



## Moving Regeneration Forward in Waimakariri

### *A Casebook of Adaptive Reuse prepared for the Waimakariri District Council*

Waimakariri District Council provided to the Minister Supporting Greater Christchurch Regeneration a Draft Waimakariri Residential Red Zone Recovery Plan (Te Mahere Whakarauora mō te Whenua Rāhui o Waimakariri) on 1 August 2016. It proposes land uses for the Kaiapoi, Pines Beach and Kairaki regeneration areas that aim to provide attractive, enjoyable and vibrant places for community use. This casebook provides examples of other adaptive reuse and regeneration projects with an emphasis on governance, ownership and tenancy, funding, maintenance and service provision.

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*Front cover photo credit:*  
*Aerial view of Kaiapoi by Peter Bell 2015*  
*Courtesy of Simon Markham, Waimakariri District Council*

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## Executive Summary

This casebook has been developed as a tool for the Waimakariri District Council and its strategic partners, including the Crown, Ngāi Tahu, and Environmental Canterbury, to use in considering how to fund and implement plans for the Kaiapoi, Pines Beach and Kairaki regeneration areas. It provides a range of examples of regeneration and adaptive reuse in areas of hazard-prone or under-utilised lands.

A framework for potential case types was developed in consultation with the Waimakariri District Council staff with preference given to: areas in coastal and riverine environments and comparable in size and proposed land uses for the Waimakariri regeneration areas; projects that involve public/private partnerships and provide community-wide benefits; and governance and funding practices comparable to the local/national context within New Zealand including the important partnership that the Māori/Ngāi Tahu have with the Crown reflected in the Treaty of Waitangi and subsequent settlements.

Projects in New Zealand, Australia, China, Japan, the United Kingdom, Canada, the United States, and Chile were investigated for the study. Availability and access to information on a project also factored into the case selection. Also, no potential cases involving first nations and/or indigenous people within a project area or as part of the governance structure for a project were found. As a further constraint, many of the potential cases that began with a post-disaster land buyout program, like the New Zealand residential Crown offer process, did not result in active reuse of the site and thus were not considered further. A final selection of six cases, all of which are located in the United States, was made based upon their ability to represent a diversity of governance and funding arrangements. They are:

- Case 1: Greenway, Grand Forks, North Dakota and East Grand Forks, Minnesota – A Multi-Government Partnership to revitalise a riverfront area damaged by flooding
- Case 2: Brooklyn Bridge Park, New York, New York – A Local Government Non-Profit Corporation that oversaw reuse of a former riverfront industrial site
- Case 3: Beltline, Atlanta, Georgia – A Local Government Non-Profit Corporation to convert abandoned rail lines into a multi-use pathway network around the city
- Case 4: Railroad Park, Birmingham, Alabama – A Local Government and Non-Profit Partnership to revitalise an abandoned railroad yard and surrounding neighborhoods
- Case 5: Buffalo Bayou, Houston, Texas – A Non-Profit led effort to improve public access and use of land adjoining a waterway
- Case 6: The Presidio, San Francisco, California – A National Government Non-Profit Corporation to revitalise a former military base and historic structures into a mix of open space, recreational, housing, educational, and commercial uses.

Information on the project context, planning, management, funding, operations and key resources has been developed for each of these six cases. The study report also contains an appendix with brief summaries of eight other cases considered in the study.

Insights drawn from the case study analysis are as follows:

- **Regeneration planning needs to consider pre-existing and future conditions of more than just the project site.** All the project sites endured some type of on-going stress or shock—

either economic or physical—and there have been ripple effects from these shocks and under-utilisation of the project sites onto adjoining properties, neighborhoods and communities. Each of the six regeneration cases has been a catalyst and stimulus for revitalisation of the surrounding areas as well as the project site. There are also consequential issues of social equity and displacement resulting from the increased property values and economic revitalisation following the regeneration of the project sites.

- **Regeneration project planning and implementation takes many years to complete.** Initial project planning was only a small portion (a few years) of the overall project timelines. It took several years, even decades, to complete the planning and design, fundraising, and construction of each of the projects. Time to completion roughly correlates with the complexity of land uses and the physical size of a particular project.
- **Regeneration projects benefit from special, collaborative and sustaining governance arrangements among government agencies as well as citizen and stakeholder groups.** Multiple agencies and groups were involved in special governance schemes established specifically for the projects. Governance arrangements evolved and changed over time as the projects progressed through the planning, construction and operational phases. Separate not-for-profit government corporations—governed by independent boards of directors—are a common governance scheme. These corporations have been funded through a variety of sources that include government funds, individual and private corporation donations, and philanthropic grants. There also have been formalised and important roles for interested citizen and stakeholder groups. Most commonly, these roles have been formalised as non-government, not-for-profit membership organisations. They were natural out-growths of neighborhood and community special interest groups that initially advocated for the projects. The roles and functions of these citizen and stakeholder organisations can also help to build social capital and community resilience.
- **Land ownership and the sources and availability of funding are two key determinants in the governance schemes adopted for regeneration projects.** Governance schemes seem to reflect the ultimate land ownership of the regeneration areas and not necessarily the land ownership patterns at the start of the projects. Many governing organisations were intentionally created at “arms-length” from government, allowing them to seek and manage public funds as well as private and non-profit sector grants and other charitable donations, and to partner directly with private corporations and philanthropic organisations in economic development efforts.
- **By their very nature, regeneration projects require unusual and innovative funding schemes.** Regeneration projects often involve hazard-prone or under-utilised land as well as other risks that are difficult for conventional real estate development and financing structures to handle. All the case studies involved a significant level of private sector and philanthropic funding that mostly came in the form of grants and donations. Innovative funding approaches included tax increment financing; residential and commercial development on a portion of the site to finance construction of the public-serving portion of the site; leasing of rehabilitated structures on the site; and a nominal monthly fee to all city residents and businesses.

Based upon the insights gained through this casebook analysis, the following points are offered for consideration by the Waimakariri District Council and its strategic partners as the initial planning phase for the Kaiapoi, Pines Beach and Kairaki regeneration areas is completed and the next phase of implementation begins:

- Have the opportunities and benefits of economic revitalization to properties and neighborhoods adjoining the regeneration areas been fully explored? Are there potential partnerships or other ways to leverage and acknowledge those benefits in the governance arrangements as well as the funding schemes for both the implementation and long-term maintenance and operations of the regeneration projects?
- Similarly, are there potential social equity and displacement issues that may result from the increased benefits resulting from the regeneration areas and how might those issues be monitored and addressed in the implementation phase of the regeneration projects?
- Are the current timelines and expectations for implementation appropriate for the scale and complexity of each of the regeneration projects?
- What are some of the potential risks to current timelines and expectations and how might those be monitored and addressed in the implementation phase for each of the regeneration projects?
- What is the appropriate governance arrangement within the Council to maintain the sustained focus necessary throughout the implementation phase for each of the regeneration projects? What departmental collaborations and skills are necessary and how might they be best accessed and leveraged in governance arrangements for the implementation phase?
- What other agencies and organisations have overlapping and alignable projects and interests in and around each of the regeneration areas? How might those interests be leveraged into the governance arrangements for the implementation phase? What are some of the potential risks and challenges for each and how might those be monitored and addressed?
- Are there neighborhood and special interest groups with alignable interests that might be engaged and even cultivated to have more formalised roles and functions in the implementation and operational phases for each of the regeneration areas? What are some of the key roles and functions that these groups could undertake? What additional skills and resources might they need and how might the Council support them in their efforts?
- Do other agencies, organisations, stakeholder groups with an interest in and around the regeneration areas have access to resources that could be better leveraged if combined to achieve a greater good than if managed separately? And finally,
- Have all the potential financing options been explored for each of the regeneration areas? Are there some innovative financing approaches and governmental and non-governmental resources that might be accessed, especially considering the economic development and revitalisation opportunities that will result from each of the projects?



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*Kaiapoi red zone area (L. Johnson September 2015)*

## Introduction

The **Draft Waimakariri Residential Red Zone Recovery Plan** (*Te Mahere Whakarauora mō te Whenua Rāhui o Waimakariri*) provided to the Minister Supporting Greater Christchurch Regeneration proposes land uses for the 99.4 hectares of land that comprises the Kaiapoi, Pines Beach and Kairaki regeneration areas. The plans call for an array of uses including sports fields, neighborhood parks, new business areas, recreation and ecological linkages, a cemetery, a BMX track, a dog park, vehicle and motor caravan parking, provision for heritage and mahinga kai activities, roads and infrastructure sites and rural activities. The regeneration proposed for each area aims to provide attractive, enjoyable and vibrant places for community use that work to balance goals to improve appearance, benefit the whole community, and account for the significant costs of land purchase.

## The Cases

This casebook has been developed as a tool for the Waimakariri District Council and its strategic partners, including the Crown, Ngai Tahu, and Environmental Canterbury, to use in considering how to fund and implement plans for the Kaiapoi, Pines Beach and Kairaki regeneration areas. It provides a range of examples of regeneration and adaptive reuse in areas of hazard-prone or under-utilised lands.

Adaptive reuse is a development approach that has largely been applied to attract investment to struggling downtowns, abandoned industrial sites, infill locations, and under-utilised commercial centers and business parks. Adaptive reuse of hazard-prone lands is less common but there are many examples, most emerging in the aftermath of major flood, hurricane, and earthquake disasters.

A framework for potential case types was developed in consultation with Waimakariri District Council staff. Case preferences include:

- Areas in coastal and riverine environments
- Areas comparable in size to the Waimakariri regeneration areas
- Land reuses similar to the proposed uses for the Waimakariri regeneration areas, including parks and open space, recreation and ecological uses, and low-intensity development
- Projects that provide community-wide benefits

- Governance and funding practices within industrialised economies comparable to New Zealand and with a national/local governance context similar to the Waimakariri regeneration areas, including the important partnership that the Māori/Ngāi Tahu have with the Crown reflected in the Treaty of Waitangi and subsequent settlements
- Projects that involve public/private partnerships
- Availability and access to information on project governance, ownership and tenancy, funding, maintenance and service provisions.

An initial set of potential cases were identified by looking at both kinds of adaptive reuse—of brownfields and hazard-prone lands—and the potential case preferences. This initial set included potential cases in New Zealand, Australia, China, Japan, the United Kingdom, Canada, the United States, and Chile. It was particularly challenging to find ample documentation on many of the cases due to lack of formal study or formal project management. Also, no potential cases involving first nations and/or indigenous people within a project area or as part of the governance structure for a project were found. As a further constraint, many of the potential cases that began with a post-disaster land buyout program, like the New Zealand residential Crown offer process, did not result in active reuse of the site; instead, many sites went fallow or were returned to a natural state and thus not comparable to the active reuse proposed for the Waimakariri regeneration areas.

Six cases were selected from the list of potential cases based upon their ability to represent a range of governance and funding arrangements. They are:

- Case 1: Greenway, Grand Forks, North Dakota and East Grand Forks, Minnesota – A Multi-Government Partnership to revitalise a riverfront area damaged by flooding
- Case 2: Brooklyn Bridge Park, New York, New York – A Local Government Non-Profit Corporation that oversaw reuse of a former riverfront industrial site
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Information on the project context, planning, management, funding, operations and key resources is has been developed for each of the cases. This is followed by a set of insights and points for consideration gleaned from the case analysis. Appendix A contains brief summaries of eight other cases considered in the study.

## Case 1: Greenway, Grand Forks, North Dakota and East Grand Forks, Minnesota – A Multi-Government Partnership Model

**Project Size:** 890 ha in total—325 ha in Grand Forks and 565 ha in East Grand Forks.

**General Land Uses:** Open space, park and recreation facilities, and river flood protection. Park and recreation facilities include: several parks, campground, fishing sites and boat ramps, 2 golf courses and 3 disc golf courses, clubhouse, and over 32 km of multi-purpose trails that link both communities together.

**Timeframe:** Planning, land acquisition, and construction of the flood protection, greenway, park and recreation facilities, 1997 – 2008.

**Benefits:** Provides year-round outdoor recreation, ecological value, and a source of economic development, including downtown revitalisation in both cities.



*Railroad bridge over the greenway multi-purpose trail, City of Grand Forks (L. Johnson Sept 2010)*



*Greenway along the Red River of the North which is at flood stage, City of Grand Forks (L. Johnson May 2009)*

### Context

In 1977, unprecedented flooding on the Red River of the North forced the evacuation of more than 56,000 people from two cities that straddle the river—City of Grand Forks, North Dakota (52,500 residents in 1995) and East Grand Forks, Minnesota (9,000 residents in 1995). Total damage and recovery estimates are as high as US\$2 billion (1995 US Dollars). A U.S. federal disaster declaration opened the door for federal funding for the voluntary purchase of heavily damaged homes. Concurrently, the U.S. Army Corps of Engineers began designing an enhanced flood control project for this section of the river and federal funding for the project was approved in 1998. The states of North Dakota and Minnesota also pledged funds for the project and the cities were required to contribute a project match. Together, government provided the majority of funds that were used to purchase the private and public lands that would become the greenway system. Ownership of the land acquired through the voluntary buyout programs and the flood protection project was transferred to the cities of Grand Forks, East Grand Forks, and the State of Minnesota. Government ownership of the land was necessary to implement the construction of the flood protection project and ensure access during high water events.

### Planning

Planning to improve the cities' flood protection by setting back and widening the river floodway had begun before the 1997 flood. Concepts for a park system within the river floodway also appeared in the cities' land use plans produced before 1997. After the 1997 flood, the cities' U.S. Congressional delegation promoted the greenway concept as they worked to secure federal funding.

More detailed planning for the flood protection system began in 1998 and included landscape architects to design the trails and other amenities. Concurrently, the cities conducted an extensive set of studies pertaining to the greenway, including a recreation needs assessment and tree inventory report and management plan. Community residents participated in workshops as part of the planning process and crafted the following vision: *“The Red and Red Lake Rivers Greenway will protect residents of Grand Forks and East Grand Forks from flooding, provide opportunities for economic growth, improve and restore ecological stability of the river corridor, link residents and tourists to four seasons of recreation and transportation facilities, provide linkage between the cities, preserve and promote the history and culture of the region through education, and improve the quality of life for future generations.”*

The Greenway Plan, released in 2001, states the vision and goals for the project, the proposed greenway facilities and facility design guidelines, operational structure and considerations, estimated costs and funding options, and an implementation action plan. Specifically, the plan calls for the establishment of a governing structure ahead of the project design and construction and the formation of partnerships to assist in the construction, use, and operation of a Greenway with a variety of compatible uses. Both the cities of Grand Forks and East Grand Forks subsequently adopted portions of the Greenway Plan and incorporated elements of the plan into their local comprehensive (land use) plans.

Several projects in the original Greenway Plan were eliminated during project construction due to lack of funding, community resistance, and inconsistencies with local land use plans. A map of the Greenway and its many recreation features is provided in Map 1.

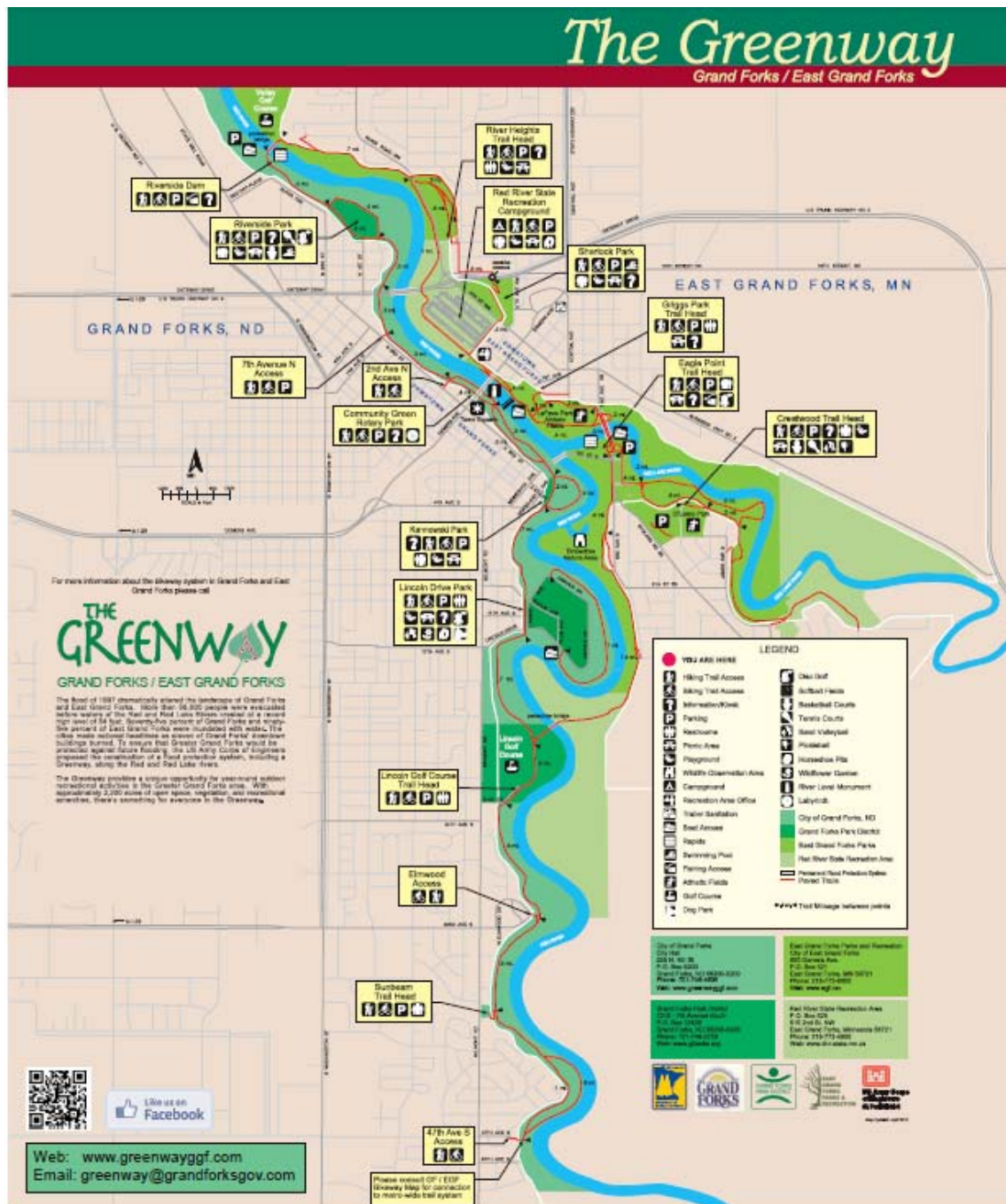
## Management Structure

The development and construction of the flood protection system and Greenway required multi-agency cooperation. In 1998, the Greenway Alliance was formed to work through the issues associated with construction and governance of the Greenway. This group oversaw the creation of the Greenway Plan and accompanying facility design guidelines, and the establishment of the Greenway governance structure. Alliance membership included representatives from both cities as well as federal, state, and local agencies with expertise in a variety of recreation management fields. The Greenway Alliance dissolved in 2001 after the Greenway Plan was completed.

The Greenway Technical Committee was then formed as a technical advisory board to the four agencies that manage the Greenway:

- City of Grand Forks owns all 325 hectares of land within the Greenway on the North Dakota side of the river.
- Grand Forks Park District leases and manages four areas in the Greenway through a lease agreement with the City of Grand Forks. These areas are the Lincoln Park Golf Course and the Riverside, Lincoln Drive and Kannowski Parks.
- City of East Grand Forks owns the majority of the 565 hectares of land within the Greenway on the Minnesota side of the river.
- Minnesota Department of Natural Resources owns and manages the Red River State Recreation Areas Campgrounds and the River Heights Trailhead area.

### Map 1. Grand Forks/East Grand Forks Greenway and recreational features



Source: *The Greenway 2012 Supplement, Grand Forks, North Dakota and East Grand Forks, Minnesota*, <http://www.greenwayggf.com/greenway-plans.html>

Committee membership includes representatives of the four managing agencies and other parties interested in the development of the Greenway. Meetings are held bimonthly and are open to the public. Staff from the four managing agencies meets on the alternate months.

The Greenway Technical Committee has no governing authority but serves as the primary mechanism for the four managing agencies to discuss issues. In 2003, the Greenway Technical Committee began work on a set of consistent regulations for the governance of the entire Greenway system. These were based on a series of state laws and were adopted by the cities of Grand Forks and East Grand Forks in 2005 and 2006.

A Greenway and Trail Users Advisory Group has also been formed and is open to local citizens who share an interest in the development and use of the Greenway and trails in the Greater Grand Forks community. Meetings are held the once a month.

Citizens can submit an idea for an addition or improvement to the Greenway through either the Greenway Technical Committee or the Greenway and Trail Users Advisory Group. A completed request form is reviewed by the staff of the Greenway Technical Committee to determine its feasibility. If the request is approved for further evaluation, a member of the committee will guide the request through the proper channels of their organisation. Several features have been added to the Greenway as a result of citizen input and requests.

## Funding

The total cost for the flood protection project has been estimated at US\$409 million of which about half came from the U.S. federal government. The states of North Dakota and Minnesota and the cities of Grand Forks and East Grand Forks contributed the remaining funds. The cost for the recreational features has been estimated at US\$22 million and was funded on a 50/50 cost share between the federal government and the two cities. This included the trail system, restrooms, playground equipment, signage, and two pedestrian bridges. State agencies helped to fund the Community Green, two boat ramps, tree planting, trail signage, new trails and trail realignments.

During the planning for the flood protection project, the Grand Forks community decided that it wanted to incorporate extra features, not included in the original plan, including the Greenway Plan, construction of the Community Green, warming houses, and other recreational features. The City of Grand Forks established a Betterment Fund to provide 100 percent of the financial support for these additions. Money for the Betterment Fund was raised through a special assessment process paid by all property owners in Grand Forks. These special assessments were also used to pay a significant portion of the local share of the flood protection and Greenway project construction costs, including operating and maintenance expenses up to 2005.

The Friends of the Greenway Fund was established with the local Community Foundation of Grand Forks, East Grand Forks and the region and is used to construct projects within the Greenway. The local energy company and University of North Dakota have funded vegetation planting. A local dog park advocacy group raised the funds for a dog park within the Greenway. Other private donors funded a community pool, children's play areas, and other amenities.

In December 2005, the Grand Forks City Council passed an ordinance to assess a monthly fee of US\$1.15 per unit to residential and commercial properties to finance the operations and maintenance and small capital improvements of the flood protection system and Greenway.

Greenway expenses include items like administration, mowing, trail maintenance, repairs and replacement of recreational features, and minor debris cleanup. This nominal fee is included on the monthly utility bill for residents and businesses. Fees for residential customers are based on the number of residential units. Fees for nonresidential properties are based on the taxable area of the property and storm-water drainage factors.

In 2009, the City of East Grand Forks also began charging a monthly Greenway fee for every utility account within the city. This fee is dedicated to the Greenway Capital Fund for capital expenditures on trails and trailheads.

Most facilities in the Greenway are available at no cost, but fees are required for special events and to reserve picnic shelters and community rooms. These facilities are managed and fees collected by the Grand Forks Park District and East Grand Forks Park and Recreation Department.

## **Operations: Programs and Maintenance**

Discussion about the ongoing maintenance of the Greenway began early in the construction process and addressed both the flood protection and recreation components of the system.

In Grand Forks, the storm water division of the Public Works Department is responsible for maintaining the integrity of the flood protection system (e.g. floodwalls, earthen levees, pump stations, and a diversion channel). The streets division maintains the recreational features of the Greenway not already covered through agreements with other agencies or maintenance contracts. The Grand Forks Park District provides maintenance services for areas under its management.

The City of Grand Forks has one full time staff person within the Public Works Department who oversees the daily operations, maintenance, contracting for outside services, promotion, and public relations of the Grand Forks portion of the Greenway. The Grand Forks Greenway Specialist position was funded as a part of the construction project and then became a permanent position supported by the monthly assessment fees as well as city funding for maintenance of the flood control system.

Maintenance for the East Grand Forks portion of the Greenway is the responsibility of the city's Public Works Department, in partnership with the Minnesota Department of Natural Resources. Staff is hired seasonally to manage the Red River State Recreation Area, including the campground reservations, point of sale, rules and regulations, reporting, guidelines, and procedures.

The Greenway Adopt-a-Trail program is an all-volunteer program that allows persons or organisations interested in adopting a section of trail to submit an application to the managing agency for consideration. The Adopt-a-Trail program requires a minimum commitment of three years. Both cities also rely on a variety of outside agencies for assistance with forestry, recreation management, special events, and riparian restoration.

## **Key Resources**

This case study was largely developed from information available at The Greenways website, <http://www.greenwayggf.com/>, notably the "The Greenway 2012 Supplement, Grand Forks, North Dakota and East Grand Forks, Minnesota" and "The Greenway Plan, 2001, Grand Forks, North Dakota and East Grand Forks, Minnesota". Information on the 1997 flood and early programs also came from the City of Grand Forks, 1997, Flood Recovery Action Plan and the author's work and research following the 1997 flood.

## Case 2: Brooklyn Bridge Park, New York, New York– A Local Government Non-Profit Corporation Model

**Project Size:** 34-ha ribbon park running along 2 km of the East River Shoreline in the borough of Brooklyn, New York City.

**General Land Uses:** Open space, park and recreation facilities that include: lawns, gardens, playgrounds, sports facilities, walking and cycling paths, and waterfront access. Sites for residential and commercial development are also included.



*Park construction and landscaping underway at the Brooklyn Bridge Park (L. Johnson July 2011)*

**Timeframe:** Park decision reached in 2002 and planning initiated in 2004. Construction began in 2010 and largely completed by 2015. Residential and commercial development on the site is still ongoing.

**Benefits:** Provides year-round outdoor recreation and civic activities. Also provides opportunities for economic development and generation of funds to sustain park maintenance and operations.

### Context

Brooklyn Bridge Park is a 34 hectares park extending along 2 km of the East River shoreline, from just north of the Manhattan Bridge in the borough of Brooklyn in New York City. Much of the site once housed industrial warehouses that sat atop piers extending out into the river and originally built by the Port Authority of New York and New Jersey<sup>1</sup> in the 1950s. By the early 2000s, constant tidal action had degraded the timber piles under the piers and the warehouses were largely abandoned. The land was still owned by the Port Authority and much of the site was closed to public access. An agreement to create park on the site was reached in 2002 amidst community concerns that the land should remain in public use and not be sold for private development.

### Management Structure

A 2002 Memorandum of Understanding between the Port Authority, the State of New York and New York City established the terms of land ownership, funding, and planning for the park. It included a directive for 20 percent of the Port Authority land to be dedicated to development and revenue generation in order to pay for the ongoing capital necessary to maintain and operate the park. That figure was later reduced to 10 percent since real estate land values are so high in New York City and this was all that was necessary to meet the ongoing maintenance and operations needs of the park.

A new subsidiary of the Empire State Development Corporation (ESDC), called the Brooklyn Bridge Park Development Corporation (BBPDC), was also established in 2002 to lead the initial planning and

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<sup>1</sup> The Port Authority of New York and New Jersey was created in 1921 by a compact between the states of New York and New Jersey and approved by the U.S. Congress. It is under the joint control of the state governors of New York and New Jersey who each appoint 6-members to the Board of Commissioners for 6-year terms.

construction for the park. The ESDC is a 1995 amalgamation of New York State's Urban Development Corporation, the Department of Economic Development and several other state economic development entities. It has a broad range of statutory powers, including the authority to issue tax-exempt and non-tax exempt bonds, provide flexibility in the application of local codes and arrange full or partial exemption from real estate taxes. It can also exercise powers of condemnation, act as an agent in obtaining federal subsidies and grants for projects and invest in real estate at below-market interest rates. The EDSC has established many subsidiaries like the BBPDC throughout New York City and the state including the Lower Manhattan Development Corporation which has led rebuilding of the former site of the World Trade Center following the September 2001 disaster.

In 2010, the BBPDC transferred its financial and operational responsibility to the newly-formed Brooklyn Bridge Park Corporation. The Park Corporation is a non-profit entity formed and controlled by the City of New York. It is governed by a 17-member Board of Directors appointed by the Mayor of New York City and chosen by the Mayor of New York City, the Governor of New York State and local elected officials. Its mission is to create a sustainable waterfront park that is a recreational, environmental and cultural destination enjoyed by the residents of, and visitors to, New York City. The Corporation is required to be financially self-sustaining, which includes the commercial development of certain sites within the project's footprint. The Brooklyn Bridge Park Corporation formally leases the park land held by the BBPDC, manages the development and revenue generation efforts and has responsibility for ongoing maintenance and park programming.

The neighborhood activist group that led the campaign to create the park became the Brooklyn Bridge Park Conservancy which initially served mainly as an advocacy organisation for the park. The Conservancy eventually formalised into a non-profit agency and works collaboratively with the Brooklyn Bridge Park Corporation in handling the park's year-round events programming. The Conservancy's volunteers log over 6,800 hours per year helping to support programs, visitor services and park maintenance.

## Planning

In 2004, BBPDC initiated planning for the park's development, directing a design consultant to preserve the dramatic experience and monumental character of the industrial waterfront while reintroducing self-sustaining ecosystems to the site and investing it with new social and recreational possibilities. This resulted in a General Project Plan approved in 2005.

The proposed park design removed the former industrial structures and replaced them with a varied geography bisected by meandering walking paths, promenades and bicycle trails. The park's elevation, soil types, vegetation, edge design, and materials were also carefully selected to help reduce flood and storm risk. Dramatic increases of up to 10 meters in topography were proposed in order to help transform the site and enhance its views and appeal. Changes in grade are in direct relationship to the existing structural capacity of the site with less intense uses located on the piers and more intense uses and development located on parcels of land. Fill was imported from another city-owned excavation site. Multiple berms were also proposed to act as a barrier to both current and future flooding. A variety of salvaged materials and repurposed existing marine infrastructure were also incorporated into the park design, simplifying engineering solutions and reducing construction and maintenance costs.

The park plan also includes a handful of residential and commercial development sites along the park's urban edge that will generate funds and fulfill the park's mandate of being financially self-sufficient; see Map 2. The development program was determined after an in-depth analysis of potential locations. The analysis focused on finding uses that would generate sufficient revenue to support park operations, minimize the size of the required development footprint, and be compatible with the surrounding park and neighborhood uses. Development locations were chosen to take advantage of the existing urban context by concentrating development closest to three park entrances and protecting view corridors.

**Map 2. Revenue-generating Development Sites within the Brooklyn Bridge Park Project Footprint**



Source: Brooklyn Bridge Park Corporation, <http://www.brooklynbridgepark.org/pages/project-development>

The development projects include a number of new residential developments as well as a hotel. Given the location, condominiums cost millions of dollars to buy. More recently, New York's latest Mayor de Blasio has instituted mandates for affordable housing options as part of the newer residential developments.

## Funding

The total construction costs for the park are estimated at US\$350 million, which results in an average cost of US\$94 per square foot (about US\$1,000 per square meter). It is reported that both the State of New York and New York City provided seed funding of about US\$85 million and US\$65 million, respectively.

Only a small fraction of the required operations and maintenance funds for the park are collected from permits and concessions. The majority of these funds come from the revenue-generating development sites within the project's footprint. The development projects have helped to fund about US\$250 million in infrastructure improvements and they also provide over US\$4 million in revenues for the ongoing maintenance of the park.

## Operations: Maintenance and Programs

The multi-phased development of the park began in 2008. A portion of the park first opened in March 2010 and included playgrounds, lawns, a waterfront esplanade, and walking paths as well as dramatic changes in topography. Since then additional parts of the park have been constructed to include additional playgrounds, lawns, and promenades, as well as sports facilities, a waterfront greenway for pedestrians and cyclists, flower gardens, and numerous waterfront access features.

The Brooklyn Bridge Park Corporation maintenance and operations program includes horticulture, custodial staff, security, administration and events programming. The Park Corporation is also working to restore the pier structures through pile encapsulation. By encapsulating the timber piles with concrete, they are protected from tidal shifts preventing fungus from further deteriorating the piles.

There are more than 400 free events offered at the park. They include arts and culture (i.e. movies and concerts), recreation (i.e. boating, fitness classes, volleyball workshops, and chess lessons), education and environmental activities (i.e. stargazing and history tours), and fundraisers. The Brooklyn Bridge Park Corporation and Park Conservancy estimate that, over the last decade, 1,000,000 visitors have participated in the Conservancy's free events and activities. In 2015, there were 175,000 visitors and over 500 free and low-cost cultural, educational, and recreational events in the park. The Conservancy's education programs drew over 10,000 students from 50 New York City schools and free day camps.

## Key Resources

This case study was largely developed from information available at the Brooklyn Bridge Park website, <http://www.brooklynbridgepark.org/> and the book *Rebuilding the American City: Design and Strategy for the 21<sup>st</sup> Century Urban Core*, Gamble and Heyda (2015). Other resources include: Buro Happold Engineering, "Sandy Success Stories, New York, New Jersey, June 2013" <http://www.rebuildbydesign.org/research/resources/36-resources/38/38>

## Case 3: Beltline, Atlanta, Georgia – A Local Government Non-Profit Corporation Model

**Project Size:** 35-km walking, jogging and biking network around the city of Atlanta, Georgia. Parks are also being constructed along the network

**General Land Uses:** Open space, park and recreation facilities.

**Timeframe:** Initial concept proposed in 1999. Formal planning and management structure initiated in 2004. Eastside Trail opens in 2012. Work is still ongoing.

**Benefits:** Provides year-round outdoor recreation and connects existing parks and cultural facilities. Provides an innovative approach to public transport, linking 45 neighborhoods together and also connecting to the regional transit system (MARTA) and regional trails. It is also catalyzing redevelopment and economic development for over 2,500 ha of potentially developable land along the abandoned rail corridor ringing downtown Atlanta.



*Beltline trail in Atlanta, Georgia ([www.beltline.org](http://www.beltline.org))*



*Grand Opening of the Historic Fourth Ward Park along the Beltline ([www.beltline.org](http://www.beltline.org))*

### Context

The Beltline was first conceived by a Georgia Tech University graduate student in 1999. His thesis proposed repurposing a 35-km loop of largely abandoned old railroad lines, and rights-of-way ranging from 24 to 91 meters in width, that circle the City of Atlanta. The former rail corridor transects properties that were previously only seen from the rail infrastructure and included poorly maintained backyards, parking lots, water retention ponds, and industrial relics. Students then launched a letter campaign that finally gained traction with some members of the Atlanta City Council. One councilmember held a town hall meeting in her district and residents liked the Beltline idea. Soon after, that council member became City Council President and launched a 2 ½ year citywide outreach effort to gauge the level of support among various neighborhood groups and stakeholders across the city. A coalition of activists, developer and environment groups was formed.

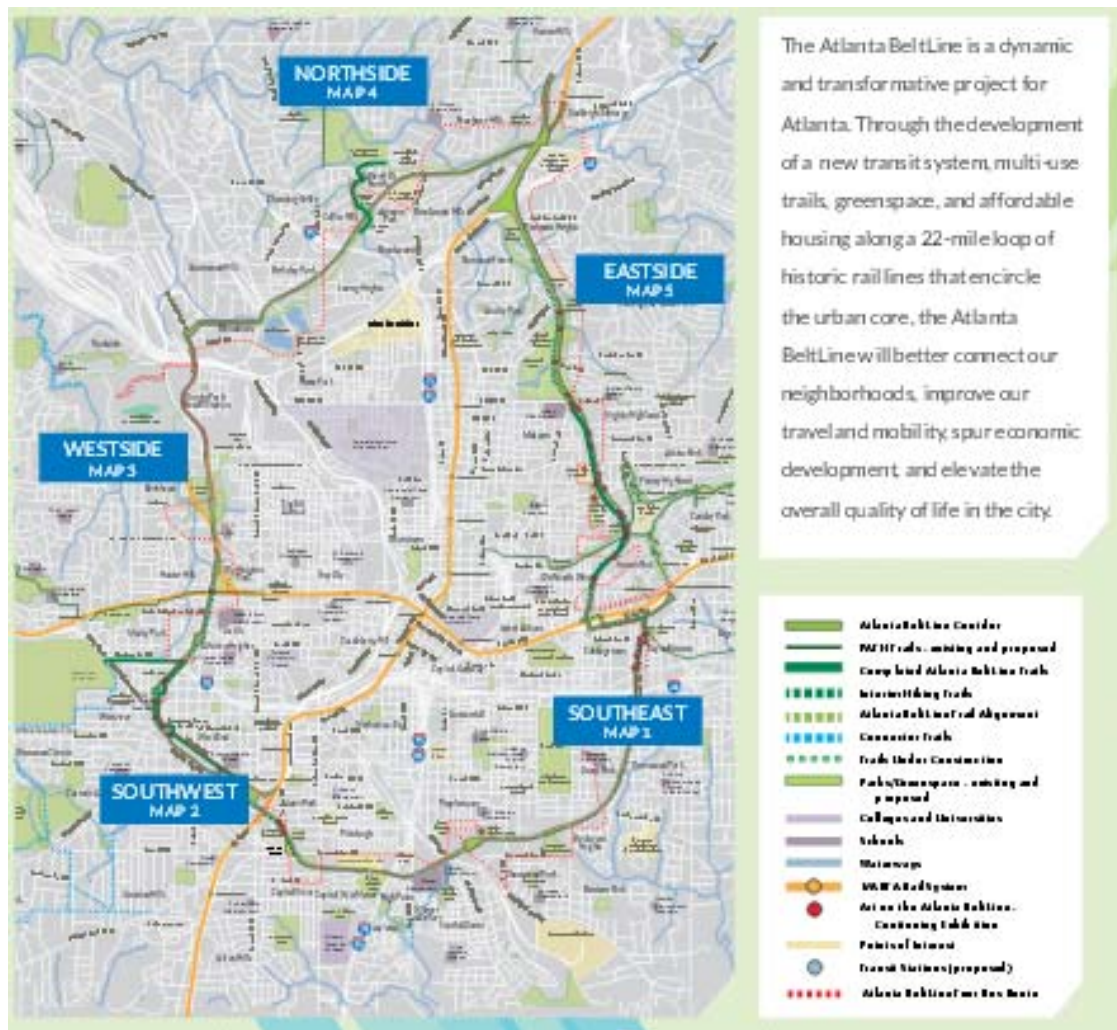
### Planning

In 2004, the Trust for Public Land—an international land preservation organisation—commissioned a study to look at ways to maximize greenspace opportunities in the Atlanta BeltLine corridor. The study was integral to the plans for comprehensive development or redevelopment of many major greenspace improvements.

The Atlanta BeltLine Redevelopment Plan was completed in 2005 and includes the initial proposal to combine greenspace, trails, transit, and new development along the 35 km of historic rail segments; see Map 3. The plan provided a framework for moving the project forward by outlining the major

public infrastructure projects that comprise the project, identifying the type and scope of potential development that would be consistent with good planning practices, and identifying the boundaries of a potential Tax Allocation District to be established in order provide a major local funding source for the project. (The Tax Allocation District is discussed in the Funding section of this case study.)

**Map 3. Overview of the 35-km Beltline trail network encircling downtown Atlanta, GA**



Source: [www.beltline.org](http://www.beltline.org)

The implementation of the Atlanta BeltLine began in 2006 with the start of the Five-Year Work Plan and the formation of Atlanta BeltLine, Inc. (ABI)—a subsidiary of the Atlanta Development Authority (discussed in the Management section of this case study). The Five-Year Work Plan served as a road map for all targeted activities and accomplishments of the first five years for ABI and its partners. The majority of the goals articulated in the plan were achieved in the five-year timeframe.

The Metropolitan Atlanta Rapid Transit Authority (MARTA) conducted an Alternatives Analysis (AA) to identify and evaluate transit improvements within the Atlanta BeltLine corridor. Finalized in 2007, this offered options for improving local and regional mobility, accessibility, and connectivity, while also supporting the City of Atlanta's redevelopment plans.

In 2007, master planning began by looking at the half mile on either side of the Atlanta BeltLine corridor to create a suitable framework to support future population growth and transit ridership. In 10 distinct subareas, Atlanta BeltLine, Inc. and the City of Atlanta Department of Planning and Community Development developed 10 master plans for neighborhoods surrounding the Beltline that address land use, transportation and parks. Neighborhood residents have informed and shaped the plans by providing detailed feedback at public meetings and in writing.

On December 11, 2013, ABI's Board of Directors unanimously approved the Atlanta Beltline 2030 Strategic Implementation Plan (SIP), which will guide the citywide transportation and redevelopment program through its completion. The SIP is the culmination of a year-long effort with extensive community and stakeholder engagement to create a living document that determines short, medium and long-term priorities for the implementation of the Atlanta BeltLine across the city. It also provides cost estimates and funding scenarios to complete the program.

## Management Structure

In 2006, Invest Atlanta (formerly the Atlanta Development Authority) formed a subsidiary organisation—the Atlanta BeltLine, Inc.—for the purpose of managing the implementation of the Atlanta BeltLine program. Like its parent organisation, Invest Atlanta, Atlanta Beltline Inc. is an independent, non-profit, private development corporation empowered through the Georgia Redevelopment Powers Law. It can receive public funding but is also able to receive charitable donations and partner directly with private corporations in economic development efforts.

Working with partners, including City of Atlanta departments, ABI's functions include specifically defining the Atlanta BeltLine plan; leading efforts to secure federal, state and local funding; spearheading all design and engineering; constructing trails, parks, transit, streetscapes, affordable housing, and art; continuing the community engagement process; managing all vendors and suppliers; and serving as the overall project management office to execute the Atlanta BeltLine program. ABI is also responsible for attracting new development along the special economic zone and, in doing so, navigates the complex space between city agencies, private sector developers, residents and other stakeholders.

Atlanta BeltLine, Inc. is also responsible for tracking and reporting progress on the program to the Atlanta City Council, Atlanta Public Schools, and Fulton County, the three taxing authorities that authorized the Atlanta BeltLine Tax Assessment District legislation in 2005 (discussed in the Funding section of this case study).

Atlanta BeltLine Partnership is a non-profit organisation that emerged out of the early grass-roots movement called the Friends of the Beltline. It is funded entirely through private and philanthropic sources. The Partnership staff works with neighborhoods, businesses, community and faith organisations, and other groups to raise general awareness, and broad-based support, for the Atlanta BeltLine. The Partnership also raises funds, and serves as a catalyst to mobilize resources to achieve the Atlanta BeltLine vision.

## Funding

The Atlanta Beltline Inc. has spent about US\$350 million for land acquisition, parks and trails construction but more than half of the system still needs to be developed. Funding has come from a mix of public and private resources.

A Tax Allocation District (TAD) was approved in 2005 and serves as a funding resource for the beltline construction based on the economic gains made in a 0.8-km swath of neighborhoods on either side of the trail (approximately 6,000 hectares and roughly 20 percent of the city's population and land areas). As their real estate values improve with the addition of the Beltline, the taxable value of that incremental increase in property value goes to Atlanta Beltline Inc. A portion of the tax increment revenue is also going to an affordable housing trust fund to help ensure that lower income residents are not displaced from neighborhoods as gentrification occurs.

There is one estimate that over US\$1.2 billion in private sector development has already occurred in the area ringing the trail.

## **Operations: Maintenance and Programs**

To date, 18 km of trails have been completed and are open to the public, including permanent trails and temporary hiking trails. The trail corridors have been constructed in phases. The southwest and southeast corridors are currently in design.

Several of the Atlanta BeltLine parks are also completed and open to the public, providing new recreational offerings, public health benefits, environmental benefits, and also serving as a catalyst for economic development around the parks. The greenspace component is based on the Trust for Public Land's 2004 study.

Besides fundraising, the Atlanta BeltLine Partnership's promotional efforts include: guided tours of the Beltline, hosting special events and run/walk races on the Beltline, conducting monthly sessions to teach residents about the Beltline, maintaining a speakers bureau to educate people about the Beltline, and disseminating information on the Beltline through outreach, social media, and specific activities. It also hosts the Adopt the Atlanta BeltLine in which dozens of businesses and community organisations have committed to caring for the Atlanta BeltLine corridor. It has also created the Atlanta Land Trust Collaborative to help address affordable housing issues, and it coordinates with more than 40 partner organisations to connect residents with job opportunities around the Atlanta BeltLine.

While the Beltline aims to bring together Atlanta residents of all races and economic strata, there are also concerns about social inequity and displacement that the Beltline's expansion bring new economic and access opportunities to different neighborhoods in the city. Atlanta Beltline Inc. plans to invest between US\$10 and US\$20 billion in infrastructure and economic development over the 25-year life of the program. The Atlanta Beltline Inc. equitable development strategy targets the creation of 5,600 units of affordable workforce housing, 30,000 permanent jobs, and 48,000 construction jobs, emphasizing local workforce training and hiring.

## **Key Resources**

This case study was largely developed from information available at the Atlanta Beltline Inc. website, <http://www.beltline.org/> and the Invest Atlanta website, <https://www.investatlanta.com>. The book *Rebuilding the American City: Design and Strategy for the 21<sup>st</sup> Century Urban Core*, Gamble and Heyda (2015) was another important resource.

## Case 4: Railroad Park, Birmingham, Alabama – A Local Government and Non-profit Partnership Model

**Project Size:** 8 ha of open space in downtown Birmingham.

**General Land Uses:** Open space park and recreation facilities that include local recreation, family activities, concerts, and cultural events.

**Timeframe:** Park-specific planning was initiated in 2005 and the park opened in 2010.

**Benefits:** Provides year-round recreation and a source of economic development, connecting Birmingham's downtown area with surrounding neighborhoods and the University of Alabama-Birmingham campus.



*The 17<sup>th</sup> Street plaza is home to concerts, food truck festivals and other cultural events. The excavated pond provides for water storage and flood protection (<http://www.railroadpark.org>).*

### Context

The City of Birmingham, Alabama was an industrial hub in the early 20<sup>th</sup> century but many of those industries like steel production faltered in the second half of the century. Abandoned rail yards were just one of the artefacts that the City of Birmingham had to contend with.

Back in its heyday, the city of Birmingham and the surrounding Jefferson County had commissioned the famous Olmsted Brothers to prepare a plan for a comprehensive open space network through the city. The plan addressed storm water and floodplain management and recommended a system of new and expanded parks through the “thriving industrial center.” Even after resources for the plan’s implementation diminished in the 1930s and 1940s, the notion of downtown parks and recreation endured.

### Planning

The abandoned railroad yards have been the subject of numerous planning efforts over many decades. In 2002, however, the City of Birmingham invited the Urban Land Institute—a worldwide land use and real estate development membership organisation—to conduct an advisory service panel on how to enhance quality of life and stimulate economic redevelopment in downtown Birmingham. The panel had a broad-based steering committee that included neighborhood leaders and business leaders. A Railroad Preservation Park was one of the panel’s five focus areas that it recommended could be a “unifying design element and social magnet” to generate increased property value and the development of new residential and commercial uses. Friends of the Railroad District formed in 2001 and provided advocacy and fundraising for the park.

A 2004 citywide master plan stressed the transformative potential of the railroad park. The University of Alabama had a growing hospital and research facilities just to the south of the park and, together with the Children’s Hospital, these facilities were serving as economic drivers in the



The park has been the source of downtown and neighborhood transformation as city leaders had hoped. Six months after the park opened, the city was already in construction on a minor-league baseball park across the street from the park. The team had been out in the suburbs for 30 years but decided to move back into downtown as the railroad park was under construction. Former industrial buildings around the railroad park are being converted into new uses or demolished to enable larger projects to occur. Large-scale residential and commercial construction is emerging on the park's periphery in an area now referred to as the "Parkside District."

## Management Structure

The City of Birmingham acquired the abandoned property surrounding the active rail lines with federal transportation funding. The rail line rights-of-way are held by private rail companies. The city also funded the initial planning for the park as well as a portion of the park construction.

The Friends of the Railroad District transformed into the Railroad Park Foundation. It is a non-profit organisation managed by an approximately 20-member volunteer Board of Directors and a small staff. The Foundation helped to raise funds for the park construction and also entered into an agreement with the City of Birmingham to manage the park. The Railroad Park Foundation relies on public and private donations to operate and manage the park.

## Funding

Available estimates for the park construction range from US\$17 million to US\$23 million. The City of Birmingham, Jefferson County, the Railroad Park Foundation and the Community Foundation of Greater Birmingham all provided funds to construct the park. A portion of the capital funding came from the Three Parks Initiative, a combined campaign that was jointly managed by the Community Foundation of Greater Birmingham and Region 2020 to raise money for several parks and support the vision of Birmingham as a national leader in green space.

## Operations: Maintenance and Programs

Railroad Park has been open since September 2010. Key amenities include:

- The partially covered 17th Street Plaza which houses the ranger station, the Railroad Park Foundation office, restrooms and the Railroad Park Dining Car
- Two age-appropriate play areas with modern playground equipment and a climbing dome
- Outdoor gym equipment for adults
- A variety of walking trails to accommodate runners and walkers
- A lake, rain curtain, wetlands, ponds, and streams
- A designated skate area, and
- Free Wi-Fi throughout the park.

The Railroad Park Foundations offers a variety of programs that includes exercise programs, run/walk races, a fall food truck festival, summer symphonies, and other community celebrations. The Foundation also provides park security, including rangers on patrol, and landscaping and maintenance services.

## Key Resources

This case study was largely developed from information available at the Railroad Park Foundation website, <http://www.railroadpark.org> and the book *Rebuilding the American City: Design and Strategy for the 21<sup>st</sup> Century Urban Core*, Gamble and Heyda (2015).

## Case 5: Buffalo Bayou, Houston, Texas – A Non-Profit Model

**Project Size:** Parkland along a 16-km stretch of waterway in the City of Houston.

**General Land Uses:** Open space, civic park and recreation facilities, and flood protection.

**Timeframe:** Non-profit formed in 1986. Park construction projects initiated in 1988. Major master planning initiated in 2001. Subsequent park construction and flood protection projects undertaken and continuing today.

**Benefits:** Provides for enhanced flood protection, ecological value, and year-round outdoor recreation. It is also a source of economic development for downtown Houston and adjoining neighborhoods.



*A view toward downtown Houston along Buffalo Bayou (<http://buffalobayou.org>)*



*Dog park in Buffalo Bayou Park (<http://buffalobayou.org>)*

### Context

Buffalo Bayou is one of the two major watersheds in the Houston metropolitan area. It flows approximately 85 km toward the Galveston Bay and the Gulf of Mexico. The place where Buffalo Bayou merges with the other major tributary—White Oak Bayou—in downtown Houston is the city's original settlement site. After major flooding in 1935, the Harris County Flood Control District was established as a local partner of the U.S. Army Corps of Engineers which acquired land alongside the city's watersheds and channelized the waterways into open concrete troughs designed to help manage high-volume floods. Buffalo Bayou was not channelized in concrete; however, it became overgrown with vegetation and a dumping ground for unwanted goods and rubbish. Near downtown Houston, the bayou is located about 9 meters below street grade and overtopped in many places by highways and roadway bridges. In 2001, Tropical Storm Allison caused record flooding in downtown Houston and crystalized local advocacy to improve the bayou.

### Management Structure

In 1986, the City of Houston's Mayor founded the Buffalo Bayou Partnership (BBP), a non-profit corporation, to advocate for the regeneration of a 16-km stretch of Buffalo Bayou and oversee land acquisition, trail development, park creation and comprehensive clean-up along the bayou. The partnership has helped to organize a number of local and state agencies as well as neighborhood, transportation, real estate, economic development, and environmental interest groups. It raises funds from public and private donors and advocates for planning. It also seeks ways to activate Buffalo Bayou through pedestrian, boating and biking amenities; volunteer activities; permanent and temporary art installations; and wide-ranging tours and events that attract thousands. The Partnership is led by a large (30+ member) voluntary Board of Directors and there are a couple dozen staff that handle fund raising, public relations, field operations and park management, landscaping, and maintenance.

The Harris County Flood Control District controls much of the land on either side of the Buffalo Bayou waterway. The District's standard right-of-way is about 60 to 90 meters wide. The District maintains the waterway and also provides clean-up support following floods. It also contributes funds toward the flood mitigation portions of the Buffalo Bayou project.

The Houston Parks Board is a non-profit organisation created in 1976 that seeks donations of land and other assets, manages capital projects, undertakes studies for the benefit of the park system and raises awareness of the need for adequate parks and open spaces across the City of Houston. The Parks Board is made up of 26 volunteer Board of Directors and 7 full-time staff members and it works with local agencies, other non-profit organisations and numerous community groups in fulfilling its mission.

The Houston Parks Board in partnership with the Houston Parks and Recreation Department and the Harris County Flood Control District leads the private fundraising and it also manages the acquisition, design and construction of the Bayou Greenways 2020 Project. The 2020 project aims to significantly expand and enhance Houston's parks system by creating a continuous 240 km system of parks and trails along Houston's bayous and linking to the Buffalo Bayou Partnership and plans.

## Planning

In 2001, the Buffalo Bayou Partnership launched a major planning effort, shortly before Tropical Storm Allison struck and caused major flooding across downtown Houston and the metropolitan area. The planning effort soon became a public-private project, led by the Partnership as well as Harris County, the City of Houston, the Harris County Flood Control District, and the Texas Department of Transportation.

The Partnership's 20-year Master Plan, *Buffalo Bayou and Beyond*, was issued in 2002. It calls for Buffalo Bayou to be a central, regional amenity with proposed restoration and revitalisation work that attempted to balance conservation and development and create projects that serve multiple purposes—recreation, flood management and ecosystem restoration. Its specific proposals were to:

- Create 345 hectares of new park land that will transform the bayou into a recreational and scenic focal point for Houston
- Define key sites that will make the bayou a focal point for greater Houston's future development (see Map 5)
- Reduce flooding potential in downtown Houston and upstream communities
- Build a network of trails and public sites to promote access to the bayou, and reconnect communities to their waterway
- Reclaim former industrial sites and repair damaged environmental resources
- Create public access to views and edges of the bayou from streets, trails, neighborhoods, and all areas of the downtown.

The plan also recognized that there would be enhanced economic benefits both to adjoining properties and neighborhoods as well as to the city and region as a whole from the improvements made along the bayou.

Site-specific plans have also been completed for specific park developments and for such areas as public art, lighting and conservation management.

**Map 5. Network of event destinations along Buffalo Bayou**



Source: *Buffalo Bayou and Beyond Master Plan*, page 50, <http://buffalobayou.org/our-vision/>

## Funding

Over the organisation's 30-year history, the Buffalo Bayou Partnership Board of Directors and staff have raised and leveraged more than US\$150 million in private and public funds, including federal and state sources, for the bayou's redevelopment and stewardship.

As part of fundraising, the Partnership hosts several events each year. The Buffalo Bayou Partnership Gala is the Partnership's most important fundraiser. The Buffalo Bayou Partnership Regatta is Texas' largest canoe and kayak race along historic Buffalo Bayou and a spring celebration—hosted by the Partnership's young professionals group—features crawfish and libations, live music, lawn games, and boat rides.

Annual funding for maintenance of the Partnership's Buffalo Bayou Park is provided by the Downtown Tax Increment Reinvestment Zone (TIRZ #3). Tax Increment Reinvestment Zones (TIRZs) are special zones created by the city council to attract new investment into an area. TIRZs help finance costs of redevelopment and encourage development in areas that would otherwise not attract sufficient market development in a timely manner. Taxes attributable to new improvements (tax increments) are set-aside in a fund to finance public improvements within the boundaries of the zone. The Board of Directors of a reinvestment zone generally consists of at least five and not more than 15 members who are appointed to 2-year terms. Each taxing unit other than the municipality or county that created the zone may appoint one member of the board.

The Harris County Flood Control District has provided funds for those major improvements related to flood control.

The Houston Parks Board estimates that the cost to complete the Bayou Greenways 2020 project will be US\$220 million. In November 2012, 80 percent of Houston voters approved a major bond referendum to provide US\$166 million in parks funding of which US\$100 million is set aside for the Bayou Greenways 2020 project. The board is responsible for raising the remaining US\$120 million from private funds, federal and state grants and other sources. As of February 2016, more than US\$90 million had been raised.

## Operations: Maintenance and Programs

Shortly after its formation in 1986, the Buffalo Bayou Partnership helped to raise public and private funds to construct two parks along the bayou.

- The 9-hectare Sesquicentennial Park is located in the heart of Houston's Theater District. It was established in 1986 to commemorate the 150-year anniversary of the founding of the city of Houston. It contains a promenade and pedestrian bridge, a commons area with dedications to local leaders, a boat dock and gardens, and an historic photographic display.
- The Partnership also took the lead in revitalising the city's historic settlement site at Allen's Landing into an active and vibrant destination along downtown's waterfront. Enhancements include an entry plaza, embarcadero, historic wharf, hike and bike trails, and public art.

The Sabine Promenade, completed in 2006, provides new bike and pedestrian trails, a pedestrian bridge, two canoe and kayak launches, art installations, and lighting along the bridges, trails and water in a 1.9-km stretch of the bayou near downtown. The project has won dozens of awards for its innovative design for this difficult section of the bayou that winds under highways and is characterized by steep embankments.

The Partnership also recently completed the US\$58 million Buffalo Bayou Park project that includes an elevated sky lawn and pavilion with views of the Houston skyline, park facilities for large-scale festivals and events, a restaurant, a dog park, natural landscaping including wetland gardens and a restored pond, footpaths, trail lighting, water features and pedestrian bridges. Buffalo Bayou Partnership is maintaining and operating Buffalo Bayou Park.

In 2003, the Partnership also launched a skimmer boat program sponsored by the Harris County Flood Control District. The custom-built, industrial strength vessel—the Bio-Vac-- sucks floatable trash from Buffalo Bayou. The Partnership's Clean & Green Program was established with Shell Oil Company and the Port of Houston Authority as founding partners and the Partnership's staff directs and works alongside community service workers to remove trash and debris from Buffalo Bayou, its tributaries and the Port of Houston. In 2013, nearly 85 cubic meters of trash and debris were removed from Buffalo Bayou, its tributaries and the Port of Houston.

## Key Resources

This case study relied upon information from the following organisation's websites:

- Buffalo Bayou Partnership, <http://buffalobayou.org>
- Houston Parks Board, <http://houstonparksboard.org>
- City of Houston, Tax Increment Reinvestment Zones, <http://www.houstontx.gov/ecodev/tirz.html>

Another key resource was the book, *Rebuilding the American City: Design and Strategy for the 21<sup>st</sup> Century Urban Core*, Gamble and Heyda (2015).

## Case 6: The Presidio, San Francisco, California – A National Government Non-profit Corporation Model

**Project Size:** 607 ha in total—486 ha held by a new federal corporation—the Presidio Trust—and 121 ha of coastal area managed by the U.S. National Park Service.

**General Land Uses:** Open space, park and recreation facilities, new office space, and former military and heritage structures that have been revitalised for leased housing, recreational, hospitality, educational and commercial uses.

**Timeframe:** 1994 – 2013. Base closure and land transfer began in 1994; New federal management structure established in 1996. The Presidio achieved self-sufficiency in 2013.

**Benefits:** Preserve historic structures and open space for public use; provide a refuge for rare and endangered species; and provide housing, recreational, hospitality, educational, and commercial opportunities for a population of 7,000 (within the site), as well as the residents of the City and County of San Francisco and surrounding communities and millions of tourists that visit the region each year.



*The Golden Gate Bridge as viewed from the beach at Crissy Field in The Presidio (L. Johnson Oct 2014)*



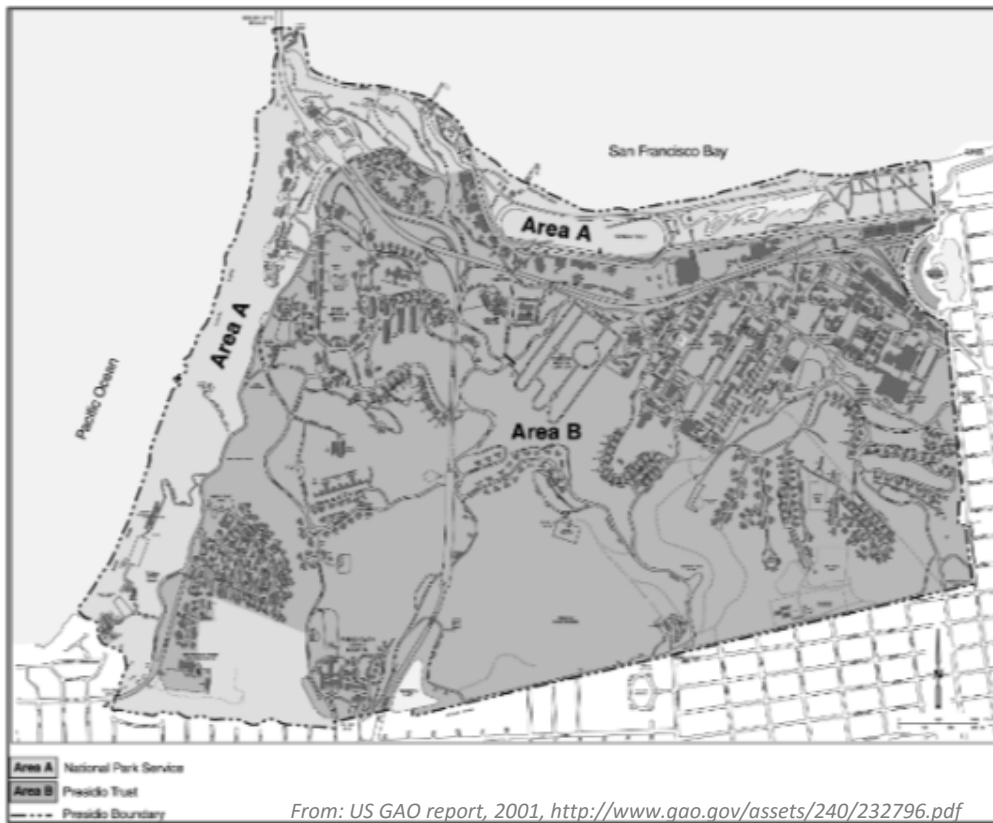
*An aerial view of The Presidio (Source: <http://www.innatthepresidio.com/images/headers/area/presidio-community-header-lg.jpg>)*

### Context

The Presidio was established in 1776 at the mouth of San Francisco Bay and served as a fort for Spain and Mexico before becoming a U.S. Army post in 1846. In 1972, legislation creating the new Golden Gate National Recreation Area in northern California indicated that the Presidio would join that park if the Army ever left the site. In 1989, the U.S. Base Realignment and Closure Commission determined that the Presidio was no longer needed for military service. In 1994, the Presidio was officially turned over to the National Park Service to become part of the Golden Gate National Recreation Area. However, the costs to convert the base to public use were significant and so a unique governance model was created.

### Management Structure

In 1996, the U.S. Congress created The Presidio Trust as a wholly-owned government corporation managed by a seven member, volunteer Board of Directors (The Presidio Trust Act, Public Law 104-333, 6 U.S.C. §460bb appendix). Six members are appointed by the President of the United States and the seventh is the U.S. Secretary of the Interior or designee. Board members are generally appointed to 4-year terms and can serve up to 8 consecutive years. The board must hold three meetings per year, two of which must be open to the public. An executive director oversees the daily operations of the Trust and the several hundred staff. Under the Act, the Trust is charged with managing the leasing, maintenance, rehabilitation, repair and improvement of 80 percent of the land (486 hectares) and 770 structures within the Presidio (See Map 6).

**Map 6. The Presidio lands managed by the Presidio Trust and the National Park Service.**

Source: The Presidio Trust.

Congress required that the Trust, within one year of appointing its Board of Directors, develop a comprehensive program for management of the lands and facilities that would be designed to reduce federal support and increase revenue by attracting non-federal resources to the park to the point that the Trust would become self-sufficient within 15 years. If the Trust failed to achieve this mandate, the law directed that the Presidio would be sold as excess federal property. In 2013, the Presidio reached a crucial milestone when it became financially self-sufficient and no longer relies on federal taxpayer support. The act also includes a requirement that the Trust undergo annual audits and that the U.S. Government Accountability Office periodically review and report to the Congress on the Trust's activities.

The federal government also designated the U.S. National Park Service to manage 121 hectares of coastal area that includes the shoreline along San Francisco Bay and the Pacific Ocean. Under the Presidio Trust Act, the National Park Service and Presidio Trust can enter into agreements with respect to leasing, maintenance, rehabilitation, repair and improvements of the land and structures within the Presidio which has allowed the two agencies to leverage both personnel and funding resources.

The third entity that is critical to the Presidio's management is the Golden Gate National Parks Conservancy. The Conservancy is a non-profit membership organisation first established in 1981 soon after the federal designation of the Golden Gate National Recreation Area. Its main activities are to raise philanthropic funds and build community support for the recreation area, including the Presidio.

## Planning

There have been two major cycles of planning since the Presidio Trust took over control of land and structures in the Presidio in 1998.

In 2000, the Presidio Trust undertook a two-year community planning process to develop the Presidio Trust Management Plan that would guide the trust management and revitalisation of the park's seven districts. As part of this planning process, the Trust prepared a preferred alternative and five other alternatives for the future development of the Presidio. Under every alternative, the Trust could achieve financial self-sufficiency by 2013. During that timeframe, the National Park Service prepared the Presidio Trails and Bikeways Master Plan and the Vegetation Management Plan which also helped to lay the foundation for enhancements in the park.

After achieving financial self-sufficiency in 2013, the Trust embarked on another phase of planning. Strategy 2020 released in 2015 outlines how the Trust will move beyond its work to save the Presidio in its the first two decades of existence into sharing the Presidio and expanding opportunities for its use and maintaining financial stability over the next two decades.

## Funding

Under the Presidio Trust Act, the Trust was also allowed to retain all proceeds and other revenues from Presidio properties under its administrative jurisdiction for administration, preservation, restoration, operation and maintenance, improvement, repair and related expenses. Congress also gave the Trust the authority to guarantee loans to tenants who finance capital improvements of Presidio buildings, manage building leases, borrow up to US\$50 million from the U.S. Treasury, and demolish buildings that it deems to be beyond cost-effective rehabilitation. The Act also exempted the Trust and all properties administered by the Trust from all taxes and special assessments by the State of California and its political subdivisions, including the City and County of San Francisco.

Congress initially seeded the Trust with US\$25 million annually—the amount of funding that it was already appropriating to maintain the land. Once the management plan was completed and approved, federal funding was adjusted to meet the annual funding levels outlined in the plan.

In the first three years (1998 – 2001), the Trust spent more than US\$38 million to preserve and protect the Presidio by upgrading the infrastructure and repairing and rehabilitating residential housing units and commercial space. In addition, private entities spent about US\$40.8 million to repair and rehabilitate commercial space that they then leased from the Trust. The Trust also assumed responsibility for the environmental cleanup of contamination across the entire Presidio.

By 2015, US\$1.6 billion had been invested in the Presidio since 1998. Funds have come from many sources—public taxpayer support, philanthropic gifts, investment in building rehabilitation by tenant organisations, and leasing revenue. The Trust reports a 4:1 ratio of private investment to federal dollars received.

Volunteers have also been a major element of the Presidio's operations. In 2012, 6,765 volunteers recorded 65,056 hours of work, supporting habitat restoration, archaeological investigations, and trail maintenance, and serving as visitor docents. The Presidio ranks fifth among all U.S. national parks in volunteer participation. The volunteer program is operated by the Golden Gate National Parks Conservancy, the Presidio Trust, and the National Park Service.

## **Operations: Maintenance and Programs**

Since 1998, the Trust has upgraded infrastructure (electric, telecommunications, storm drains, sanitary sewer, potable water, and roadways) and repurposed 560,000 square meters of building space. As of 2015, 80 percent of the Presidio's building space was occupied and 21 neighborhoods were revitalised. There are now 3,000 residents in 1,200 homes and 4,000 employees and 200 companies working in buildings that the Army once used as offices, airplane hangars, and warehouses. They include non-profits, for-profits, restaurants, recreational organisations, and cultural destinations such as museums and archeological sites. In 2005, the Trust built a Transit Center on the Main Post and established a free shuttle system for park visitors, residents, and employees.

The Trust began a major Environmental Remediation Program in 1999, transferring primary remediation responsibility from the U.S. Army and National Park Service to the Trust through a series of cooperative agreements. As of 2015, 90 percent of the remediation program was complete. Sixteen landfill sites were assessed, removed, or capped; 500 former fuel storage tanks were assessed and remediated; extensive amounts of fuel distribution piping was removed; and lead-based paint in soil was removed at hundreds of sites.

The National Park Service retains responsibility for the maintenance of the coastal areas within its jurisdiction. It also provides public safety services, public interpretive services, visitor orientation, and educational programs throughout the Presidio under a reimbursable agreement with the Trust.

The Golden Gate National Parks Conservancy collaborates with the Presidio Trust and National Park Service to undertake major projects and to run the Presidio plant nursery, administer stewardship programs, and provide public programs. In addition to individual, corporate, and foundation donors, the Conservancy also earns income from operating park bookstores, selling retail merchandise, publishing educational materials, and providing interpretive tours.

Together, the Golden Gate National Parks Conservancy and the National Park Service transformed the Crissy Field shoreline. Funding came from Evelyn and Walter Haas, Jr. Fund and Colleen and Robert Haas, as well as thousands of community volunteers and donors. The marsh, airfield, beaches, picnic areas, and trails opened to the public in 2001.

The Trails Forever campaign began in 2002 with a generous lead challenge grant from the Evelyn and Walter Haas, Jr. Fund and match funding from many donors including the S.D. Bechtel, Jr. Foundation. Today, more than 30 km of new or upgraded trails, 22 km of bikeways, and seven major scenic overlooks grace the park.

The Presidio's historic Public Health Service District was restored in 2010 and is now a "green" neighborhood with homes, office space, a pre-school, a historic printing press, trails, scenic overlooks, and 10 hectares of open space. Forest City Enterprises led the revitalisation of the historic hospital into a residential community. The Presidio Trust repurposed the former nurses'

quarters as office space, rehabilitated the surgeons' homes, and converted support buildings to house a variety of organisations. The Trust also improved landscapes, built new trails, and completed environmental remediation. The collection of projects earned the 2011 California Governor's Historic Preservation Award.

## Key Resources

This case study was largely developed from information available at The Presidio website, <http://www.presidio.gov>, notably "Milestones: Presidio Trust 2012 Year-End Report to Congress and the Community", <http://www.presidio.gov/presidio-trust/Shared%20Documents/Milestones%202012%20Year-End%20Report.pdf> and "Strategy 2020: Unleashing the Promise of the Presidio" <http://www.presidio.gov/presidio-trust/Shared%20Documents/Strategy%202020.pdf>.

The U.S. Government Accountability Office 2001 report on the Presidio Trust was also used, see <http://www.gao.gov/assets/240/232796.pdf>.

## Insights and Key Points for Consideration

The six case studies provide a spectrum of planning, management, funding, operational issues to be considered as the Waimakariri District Council and its partners move forward with the adaptive reuse planning and implementation for the Waimakariri regeneration areas.

### Insights

Some insights drawn from the case study analysis include the following:

- **Regeneration planning needs to consider pre-existing and future conditions of more than just the project site.** All the project sites endured some type of on-going stress or shock – either economic or physical—and there were ripple effects from these shocks and under-utilisation of the project sites onto adjoining properties, neighborhoods and communities. As exemplified with the Atlanta Beltline and Birmingham Railroad Park cases, project planning considered the conditions of surrounding areas, socio-economic trends and opportunities underway in nearby areas, and how the proposed project could be a catalyst and stimulus for revitalisation of the surrounding areas as well as the project site.

In all the cases, surrounding areas have benefitted by increased property values and economic revitalisation following the regeneration of the project sites. However, there were also consequential issues of social equity and displacement resulting from these benefits and these were not addressed as well in the planning stages.

- **Regeneration project planning and implementation takes many years to complete.** It took several years, even decades, to complete the planning and design, fundraising, and construction of all the project sites. Initial project planning was only a small portion (a few years) of the overall project timelines.

Time to completion seems to roughly correlate with the complexity of land uses and the physical size of a particular project. The relatively simpler Birmingham Railroad Park and Grand Forks Greenway projects took under a decade for the major planning and implementation work to be completed; whereas, the others which have involved more complex land acquisition and land use issues have taken longer to implement. Within the Brooklyn Bridge Park project, the park area took a lot less time to plan and construct than the residential and commercial development elements of the project.

- **Regeneration projects benefit from special, collaborative and sustaining governance arrangements among government agencies as well as citizen and stakeholder groups.** All the cases involved multiple agencies and groups in special governance schemes established specifically for the projects. Also, many of these governance arrangements evolved and changed over time as the projects progressed through the planning, construction and operational phases.

Separate not-for-profit government corporations—governed by independent boards of directors—were created for half of the six cases. Two of the corporations reside at the local government level in New York City and Atlanta. A mixed local-state level entity was initially created for New York's Brooklyn Bridge Park before the local level entity was created. In San Francisco, the Presidio Trust is a national-level entity with very little state or local involvement. For the Grand Forks Greenway, the cities created a formal alliance with state and federal partners to complete the initial project planning and then continued to collaborate through a Greenway Technical Committee for the construction and operational

phases. While Houston's mayor initiated the Buffalo Bayou Partnership, it operates as a non-profit corporation outside government.

The funding for these corporations has come from a variety of sources that include government funds, individual and private corporation donations, and philanthropic grants. Special government funding arrangements, like tax increment financing, were also established and overseen by these corporations.

All the projects also had formalised and important roles for interested citizen and stakeholder groups like the Brooklyn Bridge Park Conservancy, Atlanta Beltline Partnership, Railroad Park Foundation, Buffalo Bayou Partnership and Golden Gate Park Conservancy. Most commonly, these roles were formalised as non-government, not-for-profit membership organisations and the organisations were natural out-growths of neighborhood and community special interest groups that advocated for the projects. The roles and functions of these organisations have also had indirect benefits of building social capital and community resilience.

Noteworthy roles of these organisations include: helping to raise funds for and guide the project planning processes and ensuring robust citizen and stakeholder involvement in the planning processes; fundraising for the land acquisition and project construction; provision of maintenance and security services for the project; and offering a number of programs and services that support the public-serving facilities in the projects. Some noteworthy activities and functions carried out by these organisations include: fundraising campaigns and events; the operation of "adoption programs" for open space, trail and asset maintenance; interpretive tours and educational activities; scheduling and management of public programs and events; and the operation of public-serving facilities like bookstores and restaurants.

- **Land ownership and the sources and availability of funding are two key determinants in the governance arrangements adopted for regeneration projects.** The governance arrangements of all the case studies were largely influenced by the ultimate land ownership of the regeneration areas and not necessarily the land ownership patterns at the start of the projects. The governance arrangements in New York City, Atlanta, and Birmingham were specifically selected for the legal authorities that they would have to both purchase and sell land within the project areas; and the U.S. government through the Presidio Trust maintains ownership and governance authority over the land within the Presidio. These organisations were also intentionally created at "arms-length" from government, allowing them to seek and manage public funds as well as private and non-profit sector grants and other charitable donations, and to partner directly with private corporations and philanthropic organisations in economic development efforts.
- **By their very nature, regeneration projects require innovative funding approaches.** Regeneration projects often involve hazard-prone or under-utilised land as well as other risks that are difficult for conventional real estate development and financing structures to handle. All the case studies involved a significant level of private sector and philanthropic funding that mostly came in the form of grants and donations. The Buffalo Bayou Partnership has raised a great proportion of project funding from philanthropic foundations, corporations, and individuals. The Brooklyn Bridge Park Corporation is financing the public park construction through the revenue generated from residential and commercial development on the site. The Atlanta Beltline Inc. uses tax increment financing to generate funds to acquire land and construct the multi-purpose pathways. The Presidio Trust

generates revenue through the leasing of rehabilitated structures for housing, hospitality, educational, office and commercial uses. Even the Grand Forks Greenway, which is almost entirely government-owned and financed, has raised funds through private donations and philanthropic grants to construct trails and pathways as well as park amenities such as a community pool and playgrounds, and to plant vegetation. On-going maintenance of the Greenway is also funded through a nominal monthly fee attached to the cities' water and wastewater utility bills.

## Points for Consideration

As the Waimakariri District Council and its strategic partners move into the implementation phase for the Kaiapoi, Pines Beach and Kairaki regeneration areas, it may be useful to consider the following points as well as other insights gained through this casebook analysis:

- Have the opportunities and benefits of economic revitalisation to properties and neighborhoods adjoining the regeneration areas been fully explored? Are there potential partnerships or other ways to leverage and acknowledge those benefits in the governance structures as well as the funding schemes for both the implementation and on-going maintenance and operations of the regeneration projects?
- Similarly, are there potential social equity and displacement issues that may arise from the increased benefits resulting from the regeneration areas and how might those issues be monitored and addressed in the implementation phase of the regeneration projects?
- Are the current timelines and expectations for implementation appropriate for the scale and complexity of each of the regeneration projects?
- What are some of the potential risks to current timelines and expectations and how might those be monitored and addressed in the implementation phase for each of the regeneration projects?
- What is the appropriate governance arrangement within the Council to maintain the sustained focus necessary throughout the implementation phase for each of the regeneration projects? What departmental collaborations and skills are necessary and how can they be best accessed and leveraged in governance arrangements for the implementation phase?
- What other agencies and organisations have overlapping and alignable projects and interests in and around each of the regeneration areas? How might those interests be leveraged into the governance arrangements for the implementation phase? Also, what are some of the potential risks and challenges for each and how might those be monitored and addressed?
- Are there neighborhood and special interest groups with alignable interests that might be engaged and even cultivated to have more formalised roles and functions in the implementation and operational phases for the regeneration areas? What are some of the key roles and functions that these groups could undertake? What additional skills and resources might they need and how might the Council support them in their efforts?
- Do other agencies, organisations, stakeholder groups with an interest in and around the regeneration areas have access to resources that could be better leveraged if combined to achieve a greater good than if managed separately? And finally,
- Have all the potential financing options been explored for each of the regeneration areas? Are there some innovative financing approaches and governmental and non-governmental resources that might be accessed, especially considering the economic development and revitalisation opportunities that will result from each of the projects?



## Appendix A: Brief Summaries of Other Potential Cases

As reported, an initial set of potential cases was developed by looking at both kinds of adaptive reuse—of brownfields and hazard-prone lands—and the potential case preferences. This initial set include potential cases in New Zealand, Australia, China, Japan, the United Kingdom, Canada, the United States, and Chile. This appendix contains brief summaries of eight other cases that made it to the short list for more detailed consideration in the study. There are aspects of each of these cases that may be helpful to the Waimakariri District Council in planning for next steps in the reuse of the Waimakariri regeneration areas. As with the main cases in the study, key resources are also provided for each brief summary so that more information can be obtained if desired.

### Voluntary land swap program, Grantham, Queensland and other Australia examples

Following floods in January 2011, 100 residents from Grantham, Queensland and nearby towns were offered properties on a piece of higher-elevation land in exchange for their low-lying, flood-ruined homes. The Strengthening Grantham Project involved a voluntary land swap program that was put in place by May 2011 in which residents swapped lots of land then paid to build their new homes with their insurance payouts backed by special grants from the Premier's Flood Appeal. By Christmas 2011 the first homes were built in the new estate and the first residents moved in. The Queensland Government now plans similar re-location plans for other Queensland towns. Resource:

[www.statedevelopment.qld.gov.au/resources/guideline/qra/rebuilding-grantham-dev-scheme.pdf](http://www.statedevelopment.qld.gov.au/resources/guideline/qra/rebuilding-grantham-dev-scheme.pdf)

Other flood related relocations in Australia include the towns of Clermont (Queensland), Bega and Gundagai (New South Wales). In general, when significant retreat has occurred in Australia, the land has reverted to non-urban use rather than repurposing for recreation, active open space, etc. Resource: <http://theconversation.com/moving-grantham-relocating-flood-prone-towns-is-nothing-new-4878>.

### Post-Flood Green Infrastructure Plan, Kinston, North Carolina

After being struck by two hurricanes (Fran, 1996 and Floyd, 1999), the City of Kinston, North Carolina (population 57,961) worked with the U.S. Federal Emergency Management Agency (FEMA) and U.S. Department of Housing and Urban Development (HUD) to obtain funding to buyout approximately 1,000 flood-damaged homes, and relocate people out of the floodplain and into the town's center. FEMA's post-disaster Hazard Mitigation Grant Program requires that the purchased property be maintained as open space. In 2001 the City of Kinston, in partnership with the Conservation Fund and the University of North Carolina at Chapel Hill Graduate Student Workshop, developed a green infrastructure plan to guide redevelopment of the buyout areas as open spaces that create amenities and services to benefit the overall community.

The Kinston/Lenoir County Green Infrastructure Plan for the Neuse River Floodplain focuses on three areas: heritage tourism (e.g., a Civil War site and historic buildings), passive recreation (e.g., an educational forest and nature trail), and active recreation. It complements existing community projects and goals in the Kinston-Lenoir County Parks and Recreation Master Plan and the Greater Kinston Urban Area Growth Plan. Planners analyzed land in the floodplain area to assess its suitability for conservation or recreational uses and identified hub areas for appropriate activities. The scenic Neuse River runs through the center of the community, providing excellent opportunities for river travel, walking and bicycling, and the greenway plan proposed linking with connectors or

greenway segments to allow residents and visitors to travel throughout the county, by foot, bicycle, canoe, or car to experience the diverse activities and landscapes. The plan identifies 14 potential greenway segments and several additional canoe launches.

The Kinston Green Infrastructure Plan is still in the early stages of implementation. The city received a grant to construct the skeet range and to purchase eight junkyards in the floodplain. The Clean Water Management Trust Fund has provided funds to buy abandoned properties in the floodplain. Additionally, Kinston has linked the green infrastructure planning with downtown revitalisation efforts and the promotion of affordable housing. Resources: Case Study of Floodplain Acquisition/Relocation Project in Kinston, NC after Hurricane Fran (1996) and Hurricane Floyd (1999) <https://cdr.lib.unc.edu/record/uuid:e9430c54-d2c0-4747-ad8a-edb5d893250c>

### **Riverfront Revitalisation, Hartford and East Hartford, Connecticut**

In the 1980's, an interest group of citizens formed Riverfront Recapture a non-profit organisation to plan and lead a public-private effort to revitalise the riverfront between Hartford and East Hartford in ways that would enhance residents' quality of life and make the region a better place to live, work, and play. Restoring public access between downtown Hartford and the river was central to the riverfront plan. Fortunately, the Connecticut Department of Transportation (ConnDOT) was planning a major redesign of an interstate highway interchange in downtown Hartford. Riverfront Recapture asked ConnDOT to use this opportunity to help restore pedestrian access to the riverfront.

In 1984, ConnDOT agreed to include Riverfront access in its plans by rebuilding a section of interstate highway at ground level and building a landscaped plaza over the new highway to reunite downtown Hartford with the river. Recognizing that it would take more than a decade to complete the project, Riverfront Recapture turned its attention to the first phases of park development at Charter Oak Landing in Hartford and Great River Park in East Hartford. Incremental progress, including a restoration of Hartford's historic Riverside Park, continued the riverfront transformation as construction moved forward on the downtown Riverfront Plaza, which was completed in 1999. The project has earned national recognition and awards, including the Waterfront Center's Excellence on the Waterfront.

Riverfront Recapture transformed itself in 1998 when it took on management responsibility for the riverfront parks, working in partnership with the City of Hartford and the Town of East Hartford, while it continues to plan for additional access to the river. Riverfront Recapture is now responsible for all programming of events and activities in the riverfront parks. In 1998, the Metropolitan District (MDC)—the region's water and sewer authority—agreed to work with Riverfront Recapture to provide daily maintenance of the parks and to provide funding for a park rangers program that is administered by Riverfront Recapture. The MDC has played a key role in improving the river's water quality so that it can be used for recreational activity. Planning continues for even more extensions of riverfront walkways on both banks and other riverfront enhancements. Resource:

<http://riverfront.org>

### **Great Urban Park, Jamaica Bay, New York**

Jamaica Bay is an estuary located on the southern edge of New York City. Approximately 4,050 hectares of land and water are owned by New York City and the National Park Service. A large number of other organisations are also passionately involved in the conservation of the park's lands and waters. While there has been widespread recognition of Jamaica Bay's potential to be revitalised as an urban park for New York City, there has been limited collaboration in land management or provision of services in the area. In 2011, New York City and the National Park Service initiated a joint planning effort that resulted in an initial action plan with top line strategies

to address restoration, transportation, access, and youth engagement. Recommendations on joint park management and the development of a conceptual master plan were also proposed as necessary next steps for the revitalisation of the parklands and their surrounding communities. A series of alternative federal-civic governance structures were workshopped with various stakeholders and, in July 2012, a governance agreement was signed by the Mayor of New York and the U.S. Secretary of the Interior. Work is also underway to establish a permanent non-profit conservancy that will partner with the city and the park service to plan, develop and program the new park, as well as a new Science and Resilience Institute at Jamaica Bay, a premier science organisation created following Hurricane Sandy that will coordinate scientific research efforts for the bay. Planning will address design, restoration, transportation and access, education and programming, within existing city and park service land-use frameworks. Feasibility studies are underway for an aviation district and an experiential wetlands center. Resources: Buro Happold project description (unpublished) and <https://www.nps.gov/gate/learn/management/upload/1-New-Vision-for-a-Great-Urban-Park.pdf>

## **Reuse of Hamilton Air Field, Novato, California**

The Hamilton Air Field Base Realignment and Closure (BRAC) Commission recommended closure of the last 283 hectares of federal government land at Hamilton Army Airfield. Following its closure, many of the facilities at the airfield were transferred to the City of Novato and County of Marin for planning and reuse. The City of Novato led a planning effort for the property and released a Master Plan for Hamilton Field in 1993.

Several structures were removed and replaced with a housing subdivision known as Hamilton Landing. Over a seven-year period, more than 2,100 new homes were constructed there. The developer also renovated airplane hangars into over 46,400 square meters of office/technology space which it still owns and manages. The office buildings are home to various technology, entertainment, biotechnology, and traditional office tenants. In 2000, the Novato City Council voted to establish the Novato Arts Center at Hamilton Field. A local artist organisation—now the Art League of Northern California—soon began a sweat-equity build-out and renovation of some of the buildings for an initial gallery and artist workspace for the art center. In 2005, the City of Novato signed a formal lease with the Art League for three gallery spaces and the league transformed them into the Marin Museum of Contemporary Art which opened its doors in 2007.

The airfield is also part of tidal wetland restoration effort led by the U.S. Army Corps of Engineers, California Coastal Conservancy, and the San Francisco Bay Conservation and Development Commission. This multi-agency construction and environmental restoration effort is called the Hamilton Wetland Restoration Project and is funded by federal, state, and regional agencies.

In 2013, the city hired a Director of Hamilton Base Reuse to maximize revenue potential from city-owned properties on the former base, by soliciting developer interest to restore numerous historic buildings with the goal of continually improving the Hamilton neighborhood. Since that time, the city has sold two sites for redevelopment, including the historic Hamilton Hospital which will be renovated for use as a senior care facility. Additionally, the city is negotiating with the federal government to release several properties from deed restrictions that currently hinder their redevelopment. These properties include the historic Hamilton Theater and Officer's Quarters. If successful, this effort will permanently protect over 36 hectares of undeveloped land in southern Novato from future development and allow for private investment in the Hamilton properties, facilitating their rehabilitation and revitalisation. Resource: <http://novato.org/community/get-to-know-novato/hamilton-field>

## **Post-flood reuse of Vanport, Portland, Oregon**

Vanport was constructed in 1942 to house the workers at the wartime Kaiser Shipyards in Portland, Oregon and Vancouver, Washington. It is located on an island in the middle of the Columbia River and along the border separating the two cities and the two states. At its peak, Vanport was home to 40,000 people, making it Oregon's second-largest city at the time, and also the largest public housing project in the nation. It also had its own post office, nine schools, a fire station, a 400-seat cafeteria, a 785-seat theater, a library, a hospital, 14 playgrounds, five commercial centers, and a police station. After World War II ended, Vanport's population dropped to about 18,500. In order to attract veterans and their families, the Housing Authority of Portland opened Vanport College and enrolled 1,924 students its first year. On May 30, 1948, a 61-meter section of the stopbank holding back the Columbia River collapsed during a flood, killing 15 and displacing remaining residents.

The City of Portland's Parks and Recreation Department acquired the site in 1950 and oversaw its subsequent redevelopment as a public municipal park complex. The 34.5-hectare East Delta Park contains the Owens Sports Complex, with seven softball fields, nine soccer fields, and a concessions building, as well as a dog off-leash area, a football field, paved paths, picnic tables, a playground, and a volleyball court. The Urban Forestry Division of the Portland Parks Department also maintains a street-tree arboretum in East Delta Park to show the types of trees it recommends for planting in the city's public rights-of-way between curbs and sidewalks. The West Delta Park contains the Portland International Raceway, for car, motorcycle and bicycle racing, the Heron Lakes Golf Course, a dog off-leash area, and natural areas. Resources:

<http://www.portlandoregon.gov/parks/finder/index.cfm?&propertyid=34&action=ViewPark>

<http://www.smithsonianmag.com/history/vanport-oregon-how-countrys-largest-housing-project-vanished-day-180954040/?no-ist>

## **Post-hurricane beach reuse, Bolivar Peninsula, Texas**

Galveston County, Texas led the project to acquire and demolish up to 1,000 buildings on the Bolivar Peninsula that were damaged or destroyed by 2008 Hurricane Ike. Focus areas include Gilchrist, Crystal Beach, and along a 3.2-km internal drainage area known as the Slough. FEMA provided a US\$103 million post-disaster hazard mitigation grant in January 2010. It was the largest mitigation project ever approved by FEMA in Texas and one of the largest in U.S. history. The FEMA grant funds covered 75 percent of the voluntary property purchase and homeowners covered the 25 percent required local match. The approximately 120 hectares of cleared land will be retained in open space in perpetuity. A land re-use plan is under development and might include beachfront recreation, parks, flood management, outdoor festivals, and similar uses. Resources: FEMA Mitigation Success Stories (unpublished draft), and <http://www.fema.gov/news-release/2010/01/06/bolivar-peninsulas-hazard-mitigation-property-acquisition-project-102>

## **Post-flood town relocation, Grafton, Illinois**

Flooding in 1993 inundated almost the entire city of Grafton, Illinois – a small tourist-based community in west central Illinois at the confluence of the Illinois and Mississippi Rivers. The city obtained federal funding through FEMA's Hazard Mitigation Grant Program (HMGP) and matching funds provided by the Illinois Department of Commerce and Community Affairs to offer voluntary buyouts to 100 flood properties, many of them located in the floodway of the rivers. The acquired properties are all dedicated to open space and provide unobstructed, scenic views of the rivers. With its strong tourism base, the city is using some of the acquired property to connect a bicycle trail that begins at Pere Marquette State Park, just to the north of the city, and ends at the City of Alton, to the south. Resource: <http://nhma.info/uploads/bestpractices/2011%20-%20Best%20Practices%20-%20Acquisitions%20Buyouts.pdf>