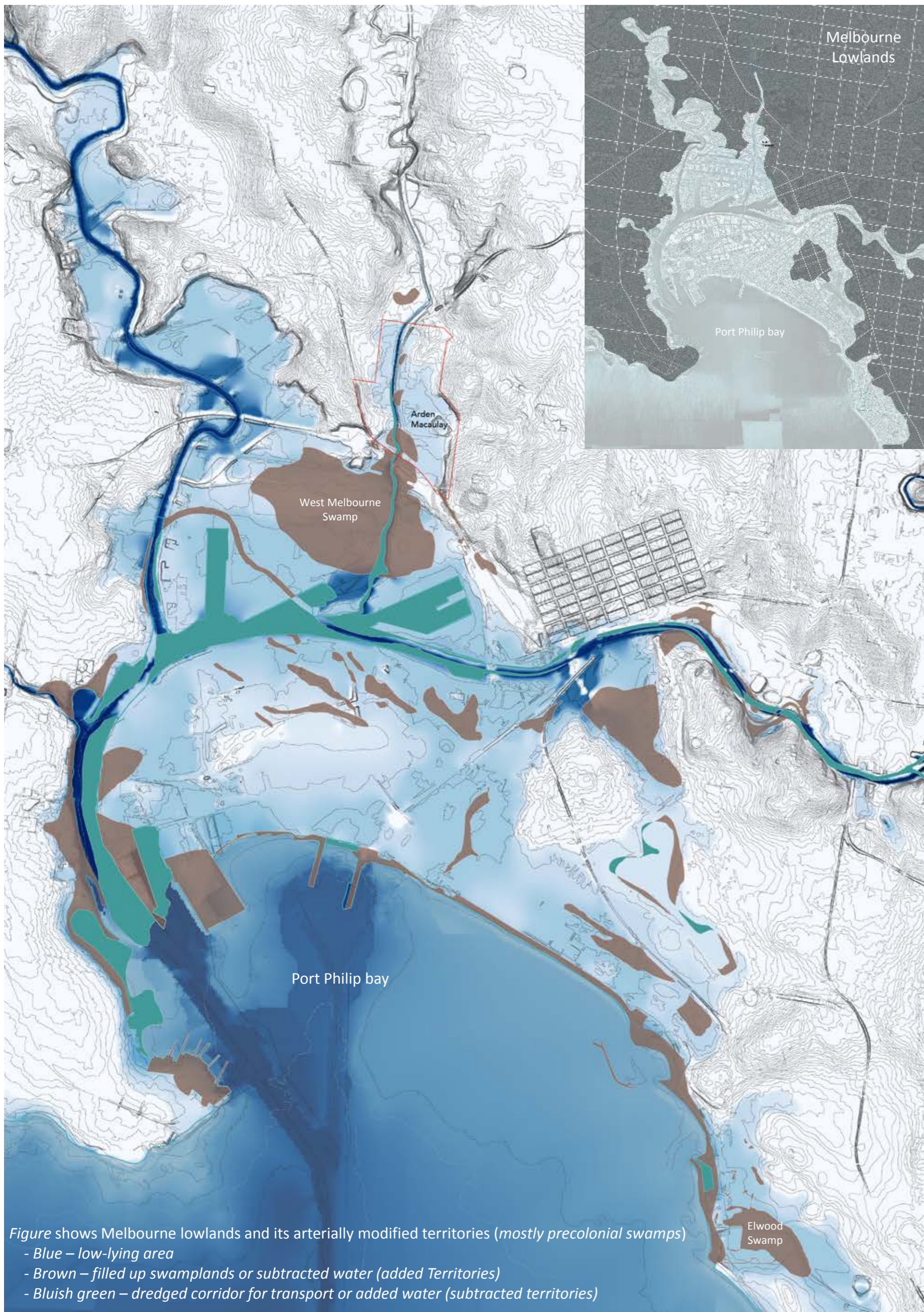




Tactics for Artificially Modified Territories

Exploring Potentials for Artificially Modified Low-lying Territories in Coastal Swamp Cities



Lowlands as Contested Territories Between:

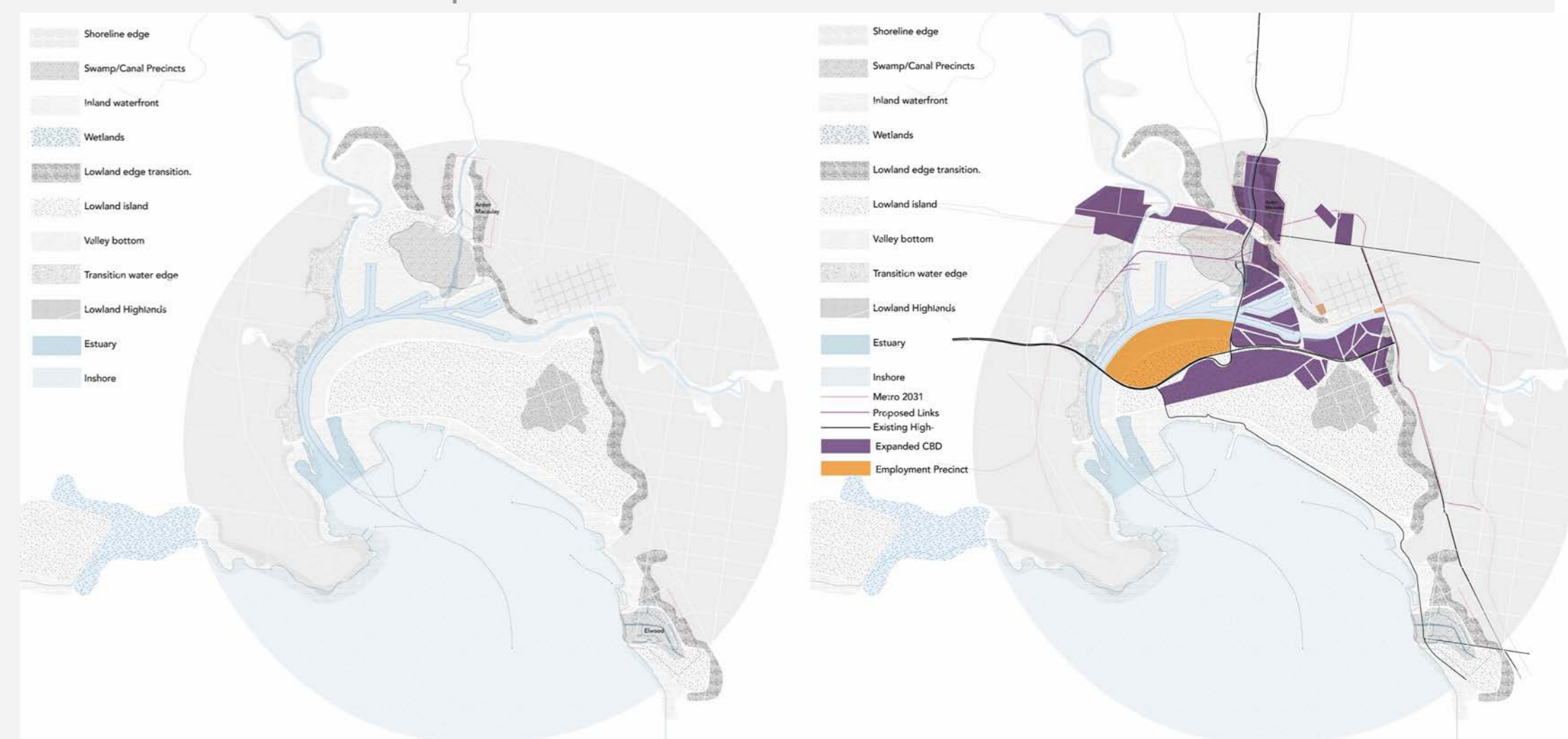
- Water and land, fresh water and saline water (estuary), inland flooding and coastal flooding/storm surge together, drought and sea level rise.
- Artificial modification and natural modifications (blurring the boundary between what is natural and what is artificial) urban growth and natural environment (water), urban economics and ecology, transport infrastructure versus water.

Statement. Earth's surface gained 115,000km² of water and 173,000km² of land over the past 30 years; the land gained is equivalent to Washington state in the US or 63% of Victoria in Australia. This phenomenon of water appearing and disappearing occurs through *natural variability, climate change and man-made change*. The world's largest cities have made a significant contribution to this as 90% of them are built along low-lying coastal areas or next to water by artificially modifying water territories (swamps). Australia is a good example of this with close to 90% of its cities located along its coasts. With over 66% of the world population projected to be living in cities by 2050, significant pressure will be felt on lowlands in coastal cities.

Where? This research focuses on Melbourne city lowlands, where major historical modification of swamps took place by either addition or subtraction of land or water to create artificial territories for the city's growth and transport infrastructure. This low-lying area has been earmarked as future growth area for this ever-expanding city, however it remains dangerously vulnerable to the future scenario of extreme weather events. As a result, it is emerging as being contested territory between water, land and urban intensification.

Goal. To develop new design tactics: building, landscape and infrastructure typologies for future scenarios in low-lying areas and reframe the role of the reconceived lowlands to the future of the city and the metropolis.

How? The investigation is case-based and carried out through an emergent design-led investigation at precinct and site scale to develop provocative and reflective design propositions. The current sites of investigation; Elwood and West Melbourne, are both former swamplands, and were selected for their similarities as well their differences, to develop typologies which can be replicated in other cities rather than site specific solutions.



Melbourne Lowlands Vision Through Lenses of Water

Vision based on topography, hydrology, geology and modified territories (*Modified geology/swamp deposits, modified topography, modified hydrology system and novel ecosystems*). The vision looks at the lowlands as both a wetland and a city (a city version of a wetland) as a shock absorber and a ground for equilibrium between water and urban intensification.

