Emerging Urban Futures: Land, Water Infrastructure
Dr Kathi Holt-Damant QUT

Framing the context
What happens when a city is placed under scrutiny?
Experiences that locals take for granted or even ignore are considered strange, anomalous or even extraordinary to visitors. Customs that take no more than a nod need to be explained and expanded, sometimes including centuries of development – at times many questions cannot be answered. Furthermore, the interest that visitors have shown seeming ordinary urban phenomena has sparked an opportunity for review. This has a beneficial effect for renewal in a city.

In the first instance, the post-colonial Australian context in which we were working had to be interrogated, interpreted and then translated to satisfy a global perspective. Prejudices and urban myths that previously made sense to local architects and planners had to now be rationalised for a broader context, like: the historical layers of the city that contributed to Brisbane’s identity in relation to other Australian cities; the aboriginal origins compared with the colonial records; understanding indigenous Brisbane; dreamtime stories of this region cast against urban myths; and lastly the reality of urban development with its particular patterns of settlement, rapid growth, urbanisation and extreme congestion as compared with trends around the world.

Colonial Brisbane
‘On Monday, 27 March 1848, the people of Brisbane town were shocked to learn of an exceptionally brutal murder at Kangaroo Point. The victim had been Robert Cox, a sawyer…from the Tweed River area. The body had been expertly butchered…’

‘Had it not been for [this] murder and robbery…the University of Queensland would not be sited at St Lucia. An innocent man hanged for the crime. The murderer confessed in August, 1865.’

Early Brisbane was a rough and aggressive frontier town that continues to resonate with the contemporary climate of Brisbane today. Echoes from the past are explained in Rosamond Siemon’s historic novel, The Mayne Inheritance, which explores and frames the extraordinary beginnings of the University of Queensland within these early colonial settlement patterns. In itself the violence of the singular murder is not so remarkable for an early settlement, but, taken as a landmark event at which one of the oldest universities in Australia began its life on a celebrated new campus, the event mirrors the climate of opportunism and racketeering that underpinned Brisbane’s development and expansion.

---

2 Between 2003 and 2007, the Emerging Futures Project began at the University of Queensland, up river from Brisbane’s CBD, a quiet, hermetic campus occupying a generous bend on the river and nestled/shrouded in subtropical vegetation – ‘The Mayne inheritance’ was a bequest to the University of Queensland for land at a new location for their campus.
4 Similarly, Sydney at that time (1841) was raging with opportunity for those ready to seize it: ‘…new arrivals, [were] mostly contracted to work for two years [before moving on to other opportunities such as Brisbane]… If Sydney had been a new world after Ireland, Moreton Bay (Brisbane) bore scant resemblance to any sort of civilisation…It was a frontier settlement with little resemblance to a town…’ R. Siemon, 2002, pp.20-21.
**Urban layers:**

The somewhat swampy South Brisbane and higher Kangaroo Point faced North Brisbane across the water; each settlement, pushed by its investors, vied to become the trading heart of Brisbane.5

‘Ships, when they came were the life blood of Moreton Bay...The only links between Kangaroo Point, [North Brisbane] and South Brisbane were the boatmen with their ferries. These two south bank communities should have enjoyed a trading edge over North Brisbane: they were on the direct route to the inland, the Darling Downs, and the long overland haul to Sydney – but the race for supremacy was very much in the hands of the entrepreneurial capitalists. The rivalry between the three areas provided a climate of challenge...’6

As these quotations show, Brisbane, was unlike Sydney in its settlement patterns, which again was also quite different to Melbourne or Adelaide (both free settlements and planned cities that were financially supported by the flurry of gold rush in Victoria and South Australia). Brisbane was further distinguished by its hilly topography, hot humid summers and sub-tropical vegetation. Located in the South Eastern corner of Queensland, Brisbane has the highest population density in the state. Narrowly contained between the north-south dividing range of mountains and the long eastern coastline stretching north, Brisbane city, and its numerous conurbations along the South-Eastern coastline are best described as the 200 km city. It is the third largest city in Australia, and since the 1990s has been the destination choice for a steady migration from the southern states of Australia. With this continuous influx of people the pressures on infrastructure, services and resources have all increased – although foreseen, the increased usage and demand were not planned for. Like many entrepreneurial developments of the colonial past, SEQ has relied heavily on industry and market forces to define and satisfy the trends. Previous State Governments invested little in infrastructure, maintenance or new services. Similarly the State-wise transport infrastructure (rail road and bus) had no plans to accommodate these increases in exigency. Even as recently as in 2002 the idea of mass transit across Brisbane was an unconvincing idea with few people favouring public transport over car travel - rail travel being the least popular.

**Emerging Futures Project Beginning**

The aims of the project were relatively modest: to simply understand why such low densities occurred along existing railway corridors, especially those concentrated around the existing railway station precincts of Milton, Auchenflower, Indooroopilly and Toowong where good opportunities for transit-oriented development naturally arose? Where railway stations in most cities tend to occupy the poorest land, these particular SEQ stations enjoyed 180-degree view corridors, topographic highlights and a spatial continuity of landscape that was matched only by the Brisbane River valley. These rail corridors were also laid over some of the first aboriginal tracking routes in and out of the colony. Historically they represented some of the earliest conflicts between colonial culture and the indigenous people.

**Pilot project - The Emerging Futures Project**

The coincidence of a travelling studio to Brisbane by Columbia University (New York) in 2004, enabled the reframing of the Emerging Futures pilot Project to suit a combined urban design

---

5 ‘At Moreton Bay, six hundred miles away [from Sydney], the former convict settlement had received a population boost when it began selling town allotments...[the slaughterhouse and boiling-down works at Kangaroo Point] were one of three rough settlements sprawling along the banks of the Brisbane River.’ R. Siemon, 2002, p19.
studio at postgraduate and 4th year architecture levels. By chance, the project began a new phase imbued with inter-disciplinary complexity. The new project was submitted for an Australian Research Council Linkage grant combining an international research team from Columbia University, Rand and the University of Queensland. The project was reinforced by two key industry partners: Queensland Rail and Queensland Transport, and consequently won a substantial ARC Linkage-Grant in 2005. The research plan included case studies, studio-based teaching, design research and consultancy collaborations with industry and stakeholder groups. With recent train bombings in England, and earlier in Spain, a special focus on security and counter-terrorism seemed essential in researching railway corridors for Australia. The scope of the research expanded to include threat management and transport strategy along with the earlier core urban design and architectural components.

In 2005, the newly formed Queensland Government’s Office of Urban Management released its blue print for future growth and development in SEQ. This initiative coincided with the directive to consolidate new development in and around the limited infrastructure corridors. Although no new rail infrastructure was envisaged an intensive new network of bus-ways were considered critical. A Transit-oriented development working party was formed to give direction to future transit-oriented planning policies for SEQ. Railway corridors in general present interesting spatial phenomena for cities. The continuity of space created between station developments is often inhabited only by the infrastructure of railroads, rolling stock and sporadic planting. For the most part the railway corridor acts as a physical urban divide – forging deep incisions in the landscape.

Space, climate and landscape

While every state in Australia has to deal with many different landscapes and climatic regions nowhere is this clearer than in South East Queensland. Here, the climate is categorised as sub-tropical, yet the variations in micro-climate are significant and dependent upon the topography and landscape. A small group of architects in SEQ have been experimenting with designing for a sub-tropical environment, using systems that enable the best integration of site, landscape and climate. Their endeavours have produced a unique architecture within Australia where external form is subordinated to space, and the experience of the viewer is prioritised. At any scale the internal experience of space comes as a surprise after crossing the threshold and entered the enclave.

The Queensland work of Donovan Hill Architects has demonstrated this successful coalescence of space, landscape and climate at a range of scales, from the suburban house to the public building, as has the work of Andresen O’Gorman, or Elizabeth Watson-Browne to mention only a few architects.

---

9 A Transit Oriented Development Taskforce was established in late 2005 to provide leadership and advice to the State Government on matters relating to transit oriented development. The taskforce - which includes representatives from state and local governments, the planning and development industry, and academia - meets once a month.
12 Similarly, across Australia other architects have responded to their own climatic challenges - historically the early courtyard houses of Robin Boyd (Victoria), or the timber pole constructions of Kevin Borland or Peter McIntyre (Victoria) have produced a considered approach to climate, topography and architectonic space.
http://www.acn.net.au/articles/architecture/modernresidential/
http://www.abc.net.au/rn/bydesign/stories/2006/1810506.htm
Aboriginal sense of space

The more difficult context to understand is the pre-colonial layer of SEQ comprising an Aboriginal sense of space, which departs from any traditional readings of space where scale is dominant. Based on a sustained period of research, the Aboriginal Environments Research Centre at the University of Queensland maintains the position that Aboriginal architecture: ‘is an expression of highly complex and diverse relationships between the physical, social and cosmological environments.’

Premised on the idea that the entire continent of Australia is one immense cultural landscape created during the Dreamtime with human occupation stretching back into the Ice Age and having endured many major phases of climate changes, this occupation brought with it a unique perception of space and place which underpinned sacred sites celebrated through ceremonial architecture as well as a range of settlement styles from sedentary stone villages to temporarily occupied campsites with minimal structures.

Paul Memmott describes the temporal properties of Indigenous architecture as including ‘types of change’ that revolved around ‘an activity (involving a time, frequency, and duration of usage)…’ 

‘There are then no abstract units of time and space that people use to measure distance between events, i.e. no quantified geometry of space or chronology of time. The overall result is the possibility of expanding or compressing time and/or space in historical or geographical thought. Scale is less important than sequential correctness of events in space and time, and the nature of causal links between them….’ To quote McKay: ‘space and time construct can be thought of more like a constellation with the past and the people of the past always in the present, like the constellation of the sky – enmeshing, surrounding – always before you, always behind, forming patterns that can be interpreted in various ways’.

To understand the evolution of Australian post-colonial architecture it is perhaps easiest to compare the complex coexisting tradition of architecture as it has responded to ideas about space, climate and landscape. We find two examples of such co-existence in SEQ: firstly with the use/misuse of landscape by the Colonists/new settlers/migrants in contrast to the temporal interpretations of cultural landscapes by indigenous Australians; secondly, where these clashes have been reconciled or mediated in some form. Common elements in each tradition are underpinned by a considered approach to both climate and landscape and have produced an evolving space perception.

The Brisbane River presents one of these contested landscapes holding divergent meanings to each culture. International visitors frequently remark on there being so few cross-river

---

13 http://www.aboriginalenvironments.com/
14 P. Memmott and J. Davidson, 2006, p10
15 P. Memmott and J. Davidson, 2006, p.20
16 P. Memmott and J. Davidson, 2006, p.21
17 Three broad themes tend to define this co-existent tradition integrating people and their cultural landscapes:  
• a Euro-Australian use of space and its architecture;  
• an Australian Aboriginal use of space and its architecture; and  
• the Australian landscape.  

Space, climate & Landscape was the title of a submission for Creative Direction for the Australian Pavilion at the Venice Biennale in 2008 by Kathi Holt-Damant, John Frazer, Paul Memmott and Brit Andresen. It was one of 5 entries shortlisted for final selection. The exhibition offered a new spatial reading of Australian architecture that was based on the interaction between space, climate and landscape (rather than form), and took into consideration the cultural evolution of Australia.  
connections existing in Brisbane, or question why the CBD, although so close to the river, is collared and hemmed in by the concrete riverside expressway – even the under-developed historic Kangaroo Point which enjoys spectacular views, cliffs and extensive river frontage along its finger peninsula is isolated by traffic arterioles.

**Bris-Vegas – New York**

Lastly, the relationship between Brisbane and New York might seem remarkably at odds for comparative design research, processes and case studies: the high-density thriving metropolis of New York versus the over-sized, country-town of Brisbane – where not even the climates claim similarities. Both cities do however share similar issues relating to services, resources (water, land, energy) and infrastructure brought together in the realm of public urban space. One city having dealt with transit-oriented development for decades and the other, just coming to terms with what this might mean for future growth. Much of our research here in SEQ has focused on the role of the urban station as a key to sustainable growth. New York has a sustained history in the evolution, rise and demise of the urban station – it also has one of the first exemplars of planned Transit-oriented development in the world: Grand Central Station. Consequently, case studies from New York have enabled us to develop a datum for the examination of SEQ stations and precincts.¹⁸

During the life of the project, over 40 international students and Faculty from Columbia University have travelled to SEQ. State and Local Government, industry professionals and expert consultants in both cities have contributed generously to sharing knowledge and data in these energetic events. Common themes of land, water and infrastructure have reoccurred over the years setting up comparisons between local examples, global case studies and benchmarking – some challenges have persisted and need to be considered critical to the future sustainability of SEQ, most notably those related to water, infrastructure and land. The annual visits from Columbia University have had an unanticipated outcome. Due to the timing of the visits in February/March each year, these intensive two-week visits have accelerated our image of the rapid change in the region, showing at each visit, a twelve-month compressed period of growth and development. This collective body of research contained in this book has enabled a number of urban issues to be examined cumulatively and from different professional perspectives. In addition to the work in this book, and tangentially to the design studios, the research team have hosted a number of international conferences, workshops, symposia and colloquia to discuss and debate the issues arising out of these related topics.

Urban design has emerged from this research project as a discipline vitally necessary to the cultural future of Brisbane. The collective knowledge gained from such design research and shared studio culture enlarges our comprehension of global trends and practice. Not least, the period of study has engaged students, industry professionals, academics and key stakeholders in both cities to debate the complexity and confusion that is typical of a rapidly evolving contemporary city. In particular the challenges of SEQ have offered a real world urban laboratory for design research, and the following projects and texts present an array of ideas worthy of further discussion.

¹⁸ Jamaica Center, Queens compares with suburbs like Logan. A range of case studies across the US have enlarged our understanding of which factors are critical to the integration of mass transit and urban development.