

Urban Geography: Waterfront Development

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Glossary

brownfield A piece of previously used land that requires some remediation of contaminants, pollutants, debris or hazardous substances in order for it to be reused and redeveloped.

containerization A shipping method which uses standardized containers to store and transport goods and materials.

gentrification A complex process whereby a group of middle class people move into a previously working class community, causing substantial neighborhood reinvestment and the displacement of existing working class residents.

place marketing Marketing activities which seek to influence a target audiences perceptions about a particular place in a positive way.

post-industrial city A city that has undergone industrial decline and now has an employment profile that is characterized by the tertiary service sector.

urban development corporation A quasi-public authority that is established by government in order to generate and direct urban development.

waterfront A space where water (i.e.: river, lake, sea, ocean) meets with urbanized land, creating a unique spatial interface.

The unique qualities of the water/urban spatial interface have regularly meant that waterfront development has been distinct from general urban development. Historically, the numerable resources provided by the waterfront, things such as waste disposal, energy and transit, have resulted in processes of waterfront development throughout the globe creating distinctive urban landscapes designed to utilize them. However, over recent decades, previously industrial – and subsequently derelict – waterfront spaces have been redeveloped into urban spaces which are emblematic of post-industrial urbanism. Here, the resources offered by the water/urban space interface appear to have mutated and therefore waterfront development has broken from traditional patterns.

Key words: waterfront, port, urban development, decline, post-industrial, entrepreneurial, public space, gentrification

Introduction: An Historical Perspective

The earliest forms of waterfront development occurred as various societies began to utilize waterborne transit. This meant that up until 50 years ago, waterfront urban development largely occurred where physical relief was conducive to harborage and shelter. For example, the Roman settlement of Londinium – later to become London, UK – was established in 50 A.D. at the last bridgeable point on the River Thames. Subsequently, many more urban settlements have been established along favorable waterfront areas, such as Falmouth, UK, Bahia, Brazil, and Mumbai, India, where particular sections of riverside and coastline have provided ports and natural harbors suitable for maritime activities.

As international trade developed apace from the 14th century onwards, waterfront cities witnessed significant growth as mercantile activities produced burgeoning urban economies. As the capital of the first imperial trading nation, Amsterdam in the Netherlands developed from a fishing village founded in the 12th century to a city of 200,000 people in 1700. Other major waterfront

trading cities established during this period included the Mediterranean cities of Naples, Venice and Marseille. As European nations developed imperial trading routes, many other port cities developed. The British Empire's growth saw major ports established in Mumbai, India; Cape Town, South Africa; and Sydney, Australia. As the central point within this globalized trading network, London's port grew to stretch some 11 miles along the River Thames.

Waterfront space was also developed during this period for military and strategic reasons. Port cities were centers of economic and political power and therefore required means of protection during a period of competitive imperial expansion and mercantilism. For example, to the east of London from the 16th century onwards, a large stretch of the Thames riverside housed a naval dockyard and munitions storage facility. Originally located to protect the capital from invasion via the Thames estuary, the facility, which became 'Royal Arsenal', eventually grew to a 1200 acre site, employing 72,000 people during the early twentieth century.

Industrial Waterfronts

Although imperial trade and military expansion lie at the origins of much urban waterfront development, it is the industrial development which took place in waterfront areas during the 19th and 20th centuries that has left the greatest legacy for contemporary urbanism.

The scaling up of production involved in industrialization had the commensurate effect of expanding city ports. As industrialization brought with it increased demand for raw materials and new streams of export products, port facilities had to be expanded. Nowhere was this more striking than London, UK, where dock construction continued throughout the 19th and early 20th century so that most of the eastern section of the metropolitan Thames was devoted to shipping and related mercantile activity. Starting with the construction of West India dock in 1802, and followed by London (1805), East India (1805), Surrey (1807), St Katherine (1828), West India South (1829), Royal Victoria (1855), Millwall (1868), Royal Albert (1880) and King George V (1921) docks, the scale of development was vast and played a central role in enabling London's economy to become both prosperous and diverse.

Industrial production methods were also used in port and shipyard construction; building larger ships meant building larger dry docks in which to build them. In Britain, the rivers Thames (London), Mersey (Liverpool), Tyne (Newcastle), Wear (Sunderland) and Clyde (Glasgow) were all utilized to build large, ocean-going ships. In Belfast, Northern Ireland, the Harland and Wolff shipyard was established in 1861 when Edward James Harland and Hamburg-born Gustav Wilhelm Wolff founded a small shipyard on Queen's Island. As Belfast and the wider UK developed into the globe's largest industrial center, the Harland and Wolff shipyard developed apace, building larger and larger ships, including the Titanic between 1909 and 1911. During this period, the Harland and Wolff shipyard employed 15,000 people working 49 hour weeks. Harland and Wolff also built the world's largest dry dock in Glasgow, Scotland; a facility which measured 840 feet long by 240 feet wide.

As processes of globalization and industrialization drove waterfront industry growth and dock construction, the supporting physical infrastructure which surrounded also had to be expanded. Dockland areas gradually became larger and larger as vast railway terminals were constructed on waterfronts to transport incoming ship freight. In addition, huge warehouses were also built to store the vast amounts of goods that flowed into port cities. This resulted in many cities losing their waterfronts as public spaces. Waterfront areas simply became the domain of heavy industry; rarely seen by most city residents. In Toronto, Canada, this port infrastructure dislocated the city from the Lake Ontario shorefront. Railways ran parallel to the shore and in front of these port

facilities hugged the waterfront. As a consequence when the Toronto waterfront began to be targeted for redevelopment during the 1960s by city government, increasing accessibility to the waterfront quickly became a priority.

With the growth of port facilities and related infrastructure, waterfront urban areas required large labor forces. As a consequence, residential communities reliant upon dock-related employment grew up in areas adjacent to the waterfront. These often developed distinctive political and social cultures since the demands and practices of port-related labor were quite particular. For example, the casual work practices of dockers created distinct social networks and political practices. Quayside workers in cities such as London operated under a complex and informal employment system whereby workers would be recruited on a needs-basis every morning by foremen. Such an employment system meant dockers often faced great levels of periodic hardship as recessions, tides and weather combined to create insecure labor demand. This also affected social practices and networks with it being imperative that dockers know their foreman to ensure their labor was recruited. Such an obvious and unmediated relationship between labor and capital also contributed to dock communities being places of radical politic ferment. Port communities in London, UK, Liverpool, UK, New York, US, Boston, US, and Brisbane, Australia, all became sites of political radicalism and trade union power.

In addition to shipping and port activities, 19th and early 20th century waterfronts were also appropriated by industries which relied upon water resources. Such industries included textiles, dyes, cable making, breweries, various milling industries, steel, and energy. Throughout this period many cities developed coal fired power stations along waterfront areas because the interface of water and land provided an efficient means to transport the bulk materials required to generate power. Many of these power stations have left, and continue to leave, indelible marks on the urban landscape both in terms of impressive built structures and contaminated land. Although some of these early 20th century power stations continue to operate using new energy production technologies, others have been converted to adaptive uses. Examples include the Bankside and Battersea Power Stations in London, both designed by architect Sir Giles Gilbert Scott. The Bankside building is now the Tate Modern art gallery, whilst Battersea Power Station is undergoing redevelopment for conversion into residential and commercial usage.

Around the globe during the 19th and 20th centuries many waterfront cities, such as Toronto, Boston, Baltimore, Liverpool, Barcelona, Bilbao, Santiago and Osaka, developed their waterfronts for the types of industrial purposes described above. However, as urban economies began to make a post-industrial transition, many of these once highly productive waterfront spaces went into decline and became redundant.

Industrial Decline

As industrialized nations such as the UK and USA underwent industrial decline in the second half of the 20th century, many of their urban waterfronts fell into dereliction. The massive industrial and trading complexes that once dominated urban waterfronts became landscapes of despair. As capital fled from urban waterfronts, the communities that were left behind often faced high unemployment, economic stagnation, and growing social problems.

Many of the ports which were built in the 19th and early 20th century became unprofitable and eventually redundant in the late 20th century as the shipping industry began to use containers to transport goods. Container shipping, a method developed by Malcolm McLean of the Pan-Atlantic Steamship Corporation, USA, greatly reduced the costs of handling goods at ports and

simplified the logistics of shipping, drastically cutting the labor and time involved compared to the previously used bulk break method of shipping. The economic and social effects of the transition to container-based shipping were drastic. Container shipping required large areas of land to store and organize shipping containers, large docks to hold container ships, and different labor practices. This meant that the many waterfront industries and communities that developed during the previous decades quickly became unprofitable and obsolete. This decline created a host of complex problems for effected cities, many of which are still felt today.

As large dock facilities and surrounding communities fell into decline, city and national governments were presented with the question of how to deal with the resulting problems. Initially, many governments attempted to reform and restructure port industries to make them more competitive. In London, the national government unified the city's docks and wharves under a single jurisdiction – the Port of London Authority (PLA) – in attempt to remove internal wrangling and restructure complex operations. Yet, faced with an archaic labor system and restrictive legislation, the PLA ultimately abandoned its attempts to regenerate London's docks and in 1969 it instigated the movement of these operations east to a new container port in Tilbury, Essex. This story of a failed attempt to regenerate urban docks was repeated elsewhere. In Toronto during the 1950s and 1960s, the city government responded to increased competition and changing shipping practices with a plan to expand port facilities, create a new outer harbor, and begin a process of redevelopment in established ports. Initial reactions to waterfront decline were therefore often focused upon restructuring existing industries and maintaining these spaces as sites of industry.

As various government bodies attempted to reverse this decline, a number of political conflicts arose. The containerization of shipping demanded that labor practices within docks changed. Working hours, employment contracts, places of work and labor requirements were all being dramatically altered. As a consequence, dockers unions were brought into conflict with managers and political representatives. In New York City during the 1960s, the New York Shipping Association introduced a computer-based hiring system, developed by IBM, to reorganize dock labor. This system had the effect of rationalizing labor recruitment and working hours, and changed the organization of work units. The latter caused discontent within dockers unions as it threatened to reduce labor demand and increase the risk of workplace accidents. This was repeated in other cities, such as Liverpool, UK, as difficult negotiations were undertaken in order to maintain port facilities. However, these did little to stem the processes of decline which finally resulted in the complete abandonment of many urban waterfronts by port activities.

Economic decline and abandonment of city ports plunged the communities which relied upon dock-related employment into severe distress. In London between 1971 and 1981, the population in the docklands area fell from 48,352 to 39,429, due in large to out-migration. By 1981, the unemployment rate in the area was running at 17.8%. However, even after a decade of decline, between 1978 and 1983, a further quarter of all jobs in the area (13,000) were lost and another 5,100 acres of land fell into dereliction. The same processes of decline occurred in other port cities, with similar consequences for working class communities. In New York City, the piers of Manhattan and Brooklyn were abandoned for the container port in Newark/Elizabeth, New Jersey. Whilst in Dublin, Ireland, all port activities transferred one mile down the River Liffey, from the central city to a container shipping facility at Alexander Quay; reducing labor demand and dislocating dockers from traditional sites of employment.

As industries abandoned urban waterfronts, much of the land fell into dereliction. Furthermore, as a consequence of the character of many dock and waterfront industries, such as gas stations, chemical plants and oil refining, large swathes of land were left highly contaminated. For

example, the Union Carbide chemical plant on Rhodes Peninsula, Sydney, Australia, dumped dioxins and other chemical by-products in surrounding wetlands up until 1970. As a consequence of such practices, many waterfront sites have required significant expenditure on remediation to make them fit for reuse.

The return to the waterfront

The explosion of waterfront (re)development

As waterfront cities began to develop post-industrial urban development strategies throughout the 1970s, 1980s and 1990s, urban waterfronts became central to urban renewal and regeneration throughout the world. In Sydney, Australia, the once derelict docklands of Darling Harbour have been transformed into a showpiece for the city and a hub of tourism. Baltimore's Inner Harbor has been transformed from a symbol of industrial decline into one of post-industrial urbanism, with all of the related connotations of gentrification, spectacle, social polarization and inequity. In Melbourne, Australia, the urban waterfront has been redeveloped to represent the city's globally-orientated, economically-focused, consumption-based urban strategy. Hong Kong's waterfront has been redeveloped and substantially extended through a reclamation project that has involved building a new urban infrastructure, consisting of an airport, railways, motorways, tunnels and bridges. In Toronto, the landscape of industrial and rail terminal facilities that once lined the shorefront of Lake Ontario has, and continues to be, reinvented. And in London, the docklands have been remade into a post-industrial space where remnants of past activities now only exist in the form of postmodern pastiche, where quaysides support the balconies of luxury apartments and cranes exist as artifacts.

Urban development agendas and waterfronts

Waterfront redevelopment has been at the forefront of some of the urban redevelopment schemes which have come to characterize post-industrial urban renewal, such as London Docklands and Battery Park City, New York City. Under post-industrial urban policy agendas that are focused upon consumption and the attraction of capital, waterside redevelopment schemes have followed similar patterns. Waterside office-based redevelopment programs have aimed to attract a global clientele of trans-national corporations to the city. The development of waterside leisure spaces has catered to the consumption desires of the professional middle classes. Finally, waterside residential development has focused upon providing residencies for the post-industrial metropolis' burgeoning ranks of capital-rich professionals. Whilst there have been exceptions to this trend, notably in Vancouver's False Creek South neighborhood where a liberal city administration constructed a waterfront neighborhood based upon principles of livability (Ley, 1980), the redevelopment of deindustrialized waterfronts has overwhelmingly reflected the neoliberal reinvention of urban policy and related issues of inequity and questionable political representation.

Case Study: Battery Park City, New York City

The redevelopment project which transformed Lower Manhattan's Hudson River waterfront from a collection of derelict piers into a beacon of global capital has become a symbol of both post-industrial waterfront development and urban renewal. The redevelopment of this 92 acre slice of Manhattan began in 1968 when New York State established the Battery Park City Authority, an urban development corporation. The initial plans for this space proposed by the New York City Department of Marine and Aviation had wanted to redevelop the port facilities along this stretch of waterfront, creating an updated dock and warehouse facility for the island of Manhattan. However,

under New York State Governor Nelson Rockefeller, a series of master plans were developed which envisaged this waterfront area becoming a pedestrianized park space, interspersed with both private and subsidized futuristic housing. The plan received a warm reception in the city with architecture critic Ada Louise Huxtable commenting in the New York Times: "Is this any way to plan a city? You bet it is."

New York City's 1976 financial crisis led to the plans of Nelson Rockefeller's government being abandoned for a much more private capital orientated strategy. This change to the Battery Park waterfront redevelopment scheme represents a much wider reorientation in urban policy. In this recent examination of neoliberalism, David Harvey traces the emergence of the current ascendancy of the New Right over urban (re)development, and more generally social policy, to New York City's financial crisis. Harvey argues that, at this point in time, global financial actors, such as Citibank chairman Walter Wriston, realized significant leverage and influence over urban and social policy, which resulted in them forcing a vast scaling back of the Keynesian welfare state apparatus. As the major urban development project in North America at this time, Battery Park City's subsequent neoliberal reorientation has therefore become symbolic of the more global shift in urban redevelopment practice which has occurred over the past 30 years.

The final 1979 master plan for Battery Park City, designed by Alexander Cooper and Stanton Eckstut, dropped the ambitious and socially inclusive plans of the early 1970s and adopted what the Battery Park City development corporation was to call "a hard nosed, realistic approach". This approach was physical redevelopment-led, involved little local community participation, provided no affordable housing, and focused upon private market imperatives. In 1980, construction on the site began and continued throughout the decade. Eventually, the development included the World Financial Centre office complex and a series of private residential towers. Although the area was heavily affected by the attacks of September 11th 2001 on the neighboring World Trade Center, development in the area continues today with new luxury hotel and apartment complexes being built on the reclaimed land.



Figure 1 An image showing the continued development of Battery Park, New York City, 2006 (Source: Author)

Why is post-industrial waterfront redevelopment distinctive?

The unique dynamic created by the interface of water and urban space has greatly influenced the nature of waterfront redevelopment in the post-industrial era, just as the same interface dictated the usage of waterfronts for shipping and industrial purposes in previous decades. However, it is important to recognize that this type of renewal is not disconnected from general urban policy directions. The same themes of private sector-led development, urban development corporations, circumvention of planning protocol and lack of public accountability that characterizes neoliberal urban redevelopment also characterizes most waterside redevelopment schemes. With waterside redevelopment schemes reflecting general post-industrial urban redevelopment themes, it is therefore appropriate to ask whether waterside redevelopment should be considered as a distinctive form of urban development. In answer to this question we can identify a number of important factors that distinguish waterfront development from general urban development. These include the political significance that is imbued upon waterside locations, the economic potential that is bound up in disinvested waterside spaces, and the socio-cultural value that is associated with urban waterside locations.

Political Significance

The distinct physical qualities of urban waterside spaces have meant that in recent decades local political regimes have made them redevelopment priorities. Waterfront sites which had previously been used for port and industrial activities were often in central city locations.

Therefore, as a result of decline, many cities found themselves with large areas of devalorized land in prime central city locations. Furthermore, due to their location these sites are also highly visible; often close to the central business district and able to be panoramically gazed upon from opposing riverbanks and adjacent foreshores. This has meant that waterfront sites have become important spaces within the context of place marketing redevelopment agendas where highly visible demonstrations of post-industrial renewal and consumption are central to determining urban prosperity.

Place marketing has become a key tenet of local economic development in an era where cities are constantly hierarchically ranked by external agents. Cities must actively pursue and construct positive imaginative geographies to ensure that they become and remain 'hot spots'. A negative place image can prove unattractive to potential investment, since negative imagery can indicate the city's economic decline through falling consumption. The redevelopment of highly visible urban waterside sites has become a key mechanism by which positive place images are constructed. For example, in Singapore (Chang, Huang and Savage, 2004) the waterside was chosen for redevelopment specifically with the purpose of demonstrating and displaying the city-state's global city ambitions. The redevelopment of waterside spaces for place marketing purposes has often resulted in city planning authorities and development corporations overriding democratic planning procedures and local interests in order to bring perceived city-wide economic benefits.

Economic Value

In addition to their significance in place marketing development agendas, brownfield waterside sites are also distinctive urban spaces because of their potential economic value. Waterside development can offer substantial premiums to developers, land owners and local governments. The potential returns on investment can be as much as 40-60 percent higher for waterside residential units compared to the equivalent units without waterfront views. Releasing and redeveloping devalorized and derelict waterside land can therefore offer hefty windfall profits.

The return of capital to waterfront locations has therefore often been paralleled by a movement of people to the waterfront. Urban waterfronts which were once undesirable brownfields have now become some of the most desired pieces of real estate around the globe. Examples include waterfront areas of Sydney, Australia, Baltimore, USA and Prague, Czech Republic. A significant consequence of this has been the widespread gentrification of urban waterfront space.

Case Study: London Riverside

From almost any vista in London, the signs of the Thames' post-industrial transformation are obvious. A gaze towards East London encounters a dynamic landscape of continually growing skyscrapers huddling around the Thatcherite-government-driven 1980s Docklands tower of One Canada Square. In Central London, the new London government has established its Foster and Partners designed egg-shaped offices on the banks of Thames, and the Tate Modern art gallery has attracted four million tourists to the Southbank each year since opening in 2000. In addition, all along London's waterfront a vast swath of residential development has taken place since 2000, making the riverside one of the most desired residential spaces in the city.

London's newly (re)established metropolitan government, the Greater London Authority, has embraced the waterfront's reinvention by developing a strategic planning vision for it: 'The Blue Ribbon Network'. This planning policy is intended to stimulate the redevelopment of what the metropolitan government considers areas of prime and underutilized industrial, residential and transit resources. Whilst this policy adheres to a

wider neoliberal politics by not directly intervening in reducing poverty and alienation, it has found utility in the riverside as a social policy resource. It is seen as a place where various social groups will want to congregate and mix; generating cross-class and cross-cultural social interactions which will in turn, it is thought, help reduce the city's social problems. The Blue Ribbon Network vision therefore provides an example of how waterfront spaces have become politically valued and how certain socio-cultural values are associated with them. In order to achieve its vision, the metropolitan government has encouraged the already accelerating rates of waterfront redevelopment.

Major corporate residential property developers have continued to answer the calls of the metropolitan government as they have rushed to build luxury apartments along the Thames. Developers have been met by substantial demand for their products as London's professional elites have proven eager to become riverside residents. The collection of political promotion, large-scale corporate development, and burgeoning demand for 'riverside living' has led to a widespread gentrification of the waterfront. Although processes of neighborhood change along the riverside are still in their early stages, those working class waterfront communities which have received a large influx of middle class people now living in newly-built luxurious riverside apartments appear to be witnessing significant gentrifying, and as a result displacing, changes in their neighborhoods.



Figure 2 An image of ongoing residential waterfront development in West London, 2005
(Source: Author)

Socio-cultural Value

Although it is only implicitly referred to in many accounts of urban waterside redevelopment, it is clear that much of the political and economic significance of these spaces is related to the socio-cultural value placed upon them. Waterside spaces are often part of the city's valued collection of open spaces, comparable to the parks and gardens which are valued for their sensory and physical qualities. Many of the debates which surround issues of public access to redeveloped waterfronts bear witness to the perceived communal value of urban waterside space.

In an era of neoliberal urban development, the spatial and sensory qualities of waterfront areas have been utilized in order to generate consumption. In Melbourne, Australia, the city's Southbank waterfront region has been extensively redeveloped into a space of (middle-class) consumption. Here, carefully managed urban design techniques and omni-present policing controls manage this waterfront space filled with manufactured spectacles. The same commodification of waterfront space can be witnessed in other cities, such as Copenhagen, Denmark, Sydney, Australia, and Boston, USA, where parks and promenades have been provided alongside expensive hotels and retail stores in an effort to produce an attractive and consumption-efficient urban space.

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