

APPENDIX 1

Innovative Urban Redevelopment Projects



In this appendix we describe 16 innovative urban redevelopment projects in different North American and European cities.

There is a brief overview to provide some background for each of the urban requalification themes discussed, i.e. riverfront development, rehabilitation of contaminated soil, building trade fair centres and introducing new tramways.

1. Riverfront development projects:

Overview 118

Case studies 120

 Reclaiming the shores of the Ria, Bilbao120

 Aquarium/Inner Harbor, Baltimore124

 Moll de la Fusta/Passeig de Colom, Barcelona 126

 Central Artery/Tunnel (Big Dig), Boston 128

 Rowe's Wharf, Boston 132

 Puerto Madero, Buenos Aires134

 Park East Corridor, Milwaukee136

 Aker Brygge, Oslo138

 LeBreton Flats, Ottawa140

 Promenade Samuel-De Champlain, Québec City144

 Kop van Zuid, Rotterdam148

 False Creek, Vancouver152

2. Rehabilitating contaminated soil:

Overview 160

Case study 162

 Angus project, Rosemont/Petite-Patrie, Montréal162

3. Trade fair centres:

Overview 168

Case study 174

 BCEC— Boston Convention and Exhibition Center, Boston174

4. New tramways:

Overview 178

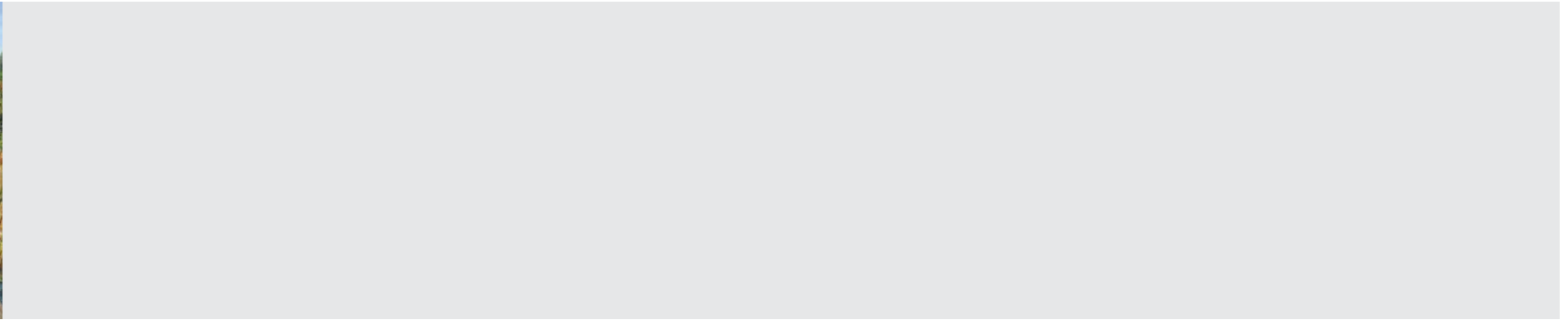
Case studies 180

 Central City Streetcar, Portland (Oregon)180

 Nouveau Tramway, Strasbourg182

APPENDIX 1.1

Riverfront Development Projects



Highlights

- Most riverfront development projects are intended to repurpose industrial and port brownfield land.
- These urban redevelopment projects cover large areas and are characterized by mixed functions.
- They are part of a development policy for run-down areas, intended to burnish the city's image (urban marketing).

General project objectives

In North America and Europe, many industrial and port sectors located in the heart of major urban centres began a gradual decline as of the late 1940s. Numerous industries shut down or left older neighbourhoods to set up in more modern industrial parks. Port operations were also relocated, so as to meet the new requirements of the shipping industry. These wholesale transformations obliged workers to move as well, and led to a rapid deterioration in the built environment in the old industrial and port zones.

During the 1970s, various development players recognized the considerable redevelopment potential of these sectors. Most of them are located near downtown, and are historically significant areas with a rich architectural and archaeological heritage.

The main objective of the urban redevelopment operations undertaken at that time were to reappropriate these areas as a strategic element in injecting new energy into former communities where the economy revolved around a once-prosperous industrial base.

There is no shortage of examples. Some large cities, like Buffalo, Baltimore, Boston, London and New York, led the way in this type of urban renaissance (see table, opposite). They relied on very different strategies, characterized by mixed urban functions. The projects varied in size but included developing public spaces for recreation, converting buildings for residential uses and creating commercial premises.

The development of available spaces in the heart of metropolitan regions often included mega-projects which in the long run helped to give the city a new economic, social and political image – "urban marketing," in short.

Characteristics of riverfront development projects

Greenbelts and riverfront promenades

The main goal of reclaiming riverfront spaces is to give the public access to the riverbanks and the water itself by creating public spaces. Providing such spaces and facilities adapted to different activities intended mainly for local and regional residents responds to the need to develop places for relaxation and physical exercise in the heart of the community.

Pleasure boating marinas

There are few marinas for pleasure boats in the heart of a city. To meet this demand, some projects include plans for marinas offering complementary services for pleasure boaters near local activity centres. For communities with direct access to major navigable waterways, the presence of a prestigious maritime passenger terminal is also an asset.

Museums and cultural and interpretation activities

Port zones and the surrounding urban spaces are often significant historic landmarks recalling the birth of a city. Such urban landscapes are also often home to a rich heritage testifying to their historic roles as industrial centres and ports. This valuable heritage, combined with their proximity to the water, prompted many public- and private-sector decision makers to begin repurposing and redeveloping

Few examples of riverfront development projects:

Baltimore	1959	Revitalization of the Inner Harbour (100 ha of brownfield land) and harbourfront of the Old Port of Baltimore, with the building of a convention centre, hotels and a shopping complex.
Boston	Late 1950s	<ul style="list-style-type: none"> - Rehabilitation of older residential neighbourhoods: - Union Wharf (1956) - The Hundred Acres (1961)
Buffalo	1970-1990	<ul style="list-style-type: none"> - Construction of the Niagara Square civic centre and its hotel complex - Creation of a cultural centre in the Theatre District - Construction of a water park and marina - Development of a shopping mall on Buffalo Place - Renewal of the historic Allentown sector, with shops and hotels
Chicago	1970	The Illinois Central railway terminal was dismantled to allow the expansion of the Great Park riverfront promenade, the construction of office buildings and hotels and the development of residential sectors.
London	1980	Revitalization of over 2000 ha of waterfront occupied by the old port. The London Docklands project was characterized in particular by Canary Wharf, the highest tower in Europe, a multifunctional space of 1 million m ² dominated by Canada Place, employing over 55,000 workers.
Manhattan and Jersey City	1970-1980	A series of projects developed along both banks of the Hudson River (Jersey City, Hoboken and Manhattan).

Source: Chaline (1988), Chevalier (1994), Giband (1997) et Olds (1995).

riverfront neighbourhoods. Pointe-à-Callière, the Montréal Museum of Archaeology and History, which is located on the very birthplace of Ville-Marie, as well as work to develop the Old Port of Montréal, are fine examples of how riverfront lands can be redeveloped for museum, cultural and interpretation purposes.

Residential uses

The conversion of older industrial buildings for residential uses is a proven success. The view of the water and nearby activities make this a popular setting. There is a tendency to greater housing density and mixed functions, as small stores and local services set up on the lower floors. The living environment this creates is perfect for companies wishing to offer their employees a different work environment, in multimedia and high tech for example, as is the case with Montréal's Cité Multimédia.

Entertainment, restaurants and bars

This kind of business needs large numbers of customers to be successful. Many riverfront redevelopment projects manage to attract large number of customers. The general setting, the quality of amenities, the attractive surroundings and the view of the water seem to be essential ingredients. On the other hand, projects must attract people year-round, and not simply during the high season — unlike Place Jacques-Cartier in Montréal, for example.

Tourism is a crucial economic industry for many large cities. They attempt to design urban places that can attract visitors and convince them to stay longer. By investing in waterfront developments, these projects promote the concept of a gateway to the city so as to create pleasant environments for visitors.

Public transit

Finally, one of the prerequisites for success for this kind of renewal project is a strategy for moving visitors around efficiently.

Implementation

Initiating the project

Our analysis of numerous waterfront redevelopment projects does not show any common factor underlying all the projects. The huge public and private investment required for this kind of project requires a trigger of some kind, however. This is generally:

- an international event, such as the Olympic games or a world's fair,
- a historic anniversary, commemorating an important event or a city's birth, or
- the implementation of a co-ordinated redevelopment policy, such as an urban plan or a master development plan.

Financing

The investments initially required to undertake such redevelopment projects generally come from public-sector organizations. Although the initial goal is most often to make the riverfront accessible and to establish museum, cultural and interpretation activities, these projects also have other dimensions — residential, commercial or entertainment — that can attract private- or para-public sector players.

Development constraints

Obstacles often arise in riverfront redevelopment projects, and call for innovative solutions if these strategic sites are to be developed. The rich historic and industrial heritage of such places calls for particular attention to protecting that heritage and perpetuating the "spirit" of the place. In addition, managing contaminated soil is a sizeable challenge in many cases, in both technical and financial terms.

Reconfiguring road infrastructure also calls for considerable investment. The Promenade Samuel-De Champlain in Québec City, LeBreton Flats in Ottawa and the Central Artery/Tunnel in Boston are all notable precedents.

Project spin-off

Redevelopment projects have considerable spin-off for the communities that rely on this strategy for reclaiming riverfront lands. The initial objective, of giving the shores back to city dwellers and developing activities related to the presence of water, makes it possible to revitalize sites in the city that have historical significance. These emerging urban poles help to create quality living environments where there is a cohabitation of residential, commercial and recreation/tourism functions. In fact, redevelopment operations bring in larger numbers of local residents and workers and significant tax benefits. They also serve as catalysts for other projects nearby.

References

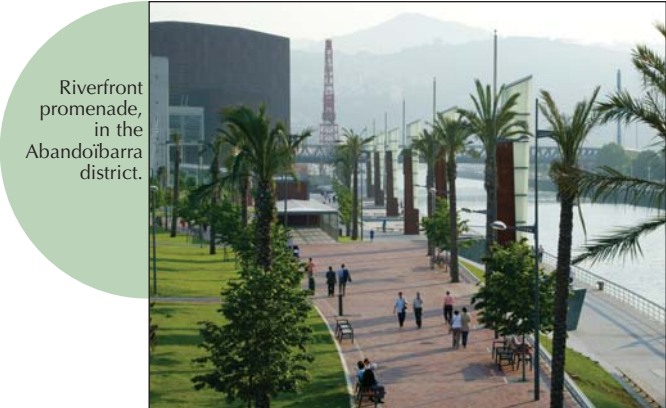
- Chadwick, Andrew, and Glasson, John. "Auditing the Socioeconomic Impacts of a Major Construction Project." *Journal of Environmental Planning and Management*, 42(6), 1999: 811-836.
- Chaline, Claude. "La reconversion des espaces fluvio-portuaires dans les grandes métropoles." *Annales de Géographie*, 97(544), 1988: 695-715.
- Chevalier, Jacques. "Les contradictions d'une 'renaissance' au cœur des villes nord-américaines." In J. Chevalier and J.-P. Peyon (Ed.), *Au centre des villes: dynamiques et recompositions*. Paris: L'Harmattan, 1994: 213-260.
- Giband, David. "Le Pennsylvania Convention Center de Philadelphie : politiques fiscales et dynamique métropolitaine." *Cahiers de Géographie du Québec*, 41(112), 1997: 49-65.
- Knox, Paul L., "The Restless Urban Landscape : Economic and Sociocultural Change and the Transformation of Metropolitan Washington, DC." *Annals of the Association of American Geographers*, 81, 1991: 181-209.
- Loftman, Patrick, and Nevin, Brendan, "Going for Growth: Prestige Projects in Three British Cities." *Urban Studies*, 33(6), 1996: 991-1019.
- Manzagol, Claude, Robitaille, Éric, and Roy, Philippe. *Le multimédia à Montréal : le High-Tech à la rescousse des espaces fatigués*. Abstract from the Seminar "Les espaces à contraintes environnementales." Montréal: ACFAS, 1999 edition (Ottawa), 2000: 201-218.
- Olds, Kris. "Globalization and the Production of New Urban Spaces: Pacific Rim Megaprojects in the Late 20th Century." *Environment and Planning A*, 27(11), 1995: 1713-1744.
- Roseberg-Lasorne, Muriel. *Marketing urbain et projet de ville : parole et représentations géographiques des acteurs*. Doctoral thesis, CNRS-Université Paris I, 1997: <http://193.55.107.3/geoappl/texte1/INTERGEO.htm>
- Short, J. R., Benton, L. M., Luce, W. B., and Walton, J. "Reconstructing the Image of an Industrial City." *Annals of the Association of American Geographers*, 83(2), 1993: 207-224.

Reclaiming the Shores of the Ria Bilbao

Area:	600 hectares, along 12 km of waterfront
Carried out:	1992-2012
Estimated cost:	3.213 billion euros — CAN\$5.62 billion (396 million euros paid by Bilbao Ria 2000)
Design:	Various designers
Development:	Basque government, Biscay provincial council, Cities of Bilbao and Barakaldo, Bilbao Ria 2000, Bilbao Metropoli-30, Solomon R. Guggenheim Foundation, etc.

The urban redevelopment program, intended to build a metropolitan framework to support the all-new post-industrial economy, is articulated around four goals:

- accessibility and mobility within the city
- environmental and urban regeneration
- investment in human resources
- the central role of culture



Bilbao Ria 200 — Photographer: Txemi Llano

Project description

The post-industrial transformation of Bilbao is an economic, cultural, environmental and social undertaking, structured around a number of strategic megaprojects.

Relocating the port

610 million euros, financed mainly by the Port Authority

Work on relocating and expanding the port began in 1991, in response to the obsolescent equipment and pressure by municipalities seeking to reconnect the city and the river. The gradual transfer of port facilities toward the mouth of the Nervión made it possible to free up large expanses upstream, which the port then ceded free of charge for use in revitalization efforts.

Context

Bilbao, a Medieval city founded in the 14th century on a bend in the Nervión River (la Ria), is surrounded by mountains. This forced the city to develop densely alongside the water. Starting in the late 19th century, mining and steelmaking led to the rapid industrialization of the entire metropolitan area; blast furnaces, port operations and shipyards sprang up along the shores, and as a result the city spread up the slopes and turned its back on the Ria. *At the height of its industrial glory, Balboa didn't care about beauty; she was rich.*¹

Then, in the 1980s, industry collapsed in Bilbao, leading to a huge economic crisis (unemployment exceeding 20%); huge areas of land were simply abandoned in the heart of the Basque capital. Faced with the crisis and the visible ruin of everything that had made the city rich, it was essential to build confidence in the possibility of economic and social renewal, by giving it a new, modern and lively face.² Governments' commitment to meeting this need first resulted in a revitalization plan for Bilbao (1987) and a strategic plan for the entire metropolitan area (1991), two planning documents that immediately called for the reclamation of the city's riverfront as a priority objective.

Planning was followed by major clean-up and infrastructure work, urban development and the construction of world-class cultural facilities. These different operations, organized by the regional, provincial and municipal governments with the support of Bilbao Ria 2000 and Bilbao Metropoli-30, are being carried out all along the Ria (12 km, 600 hectares) at a cost of over \$3.2 billion euros (about CAN \$5.6 billion).

Aerial view of the Abandoibarra district, in 1996 and 2004.



Bilbao Ria 200 — Photographer: FOAT, S.L.



Bilbao Ria 200 — Photographer: FOAT, S.L.



Bilbao Ria 200 — Photographer: FOAT, S.L.

Building the metro

1.09 billion euros, financed by the Basque government and the province of Biscay

The metro system, opened in 1995, comprises 32 stations (15 of them on the surface) along 31 km of tracks. It joins up the different parts of the city on either side of the Ria, thereby giving added credibility to the entire Bilbao development project.³ It handles close to 250,000 passengers a day, and is considered one of the most modern in the world, in terms of its technical performance and comfort and the aesthetics of its trains and stations.

Complete clean-up plan for the Ria

650 million euros, financed by riverfront municipalities and the Bilbao Bizkaia Water Authority

The objective of this project was to collect all waste water, transport it to the Treatment Plant, cleanse and purify it and then return it to its natural habitat, thus ridding the Nervión river estuary of waste and reclaiming the river's historic role as the main axis and backbone of the city.⁴

Guggenheim Museum

133 million euros, financed by the Basque government and the province of Biscay

This 24,000 m² building, inaugurated in 1997, is a symbol of the importance of culture and architecture in Bilbao's revitalization. Designed by architect Frank Gehry, the titanium, stone and glass structure, with its sinuous and asymmetrical lines, conveys Bilbao's new cultural image to the world.

The Guggenheim Museum, in the Abandoibarra district.



Bilbao Ria 200 — Photographer: Txemi Llano



Bilbao Ria 200 — Photographer: FOAT, S.L.

Euskalduna Conference Centre and Concert Hall

84 million euros, financed by the Basque government and the province of Biscay

A modern 53,000 m² building located on the site of the former Euskalduna shipyards, near the Guggenheim Museum, the combined conference centre and concert hall has hosted some 40 conferences and 200 artistic performances a year since it opened in 1999.

Rehabilitating the Abandoibarra waterfront

117 million euros, financed by Bilbao Ria 2000

This 35-ha district, the future business, recreation and culture centre of Bilbao, will extend the current centre of Bilbao all the way to the Ria and link the Guggenheim Museum with the Euskalduna centre. Work is now proceeding on 80,000 m² of office space, 31,000 m² of stores, a hotel, a university pavilion, 600 apartments and 200,000 m² of green space and promenades.

Revitalizing the Bilbao La Vieja neighbourhood

180 million euros, financed mainly by the Basque government

This run-down and unsavoury area, isolated between the river, the railway tracks and abandoned mines, will be brought back to life mainly through the creation of public spaces, rehabilitation of housing, the addition of underground parking, work to develop the docks and the addition of a footbridge over the Ria.

Aerial view of the Barakaldo district, in 1998 and 2004.

Converting the Ametzola sector

39 million euros, financed by

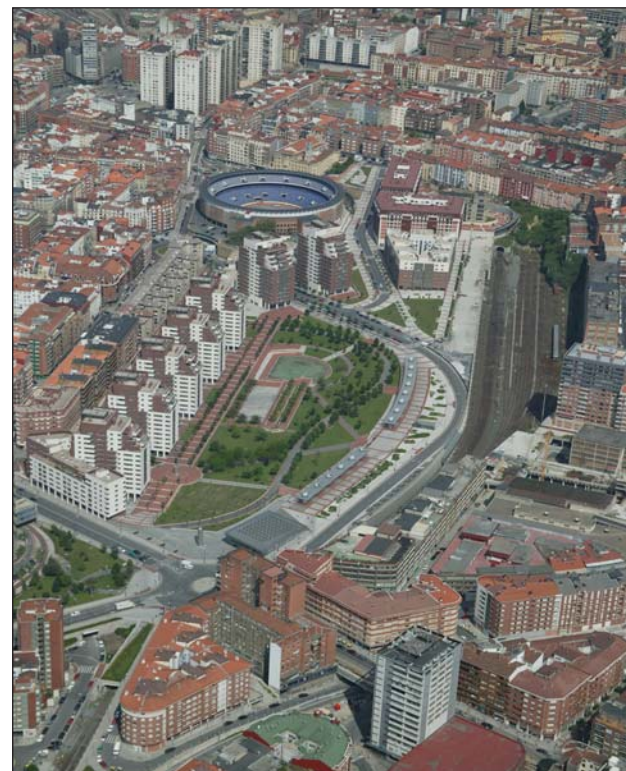
Bilbao Ria 2000

Ametzola, built on the former site of three freight terminals, will soon be a new mixed neighbourhood of 5,000 residents, around a 36,000 m² park. This initiative, begun in 1996, also includes the construction of two railway terminals and covering over the railway tracks to turn an urban barrier into an avenue.⁵

Aerial view of the Ametzola district, in 1996 and 2004.



Bilbao Ria 200 — Photographer: FOAT, S.L.



Bilbao Ria 200 — Photographer: FOAT, S.L.

Riverfront Development Projects

Case studies

A new centre for trade fairs

480 million euros, financed by Bilbao Exhibition Centre S.A., the City of Barakaldo, the Bilbao Chamber of Commerce, the province of Biscay and the Basque government

The new exhibition centre will be built in Barakaldo, in Biscay. It is to play a fundamental role in the renewal of the left bank of the Ria, and will be one of the driving forces in reshaping metropolitan Bilbao.⁶ The 120,000 m² centre will be part of a complex including a conference centre, a hotel, a shopping mall and a 4,000-spot parking lot.

The Eusko Tram Bilbao

36 million euros, financed jointly by the Basque government, Bilbao Ria 2000 and the City of Bilbao

Bilbao's modern tramway, running along a 5-km route, helps to relieve congestion in dense older neighbourhoods and simplify the development of new urban areas (e.g. Abandoibarra). Eusko Tram has been operating since late 2002, connecting the most emblematic parts of Bilbao and linking up with other public transit lines (railway and metro stations).

These development-generating projects are complemented by a multitude of other undertakings, including the reconfiguration of the Variante Sud railway line (75 million euros), the opening of new roads, the development of promenades and parks, the addition of bridges and footbridges over the Ria, a new airport (204 million euros) and many urban renewal projects in the Barakaldo area (108 million euros).

Finally, a number of internationally renowned architects, like Frank Gehry (Guggenheim), Norman Foster (metro) and Santiago Calatrava (footbridge and airport) are involved in the transformation of Bilbao.

Walkway designed by architect Santiago Calatrava.



Professor M. Neil James, www.plymouth.ac.uk/si



Audiovisual Library of the European Commission

Implementation

Bilbao Ria 2000

Given the vast territory affected by the renewal project and the multitude of political and strategic issues, it was essential to convince the administrations involved to put aside all partisan considerations and join forces, to carry out a single urban project co-ordinated throughout the whole metropolis. In 1992, this partnership between public authorities became a reality, with the creation of Bilbao Ria 2000, an inter-institutional corporation responsible for directing the urban renewal work, made up of equal numbers of representatives of the national government and the Basque administration.

The Mayor of Bilbao and the Secretary of State for Infrastructure and Transport of the Ministry of Development are the Chair and Vice-Chair, respectively, of the Board of Directors of Bilbao Ria 2000; other members represent the Port of Bilbao, the major railways, the Basque government, the Biscay Regional Council and the City of Barakaldo. They are backed up by an internal team of some twenty experts, most of them academics, along with private consultants responsible for producing studies and putting the plans into action.⁷

Ria waterfront in the Bilbao la Vieja district.

The Eusko Tram, across from the Guggenheim Museum.



Bilbao Ria 200 — Photographer: Txemi Llano

Pedro Arrupe footbridge, in the Abandoibarra district.



Bilbao Ria 200 — Photographer: Txemi Llano



Bilbao Ria 200 — Photographer: Agustin Sagasti

Bilbao Ria 2000 was created to bring the central government and local authorities together to carry out the urban renewal project. Its main role is to develop the central lands and create added value in property and urban planning terms.⁸ To do so it relies mainly on the resources of its member institutions, using a kind of barter system: they cede large tracts of vacant land along the Ria to Bilbao Ria 2000 in return for urban development and infrastructure work. Preparing the site and making zoning changes to the ceded land gives it added value that is then used to finance the redevelopment work.⁹ Thanks to this financing system, Bilbao Ria 2000 has been able to invest some 396 million euros (about CAN\$633 million) with an initial portfolio of barely 1.8 million euros (about CAN\$2.9 million).

One example is the port and the FEVE and RENFE railway companies, which jointly ceded over 233,000 m² of land in the Abandoibarra and Ametzola districts. In exchange for this land, Bilbao Ria 2000 agreed to carry out work on certain rail lines and build new railway stations; after all, these projects are just as profitable for the city as for the companies donating the land.

It must be noted, however, that in addition to the profits realized on the sale of the land, Bilbao Ria 2000 also received European subsidies on the order of \$66 million euros (CAN\$106.5 million), allowing it to finance the initial work.

Bilbao Metropoli-30

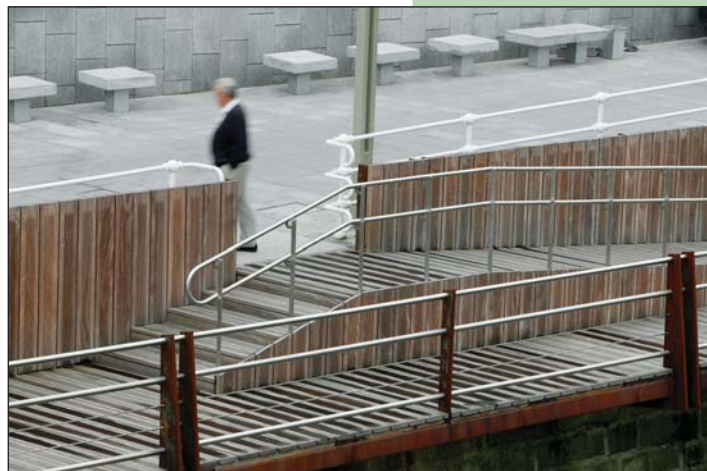
While Bilbao Ria 2000 co-ordinates partnerships between public-sector bodies, Bilbao Metropoli-30 organizes relations between the public and private sectors. Founded in 1991, the association consists of about one hundred public (province, municipalities, etc.), private (railways, port, banks, foundation, etc.) and institutional (universities, research centres, etc.) partners. Its main mandates are to make the public aware of the strategic plan for greater Bilbao, promote the city's new international image abroad and arrange partnerships between the public and private sectors. It conducts studies, publishes progress reports, analyzes projects and gives its approval to private initiatives that conform to the strategic plan.¹⁰

Decorative elements along the riverfront promenade, Abandoibarra district.



Bilbao Ria 200 — Photographer: Txemi Llano

Riverfront walkway, in the Bilbao la Vieja district.



Bilbao Ria 200 — Photographer: Txemi Llano

Follow-up

With 5 million visitors since 1997, the Guggenheim Museum indisputably represents the central attraction in Bilbao's urban renewal project. It is a true urban catalyst, an emblematic achievement that has had a great impact on commercial activities, transportation, hotel accommodation and services. In 2002, this indirect spin-off was estimated at 143.7 million euros.¹¹ Moreover, it has contributed to the cultural awakening of the city and to boosting property values. In just one decade, land in the Ametzola district has doubled in value, while in Abandoibarra, property evaluations of urbanized land suitable for building near the Guggenheim Museum have risen from 600 euros/m² in 1993 to 2,700 euros/m² in 1999.¹²

Thanks to a well-planned urban and cultural project, Bilbao, a city that tourist guides once advised travellers to avoid, has rapidly moved from extreme de-industrialization and abandonment to become a beacon of urban development and an internationally celebrated capital.¹³

References

Direction générale de l'urbanisme, de l'habitat et de la construction, under the direction of Ariella Masbounji. *Bilbao : la culture comme projet de ville = Bilbao : la cultura como proyecto de ciudad*. Coll. Projet urbain, No. 23, Paris, ministère de l'Équipement, des Transports et du Logement, 2001, 130 pages.

Powell, Kenneth. *La ville de demain*, translated by William Olivier Desmond, Paris, Éditions du Seuil, 2000, 255 pages.

<http://www.aruc-es.uqam.ca/aruces/rvm2002/fr/Bilbaoweb.htm> : *Local Development and Urban Regeneration through Culture and Services: the Case of Bilbao*. Document produced by ARUC-ES (Alliances de recherche universités-communautés en économie sociale) as part of the Rendez-Vous Montréal 2002 international symposium.

www.bilbaoria2000.com: Official site of Bilbao Ria 2000.

<http://www.bilbao-city.net>: Site describing the development of Bilbao.

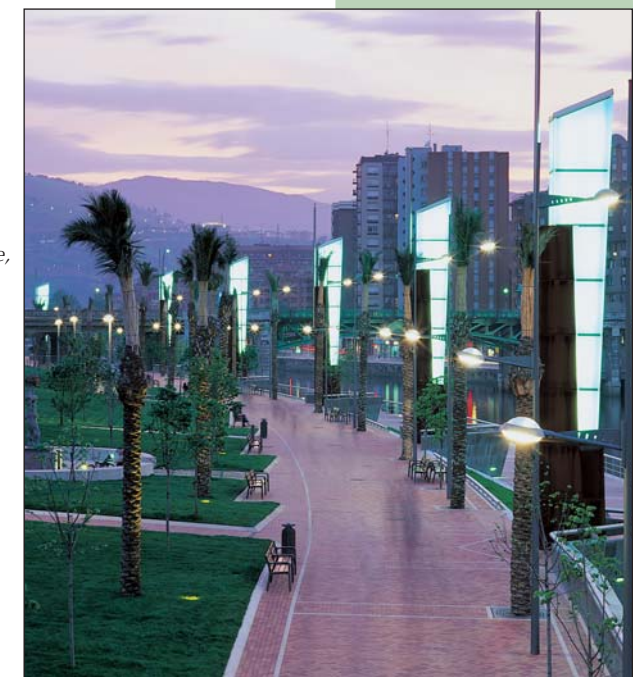
www.bm30.es: Official site of Bilbao Metropoli-30.

<http://www.euskotren.es/euskotran>: Site of the Bilbao tramway.

Notes

1. Ariella Masbounji, *Bilbao : la culture comme projet de ville, Bilbao : la cultura como proyecto de ciudad*, page 16.
2. *Ibid.*, page 18.
3. *Ibid.*, page 76.
4. www.bilbao-city.net
5. Ariella Masbounji, *op. cit.*, page 62.
6. www.bilbao-city.net
7. www.bilbaoria2000.com
8. Ariella Masbounji, *op. cit.*, page 20.
9. *Ibid.*, page 30.
10. *Ibid.*, page 40.
11. www.bilbao-city.net
12. *Ibid.*
13. Ariella Masbounji, *op. cit.*, page 6.

Riverfront promenade, in the Abandoibarra district.



Bilbao Ria 200 — Photographer: Txemi Llano

Aquarium/Inner Harbor Baltimore

Area:	10,687 m ² (115,000 ft ²)
Completion:	Initial construction 1978-1981/Expansion 1989-1990
Total cost:	US\$21.3 million (Phase I) US\$36 million (expansion)
Design:	Cambridge Seven Associates

124

Context

By the end of World War II, Baltimore Harbor was in decline. Businesses had deserted the Inner Harbor, warehouses were vacant and streets were empty. In 1955, the municipality created the Planning Council and assigned it to come up with a revitalization plan for downtown. In its plan, entitled *The thirty-year, \$260 million program*, the City of Baltimore and the different levels of government were to finance a real-estate operation with a view to acquiring and dividing up lots in the Inner Harbor district. At the same time, public activities organized on the site showed residents' enthusiasm and attachment to these seaside areas.

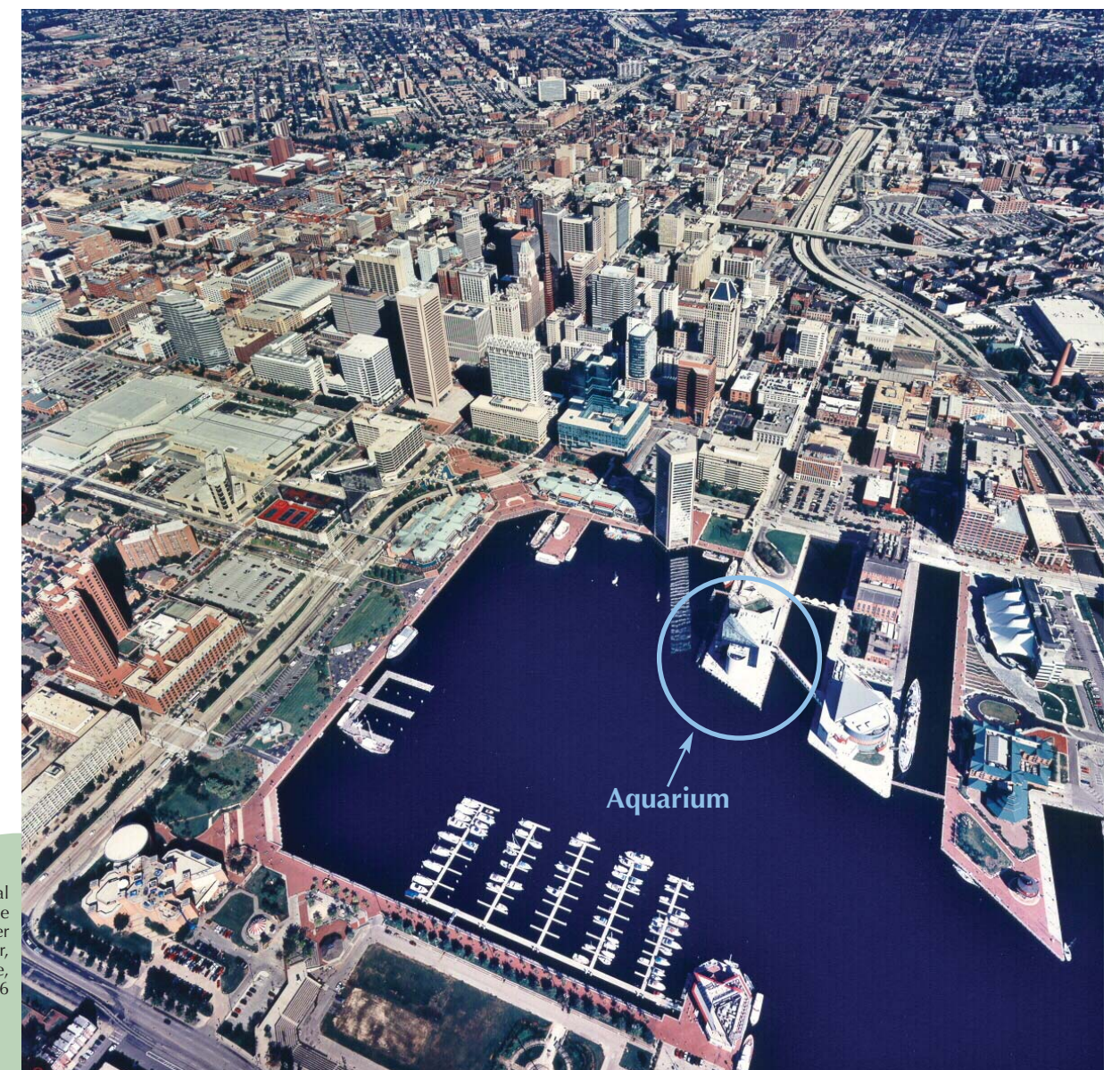
In the early 1970s, government subsidies ran out and revitalization efforts slowed. The lack of funding was overcome to some extent by focusing on tourism.

Between 1977 and 1980, the municipality undertook a series of initiatives to create a major ocean-front tourist attraction, by:

- building the Baltimore Convention Center (\$35 million),
- developing the Harbor Place shopping promenade (\$18 million),
- building the Hyatt Hotel (next to the Convention Center),
- opening an aquarium, today the most popular attraction in the State of Maryland.



www.baltimore.to/baltimore_panorama.html



Aerial view of the Inner Harbor, Baltimore, 1996

www.airphotographics.com/gallery.html

Project description

In 1976, in an effort to validate its conclusions, the City undertook a series of public consultations and invited Baltimore residents to decide on the project and its financing by means of a referendum. The construction of the aquarium finally began in 1978. Even before the work was completed, the US Congress decided to declare the project a "national aquarium," giving the attraction a valuable boost.

The aquarium is located at the tip of Pier 3, and since its construction has been the city's landmark. It has a futurist air, with its roof of glass pyramids (the highest soaring seven storeys), sitting on a concrete base adorned with multicoloured geometric shapes. In addition, in a nod to the former vocation of the site, the general shape of the building recalls a ship.

Implementation

The US\$21.3 million project was financed almost entirely by the public sector. The Economic Development Administration of the US Commerce Department contributed \$2.5 million, while the City, the main source of funds, chipped in \$15 million. Half of this amount came from the City's own coffers (proceeds from the sale of the Baltimore-Washington International Airport), while the other \$7.5 million was borrowed — the loan was authorized by residents in the 1976 referendum.

In the early 1990s, the independent board of directors of the aquarium decided to expand the complex, as part of a second phase in which work was to be financed entirely from admission revenues.

Follow-up

The aquarium reached its first objective by drawing new investment to the district. With annual economic spinoff on the order of \$128.3 million (according to a 1990 study), it is the most lucrative tourist attraction in Maryland. In fact, the aquarium's 1.6 million visitors a year are apparently the main reason for the addition of over 3,000 new hotel rooms in Baltimore — a link borne out by aquarium attendance statistics, which show that 70% of visitors to the complex come from outside Maryland.

Several large commercial chains have appeared on adjacent sites, counting on the aquarium's visibility to benefit from the strategy of developing a tourist district in the Inner Harbor.

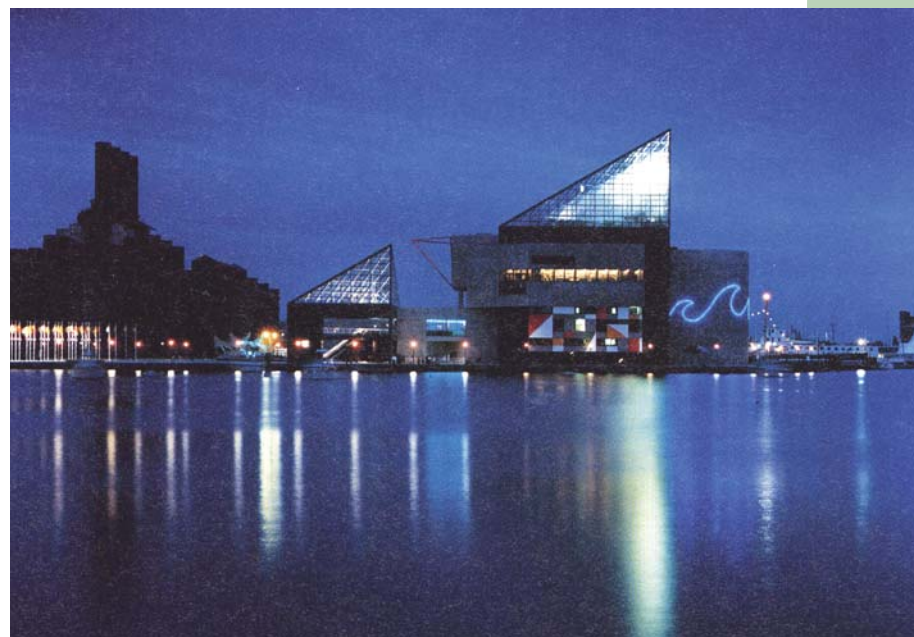
References

www.aqua.org: National Aquarium of Baltimore

Breen, Ann, and Rigby, Dick. *Waterfronts: Cities Reclaim Their Edge*. McGraw-Hill, 1994, 333 pages.

West, Keith. "Guiding Waterfront Vision Pivotal to Charleston's Future."
www.crbj.com/Articles/1999110251999Guiding%20waterfront%20vision.htm

The Baltimore aquarium, a landmark for the whole city.



Steve Rosenthal (Ann Breen & Dick Rigby, *Waterfronts*)



<http://www.csee.umbc.edu/~masuoka/200001016-20001023>

Moll de la Fusta / Passeig de Colom Barcelona

Area: 61,710 m² (664,000 ft²)
 Completion: 1981-1987
 Design: Manuel de Solà-Morales
 Development: City of Barcelona



View from the Barceloneta toward the upper terrace, constructed above a four-lane expressway.

Annie Laurin et Juan Antonio Oliver image bank

Context

The Old Port of Barcelona (Porta Vell), a district of docks and warehouses, long represented an all-but impenetrable barrier between the city and the Mediterranean. In the early 1980s, when port operations shifted south of the city, it was an opportunity to completely redevelop Porta Vell, in a vast redevelopment operation designed to re-establish the link between the Catalonian capital and its seafront.

The first main achievement was redeveloping the Moll de la Fusta and the adjacent highway infrastructure, the Passeig de Colom (a 12-lane expressway). Architect Manuel de Solà Morales was asked to come up with a design that would simplify pedestrian access to the shore and celebrate the history and symbolism of the area, while integrating a highway infrastructure that could handle 120,000 vehicles a day without cutting the city off from the waterfront.



Aerial view before the work.

City of Barcelona (Béatrice Sokoloff, *Barcelone ou comment refaire une ville*)

Overall aerial view: in the foreground, a monumental sculpture by Roy Lichtenstein.



Vito Ahtik (Béatrice Sokoloff, *Barcelone ou comment refaire une ville*).



Westward view of the Moll de la Fusta.

Annie Laurin et Juan Antonio Oliver image bank

Project description

The plan had the following characteristics:

- a six-lane boulevard (three in each direction) linked to the local road network,
- a high deck topped with pergolas and decorated with urban furniture, served by two bus lanes,
- six express lanes (four covered and two uncovered), linked to the city highway network,
- partially covered parking areas,
- an esplanade 75 metres wide, located along the seafront and separated from automobile traffic by a series of large stone arches.

Built entirely on public lands (56.6% belonging to the City of Barcelona, 39.1% to the Autonomous Port and 3.3% a servitude of the RENFE railway), the project called for the removal of the railway, which previously separated the Passeig de Colom from the Moll de la Fusta.¹

The work was carried out in strata on different levels, recreating the unique topography of this port district in the late 19th century, when the walls of the docks and the Passeig de Colom formed an *urban balcony* looking out over the sea at the foot of the old city. In Solà-Morales' contemporary reinterpretation, the upper level, with its outdoor cafés, pavilions, balustrade and spaces for local traffic, is an *urban* creation, whereas the lower level, with its vast brick-lined esplanade and its express lanes, is part of the port culture (wide-open spaces, transportation, communications, etc.).

Implementation

The transformation of Porta Vell was made possible by an agreement signed in the early 1980s between the City and the Autonomous Port, under which the port authorities retained ownership of the docks, but delegated responsibility for redeveloping the district to the City of Barcelona.

Follow-up

The Moll de la Fusta/Passeig de Colom project showed that by choosing to slightly reduce the amount of space devoted to through automobile traffic, it is possible to reclaim fragmented urban space, repair the gaps in the urban fabric and create accessible and welcoming public spaces.



Ville de Barcelone (Béatrice Sokoloff, *Barcelone ou comment refaire une ville*).

View from the waterfront, looking up.



Béatrice Sokoloff, *Barcelone ou comment refaire une ville*.

One of the pedestrian bridges linking the Barceloneta to the upper terrace.



Annie Laurin et Juan Antonio Oliver image bank

Cutaway view of the Moll de la Fusta.



View from the upper terrace toward Barceloneta.

Béatrice Sokoloff, *Barcelone ou comment refaire une ville*.

References

- Bohigas, Oriol. Barcelona. *City and Architecture 1980-1992*. Rizzoli: New York, 1990, p. 161-167.
- Busquets, Joan. "Anvers, Barcelone et Buenos Aires, quand les villes s'occupent de leurs ports." *Annales de la recherche urbaine*, Nos 55-56, September 1992, p. 34-43.
- Carreno-Piera, Luis. "Barcelone s'offre un front de mer pour les jeux," *Urbanisme*, No. 225, June-July 1988, p. 32-35.
- Meyer, Han. City and Port. *Urban Planning as a Cultural Venture in London, Barcelona, New York and Rotterdam: Changing Relations between Public, Urban Space and Large-scale Infrastructure*. Utrecht: International Books, 1999, p. 112-180.
- Sokoloff, Béatrice. *Barcelone ou comment refaire une ville*. Montréal: Les Presses de l'Université de Montréal, 1999, p. 194-197.
- www.boston.com/beyond_bigdig/cases/barcelona/ (case studies by MIT researchers)

Note

1. Béatrice Sokoloff, *Barcelone ou comment refaire une ville*, p. 196-197.

Central Artery / Tunnel (Big Dig)

Boston

Area:	12.5 km of highway (half of it in tunnels) and 105 ha of freed-up land to be developed
Completion:	1992-2004
Estimated cost:	US\$14.625 billion
Design:	Bechtel/Parsons Brinckerhoff (design and site management)
Development:	United States Department of Transportation, Federal Highway Administration, Massachusetts Turnpike Authority (MTA)

128

Context

At the end of the 1940s, the Massachusetts Department of Public Works came up with a vast plan for an elevated highway network, designed to solve traffic congestion problems afflicting downtown Boston. The project was based on two key elements: a freeway serving the downtown core (the Central Artery) and a beltway (Inner Belt) for through traffic.

When the work started in 1950, however, the construction of the Central Artery met with such a wave of opposition from Bostonians (over 1,000 buildings were levelled along the corridor and 20,000 people lost their homes), that entire segments of the original plan had to be dropped. By 1954, given the dissatisfaction with the elevated structure already built, the authorities decided to convert the second section of the Central Artery into a tunnel, and to abandon the Inner Belt idea once and for all.

Aerial view of how the highway cut downtown off from the waterfront.



www.boston.com
Boston Globe/David L. Ryan

Congestion problems on the Central Artery, in 1999.



www.boston.com
Boston Globe

The six-lane Central Artery was designed to handle local downtown traffic, i.e. about 75,000 vehicles a day. Unfortunately, without the Inner Belt, the Artery was also taken by through traffic, leading to huge traffic jams. By the late 1980s, the situation had become intolerable. Over 190,000 vehicles were taking the Central Artery every day, rush hour was getting longer all the time (the highway was at a standstill nearly 10 hours a day) and the number of accidents was four times higher than the national average for an urban expressway. It was predicted that by 2010, if nothing were done to remedy the situation, the Central Artery would be jammed for 15 to 16 hours every day of the year.

Finally, in addition to creating major traffic problems and impeding the development of some 100 ha of land, the design of the Central Artery generated separate development on either side of the highway corridor, with the historic city and waterfront neighbourhoods completely cut off from Boston's commercial and financial core.

Project description

The Central Artery/Tunnel (or "Big Dig") project, of astonishing scope and extraordinary complexity, was the largest infrastructure project in United States history. It was essentially intended to extend Interstate 90 to Logan Airport and bury the Central Artery (Interstate 93), and included a number of major projects: rebuilding 13 km of expressway, creating four major highway interchanges, building a 14-lane double bridge over the Charles River, and digging two tunnels.

Underground work

The Ted Williams Tunnel, 2.6 km long (1.2 km of it underwater) and varying from four to eight lanes, runs beneath Boston Inner Harbor and links the southern part of downtown with Logan Airport. The tunnel cost US\$1.3 billion and was opened in 1995. All automobiles and trucks taking the tunnel must pay tolls of \$2.50 to \$4.50, depending on the type of vehicle.

The second tunnel was created by burying the Central Artery directly beneath the former elevated highway. The underground highway, varying from eight to ten lanes, runs beneath the downtown and its subway system at a depth of some 36 m.

Model showing the project looking south, from Quincy Market.



www.bigdig.com



Aerial view of construction on the Fort Point Channel.

www.bigdig.com



Aerial view of the Leonard P. Zakim Bunker Hill Bridge, suspended over the Charles River.

www.bigdig.com



Construction of part of the tunnel in East Boston.

www.bigdig.com

Aside from the design of these two tunnels, the major technical challenge for engineers was undoubtedly the link between the two highways: an enormous underground interchange at Fort Point Channel. Building this interchange called for the excavation of a huge prefabrication basin 300 m long, 90 m wide and 18 m deep (large enough to hold three *Titanics*!) on the edge of South Boston, in which different sections of the tunnel were moulded before being submerged in the channel and sealed off. The Fort Point Channel section, barely 0.2 km long, cost US\$1.5 billion—kilometre for kilometre the most expensive highway section in the world.

Bridges

The Leonard P. Zakim Bunker Hill Bridge, designed by Christian Menn of Switzerland, is remarkable both for its elegantly asymmetrical design and its size (444 metres long and 56 metres wide). It has already been hailed as a monument and a symbol of Boston's renewal. The US\$105 million structure, inaugurated in 2001, is the world's widest suspended bridge. It passes over the Charles River, linking the Central Artery Tunnel in the downtown area with northern Boston.

Just west of the bridge, the narrower Storrow Drive Connector Bridge (23 metres, 4 lanes) links Storrow Drive and Leverett Circle. It was completed in October 1999, with a price tag of \$22.3 million.

Simulation illustrating the creation of public spaces along Atlantic Avenue, across from the Rowe's Wharf complex.



www.bigdig.com



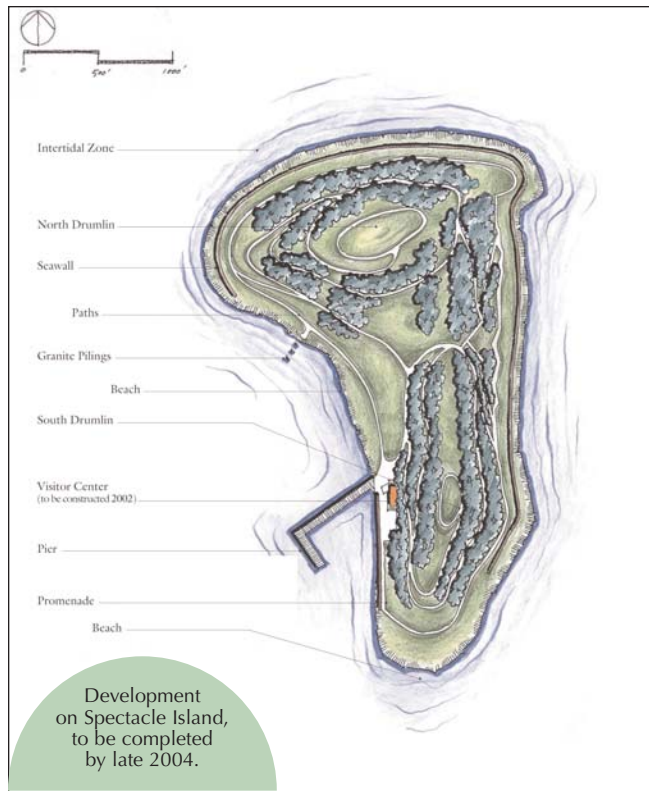
Parks and public spaces

The project freed up over 105 ha of land, including 11 ha on the site of the former elevated highway, 40 ha on Spectacle Island and 16 ha along the Charles River. More than half of the available land, i.e. 60 ha, was set aside for parks and public spaces; work was done jointly by the Massachusetts Turnpike Authority and the City of Boston. Three-quarters of the 11 ha freed up by burying the Central Artery will remain accessible for public use, while the rest is slated for development.

On Spectacle Island, the 2.5 million m² of clay, earth and gravel from the excavation of the Ted Williams Tunnel was used to bury in sealed containers the waste that had accumulated there over the previous century — it had been the site of a horse-rendering plant (1857-1910), a grease-reclamation plant (1920s) and a city dump (1935-1959). Thanks to close co-operation between the City of Boston and the Massachusetts Department of Environmental Management (D.E.M.), this initiative solved a major environmental dilemma (large quantities of oil and toxic substances were leaking into the water from the island), while

Riverfront Development Projects

Case studies



Views from Spectacle Island, part of the Boston Harbor Islands State Park.

providing somewhere to put the excavation materials. In addition, it gave Boston a new green space, as a vast urban park measuring 42 ha was created there, with beaches, picnic areas, trails, recreation areas and a visitor information centre. Spectacle Island, accessible by ferry and pleasure boat, is now part of the Boston Harbor Islands State Park, an archipelago whose development has been overseen by the Department of Environmental Management.

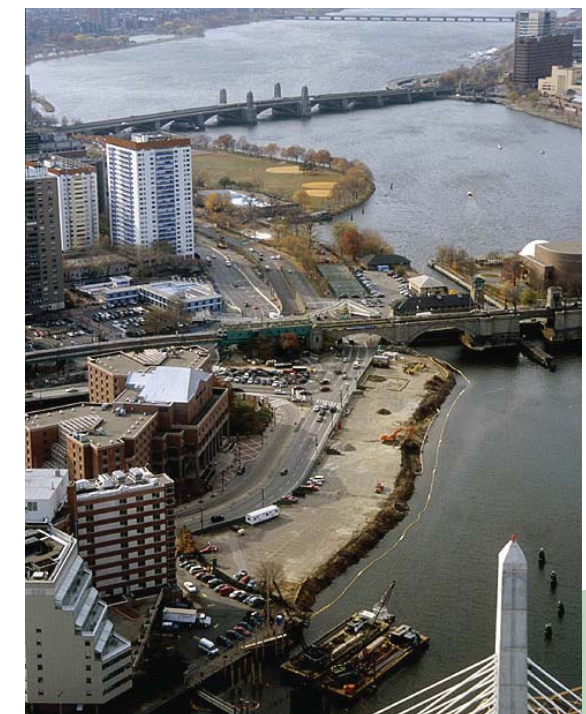
Implementation

The Central Artery/Tunnel project, recently evaluated at US\$14.625 billion, was financed as follows:

- Federal government \$7.049 billion (48% of the total)
- States Bonds \$1.588 billion (11%)
- Transportation Infrastructure Fund (TIF) \$2.343 billion (16%)
- Grants Anticipation Notes (GANs) \$1.5 billion (10%)
- Massachusetts Turnpike Authority \$1.658 billion (11%)
- Massachusetts Port Authority \$302 million (2%)
- State Interest on MTA Funds \$45 million (0.3%)
- Insurance Trust Revenues \$140 million (1%)



A network of waterfront parks around the new Charles River Basin.



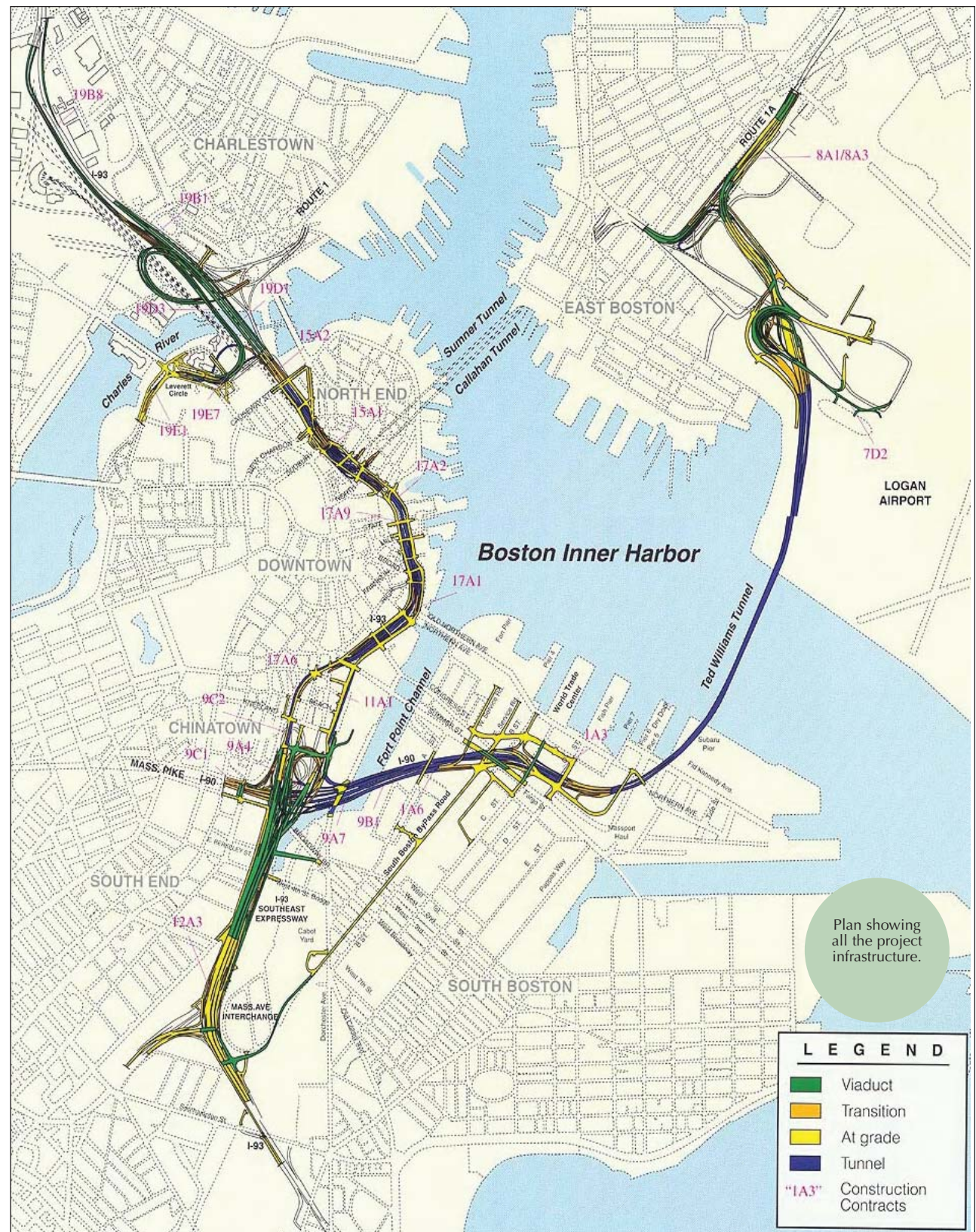
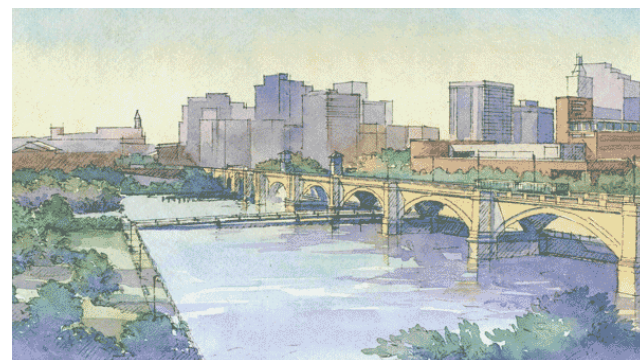
Proposed development plan for the Nashua Street Park (top: the site as it appeared in 2001).



One of the major challenges of the project was to locate a huge worksite in the heart of downtown, for 10 years, without harming Boston's economy and competitiveness. Nearly one-third of the total project budget was devoted to a vast plan for minimizing the congestion caused by the worksite, ensuring efficient and safe alternatives for pedestrians and protecting the quality of life for local residents and workers alike. The mitigation measures included the decision to keep the elevated highway open while the tunnel was being dug immediately below; this decision called for ingenious engineering solutions and itself involved costs of about US\$600 million.

Follow-up

The new Central Artery, the cornerstone of the downtown renewal project, will be able to handle over 245,000 vehicles a day, with no real traffic congestion. The significant reduction in exit ramps (14 rather than 27), along with the reconfiguration of surface streets, will separate local and through traffic, for greater efficiency. It is expected that the smoother traffic flow will help to reduce carbon monoxide emissions by nearly 12% in downtown Boston. Finally, by eliminating the divisions created by the elevated highway and creating more parks and public spaces along the former corridor, the project will significantly improve the quality of life in central neighbourhoods. The Ted Williams Tunnel is expected to handle 94,000 vehicles a day by 2010.



References

- www.search.boston.cm/beyond_bigdig, "Beyond the Big Dig."
- www.bigdig.com: Official project site.
- www.boston.com/advertisers/bigdig: A *Boston Globe* publication on the Big Dig project.

Rowe's Wharf Boston

Area:	2.2 hectares
Completion:	1982-1987
Total cost:	US\$193 million
Design:	Skidmore, Owings & Merrill
Development:	Rowe's Wharf Associates (The Beacon Companies + Equitable Real Estate Investment Management), Boston Redevelopment Authority (BRA)

132

Context

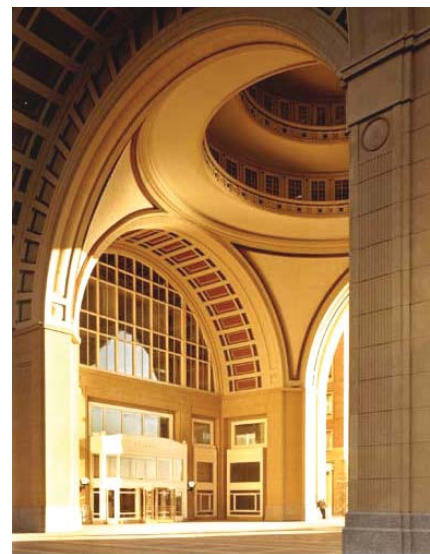
Redevelopment of Boston's historic harbour began in the 1960s, with the conversion of former warehouses into housing and office space. A few years later, the City began developing a pedestrian promenade along the waterfront (Harborwalk), while new buildings sprang up on unused wharves (New England Aquarium, Marriott Longshore Hotel, Quincy Market\Faneuil Hall, etc.).

By the early 1980s, Boston was enjoying a real real-estate boom, and developers were fiercely competing for the few vacant downtown properties. It was at this time that the City, through the Boston Redevelopment Authority (BRA), began redeveloping one of the last port sites still available, Rowe's Wharf, located at the foot of Boston's business district. Rowe's Wharf dated from 1760, and had mainly been used to handle

Aerial view of Rowe's Wharf.



Skidmore, Owings & Merrill LLP



Skidmore, Owings & Merrill LLP, Photographer: Nick Wheeler

Provincetown and Hingham ferries before being converted into a parking lot in the 1960s.

In 1982, in co-operation with the Boston Society of Architects, the BRA launched a major architectural competition with a multitude of objectives and design criteria. It required that the Rowe's Wharf project be multifunctional, create an attractive interface between the city and the historic harbour district, include a significant proportion of public spaces (at least half the site), encourage pedestrian traffic and have an opening at least 15.2 m wide on Atlantic Avenue, in the middle of the project. Buildings were capped at 15 storeys, to preserve the views.

The Rowe's Wharf housing complex.



Skidmore, Owings & Merrill LLP, Photographer: Nick Wheeler

Project description

Located at the foot of Boston's business district, Rowe's Wharf is a vast multifunctional project, measuring 62,000 m², with 230 hotel rooms, 30,600 m² of offices, 1,000 m² of commercial space, 100 condos, 700 parking spots and a marina.

It stretches over a 2.2-ha site, of which two-thirds consists of public spaces. Its buildings are designed to recall the historic character of downtown Boston and the architecture of the former harbour warehouses.

On the downtown side, the first phase consists of two fifteen-storey towers linked by a central structure nine storeys high, with a six-storey arch in the middle, topped with a copper dome. Known as the Foster's Wharf Arch, it serves as a new gateway from the harbour to downtown Boston, and a triumph of contextual architecture, providing a physical and visual link between the city and the waterfront and linking the different project components. A vast 930 m² public plaza has also been created beneath the arch, as a monumental passage to the maritime component of the project. The two towers house the Boston Harbor Hotel, on one side, and residences on the other, while the central section is given over to office space.

On the ocean side are three more modest buildings, set on the former wharves. Seven storeys high and ringed by a public walkway, the brick buildings house condos and mixed hotel-office uses. Different developments related to the waterfront underscore the project's location in the harbour: a marina with room for 38 boats, a small arch inspired by the Foster's Wharf Arch and serving as a shelter for pedestrians and ferry passengers, and a pier where water taxis linking downtown with Logan Airport tie up over a hundred times a day.

The plaza beneath the Foster's Wharf Arch.



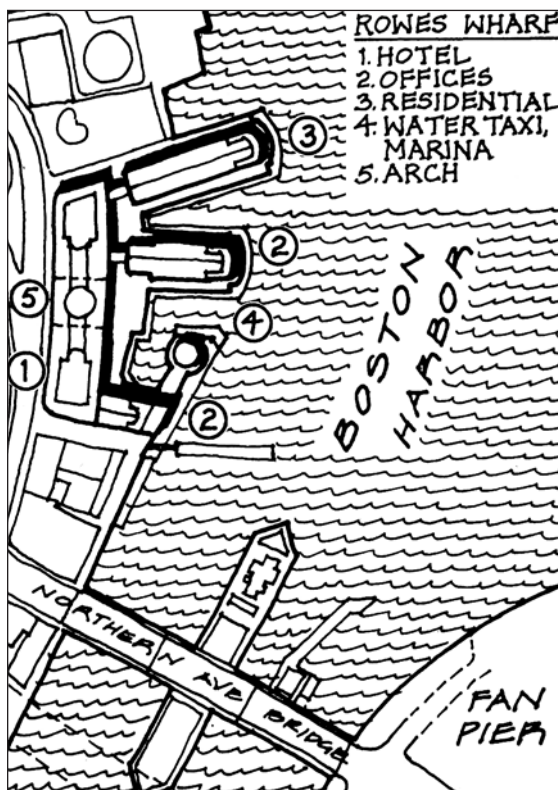
View of the pavilion and one of the residential buildings.

Skidmore, Owings & Merrill LLP, Photographer: Steve Rosenthal



View of the inner street, between the piers and the main building along Atlantic Avenue.

Skidmore, Owings & Merrill LLP, Photographer: Nick Wheeler



Implementation

The Rowe's Wharf project represents a particularly successful example of a public-private partnership. The City of Boston, owner of the land, took advantage of an especially favourable economic situation to impose its own vision of the project on bidders, by setting strict criteria. The winning consortium, of developers Rowe's Wharf Associates and architects Skidmore, Owings & Merrill LLP (SOM), were required to collaborate closely with the Boston Redevelopment Authority and a committee of Boston architects and designers on the final plans.

Map of the Rowe's Wharf project, illustrating the location of main functions.

Ann Breen & Dick Rigby, *Waterfronts*.

Follow-up

In the early 1990s, the Rowe's Wharf project brought the BRA nearly US\$2.1 million in annual rental income. In addition, it was estimated that 1,500 permanent jobs were created by the project, not to mention the 600 to 800 jobs created for building the complex.

It is still considered an outstanding success among large waterfront projects. Rather than creating a boundary, the complex elegantly bridges two very different urban contexts, while at the same time meeting the needs of various clienteles (residents, workers, pedestrians heading downtown, etc.). In addition, the Rowe's Wharf Arch, a veritable icon of Boston's prosperity in the 1980s, became a well-known visual landmark in the cityscape.

References

Breen, Ann, and Rigby, Dick. *The New Waterfront: A Worldwide Urban Success Story*. New York: McGraw-Hill, 1996, p. 60-65.

Campbell, Robert. "Multi-use Complex that feels like Boston's Waterfront." *Architecture*, vol. 77, May 1988, p. 119-122.

Chapin Davidson, Cynthia. "Urbane Renewal." *Inland Architect*, Sept.-Oct. 1989, p. 43-49.

Di Mambro, Antonia. "Redevelopment of Boston's Waterfront," in R. Bruttomesso, *Waterfronts*. Venice: *Cities on Water Edition*, 1993, p. 305-310.

www.som.com: Skidmore, Owings & Merrill LLP

Puerto Madero Buenos Aires

Area:	170 ha of land, 2 million m ² (buildings) residential: 260,000 m ² , commercial 100,000 m ² , institutional and office: 1,640,000 m ²
Completion:	1993 -
Estimated cost:	US\$1.8 billion
Design:	Juan Carlos Lopez y Asociados S.A., Patricia Arturi Arquitecta, Samuel Szusterman y Asociados
Development:	Corporacion Antiguo Puerto Madero

134

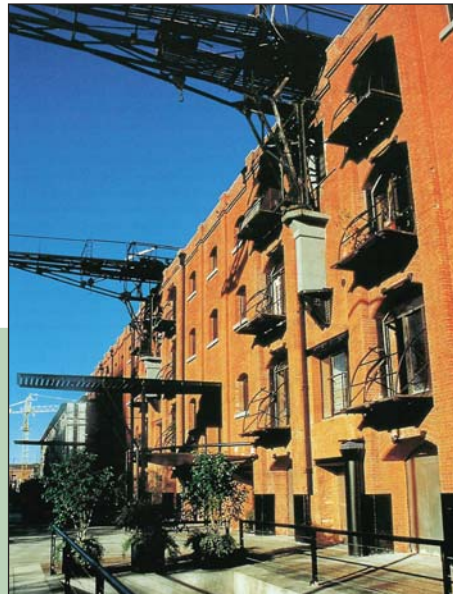
Context

Puerto Madero was inaugurated in 1889, centred on four parallel basins stretching end-to-end parallel with the seafront, lined with brick warehouses. The port was cut off by two avenues with heavy traffic and a rail line, forming a closed utilitarian space between the downtown and estuary, a barrier that cut Buenos Aires off from the river and forced the city to turn inwards on itself.

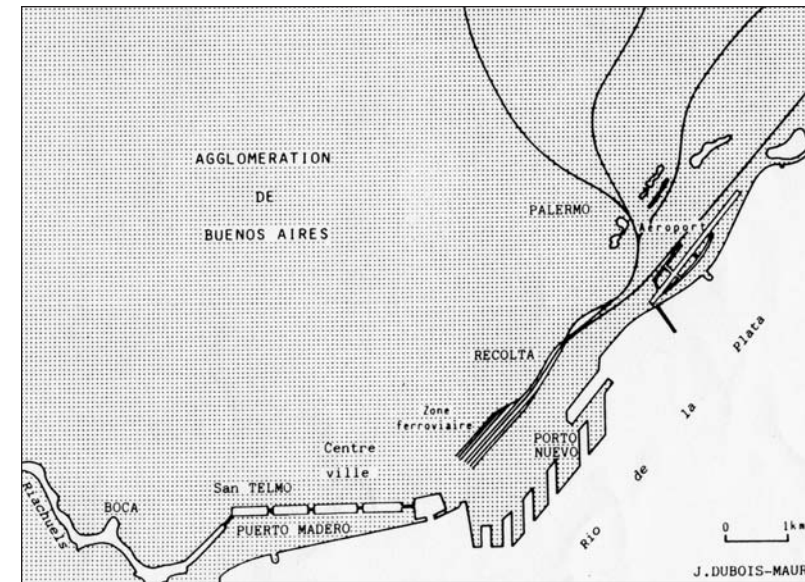
Thirty years later, the obsolescence of the Puerto Madero facilities led to the port facilities being relocated north to Puerto Nuevo, north of Buenos Aires. After Puerto Nuevo was completed in 1925, Puerto Madero gradually fell idle. Over the following decades, a number of redevelopment projects were proposed in an attempt to integrate the vacant lands into the city, but only one was actually carried out: a 350-ha national park (*Reserva Ecologica*) was created by filling in the marshy area between Puerto Madero and the shores of the estuary.

In 1991, a national competition was launched to come up with ideas for a plan to rehabilitate the actual harbourfront of Puerto Madero. The program, covering 170 ha, called for tertiary and residential uses, preserving historic heritage and providing access for residents to the ecological reserve and the river.

Example of rehabilitation of the industrial heritage of Puerto Madero.



Corporación Puerto Madero (in *L'Architecture d'aujourd'hui*)



Claude Chaline, *Ces ports qui créèrent des villes.*

Map showing the locations of Puerto Madero and Porto Nuevo.

Project description

Three successful bidders were invited to collaborate on a master plan for Puerto Madero. The plan they submitted (now being implemented) makes use of a narrow strip of land between the basins and the Rio de la Plata, where a park running down to the *Reserva Ecologica* is also located. Boulevards extending from the bridges surrounding the basins, where heritage equipment saluting the area's historic port functions (metal cranes, grain elevators, etc.) is also arranged, provide a link with the city. To the east of the basins, 15 of the 16 warehouses have been restored, while to the west,

Aerial view of Puerto Madero and part of downtown Buenos Aires.



www.coriaimmobiliaria.co.ar

View of the *Puente de La Mujer* (Woman's Bridge), a footbridge designed by architect Santiago Calatrava.



David Keeling
www.wku.edu/~david.keeling/

numerous buildings have been replaced by new apartment buildings, museums, office buildings, a convention centre, the Hilton hotel, etc. Finally, Puerto Madero is a multifunctional project inasmuch as it houses a wide variety of activities, from offices and lofts to shops, multiplex movie theatres, restaurants, bars and a university campus.

By November 2001, 170 ha of Puerto Madero had been developed to provide 39.5 ha of piers and basins, 69.1 ha of public space and 61.4 ha of land used for urban, residential or commercial purposes.

Implementation

The Corporación Antiquo Puerto Madero, an independent development corporation consisting of City and State representatives, was founded in 1989 to carry out the rehabilitation project. Title to the 170 ha of land and warehouses (essentially public property) was transferred to this corporation, which took on responsibility for promoting a future development project in the sector. The warehouses were sold to different promoters, who restored and marketed them. Since the Corporation Antiquo Puerto Madero received no public funding, it financed all the infrastructure work on the piers and the development of public spaces from the proceeds of buildings sales on the site.

Follow-up

The rehabilitation of Puerto Madero has attracted numerous investors, and the district is now one of the most popular in the city. The project also gave Buenos Aires an accessible waterfront.

Puerto Madero by night. The Malecon Tower is in the middle, in the background.



www.supostal.com.ar

References

Breen, Ann, and Rigby, Dick. *The New Waterfront: A Worldwide Urban Success Story*. New York: McGraw-Hill, 1996, p. 130-131.

Busquets, Joan. "Anvers, Barcelone et Buenos Aires, quand les villes s'occupent de leurs ports." *Annales de la recherche urbaine*, Nos 55-56, September 1992, p. 34-43.

Dubois-Maury, Jocelyne. "La recuperation du Puerto Madero à Buenos Aires," in *Ces ports qui créèrent des villes*. (Claude Chaline). Paris: Éditions L'Harmattan, 1994, p. 199-204.

Keeling, David, geography professor at Western Kentucky University. "Waterfront Redevelopment and the Puerto Madero Project in Buenos Aires, Argentina." <http://www.wku.edu/~david.keeling/BAmadero.htm>.

Schneier-Madanes, Graciela. "Buenos Aires aborde son estuaire." *L'Architecture d'aujourd'hui*, No. 332, Jan.-Feb. 2001, p. 54-59.

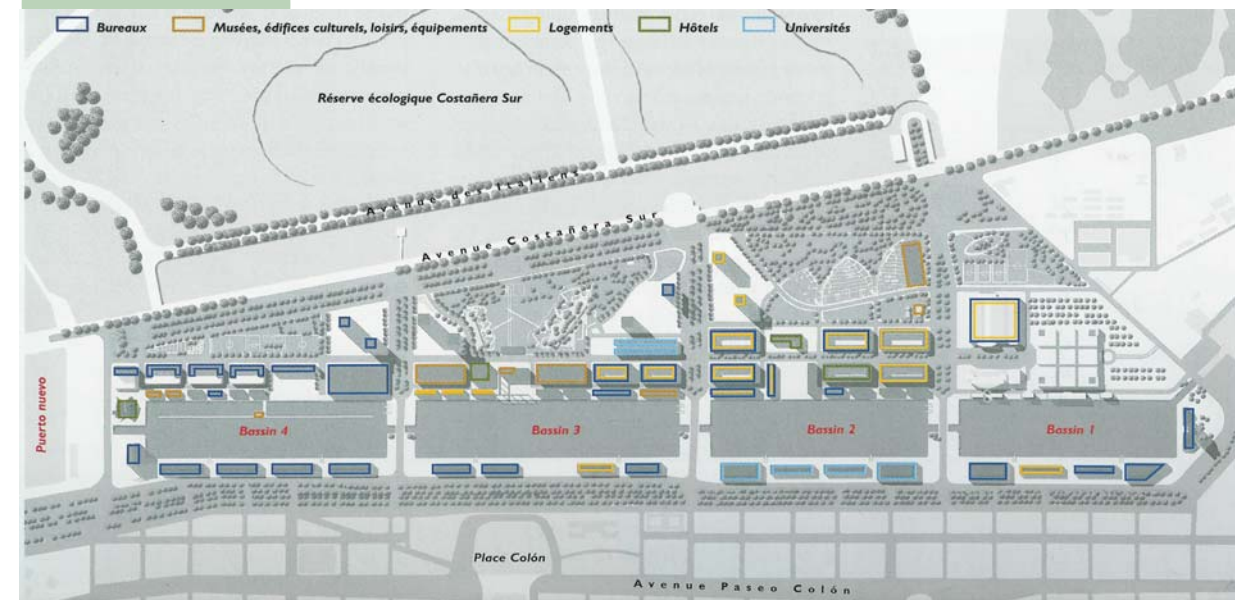
www.puertomadero.com: Official project site.

Aerial view of Puerto Madero and part of downtown Buenos Aires.



Corporación Puerto Madero (in *L'Architecture d'aujourd'hui*)

The master plan for Puerto Madero.



Corporación Puerto Madero (in *L'Architecture d'aujourd'hui*)

Park East Corridor Milwaukee

Area:	1.6 km of freeway, 10.5 ha of land for redevelopment
Completion:	April 2002 - June 2004
Estimated cost:	US\$26 million (demolition, new boulevard, bridge) and approximately US\$4 million for development of public spaces
Design:	HNTB Co. and Planning & Design Institute Inc. (mandated by the Redevelopment Authority of Milwaukee)
Development:	Federal government, State of Wisconsin, City of Milwaukee

136

Context

The Park East Freeway, planned back in the 1960s as part of a vast network that was to ring central Milwaukee with freeways, was initially intended to serve as an east-west link between Interstate 43 and a new panoramic freeway to be built alongside Lake Michigan. In the mid 1970s, however, public opposition to these projects became so vehement that the proposed riverfront freeway was cancelled and work halted on the Park East Freeway, although a one-mile section had already been built. The raised structure was designed to handle a large amount of regional traffic, and so had only three exits to downtown. It created a huge physical barrier between downtown and adjacent neighbourhoods (Schlitz Park, Brewer's Hill and Historic King Drive). As part of an unfinished network, it proved to be outlandishly large for the actual traffic to be handled (about 22,000 vehicles a day) and quickly led to the decline of the district. The land along the highway corridor plunged in value and parking lots multiplied.

In 1999, the City adopted the Milwaukee Downtown Plan, a document that identified the redevelopment of the Park East Corridor (dismantling the freeway and redeveloping the available land) as one of the 13 key projects that would make a significant contribution to the development and renewal of downtown Milwaukee. The specific objectives associated with the Park East Redevelopment Plan were:

- promote mixed-use development,
- reinstate the traditional street grid,
- enhance access to the river,
- enhance pedestrian connections across and around the river,
- enhance the success of Water Street entertainment venues,
- provide urban open space.

Aerial view of the gateway to downtown Milwaukee, before the work.



Milwaukee Dept. of City Development

The 26 hectares covered by the project are located in the northern part of downtown, on either side of the Milwaukee River. Close to half of the land, 10.5 ha, is currently vacant. The unused land is public property, and has considerable development potential. It corresponds essentially to the land beneath the freeway (8 ha) and the adjacent land whose development will be simplified once the physical and visual barrier created by the elevated structure is removed.

Project description

The Park East Corridor plan proposes to dismantle 1.6 km (1 mile) of elevated freeway and replace it with an all-new six-lane boulevard that is fully connected with the existing street grid and runs along the route of what is now McKinley Avenue. It also calls for the construction of a new bridge, to link the new McKinley Avenue with Knapp Street (east bank), and different public development work (revitalization of certain streets, a park on the triangular lot between Water, Knapp and Edison streets, new pedestrian lanes, etc.). Finally, the riverfront promenade along the Milwaukee River

N. Broadway, before (June 2002) and during dismantlement (June 2003).



Milwaukee Dept. of City Development



Milwaukee Dept. of City Development

will be extended, and provision made for future development so as to encourage the growth in this district of a vibrant new multi-use neighbourhood. The plan divides the territory into three different districts, for purposes of uses and design criteria:

- *McKinley Avenue (gateway to downtown, a prestigious neighbourhood consisting mainly of offices and entertainment venues),*
- *Lower Water Street (a highly multi-use neighbourhood where pedestrian connections and visual and physical access points to the river are to be enhanced),*
- *Upper Water Street (mainly residential; will be the site of a 0.4-ha urban park and a number of uses to complement its residential character).*

Implementation

The Park East Redevelopment Plan is the result of an extensive joint process set up by a mixed planning team (State, County and City), with input from property owners, businesspeople, residents, interest groups and local elected officials. A number of presentations and meetings were organized to compile suggestions from the public and the organizations affected by the project, a Website was set up and newsletters were sent out regularly to over 2,000 people. All this was done to validate the three guidelines produced by the planning consortium, i.e. the Renewal Plan, the Master Plan and the Development Code, which defined the uses, height restrictions and design criteria applying to all the buildings in the area affected.

In 2002, the cost of work relating to demolishing the freeway and replacing it with the new boulevard was estimated at US\$25 million:

- \$10 to 12 million for demolishing the freeway and building new road infrastructure;
- \$6 million for building a bridge between East Knapp Street and the new McKinley Ave;
- \$0.5 to 0.7 million for building a temporary access ramp during the work;
- \$6 million for various engineering expenses.

The Park East Corridor project is essentially financed by the federal government, which has agreed to spend \$21.2 million; the City of Milwaukee and the State of Wisconsin agreed to contribute \$2.5 million and \$1.2 million, respectively. In addition, some of the public facilities (urban furniture, sidewalks, etc.) will be financed through a local improvement tax imposed on all property owners in the district. This new Tax Incremental Financing District, measuring close to 20 ha, should produce additional revenue of \$4.3 million, to be used to repay the loans the City had to take out to do the development work.

Follow-up

In addition to improving the links between downtown and the neighbourhoods to the north, the redevelopment of the freeway corridor will make it possible to free up close to 400 metres of shoreline and act as a catalyst for employment and investment in the downtown area. In addition, building a new bridge and developing an urban boulevard linked to the existing street grid should allow drivers to choose from a number of routes without significantly increasing their travel time.



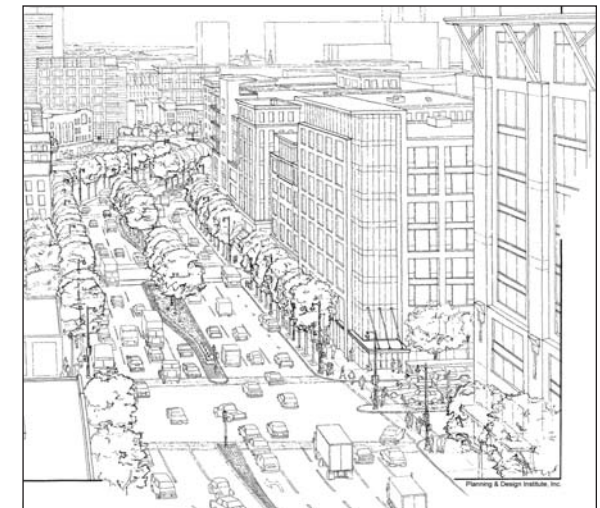
A proposed riverfront promenade, in the Upper Water Street District.

Park East Redevelopment Plan — prepared for the City of Milwaukee by HNTB Corporation and Planning and Design Institute, Inc.



Renewal of the Upper Water Street District.

Park East Redevelopment Plan — prepared for the City of Milwaukee by HNTB Corporation and Planning and Design Institute, Inc.

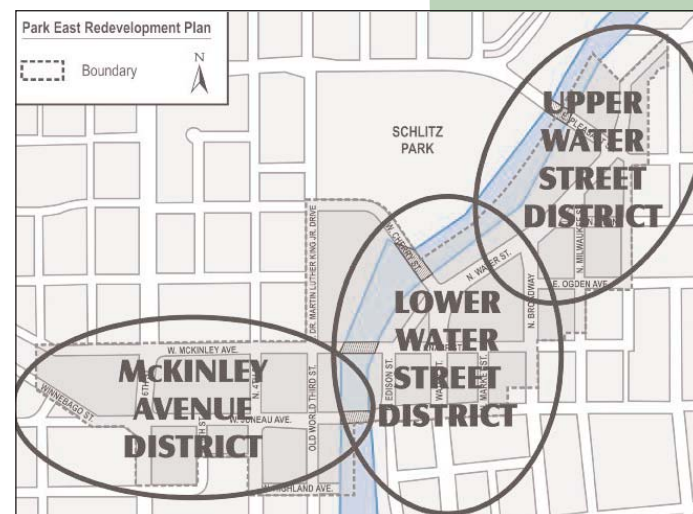


The future McKinley Avenue, new gateway to downtown.

Park East Redevelopment Plan — prepared for the City of Milwaukee by HNTB Corporation and Planning and Design Institute, Inc.

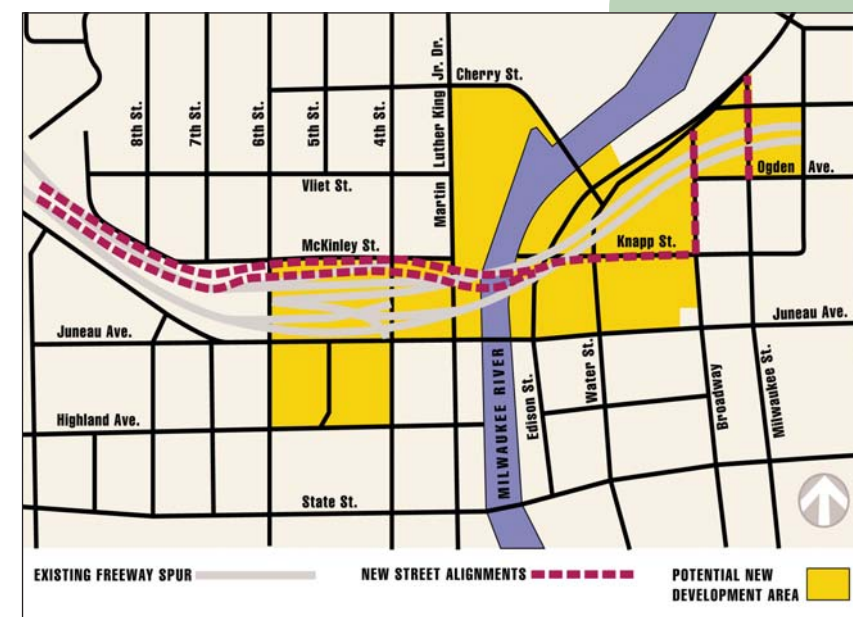
The Park East Corridor district, sitting astride the Milwaukee River, next to the riverfront promenade leading to downtown and just a few minutes from popular Water Street (to the north) and the future Harley-Davidson Museum (to the south), is now seeing considerable land speculation and is on its way to boasting some of the most desirable properties in the entire state of Wisconsin. Thanks to redevelopment in this district, the City and the County are guaranteed higher property tax revenues, particularly since dismantling the freeway will lead to real-estate investment on the order of \$250 million.

The three districts identified in the corridor redevelopment plan.



Park East Redevelopment Plan

Existing highway corridor and districts to be redeveloped after it was dismantled.



Park East Redevelopment Plan

References

- Bergstrom, K.. "TIF Plan Proceeds for the Freeway Corridor." *The Business Journal of Milwaukee*, January 21, 2002.
- City of Milwaukee, Department of City Development: www.mkedcd.org/parkeast
- MKEDCD. *The Park East Corridor Newsletters*: November 2000, March 2002, October 2003.
- MKEDCD. *Park East Redevelopment Plan, document one (Renewal Plan), document two (Master Plan) & document three (Development Code) — versions dated October 16, 2003.*

Aker Brygge Oslo

Area:	65 ha of land, 242,000 m ² of built-up areas (offices, apartments, stores)
Completion:	Three phases, between 1985 and 1990
Total cost:	\$US 350 million (Phase II only)
Design:	Niels Torp (phases I and II), Kari Nissen Brodtkorb (phase III)
Development:	Aker Brygge ANS

138

Context

In the early 1980s, a vast operation was undertaken to give downtown Oslo back its window on the bay, by closing a major shipyard and burying a highway that had cut the wharves off from downtown. In 1982, the shipyard owner (Aker a.s.) started planning for redevelopment of the former industrial-port sector, by launching a call for ideas: *The City and the Fjord, Oslo Year 2000*.

This competition produced some general development principles for the site:

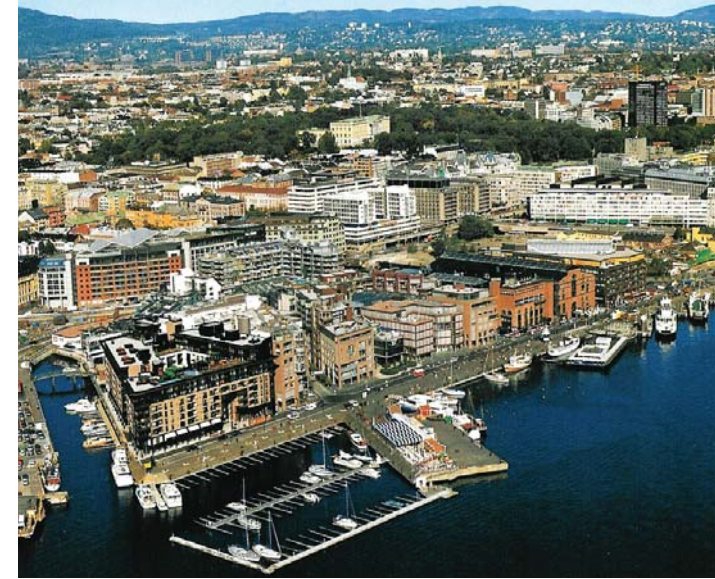
- mixed uses (including housing),
- respect for the existing urban fabric,
- strong links between the city, wharves and the bay,
- architectural integration with nearby landmarks (Royal Castle, City Hall Square, Pipervika Bay, etc.)
- public access to the shoreline, etc.

In addition, the project had to include various cultural institutions, so as to preserve the new spirit of the place. Since the closing of the shipyard, the area had been spontaneously invaded by all sorts of artists and musicians. This occupation of the old warehouses, albeit temporary, had turned Aker Brygge into a hotbed of cultural creativity, recognized throughout the city.

Detail of the façade of one of the multi-use buildings at Aker Brygge.



Bengston, Solvang, Winsnes/Telje-Torp-Aasen (Ann Breen & Dick Rigby, *The New Waterfront*).



Bryggedrift A/S (Ann Breen, *The New Waterfront*).

Aerial view of the Aker Brygge project; downtown Oslo in the background.

Project description

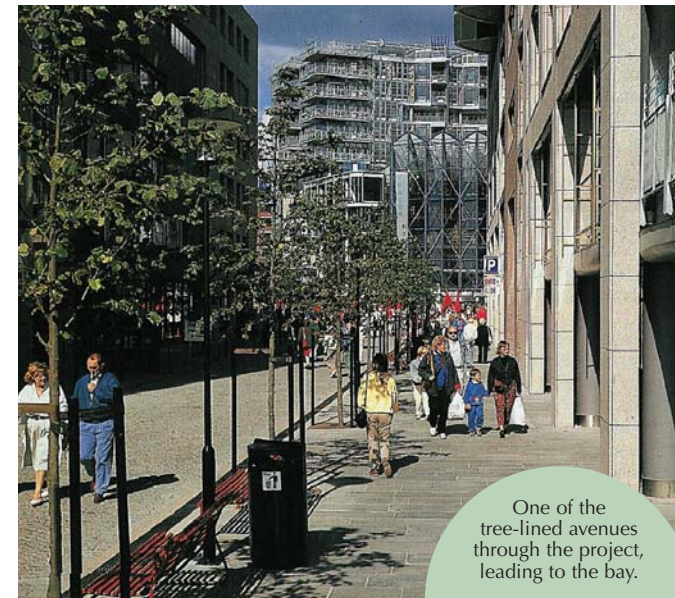
The project, much of which features pedestrian malls to give full access to the water, extends along Oslo Bay. It is centred on two major public developments:

- a wide (12 metre) riverfront promenade, lined with cafés and restaurants
- a vast public plaza with views of the old dock, the port of Oslo and the bay

Visual and physical access to the water are also assured by the many pedestrian malls throughout the project. Wide avenues planted with trees, small shopping streets, paved lanes and indoor shopping promenades provide a huge variety of routes leading to the central plaza, which in turn offers many views of the bay.

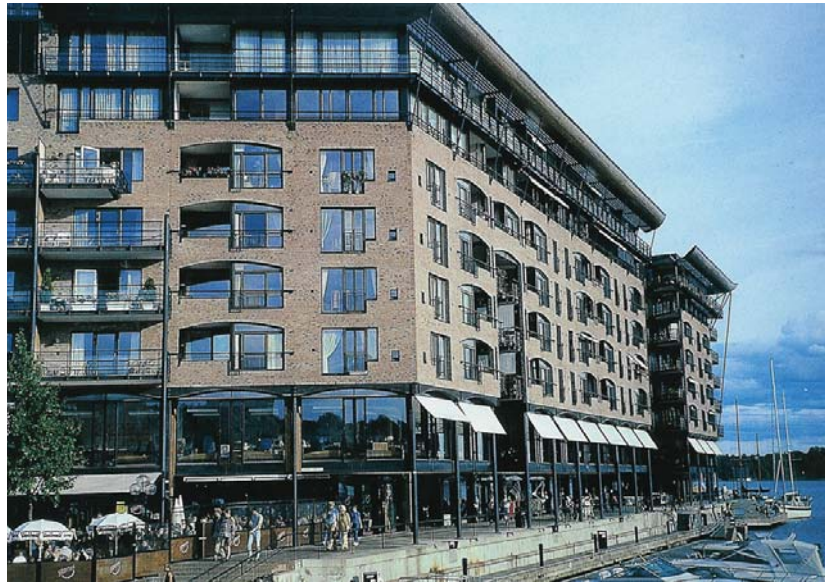
The project comprises eleven buildings housing shops and restaurants on the ground level, offices on the intermediate levels, apartments on the top floors and 1,600 underground parking spots.

Phase I of Aker Brygge (1985-1986) consists of three main buildings (two former warehouses and a new building), used for housing, offices, a theatre and a drama school.



One of the tree-lined avenues through the project, leading to the bay.

Architectural Review



The Stranden A/S complex, across from the marina: stores, offices, restaurants and apartments.

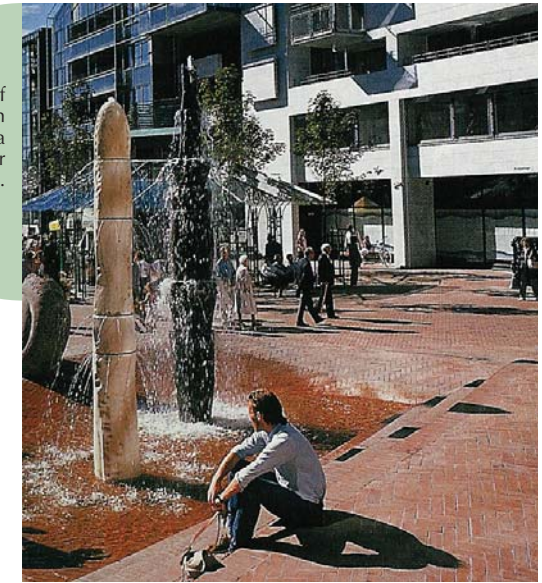
Breen/Rigby (Ann Breen, *The New Waterfront*).

Implementation

One key condition in rehabilitating the former shipyard was the fact that the national government took charge of burying the expressway that cut the city off from the bay and caused major traffic jams in the area.

Once the work to overcome this isolation was underway, it was possible to start planning the redevelopment of the former shipyard. The property owner (Aker a.s.) incorporated as a new entity (Aker Brygge ANS), took over project development and 75% of its financing. The remaining 25% was financed by the Den Norske Bank. Today the project is managed by a private company, Bryggedrift A/S, which acts as an intermediary for Aker Brygge's some 350 property owners and has taken over from the City in a number of areas, including facility management and maintenance.

Part of the main public plaza of Aker Brygge.



Architectural Review

Phase II (1986-1989), for its part, includes a vast marina and four buildings set around the edges of the riverfront promenade and the plaza. There are restaurants, cafés, many storeys of offices, apartments, a daycare centre, a medical clinic, an art gallery, two movie theatres and a theatre with seating for 645.

Finally, phase III (1989-1990) is a multifunctional complex with street-level stores and restaurants, some offices and 120 apartments. From an architectural point of view, Aker Brygge offers a daring variety of building shapes, styles and colours, giving the whole project a definitely contemporary character while evoking its industrial past.

The waterfront façade of Phase II, the Aker Brygge cultural centre.



Architectural Review

The waterfront façade of the Dokkbygget housing project.



Architectural Review

Follow-up

Thanks to its strategic location (a few minutes from downtown) and the efficient municipal public transit system, Aker Brygge rapidly became very popular with both local residents and tourists. In the mid 1990s, it was estimated that the complex as a whole was attracting over 6 million visitors a year. In addition, an estimated 5,000 jobs were created, or twice as many as at the old shipyard.

References

- Breen, Ann, and Rigby, Dick. *The New Waterfront: A Worldwide Urban Success Story*. New York: McGraw-Hill, 1996, p. 34-39.
- Breen, Ann, and Rigby, Dick. *Waterfronts: Cities Reclaim Their Edge*. McGraw-Hill, 1994, p. 130-133.
- Spring, Martin. "Fjord Fiesta." *Building*, July 13, 1990, vol. 255, No. 28, p. 42-46.
- Duffy, Francis. "Aker Brygge." *Architectural Review*. No. 1122, 1990, p. 55-62.
- Waterfront World. "Aker Brygge Phase II." *Waterfront World*, Annual Awards Issue, November-December 1991, p. 18.
- www.ntorp.no: Website of architect Niels Torp.

LeBreton Flats

Ottawa

Area:	65 ha of land
Completion:	2002 - ..
Estimated cost:	Phase 1: \$135 million (Canadian War Museum) \$99 million (site preparation and decontamination)
Design:	National Capital Commission
Development:	Federal government, National Capital Commission, City of Ottawa, private sector

140

Context

LeBreton Flats, a 65-ha property on the Ottawa River, to the west of Parliament Hill, is the last undeveloped riverfront in downtown Ottawa. It is an old industrial and residential zone where a large number of Rideau Canal workers lived in the early 19th century. Over the years, sawmills and rail depots moved in.

With declining industry in the post-war period, the area was gradually abandoned. In 1962, the National Capital Commission (NCC) acquired most of the land through expropriations and exchanges, with the intention of improving and

Overview of work in fall 2003.



NCC



Looking west along the Ottawa River Parkway, before it was relocated in 1999.

protecting the area around Parliament Hill and using the land for major federal buildings. The acquisitions did not include the road infrastructure, however, which remained in the hands of the municipal and regional administrations. As a result, the poorly divided and scattered lots were too small to allow integrated development, and the different administrative levels never managed to reach a consensus on the future of LeBreton Flats.

NCC

After the last buildings had been torn down, the area remained vacant for nearly 25 years. It served mainly as a place for people to drive through, as it was crossed by a bus-only public-transit corridor called the Transitway, one of the main routes leading downtown, the Ottawa River Parkway, and some regional roads. The site was also used for camping, dumping snow, parking, etc., and occasionally for public festivals and celebrations.

In the 1990s, a partnership developed between the NCC, the Regional Municipality of Ottawa-Carleton (RMOC) and the City of Ottawa, to draw up a development plan for LeBreton Flats. The vision set out by the NCC in the plan it submitted in 1997, i.e. to "reclaim for Canadians one of the last and most beautiful waterfront sites in the nation's capital,"¹ proposed a dynamic community where people could comfortably live, work and play. This vision, reiterated in the update to the 1999 master plan for the City of Ottawa, is also part of the core area concept of the capital (2000), designed to create a dynamic centre for Ottawa and improve the complementarity of federal and municipal functions on either side of the Ottawa River.²



Example of riverfront development along the Ottawa River, 1999.

NCC

Project description

The project development concept calls for:

- institutional or public uses in the northern section
- mixed uses (residential and commercial) in the southern section

In its LeBreton Flats development plan, the NCC details the concept and proposes the following elements:

- construction of 2,500 housing units, 158,000 m² of office space, 12,000 m² of retail and services space, and 56,000 m² of cultural/institutional space of national significance,
- creation of a vibrant urban centre,
- renewal of infrastructure (roads, sewers, remediation of contaminated soil and water, etc),
- redevelopment of access to the capital (improved public transit to downtown, development of recreational trails to different parks, etc.),
- creation of green spaces (40% of the total area of the site) and their integration into the capital's green network as public spaces and
- establishment of national institutions on lots next to the Ottawa River, in order to create viable prestige locations.

Moving the Ottawa River Parkway

The plan includes a number of separate but closely linked projects. First of all, the keystone for plans to reclaim riverfront lands is relocating part of the Ottawa River Parkway. This divided road offers a panoramic route running alongside the river, but limits access to the shoreline and the water.

To meet drivers' needs and encourage harmonious development of the site, the parkway was replaced with an all-new urban boulevard (LeBreton Boulevard), running through the centre of the area rather than next to the shore. It not only offers efficient access to the cultural institutions to the north and the residential/commercial sectors to the south, but also allows the NCC to extend the existing network of recreational trails down to the shoreline.

The federal government took the first step in establishing national cultural institutions, in 2001, with the announcement that a new 40,000 m² Canadian War Museum would be built on the Flats, and that the 6 ha of land set aside for the future institution would be developed for public use. The building, at a cost of \$135 million, will open to the public in 2005.

Finally, another key project is *The Common*, a vast 4-ha public space in the heart of the Flats, which will be able to hold up to 40,000 people.³

Implementation

National Capital Commission

Following in the footsteps of the Ottawa Improvement Commission (1899) and the Federal District Commission (1927), two agencies with crucial roles in planning and developing the capital, the NCC is a key player that has done much to stimulate the transformation of greater Ottawa (4,660 km²).⁴ The Crown corporation was created by Parliament in 1959, with the mission of *building the capital region as a source of PRIDE and UNITY for Canadians*.⁵ For this purpose, one of the NCC's mandates is to prepare plans for and assist in the development, conservation and improvement of the National Capital Region.



Riverfront Development Projects

Case studies

Main steps in planning the LeBreton Flats development

In the late 1980s, the 65 ha of land were owned by the NCC (78%), the Ottawa-Carleton region (14%) and the City of Ottawa (8%). An agreement was signed in March 1996 to transfer ownership of the Flats from the RMOC and the City of Ottawa to the NCC. Amendments to the City of Ottawa master plan and municipal by-laws were approved and adopted in 1999.

Soil management

Redevelopment of the LeBreton Flats was contingent on remediation of the soils contaminated by over a century of industrial and railway use. This work began in 2002, when the NCC adopted strict criteria covering the clean-up of the site and to ensure environmental protection during decontamination. Approximately 400,000 m² of soil contaminated in different ways and to varying degrees had to be treated. In most zones, decontamination required the removal of two metres of soil, down to the

bedrock. The soil was then separated into earth, gravel and contaminated materials, and finally was sorted and treated appropriately:⁶

- used for fill,
- treated on site,
- returned to the site untreated or mixed with uncontaminated soil,
- decontaminated with biodegradation techniques (solvent-eating bacteria).⁷

Financing

In the northern part of the site, the federal government financed the decontamination work, relocating part of the Ottawa River Parkway, building LeBreton Boulevard and developing public spaces, the network of recreational paths and spaces for national institutions.

In the southern part of the site, the federal government financed the decontamination and site preparation before it was sold to private interests.⁸



Follow-up

At present, the dismantling of the Ottawa River Parkway, the relocation of several local streets and most decontamination work has been completed. In 2004, the NCC plans to complete work on LeBreton Boulevard and begin developing The Common in the heart of the site. As for the residential and commercial areas, a Canada-wide public call for tenders should be launched in the coming months, to start construction on Phase I of the project (650 housing units and commercial premises).

Master Plan of LeBreton Flats.

NCC



Looking toward Parliament Hill from the new Common.

NCC



Sketch of the new Canadian War Museum.

NCC

References

- www.nationalcapitalcommission.gc.ca: Official site of the NCC
- National Capital Commission. Core Area Concept of Canada's Capital, summary, April 2000, 24 p.
- National Capital Commission. The LeBreton Flats Plan. January 1997, 104 p.

Notes

1. www.commissiondelacapitalesnationale.gc.ca
2. Nationale Capital Commission, *Core Area Concept of Canada's Capital*.
3. www.commissiondelacapitalesnationale.gc.ca
4. *Ibid.*
5. *Ibid.*
6. *Ibid.*
7. *Ibid.*
8. Commission de la capitale nationale, *op. cit.*

Promenade Samuel-De Champlain Québec City

Area:	12.3 km
Completion:	2004 - ...
Estimated cost:	Approximately \$200 million
Design:	Consortium Gauthier, Daoust, Lestage inc. — Williams, Asselin, Ackaoui et associés — Option Aménagement
Development:	Commission de la capitale nationale du Québec (CCNQ)



Interface between Champlain Boulevard, Foulon Road and the St. Lawrence.

CCNQ

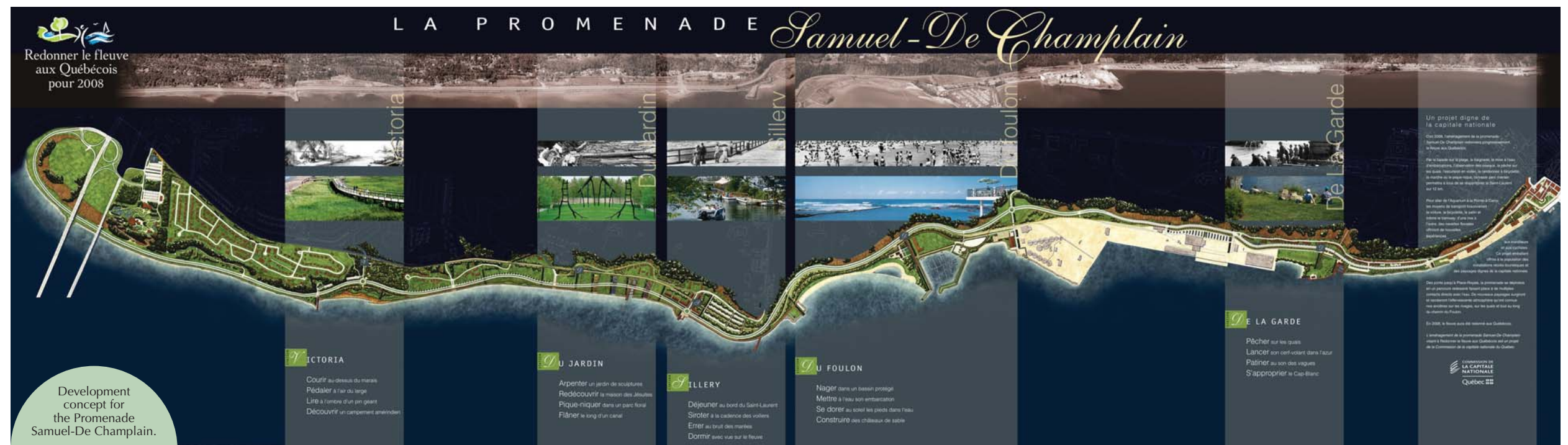
144

Context

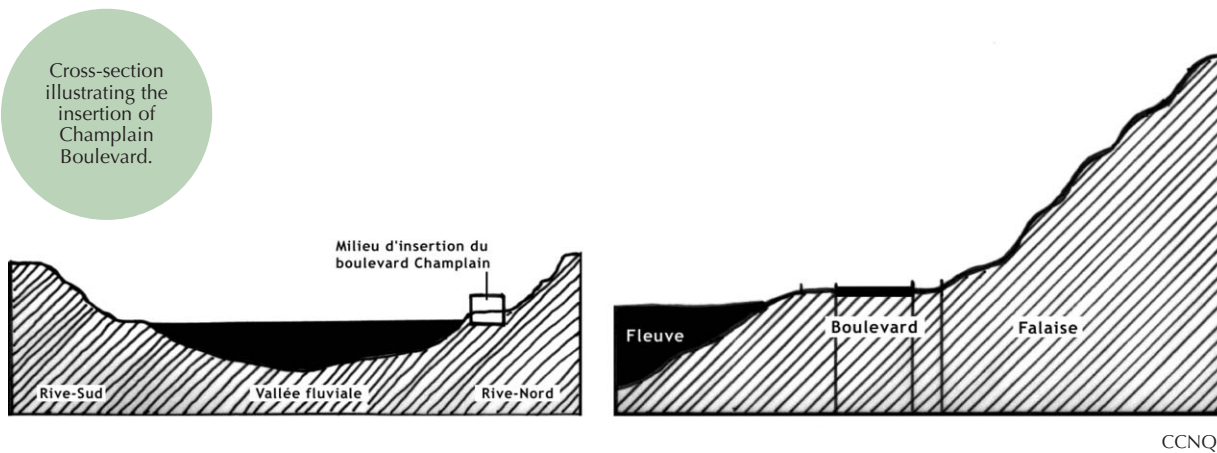
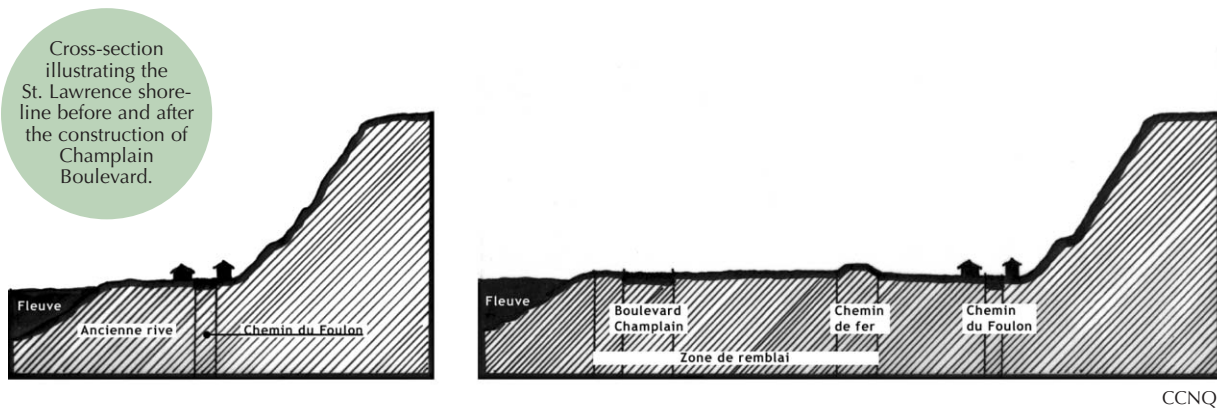
Up until recent decades, the people of Québec City accepted that the shoreline was devoted to transportation and industrial-port operations. In fact, for a long time the city automatically turned its back to the St. Lawrence, and people were used to seeing the waterfront used for floating wood and shipyards, grain elevators, oil tanks, piles of ore, transshipment equipment and so on. Then, in Québec City as elsewhere, contacts between the city and the water became more highly valued, and recovering them for the public good gradually became a larger social concern.

Accordingly, the Quebec government and its agency, the Commission de la capitale nationale du Québec, moved the question of public access to the St. Lawrence to the forefront of current and future development issues for the city.

The site where the Samuel-De Champlain promenade is to be developed corresponds to the former flats between the St. Lawrence and the Quebec promontory, and extends over a dozen kilometres. Bounded by the Quebec and Pierre Laporte bridges to the west, and Place Royale to the east, this stretch of land was long used for industrial, commercial and port operations.



CCNQ



It was initially a trading place for Natives, followed by fishermen and farmers who made their homes there. Then, in the early 19th century, the rise in exports of wood to Europe led to the construction of one of North America's largest shipyards, in the Foulon area. Nonetheless, at the turn of the 20th century, the advent of steel-hulled ships brought about a decline in traditional maritime activities and once again reshaped the face of the shoreline.

Between 1920 and 1960, Sillery became a popular resort area, as industrial-port operations picked up steam at the same time on the site of the old shipyard. The Quebec Bridge, inaugurated in 1917, linked the new port to the rapidly expanding railway system.

After World War II, the cohabitation of industrial and residential activities became more and more difficult, as many oil terminals, pumping stations and transshipment terminals went up in the sector. Finally, in the mid-1960s, the new Champlain Boulevard completely isolated the shore by eliminating the few connections to the St. Lawrence that had survived the industrial onslaught.

Of all the riverfront sites in the region, the Champlain Boulevard area was the natural choice as the first zone to be redeveloped, since it is a major access route to downtown Quebec City (20,000 vehicles a day) and the major leg in the ceremonial route from the airport to Parliament Hill, and offers exceptional views of the river and the cliff. Moreover, many private lots, formerly occupied by oil companies, have recently become available, and can be recovered for public use. This part of the shoreline has the greatest potential for developing large-scale public spaces to meet the needs and expectations of the municipal population of 675,000 people.¹

The project partners committed themselves to creating a major public space that would meet three main objectives:²

- reclaiming for public use the shoreline along the Quebec City escarpment,
- developing the shorescape as a place for outings and as public spaces,
- restoring the image of Champlain Boulevard as a major access route into the city.

Project description

The development concept for the Samuel-De Champlain promenade sets out to *give the river back to the people of Quebec City*, by adding safe access points to the water and showcasing the public and maritime roles of the shoreline.

The key to recovering the space lies in reconfiguring Champlain Boulevard, an operation aimed at maintaining smooth traffic flow and reaffirming the regional importance of this road corridor, while ensuring the safety of future users of the site. Under the development plans, the boulevard is to be straightened, its total right-of-way reduced from 28.5 to 25.5 m, and three roundabouts are to replace traffic lights.

At the same time as the boulevard is being reconfigured, the master plan calls for the development of a vast riverfront park, the addition of a number of recreational-tourist facilities and the creation of new public access points to the river. In addition, a panoramic tramway will be added, running along the CN right of way, to serve the Aquarium du Québec and five stations along the promenade.³

Station Victoria

Anse Victoria, until recently dominated by the immense Irving company oil tanks, will be returned to its original appearance, with fields and woods.⁴ The proposed steps include creating a boardwalk across a marsh, returning the shoreline of the cove to its natural state, creating a beach and restoring the Irving pier.

Station du Jardin

Here an immense garden will be established, the fill from the railway will be naturalized, the shoreline will be planted and a footpath will lead to the Maison des Jésuites.



CCNQ

A boardwalk over the marshes, near the Irving wharf.



CCNQ

Proposed Notre-Dame de la Garde park.

Station de Sillery

From this station passengers will have access to a residential area with restaurants and tourist accommodation, set at the foot of the Côte de l'Église, and a 1-km promenade jutting out from the rocky shore, between the riverfront park of Sillery cove and Saint-Michel cove.

Station du Foulon

Here will be the perfect place to appreciate the St. Lawrence. At high tide, a controlled basin and 1-km sandy beach will give users the illusion of bathing in the St. Lawrence.⁵ There will also be launching ramps for canoes, kayaks, zodiacs and other pleasure craft.

Station de la Garde

The Samuel-De Champlain promenade tramway will make its last stop at the Station de la Garde, in the Cap-Blanc neighbourhood. An urban park will be created next to the restored pier and a long promenade will lead from the river to the stairs in the historic Cap-Blanc neighbourhood.

Implementation

The Commission de la capitale nationale du Québec

The mission of the Commission de la capitale nationale du Québec (CCNQ), created by the National Assembly in 1995, is to beautify and promote the capital and advise the government on how to improve it. The Commission's development work revolves around four main goals:

- completing work on Parliament Hill,
- improving major access routes to the capital,
- establishing lighting for sites and buildings to complement the cityscape and
- developing urban complexes, squares, parks and green spaces.

The Commission is involved in many major investment projects, and its budget rose from \$7.8 million in 1995-1996 to nearly \$16 million in 2003-2004. The government's financial contribution for current operations remained fairly stable over the recent years, so this increase is attributable mainly to the growing contribution by the Commission's partners (the Québec's ministère des Transports, the Société immobilière du Québec, Hydro-Québec, the City of Québec and others) and its expanding assets. The Commission was recently authorized to borrow and to service debt in order to finance multi-year projects.⁶

Between 1995 and 2003, the combined investments of the Commission and its different partners in developing the capital reached \$73,747,000, an amount that should climb to nearly \$85 million during the 2003-2004 fiscal year. The Commission is governed by a 13-member board of directors, and has an annual operating budget of approximately \$6.5 million. As at March 31, 2003, the Commission had 39 employees, including 4 executives and 12 professionals.

Planning the Samuel-De Champlain promenade

In the late 1990s, the Commission and Quebec's ministère des Transports, the Québec Urban Community and the cities of Québec, Sillery and Sainte-Foy undertook a series of studies on the possibility of transforming Champlain Boulevard into an urban promenade. Then, on June 7, 2000, the Cabinet adopted a decree authorizing the Commission to take steps to block any land speculation on properties on the St. Lawrence shore along Champlain Boulevard. The zone concerned by the decree totalled nearly 550,000 m² on the shore, between the Irving wharf, to the west, and Côte Gilmour, to the east.⁷ Citizens and organizations affected by the planned redevelopment of the Champlain shoreline were then invited to have their say at a public consultation hearing in fall 2000.

During the 2002-2003 fiscal year, the Commission continued its land acquisitions and finalized the development concept for the Samuel-De Champlain Promenade. It should be noted that the Commission does not need to acquire the entire promenade site, since some of the development will be carried out on land belonging to the Commission's partners, including the ministère des Transports and the City of Québec.

The master plan for the Samuel-De Champlain Promenade project was submitted in June 2002, after which the Commission started the environmental assessment.

Soil management

Most of the former industrial land to be developed is seriously contaminated, particularly by hydrocarbons. The Irving Oil company, owner of much of this contaminated land, has agreed to rehabilitate all the land that it will sell to the Commission, in keeping with the intended use of the land.

Follow-up

A first environmental impact study, dealing with the sector between the Pierre Laporte Bridge and Côte de l'Église, was submitted to the Quebec's ministère de l'Environnement in October 2003. The Department expected to release the results of its analysis in spring 2004.

If the Commission manages to obtain the government authorizations required, it could begin work on Station Victoria in spring 2005.

References

www.capitale.gouv.qc.ca: Official site of the Commission

Commission de la capitale nationale du Québec. *Redonner le fleuve aux Québécois – Consultation publique*. Presentation document, fall 2000, 35 pages.

Commission de la capitale nationale du Québec. *Redonner le fleuve aux Québécois – La promenade Samuel-De Champlain – Les Québécois veulent renouer avec le fleuve*. Report of the Bureau de la consultation publique. February 2001, 58 pages.

Commission de la capitale nationale du Québec. 2001-2002 and 2002-2003 annual reports.

St-Denis, Bernard, Jacobs, P. et al. *Projet du littoral La promenade Champlain – Énoncé d'une stratégie de mise en oeuvre du projet de paysage*. Final report, Chair in Landscaping and Environment, Université de Montréal, September 2000.

Notes

1. CCNQ. *Redonner le fleuve aux Québécois. Rapport de consultation publique*, 2000.

2. Bernard St-Denis and P. Jacobs. *Projet du littoral La promenade Champlain*, 2000.

3. www.capitale.gouv.qc.ca

4. *Ibid.*

5. *Ibid.*

6. CCNQ, 2001-2002 annual report.

7. CCNQ, *Redonner le fleuve aux Québécois. Rapport du bureau de la consultation publique*, 2001.

Kop van Zuid Rotterdam

Area:	125 hectares (5,300 dwellings, 400,000 m ² office space, 35,000 m ² commercial surface, 60,000 m ² of public facilities)
Completion:	1990-2010
Estimated cost:	About 2.18 billion euros (CAN\$3.5 billion), including 272 million euros in infrastructure (CAN\$448 million)
Design:	Teun Koolhaas and the City of Rotterdam (Master plan)
Development:	City of Rotterdam, National Government, private sector

148

Context

Development of the south shore of Rotterdam began in the late 19th century, when the Kop van Zuid district was chosen as the site for expansion of the port. With the most modern facilities in Europe, Kop van Zuid soon became one of the major transshipment terminals on the continent. After 1945, however, freight traffic grew so much that Rotterdam had to extend its port westward, where it could dredge deeper channels and where there was enough riverfront land for container terminals and refineries. The port sites on the south shore of central Rotterdam (Binnenhaven, Entrepothaven and Wilhelminapier) lost their economic importance and fell into decline.

In the mid 1980s, the development of Kop van Zuid was part of a redevelopment plan for port sites in central Rotterdam. Municipal authorities wanted to extend the downtown and revitalize southern Rotterdam by using the dockland brownfields to create homes, offices and world-class recreational and cultural facilities. The master plan, drawn up in 1987, stresses the importance of architectural diversity and the need to create links between the two shores of the Meuse. The main objectives of the plan are:

- creating a unified and accessible downtown, on either side of the Meuse,
- bringing new economic vitality to the neighbourhoods in southern Rotterdam,
- creating a world-class setting combining housing, offices, stores and recreational and tourism facilities.

View of the Erasmus Bridge. Architects: Been van Berkel, Freek Loos.



Information Centre Kop van Zuid. Photographer: Tom Pilzecker



Information Centre Kop van Zuid. Photographer: Tom Pilzecker

The Luxor Theatre, opened in 2001, is the main cultural component of the Kop van Zuid project. Architect: Peter Wilson.

Project description

The Kop van Zuid development, set on a 125-ha site, is intended to transform a series of run-down docks into an extension of central Rotterdam, give it an authentically urban character and its own architecture.¹ The success of the undertaking depends greatly on establishing a relationship between the area and the rest of the city, a feat made possible by building new streets linking the project with the surrounding neighbourhoods, a new metro station (Wilhelminaplein) and a suspended bridge across the Meuse. The 802-metre Erasmus Bridge, built at a cost of 165 million euros (CAN\$268 million) and inaugurated in 1996, is a vital element in the communications infrastructure linking Kop van Zuid with central Rotterdam and a symbol of the local renaissance.²

The Kop van Zuid project is divided into six sub-sectors:

Entrepot

The development in the Entrepot district consists of over 400 apartments and condominiums, of which 107 are located in an old warehouse from 1874. It is served by a 120-berth marina (City Marine Rotterdam), and also has many boutiques and restaurants.

Landtong

Surrounded by water on three sides, this area has 625 dwellings (mainly spacious houses and luxury apartments), about 1,000 m² of office space, a sports centre, many stores, a 328-spot indoor parking lot and a daycare centre. The two vast residential blocks characterizing the development face a large urban park, in the centre of which stands a light sculpture commemorating Loods 24, a warehouse that once stood here and from which thousands of Jews were deported to concentration camps.

View of Cargadoorskade Street in the Entrepot district.



Information Centre Kop van Zuid. Photographer: Tom Pilzecker

Stadstuinen

Set around a huge urban park crossed by wide avenues planted with trees; it will soon have 950 homes for rent and sale, some stores and offices, and an elementary school.

Parkstad

Located at the southern tip of Kop van Zuid, Parkstad is now under construction. In the northern part, at the edge of Stadstuinen, there is a 171-unit housing development, a small shopping mall, an elementary school and a park. To the south, near the Rotterdam Railway Station, Albeda College, the largest technical training centre in the region, has stood since 1997.

Zuidkade

This area, located near the new Erasmus Bridge linking the area to central Rotterdam, is an important public transit terminal and road junction. It is also home to the vast Wilhelminahof office complex, inaugurated in 1997 (120,000 m², of which 70,000 m² are occupied by government offices) and the Ichthus Hogeschool, a professional training institute opened in 2000.

Wilhelmina Pier

This peninsula embodies the international dimension of the Kop van Zuid project, the economic heart of the project. It combines former warehouses in the centre with modern buildings along the docks, and includes 1,000 luxury dwellings, office towers (180,000 m²), multifunctional complexes and a number of buildings, including the World Port Centre (40,000 m²), the Luxor Theatre (1,500 seats) and the New York Hotel, already considered architectural landmarks.

Implementation

Financing

Right from the start of post-war reconstruction, the City of Rotterdam had strategically chosen to retain ownership of most of the available land, so as to halt property speculation before it began. Consequently, rather than transferring properties to promoters, it leased them (for up to 99 years), allowing it to maintain some control over development. This proved to be a wise choice in the case of Kop van Zuid, since apart from having to buy back a few lots that still belonged to the port authorities and expropriate a number of properties, the whole project called for very little property investment by the City.

Moreover, under agreements with the municipality, the Ministry for Housing, Regional Development and the Environment agreed to subsidize the construction of new buildings, while the Ministry of Transport and Public Works, supported by the Rijnmond Region, undertook to finance up to 50% of the work relating to bridges, roads and infrastructure, and up to 80% of the costs relating to public transit systems. On top of this investment, the national government contributed to the Kop van Zuid development by moving some of its services into the project (e.g. the Wilhelminahof office complex today houses the Tax and Customs Centre).

Finally, the City of Rotterdam worked in close co-operation with certain major developers, through public-private partnerships, to come up with a variety of real-estate projects (offices, apartments, etc.). For the Wilhelminahof complex, for instance, the municipality financed the construction of the metro station (about 45 million euros), while the construction of buildings above the station was financed by private developers (who could take advantage of the value added by the public transit access). For the Stadstuinen residential development, the City of Rotterdam assumed the cost of infrastructure and the improvement of public spaces, while the private sector handled the development, construction and management of housing.

Façade of the Ichthus Hogeschool. Architects: Erick van Egeraat Associated.



Information Centre Kop van Zuid. Photographer: Tom Pilzecker

The New York Hotel, at the foot of the World Port Center, in the Wilhelmina Pier district.



Information Centre Kop van Zuid. Photographer: Tom Pilzecker

Example of a converted industrial building, in the Entrepot district.



Information Centre Kop van Zuid. Photographer: Tom Pilzecker

Converted warehouses, seen from the marina basin.



Information Centre Kop van Zuid. Photographer: Tom Pilzecker

Riverfront Development Projects

Case studies



Aerial view of Wilhelmina Pier under construction.

Information Centre Kop van Zuid. Photographer: Tom Pilzecker



Information Centre Kop van Zuid. Photographer: Tom Pilzecker

KPN Telecom Office Tower, in the Wilhelmina Pier district. Architect: Renzo Piano.



Information Centre Kop van Zuid. Photographer: Tom Pilzecker

With its 32 storeys, the World Port Centre is one of the landmarks of the Kop van Zuid project. Architect: Sir Norman Foster.

Project management

The Kop van Zuid project is managed by a non-profit organization comprising representatives of different municipal services (Department of Urban Planning and Housing, Rotterdam Development Corporation, etc.) and the Port of Rotterdam.

Use of space

Five "Quality Books" were developed to guide and inspire the designers of the different individual projects. The guidelines, dealing with urban planning and design, the development of public spaces and site development programs, established quality criteria for different parts of Kop van Zuid and gave an overview of future development.

The City of Rotterdam established an advisory committee of internationally renowned architects and urban planners to help structure the development. In addition to advising local authorities on construction permits, the committee assisted and supervised teams responsible for drawing up the overall plan, designing different architectural projects and developing public spaces.

Aerial view of the Zuidkade district.



Information Centre Kop van Zuid. Photographer: Tom Pilzecker

Designed by architect Carel Weeber, in the early 1980s, the Peperklip building holds low-cost housing. It was the first housing complex in Kop van Zuid.



Information Centre Kop van Zuid. Photographer: Tom Pilzecker

Follow-up

By the end of 2000, The Erasmus Bridge, the Wilhelminaplein metro station and the Varkenoordse Viaduct were open to the public, while over 60% of residential spaces, 45% of office spaces and 40% of commercial spaces planned were completed or under construction. In 2010, once the project is completed, Kop van Zuid will have 5,300 new dwellings, 400,000 m² of office space, 35,000 m² of commercial space, 30,000 m² of institutional premises, 30,000 m² of recreational facilities and 7,000 parking spots. The project should provide housing for about 15,000 residents and space for 18,000 workers.



Information Center Kop van Zuid



Information Centre Kop van Zuid. Photographer: Tom Pilzecker



Information Centre Kop van Zuid. Photographer: Tom Pilzecker



Information Centre Kop van Zuid. Photographer: Tom Pilzecker

References

The Stadstuinen residential sector.

www.kopvanzuid.rotterdam.nl:
Kop van Zuid, City of Tomorrow and Kop van Zuid, History (PDF files)

Bakker, Riek. "Kop van Zuid, Rotterdam. Redevelopment of Disused Harbour Areas on the River Maas." In *Bruttomesso, Rinio, Waterfronts, A New Frontier for Cities on Water: Venice: Cities on Water Edition*, 1993, p. 152-156.

B.L. "Rotterdam, entre deux rives." *L'architecture d'aujourd'hui*, No. 306, September 1996, p. 90-100.

McCarthy, John. "The Redevelopment of Rotterdam since 1945." *Planning Perspectives*, No. 14, 1999, p. 291-309.

Powell, Kenneth. *La ville de demain*. Paris: Éditions du Seuil, 2000, 255 pages.

Sabbah, Catherine. "Rotterdam s'offre un Manhattan-sur-Meuse." *Urbanisme*, No. 267-268, Oct.-Nov. 1993, p. 85-88.

Notes

1. Kenneth Powell, *La ville de demain*.
2. *Ibid.*

The Landtong district, seen from the Spoorweghaven basin.

The first construction phase in the Stadstuinen residential district.

False Creek

Vancouver

Area:	Approximately 200 hectares (23 km of shoreline)
Completion:	1970 to present
Design:	Multiple firms (in co-operation with the City of Vancouver)
Development:	City of Vancouver, federal and B.C. governments, private sector

152

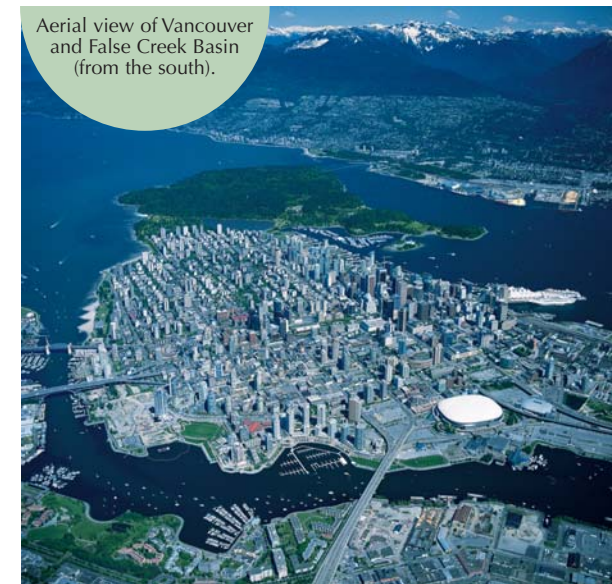
Context

In the late 19th century, the Canadian Pacific Railway decided to locate the western terminus of its network on the northern side of False Creek, a shallow arm of the ocean adjacent to what is now downtown Vancouver.

From that time on, changes to the area were as rapid as they were radical: dense fir stands were cut down to make room for shipyards, grain elevators and sawmills, and the waters of False Creek were used for timber booming and storage. Over the next several decades, industrialization carried on apace, with the construction of bridges, proliferation of railway shops, and arrival of a broad spectrum of secondary industries (mills, slaughterhouses, etc.). False Creek was dredged in 1915, and 760,000 m³ of fill from that operation was used to make Granville Island, an artificial peninsula that would become the site of an immense industrial park.

Once connected to the continental market by rail lines, and with an enviable concentration of industry, the City of Vancouver grew by leaps and bounds. The industrial cradle of Western Canada, the False Creek area was first to feel the backlash of this accelerated growth, with its attendant pollution, noise, and unhealthy living conditions (many working-class families living in cramped conditions in houseboats or waterfront shanties). The situation was so intolerable that, by the late 1920s, municipal authorities were already recommending that rail operations be moved so the sector could be revitalized. The suggestion was repeated in 1937, when City Council insisted on the urgent need for a False Creek development policy. With the exception of studies conducted in the 1950s, however, nothing was done for several decades. It was not until most local industries left the area in the 1960s, and a reformist government was elected in the early 1970s, that a vision for False Creek finally started to emerge.

In 1974, Vancouver rezoned the entire False Creek basin in order to allow the development of mixed-use projects, and adopted an official planning program (the *False Creek Official and Area Development Plan*) for the entire area south of the inlet, between the Burrard and Cambie bridges.



Tourism Vancouver

Project description

A. False Creek's South Shore

Granville Island

In the early 1970s, the Granville Island industrial park, which had fallen victim to an alarmingly high vacancy rate, was rapidly declining. The federal government, which owned the 15 hectares of land, decided to use it to establish a new urban core, a "people place" in which commercial, cultural, recreational and industrial functions could co-exist.

In 1972, project administration, management and supervision were transferred to the Canada Mortgage and Housing Corporation (CMHC), which invested some \$25 million in the Island over the next 10 years. This sum was bolstered by another \$20 million in miscellaneous public funds (used, among other things, for cultural facilities) and

\$30 million in private investment. The CMHC, via the Granville Island Trust, is still in charge of area development. Since 1983, the project has been financially self-supporting. Property maintenance and operating costs are covered by rents from public, private and non-profit sector tenants.¹



Map of Vancouver showing main False Creek redevelopment zones.

Today, Granville Island boasts about businesses, studios and facilities (including art galleries, artists' studios, an art college, theatres, a hotel, a marina, and one of the most popular public markets in North America), which employ more than 2,500 people and generate more than \$130 million annually.² Three converted old buildings remain as a testimonial to the Island's industrial past, as do a working cement plant and drill-bit factory. Thanks to the determination of the latter to establish good relations with site visitors and fellow occupants alike, this co-existence has proven extremely successful, with educational and consciousness-raising activities such as Ocean Concrete's open house day for families being organized to promote the area's industrial heritage.



Inside the Granville Public Market.

Pierre St-Cyr image bank

Two views of Granville Island and marina.



Tourism Vancouver



Tourism Vancouver

A cultural and commercial attraction as yet free from the domination of the big multinational chains, Granville Island welcomes upwards of 10 million visitors every year.³

False Creek South

The development of 30 hectares along the southern shore of False Creek began in the late 1970s, and was completed in 1990. The various projects in question formed part of the *False Creek Official and Area Development Plan* (1974), and were the subject of numerous public consultations.

This former CP property, which was sold to the province in 1928 and subsequently purchased by the City of Vancouver in the late 1960s, today has 2,811 housing units (including 1,040 co-operative or affordable units), 25,000 m² of commercial space, two marinas, a clinic, a centre for the disabled, and 10.5 hectares of green space (Charleson Park, a waterfront walkway, etc.). The initial project phases involved low-rise housing (three to six storeys); more recent phases (those farthest from the water) are much higher in density, and up to 13 floors in height.

Southeast False Creek

Located along the southern side of False Creek, between Cambie Bridge and Citygate (see section below), this 32-hectare area, which is composed of landfill (the original shoreline having been near 1st Avenue), is currently being developed. The City of Vancouver, which owns more than half the land in Southeast False Creek, wants to establish a sustainable community to act as an international demonstration project for implementing sustainable-development principles in inner cities. After a planning exercise that took more than 10 years (research, public consultations, etc.), the City finally adopted an official planning program and made the necessary zoning changes.

It was recently decided that phase one of the construction process, which could begin as early as 2005, would involve an Olympic village for the 2010 Winter Games. After the Olympics, most of the buildings will be converted into family dwellings. It is anticipated that by the time the project is completed (i.e., in 10 to 15 years), Southeast False Creek will include 5,000 units with 11,000 to 14,000 residents.

Northern shore of False Creek, as seen from a development in False Creek South.

Low-density housing project in False Creek South.



Pierre St-Cyr image bank



Bob Blacker, Vancouverisider Enterprises/www.vancouverisider.com



Granville Slopes, as seen from Granville Island.

Denis Houle image bank



Aquabus water taxi serving both shores of False Creek (with Granville Slopes in the background).

Tourism Vancouver



Concord Pacific Place and B.C. Place Stadium, as seen from the False Creek South.

Bob Blacker, Vancouver Insider Enterprises/www.vancouverinsider.com

B. False Creek's North Shore

Granville Slopes

Located between the Burrard and Granville Street bridges, this 10-hectare area is home to approximately 3,000 individuals, making it one of the most densely populated residential districts in all of Vancouver (120 people/acre).

In the 1980s, the initial phases of construction (southwestern portion of the site) began, in accordance with the Southeast Granville Slopes Official Development Plan. Among its other requirements, the plan obliged developers to extend the urban fabric into this sector and construct a continuous public waterfront walkway. The projects established at this time were among the first to put the emphasis on Vancouver's streets as a public, people-friendly, space, with three- and four-storey row houses at the foot of high-rises providing the basis for a pedestrian-oriented neighbourhood.

For subsequent phases, which were designed in the late 1980s and located in the northeastern sector of the site, the planning process was even more elaborate. A true urban-design vision was developed to provide a framework for creating and networking public spaces, and strategies were established to ensure that these spaces could co-exist with high-density dwellings. The tools designed by the City made it possible, to develop projects that maintained most views of the mountains and False Creek (for example, via configurations that minimized the width of towers and set buildings perpendicular to the waterfront) and that left public-space design in the hands of the developers (who stood to gain the most from the property appreciation due to such improvements).

A bona fide urban laboratory, Granville Slopes let the City of Vancouver test a number of planning tools, which were then used in conjunction with more recent developments, such as Concord Pacific Place, Citygate, and Coal Harbour (north of downtown).

Concord Pacific Place

The Concord Pacific Place development extends along 3 km of waterfront, between the Granville Street Bridge and Quebec Street, on a site acquired by the province in the early 1980s for the 1986 World's Fair and the construction of B.C. Place Stadium. After Expo 86, the provincial government auctioned off all freed-up land, and in 1988, 67 of the 83 hectares in False Creek North were transferred to a single developer — Concord Pacific, owned by a Hong Kong businessman.



Inner courtyard at 888 Beach Avenue, a Granville Slopes project.

City of Vancouver. Vancouver's Urban Design. A Decade of Achievements.

Following the ratification in 1990 of the *False Creek North Official Development Plan*, City urban planners, urban designers and engineers worked closely with Concord Pacific Group designers and architects on an area-redevelopment project. The resulting master plan was centred around strategic design principles such as:

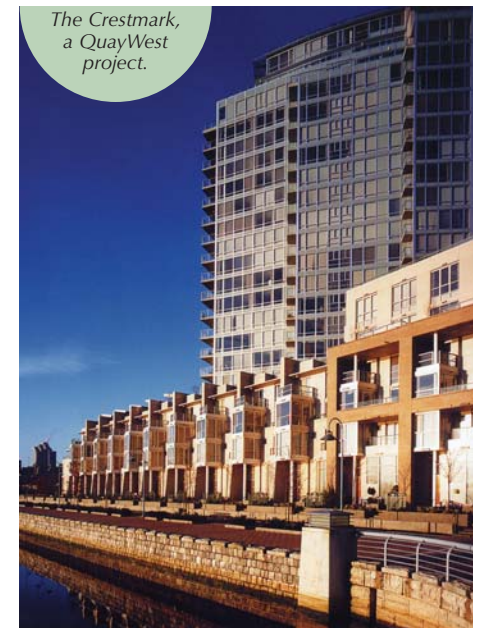
- creating a series of small waterfront neighbourhoods, separated by large green spaces,
- extending the existing road network through these new projects and to the waterfront,
- developing new urban-design strategies allowing for high-rise structures while creating quality "living environments" (for example, by taking human scale into account in lower-floor design, or imposing a minimum 25-metre buffer zone between apartment towers).

As a prerequisite for rezoning, the developer had to develop 17 hectares of public space, including a 10-metre-wide seawalk to complete the green network providing public access to both sides of False Creek; build two elementary schools, four daycare centres, a parking lot for the stadium, and a community leisure and recreation centre (the heritage Roundhouse Building, formerly a site for the restoration of historic engines); fund landscaping that would create "green links" with downtown; and, lastly, reserve 20% of all units for co-operative or affordable housing and design 25% of all units for families.

QuayWest and Marina.

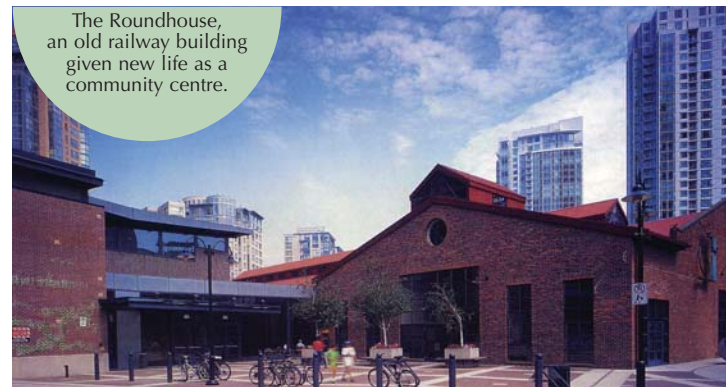
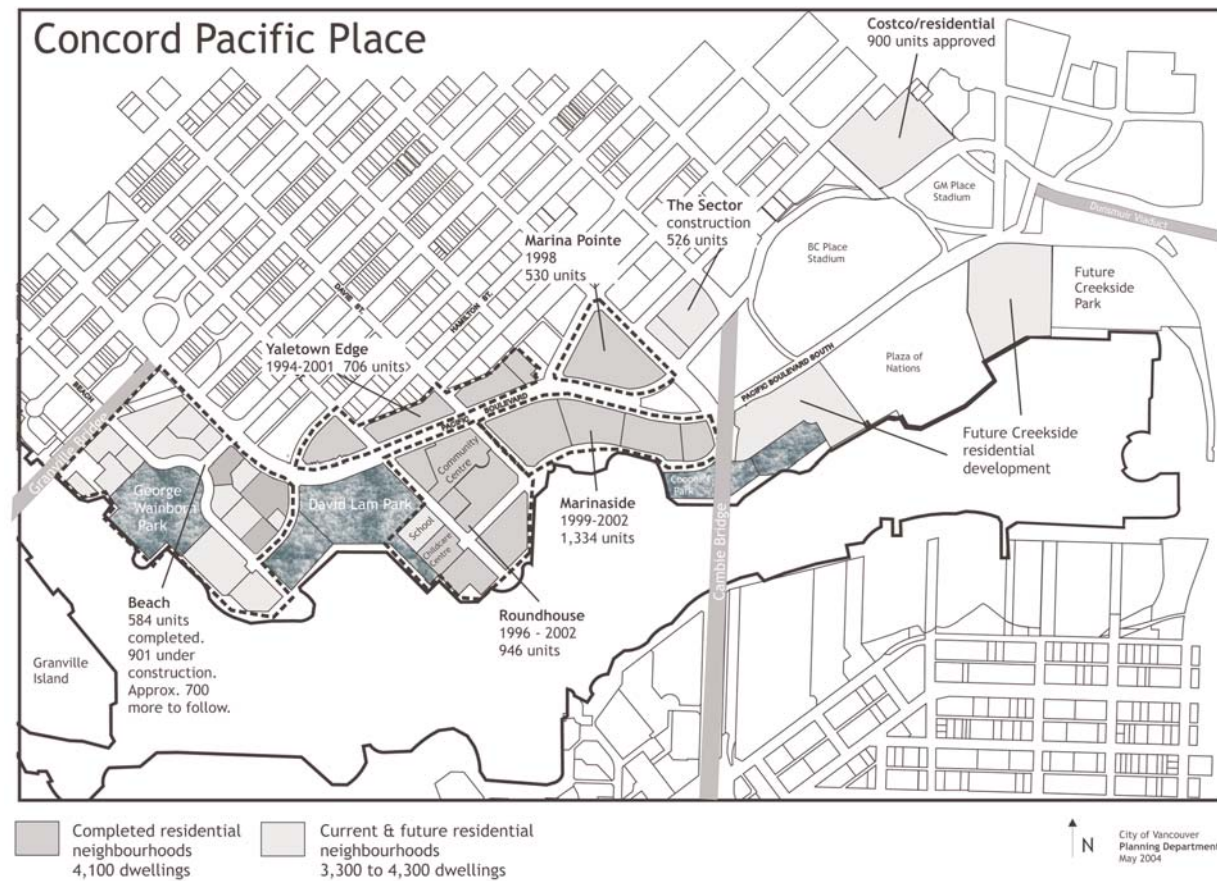


Concord Pacific Group



The Crestmark, a QuayWest project.

City of Vancouver. *Vancouver's Urban Design. A Decade of Achievements.*



The Roundhouse, an old railway building given new life as a community centre.

Concord Pacific Group

The \$3-billion Concord Pacific Place development plan also provides for the construction of 8,500 housing units and 250,000 m² of commercial space. By the end of 2002, 3,500 units had already been built, and 2,000 others were in the works.



Pierre St-Cyr image bank



Denis Houle image bank



Denis Houle image bank

Public plazas with a view of False Creek, framed by high-density housing high-rises.



Concord Pacific Place, in the QuayWest area (along Marinaside Crescent).

Denis Houle image bank



Citygate waterfront.

Pierre St-Cyr image bank



www.pierluigisurace.it

David Lam Park (eastern tip of False Creek) and Roundhouse area.

Citygate

Covering an area of 3.7 hectares, the eastern tip of False Creek was an industrial area until the mid-1980s, before being developed as part of the preparations for Expo 86. In 1990, the City rezoned the site to allow for the construction of Citygate, a high-density (160 people/acre) residential and commercial project including 1,000 housing units and 16,000 m² of office and business space. As a prerequisite for rezoning, however, the developer had to invest \$6 million in public-space improvements, build two daycare centres, a certain number of rental units and three co-operative or affordable housing projects (which were later transferred to B.C. Housing, a provincial crown agency), and develop 100 parking spots for the Science World museum.

The western part of the project, which is near the waterfront and Science World museum, features an office tower and three residential high-rises bordered by row housing. In the eastern sector, along Main Street and opposite Thornton Park, medium-density structures (6 to 15 storeys) provide commercial space at street level and residential units above.



Science World museum, opposite Citygate.

www.pierluigisurace.it

Implementation

For decades, the two major obstacles to the redevelopment of False Creek were the area's industrial occupants and the patchwork land ownership.

Most of the area was controlled by the railways (CP owning two-thirds of the land along the False Creek shoreline), whose priorities did not include solving urban-development problems. The other occupants — mainly firms with long-term leases from CP — had no interest whatsoever in adopting a development vision that might force them to relocate. Furthermore, the City of Vancouver and the provincial government did not have enough adjoining land to be able to kick-start transformation of the area. Under these circumstances, despite recurring and sustained efforts by the City to develop the waterfront, it proved extremely difficult to obtain a consensus on the future of False Creek.

In the early 1970s, talks between the City, Canadian Pacific and the B.C. government led to what would be the largest land swap in Vancouver's history, basically pooling their individual properties and then re-arranging ownership. A few years later, once these holdings had been consolidated and the 1974 *False Creek Official and Area Development Plan* adopted, the City proceeded to redevelop the shoreline on the southern side of False Creek, between the Burrard and Cambie bridges.

As regards the northern shoreline, the great catalyst for transformation was Expo 86. This international event sounded the death knell for industry on the northern shore of the inlet by paving the way for major site redevelopment. After the World's Fair, a planning program for False Creek North was established by the City, and the site was sold to developers.

Follow-Up

Although most False Creek projects have been built by private developers, support from the City has been absolutely vital. The success of recent efforts is largely attributable to the fact that they have come into being as part of an elaborate zoning framework that controls both the quantitative and qualitative aspects of the developments in question. Master plans are established that incorporate each project into the existing urban context: road networks are extended, requirements for the preservation of views established, land to be reserved for public use identified, and so on. Next, strict guidelines for the location of buildings are drawn up. At this stage, co-operation between the developer and public authorities comes into play.⁴ The designation of enjoyable and safe public spaces, facilitated by the vertical division of structures into three parts (base, body, crown), is one of the main objectives used in developing more specific zoning regulations (height, architectural details, materials).

Gordon Price, Vancouver City Councillor from 1986 to 2002, summarized the factors that in his view had contributed to the success of Vancouver's riverfront megaprojects:

- a community that makes its values clear and seeks to maximize the public benefits,
- risk takers (developers) with vision,
- risk takers (bankers) with money, who understand the longer-term benefits and are prepared to accept short-term risk,
- skilled professionals able to plan, design, build and sell inner-city high-density accommodations, and
- a (doubtless vastly underestimated) market of people who wish to live in revitalized urban centres, with a premium on amenities and security.⁵

Boating
at the foot
of Burrard Bridge.



Tourism Vancouver

References

Breen, Ann, and Dick Rigby. *Waterfronts: Cities Reclaim Their Edge*. 2nd edition. New York: McGraw-Hill, 1997. 333 pages.

Caron, Christophe and Dominique Lachance. *Desseins sur Montréal*. 2nd edition. Montreal: APAAM, 1989.

City of Vancouver. *Vancouver's Urban Design: A Decade of Achievements*. December 1999. 33 pages.

Price, Gordon. "Is Seattle ready to wear the Vancouver style?" *Seattle Daily Journal of Commerce* online edition. October 2, 2003. www.djc.com/news/co/11149498.html

Société de développement de Montréal. *Projets innovateurs d'habitation en front fluvial ou maritime*. October 2000. 18 pages.

Wrenn, Douglas M. *Urban Waterfront Development*. Washington: ULI-Urban Land Institute, 1983. 219 pages.

www.city.vancouver.bc.ca

www.cmhc-schl.gc.ca: Official site of the Canada Mortgage and Housing Corporation

www.concordpacific.com: Official site of developer

Notes

1 CMHC Website.

2 *Ibid.*

3 *Ibid.*

4 SDM, *Projets innovateurs d'habitation en front fluvial ou maritime*.

5 *Seattle Daily Journal of Commerce* online edition, October 2, 2003.

Sunset
over
Granville Slopes.



Tourism Vancouver

