Lines in the Sand:
Urban Design Attributes, Characteristics and Values of
Selected Gold Coast Beach Precincts

This dissertation is presented for the degree of Doctor of Philosophy

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Abstract

The thesis seeks to understand how people value, use and relate to urban beach precincts so that the urban design and development of seaside places may functionally reflect the role that they play in people’s lives; in particular, the walkability of the precincts and the degree of public access to the beach. The research has examined the complex relationships between the urban design attributes and spatial arrangement of beach precincts and public access to activity, amenity and facility in a case study of three different types of Gold Coast beach precincts. Urban design theories and guidelines were examined to produce an urban beach typology and develop tools of analysis to assess and survey the beach precincts using the principles of governance that prioritised an accessible, walkable and restorative environment.

Observations were conducted of use and activity in transitional locations between the natural-built and public-private environments in the precincts. The urban design analysis was combined with an inquiry into the expectations, preferences and perceptions of beach precinct use and visitation. The research further inquired into the public and professional narrative of the urban design, governance, planning and development of beach precincts using content analysis of web pages and articles on the ‘Oceanway’ and public access to beaches. Finally, a Delphi group process inquired into the opinions and beliefs of professionals who had an interest in the urban design and planning of beach precincts, and compared them to the evidence produced in the content analyses, urban design survey and field observations.

The research has found that dominant and special interest groups have created a cultural landscape that favours the activity interests of active adult males. In doing so, they have marginalised a broader constituency including children, carers, seniors, socially, economically, perceptually and mobility-impaired people, women and in particular older women, and in the context of the Gold Coast, all those people who live in inland suburbs.

The research identified the most important spaces and edges for public access to amenity and activity are along the pathways through the transitional corridors located between public and commercial and built and natural forms. The thesis proposes a research-based urban design and planning process, aligned to the inherent values of place, to produce a public realm that does not compromise or conflict with the restorative nature of the adjacency of environments found in an urban beach precinct.
Declaration

This thesis is submitted to Bond University in total fulfilment of the requirements of the degree of Doctor of Philosophy by Research. This thesis represents my own original work towards this research degree and contains no material which has been previously submitted for a degree or diploma at this University or any other institution; except where due acknowledgement is made. In addition I certify that all information sources and literature used are specified in the thesis.

Nigel Llewellyn Cartlidge
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Publications Related to the Research


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Glossary

Amenity

Amenity is a term meaning ‘the quality of being pleasant’ and is widely used in planning to describe one of its principal objectives. Amenity is a composite of aesthetic and environmental qualities. These can be private views, privacy, quiet, sitting, landscaped and play spaces, or public views from public spaces, pleasant streets, furnishings, landscaping, public spaces, and public art (Punter 2003).

Attribute: The specific thing or artefact found in a place that can be used to construct a typology of beach precincts or contribute meaning to the urban design principles adopted for this thesis. The typology is constructed using similar physical, cultural and natural artefacts such as roads, pathways, residences, apartments, resorts, shops, café’s, SLSC buildings, showers, viewing platforms and foreshore-parks to sort different beach precincts into types. Some of these attributes are common to all types of urban development, others such as foreshore-parks are only found in beach, river or lake precincts.

Barbeques are a feature of Australian parks. They are free to use, usually electric, often found in pairs and next to sheltered bench tables. They are customarily cleaned by the user after they have finished.

Beach Precinct: The precinct is used for detailed analysis of the social, movement, activity and other functions of the precinct that span the built and the natural environments found in the beach precinct. Its dimensions are intended to be related to the size that can be comprehended through a chosen walkable distance of about two minutes and where the built and natural features in the precinct can be visually perceived from all places within the precinct if clear views were possible.

For the purposes of this study the beach precinct has been defined by the researcher as a space with dimensions that are aligned with the shoreline 140m inland and 250m in dimension with an approximate area of 3.5 hectares. This gives a walkable space that can conservatively be traversed in any direction in approximately two minutes. At this chosen scale it is possible for the observation points to be visible in the distance from at least one other observation point. The precinct will be centred on a social node and will include two beach access points and two changes of form with the principal built form.
**Bubblers** Australian term for a drinking fountain.

**Characteristic:** The typical properties of an attribute that differentiates or distinguishes one beach precinct from another. For example, the attribute of a foreshore park can be described by its design, size, spatial arrangement, and provision of facilities like toilets or by the possession of a particular designation for activity or use such as children’s playground or event space and these characteristics differentiate the foreshore parks in different beach precincts.

**Constituency of Advantage:** All the beach precincts of the study appear to positively discriminate in favour of active adult males, local residents, cyclists, the wealthy, property owners, tourism operators, real estate interests, surf lifesaving clubs and their members, the physically fit and mobile. This constituency of advantage is likely to be overrepresented in the urban design, planning, management and governance of beach precincts (Mees and Groenhart 2012)

**Constituency of Disadvantage**

The constituency of disadvantage identified in this thesis is a broad grouping that includes children, carers, seniors, socially, economically, perceptually and mobility-impaired people, women and in particular older women, and in the context of the Gold Coast, all those people who live in inland suburbs.

It is a constituency rather than a community as, other than gender, people can move into and out of it and only share disadvantaged access to the public spaces of the beach precinct as a common characteristic of membership of the constituency.

**Culture** is described by Mitchell (2000) as encompassing language, dress, food, habits, music, housing styles, religion, family structures, and most importantly values. It is also referred to as a total way of life of a people and what is left over after economy, politics and society. Culture can also be seen as concerned with the symbolic artefacts including the built environment produced as a result of the material relations of politics, economic and society or that which is not nature (Williams 1976). It is also understood as both a way of – encompassing ideas, practices, institutions and structures of power – and a whole range of cultural practices: artistic forms, texts, canons, architecture and mass-produced commodities (Nelson, Treichler and Grossberg 1992).
**Locality**: is the main unit of urban design analysis in this thesis and its meaning is the area immediately around a specific location or observation point as far as 35m or the theatrical distance from the location (Gehl 2006).

**Neighbourhood**: Neighbourhoods are subject to many definitions. New Urbanism regards the neighbourhood as a village, which when combined with other neighbourhoods creates a town or a city. In general, definitions of neighbourhoods include a size, identifiable centres and edges, connectedness with the surroundings, walkable streets, and sites for civic uses and social interaction (US Green Building Council 2008).

**Nippers**, is the name given to younger club members in the Surf Life Saving clubs. Nippers participate in regular weekly activities during the season which runs from to September to May in Queensland. Nippers are a special category of membership from 5 to 13 years of age with their own program of surf skills, lifesaving, beach and surf activities and events (Surf Life Saving Australia 2013b).

**Proximity**

Proximity reflects two land use variables: density (or compactness) of land use and land use mix (the degree of homogeneity or the extent to which different uses are co-located in space). Two of the most important factors in determining the ‘walkability’ of an area are the proximity (how close destinations are to walk to) and the connectivity (how direct the routes of travel are). Urban environments, which are compact and intermixed, create shorter distances (proximity) between desired destinations, thus encouraging people to walk. This reinforces the notion that spatial landform patterns, population density and mixed land use of an area are interrelated and all encourage walking (Australian Local Government Association *et al.* 2008).

**Sustainability and Urban Sustainability**

Sustainable means able to be maintained and, using its associated ecological meaning, refers to exploiting natural resources without destroying the ecological balance of a particular area. Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs (The Brundlandt Commission, 1987).
Promenade in this thesis is used both to describe a beachfront transitional corridor route and a leisurely form of walking, and is a significant feature of resort and seaside visitation which clearly links activity to place.

1. **Promenade**, place for strolling, where persons walk at leisure for exercise, display, or pleasure. Promenades are located in resort towns and in parks and are public avenues landscaped in a pleasing manner or commanding a view. Vehicular traffic may or may not be restricted (Encyclopaedia Britannica 2013).

2. **Leisurely Walk**, selected related words - promenade, stroll, amble, wander, roam, saunter, perambulate, and ramble (Encyclopaedia Britannica 2013).

**Transitional Corridors, Locations, Forms and Edges** as defined by this thesis serve particularly important functions for residents, visitors and tourists in a beach precinct. The key transitions occur along the walking corridors that traverse and transect the elements of the beach precinct typology:

- **Transitional Locations** are found at social nodes, beach access points and gateways where facilities provide access to specific activities and amenities;
- **Beachfront Transitional Corridor** found along the transverse path between the access form and the beach in places with public foreshore spaces;
- **Gateway Transitional Corridor** found along the transect path between the built and access form, and
- **Transitional Edges** - the interfaces between public and private/commercial property and the different forms of the typology.

**Visual Survey Terms**

In the analysis of the visual extent of beach precincts it was necessary to define particular meanings to describe different types of views adopted for the visual survey:

‘**Panorama**’ is seen as the extent of an unobstructed view to the horizon that the viewer observes standing at an observation point and limited to observing from left to right through about 180 degrees.

‘**View**’ is seen as the extent of an area that the viewer observes standing at an observation point looking straight ahead. It is limited to the range that objects or features can be observed and the clarity of detail that can be identified in the view.
‘Vista’ is a type of view that is framed by elements in the landscape that the viewer observes standing at an observation point looking straight ahead and this view is limited by what objects or features can be clearly identified in the view.

‘Picturesque’ is a panorama, a view or vista that is visually appealing, attractive or impressive and related to natural, built or human environments and activity that may be considered suitable as the subject for a photograph or painting.

‘Scenic’ is a panorama, a view or vista that is related to the natural scenery of the area and suitable as a photograph or painting.

**Value**: The worth or importance attached to the attributes and characteristics of the spaces and places, natural, transitional and built environments of the beach precinct. The degree of importance is expressed as the value that an author, commentator, observer or correspondent, associates or attaches to the attributes or characteristics of the beach precinct. The associated or attached degree of importance of the different attributes and characteristics of the beach precinct may be personally, socially or culturally associated with their history of use or degree of fit for their preferred purpose of visit.

**Walkability**

Walkability has been developed as a measure to assess the relative characteristics of different urban forms and designs in the thesis (section 3.3.2). Questions about residential density, land use mix, accessibility, street networks and connectedness, walking facilities, aesthetics and safety are often included (Australian Local Government Association *et al.* 2008)

**Walking Speed**

The walking speed adopted for this research project is 4.5 km/h per hour, giving a walking distance of 375 metres in 5 minutes and 750 metres in 10 minutes. This has been converted from a study that indicates older pedestrians walk at around 4.11 ft. per second (Knoblauch, Peitrucha and Nitzburg 1996). The lower speed is seen as more appropriate as pedestrians are usually either younger or older than average. The lower speed also allows for climate, terrain and slope.
Abbreviations Used in the Fieldwork

Throughout the thesis the transitional locations and observation points were assigned a code:

BHSN  Burleigh Heads Social Node (Burleigh Heads SLSC)
BHBA1  Burleigh Heads Beach Access One (Goodwin Terrace)
BHBA2  Burleigh Heads Beach Access Two (Children’s Playground)
BHINT1 Burleigh Heads Intersection One (Memorial Park)
BHINT2 Burleigh Heads Intersection Two (The Esplanade/Gold Coast Highway)
BRSN  Broadbeach Social Node (Kurrawa SLSC)
BRBA1  Broadbeach Beach Access One (Toilet Block)
BRBA2  Broadbeach Beach Access Two (Northern Foreshore Park)
BRINT1 Broadbeach Intersection One (Victoria Avenue/Old Burleigh Road)
BRINT2 Broadbeach Intersection Two (Albert Avenue/Old Burleigh Road)
MBSN  Mermaid Beach Social Node (Mermaid Beach A.E.M.E SLSC)
MBBA1  Mermaid Beach, Beach Access One (Pocket Park)
MBBA2  Mermaid Beach, Beach Access Two (Ventura Road)
MBINT1 Mermaid Beach Intersection One (Ventura Road/Hedges Avenue)
MBINT2 Mermaid Beach Intersection Two (Montana Road/Hedges Avenue)
### Other Abbreviations used in the Thesis

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<td>BBQ</td>
<td>Barbeque</td>
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<tr>
<td>CABE</td>
<td>Commission for Architecture and the Built Environment</td>
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<td>CCTV</td>
<td>Closed Circuit Television</td>
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<tr>
<td>CPTED</td>
<td>Crime Prevention through Environmental Design</td>
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<td>CNU</td>
<td>Congress for the New Urbanism</td>
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<tr>
<td>DTI</td>
<td>Department of Trade and Industry</td>
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<tr>
<td>DETR</td>
<td>Department of Environment, Transport and the Regions</td>
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<tr>
<td>GCCC</td>
<td>Gold Coast City Council</td>
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<td>GCPS</td>
<td>Gold Coast Planning Scheme</td>
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<tr>
<td>IPA</td>
<td>Integrated Planning Act</td>
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<tr>
<td>LEED ND</td>
<td>Leadership in Energy and Environmental Design, Neighborhood Design</td>
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<tr>
<td>LGMS</td>
<td>Local Growth Management Strategy</td>
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<td>LUPTAI</td>
<td>Land Use and Public Transport Accessibility Index</td>
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<td>MPC</td>
<td>Master Planned Community</td>
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<tr>
<td>PIA</td>
<td>Planning Institute of Australia</td>
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<tr>
<td>RICS</td>
<td>Royal Institution of Chartered Surveyors</td>
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<td>SEQ</td>
<td>South East Queensland</td>
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<td>SEQRP</td>
<td>South East Queensland Regional Plan</td>
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<td>SLA</td>
<td>Statistical Local Area</td>
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<td>SLS</td>
<td>Surf Life Saving</td>
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<td>Surf Life Saving Queensland</td>
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<td>TfL</td>
<td>Transport for London</td>
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<td>Special Interest Group</td>
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<td>UDAL</td>
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Preface

In this preface I will try to summarise the position from which I approach this thesis. It is from my passion for living by the sea that I draw the inspiration and determination to articulate the importance of the urban beach to the communities that live, work, use and visit the beachfront. In a sense, the beach and its adjacent development form the genius loci (spirit of place) of many of our social constructs. When the spirit of place is strong, they are some of the most important and treasured urban forms in our society with the power to generate social, economic and cultural wealth.

Growing up in the small Welsh coastal town of Penarth, I formed my ideas of place from living by the seaside. The beachfront promenade, Alexandra Park that wound down from the town centre, the public swimming baths, the pier, the cafes and restaurants, the pebble beach, the yacht club, Royal National Lifeboat Institution station and jetty, the Italian gardens, mini golf course and the cliff-walk were the centre of my social recreational and restorative world.

Penarth was a Victorian railway transit-oriented development. It promoted itself as a day-tripping and resort town for the Welsh Valleys and the distant English Midlands. The Pier also connected the town with the other small ports along the Welsh and English coastline of the Severn Estuary and Bristol Channel. In its heyday there was a regular steamship service shuttling across and along both the Welsh and the English coasts.

The town had docks and riverside wharfs that were once a major coal exporting facility. By the time of my childhood the buildings and coal loading facilities were forlorn and deserted relics which were conversely a wonderland for adventurous boys. Standing on the wharf I watched the ships coming and going from the port of Cardiff where they travelled to far off lands. The sense of being part of something much bigger than my small town was clear when I lingered on the pier, as I knew that the same body of water I gazed on encompassed the earth.

The coast could also be a place of solitude and quiet, especially on the frequent grey days when an ice cream was the farthest thing from most people's minds and the beachfront was deserted. On a stormy winter’s day it was a place to witness the power and majesty of the sea as it crashed against the cliffs, pier and promenade.

The Pier was, for most young people of the town, a special meeting place with its once Grand Ballroom the site of the Friday and Saturday night discos. The pier also had its gold-medal-winning Italian ice cream kiosk and the sheltered places to hang a line, hoping for the fabled whiting runs which the older men would tell you about.
The beach was also a place to connect to history, and had not always been a safe or welcoming place. The offshore islands were used by Irish, Norse and later Moorish pirates as a base for their coastal incursions and slaving raids. Even their Norse names were echoes of the past: Flat Holm (Ynys Echni) and Steep Holm (Ynys Ronech).

The islands were also where sixth century saints and hermits sought and served their god. Remnants of the 19th Century Palmerston forts and World War fortifications can also be found there. Flat Holm was once the site of a cholera hospital and where Marconi transmitted his first signal over open sea. The sound of the Flat Holm Foghorn was a familiar sound that I often heard in my bed at night. Even today I feel that a beach is not complete without the sight of distant shores and islands.

The town beach was the main, but not only, beach that I used. Along the rail line was a small cove with a sand beach and rock pools to gather shellfish, and a small shop by the caravan park on the cliff top. The terminus of the line was Barry Island and its Grand Esplanade, hotels, Butlins holiday camp and a fun fair. Further afield were the summer holiday destinations with their clear, clean, green water, the rural and wild beaches of West Wales and the West Country.

In short I came from a place where the identity of the people was partly created and contained by the foreshore and beaches. It formed in me expectations of the level of public access, facility and amenity for the recreational, social, cultural and restorative values of an accessible coast universally open to all and managed by the council for the people as a public good.

In leaving this place of my childhood and youth I came to understand the meaning of *hiraeth* a welsh word that has no cognate in English. It is tied to the Welsh sense of place and reflects the deep attachment or homesickness for a home to which you cannot return, a home which maybe never was except in the heart. It encompasses the nostalgia, the yearning, the deep grief for the lost places of the past. It is a feeling Welsh people only get when leaving the places of their ancestors and take for granted when they are there.

Coming to Australia by air, one of my first sights was of the glittering white capped ocean crashing against the shore, a sight to cause the spirits to soar. I loved the coves, bays and open surf beaches of Australia on first sight. They appeared then, as they do now, as part of the place identity of the nation.

There were some noticeable differences between the Australian and Welsh coasts though, most striking of these, is the importance of the Surf Life Saving Clubs with their nippers, carnivals, bars, cafes and pokies. There is no such beach organisation in its obvious importance to the community to be found in Wales. The length of the summers and the place that beach activities had in Australian life was immediately obvious, as was the need for my young children to learn beach survival skills.
Surf Life Saving Clubs are socially much more than a club; they are centres of the local community and a place to begin to assimilate into Australian culture.

The scale, size and frequency of Australian beaches along the eastern coast create an impression of unending abundance. They rarely feel crowded, there is nearly always a quiet place to sit and sunbathe, read a book or rest with the sounds and patterns of the surf. The climate also means they are likely to be active places throughout the year for swimming, paddling, fishing, boating, body boarding and surfing. The wilder weather will often bring out the big wave kite and board surfers, whilst others watch from shoreline vantage points.

There is also the joy of the unexpected arrival of pods of dolphins that appear to be playing in the surf or racing across the bay. If you are lucky you may even get to see whales breaching as they head north or mothers nursing their calves down the coast towards Antarctica. Walking along the beach you are also likely to encounter shoals of fish and wheeling seabirds or, after storms, the debris of the offshore reefs.

The types of beaches I found in Australia were similar to other places, town and city beaches, through to rural and wild beaches in remote places. How they were used was also familiar but with subtle differences. In Australia the council provide electric barbeques for public use and there are fewer low cost fish and chip cafes. Open spaces along the urban beachfronts are either paved or unpaved tracks, not concrete buttressed promenades, and social sports such as touch football or cricket games are common in the green-spaces of the foreshore park and along the beach.

In time, I realised that some beaches, even in the centre of urban areas, are privatised or semi-privatised by the building of homes, hotels, apartments or resorts along the beach front. The reduced levels of access deter visitation to these beachfronts. They are hard to get to other than by car and when you get there, parking spaces are few and far between. Access is often by narrow entries through the dunes, and the soft sands can also be a deterrent for visits by the less mobile or encumbered.

I initially accepted these inconveniences as just part of the difference in use and function of Australian beaches until I studied urban design and planning. I began to see many of the patterns of beachside development as imported concepts of a globalised economy and not just as a natural result of the sense of endless space to be found in Australia. The beachfront developments are not necessarily a natural expression of developmental variety in a land with endless beaches. They were just as foreign to the egalitarian Australian notions of openly-accessible beaches as were my personal cultural notions of beach and place.
Education has led me to understand that much of the current development on Australian beaches had a genesis in the societies of Europe and America where people and commercial entities regularly own the beach and its uses. The European beachside developments of cabanas and rented umbrella spaces on the beach have not yet transitioned onto Australian beaches. However, the models found in the USA have had a lasting influence on Australian developers.

There are many reasons to think that the imported models of privatised beachside development in Australia will lose public support. The reasons are social, economic, environmental, and cultural. The coastal population of Australia is growing rapidly, but governments and developers will find it increasingly difficult to continue to develop new urban beaches. Resistance is also likely from environmental groups and residents to the development of new rural and wild beaches. In Australia there is a widely held view towards coastal development of ‘not another Gold Coast’. Perhaps this is an indication of the rejection of an urban form perceived to be ‘foreign’.

The coast is subject to change through erosion, weather events and climate change. Much of the rapid beach suburb development built in the last fifty years is in places that could be vulnerable to naturally changing coastal shapes. The privatised coastal developments have created a level of economic risk for federal, state and local governments that will largely be met by the public purse (Morris et al. 2009).

The crowded beaches of Europe are rare in Australia, but rising populations both in the coastal and inland towns and cities will inevitably place increasing pressure on the existing more-easily accessible public urban beaches. The recreational and restorative value of these urban beaches will increase along with the intended increase in density but decrease as they become more crowded.

All this has led to my interest in studying the spatial form and sense of place or *genius loci* of urban beaches in order to identify how the current types of seaside development distribute value and control public access. I want to know how people value, use and relate to urban beach precincts so that the urban design and development of seaside places can functionally reflect the role that they play in people’s lives.

The research is expected to support the conceptualisation of urban design and planning guidelines for the use of this high value land that is appropriate to character and context of beachside places. The research will also seek to identify appropriate urban design interventions for future development of coastal precincts to achieve the highest and best use of land at the coast from a social, recreational, restorative and cultural perspective.