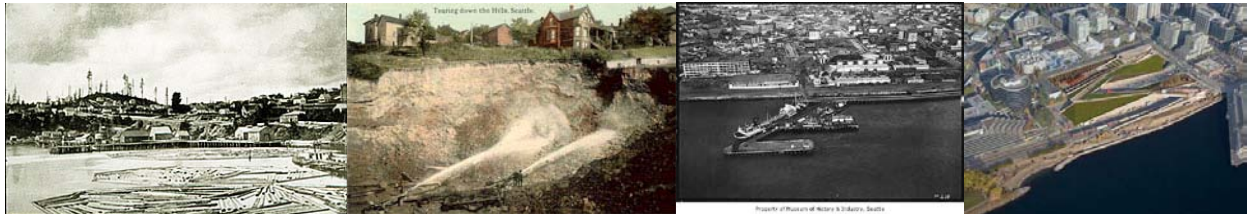


Land Flows



Green Design & the City – ENVS 662

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Above: Seattle Gas Light Company gasification plant (L) and Gas Works Park (R), Seattle, Washington
Cover, from left: Belltown early settlement, Denny regrade, Unocal oil transfer facility, and Olympic Sculpture Park, Seattle

Introduction

Europeans have a long history of reusing land; building and rebuilding within the walls of ancient settlements with access to critical sources of water, food, commerce, and labor. But so do America's original settlements – especially, Philadelphia. Through the first 200 years of her history, this reuse, or repurposing, or what I call flow of land, had contributed positively to Philadelphia's development into one of the world's industrial giants. But following the Civil War, a number of factors caused the flow of land to stall, and this stagnant land, some of which became brownfields, soon became a negative that eventually hobbled Philadelphia's growth. Broad minded groups are currently working to resuscitate land flows in Philadelphia with some exciting results. In this paper, I will define what I mean by land flows, take a brief look back at land flows in Philadelphia, and introduce some of the factors that contributed to both the degradation of land in the area and its rejuvenation. I have also included a few case studies related to Pennsylvania's Land Recycling Program as examples of positive land flows.

Concept of Land Flows

Land flows are the progression of land use by humans from early recorded history to the present. It is how the land is used as well as what it looks like and also takes into account whether the flow was positive – did it enhance the city, or negative – did it degrade the city. Because I'm more familiar with Seattle than I am with Philadelphia, I'll use a site on Seattle's waterfront to



help define land flows. This land is at the northern edge of the downtown waterfront in Belltown near the foot of Denny Hill. Before the settlers arrived, this area was a steep hill, covered in evergreens that ran right down to the water's edge and might have looked like the picture at left. The early Seattleites first harvested all the trees and then, because of the steep gradient from the waterfront to the surrounding upland, they determined to cut down the hills. They achieved this by literally washing the hills down into the harbor – creating land along the waterfront in the process. Subsequent years saw industry build up along the waterfront including the Union Oil Company

of California's (Unocal) oil transfer facility that was in operation from 1910 to 1970.¹ This site became contaminated with petroleum products and fell into disuse as a brownfield for nearly 30 years. In 1999, the site was remediated by Unocal and then purchased by the Seattle Art Museum who constructed a beautiful sculpture park on the land that will be preserved and maintained in perpetuity through a significant endowment. The new park provides important green space for city inhabitants as well as for local fauna as the park is designed with native plants, uses no pesticides or herbicides, and includes restoration of the seawall for salmon habitat. The flow of this land went from pristine natural environment through hard labor, industrial development, damage and disuse, and then to parkland and new habitat (see photos on cover).

History of Philadelphia Land Flows

So let's come back to Philadelphia to explore land flows here. While each individual site has its own story, for Philadelphia the overarching story is basically the same – it is tied to industry. The cradle of liberty was a very busy place from the 1600s to just before the Civil War. It started quietly enough with farms and general subsistence living but soon grew into the second most important port in the world (behind London). An important textile center with access to coal to power industry, it grew into a diverse manufacturing center. And land flows were common. One of my sources – a book by Walter Licht called Industrializing America, notes that “workplaces constantly changed. A visit to a mill building one year might find one firm operating with a force of machine operators; the next year the same urban structure might be subdivided into several businesses producing variously on manufactory, craft, or sweatshop bases.”² Land reuse in early Philadelphia was very common practice. Resources were expensive, the pace of industry fast, and you couldn't be slowed by the need to build a new factory, especially since most of them were in prime locations for access to transportation, raw materials, and laborers. As one business moved out, another would take its place.

¹ Seattle Art Museum

² Licht

Fast forward to after the Civil War, and we see Americans moving west to build the next round of great industrial cities such as Cincinnati, Cleveland, Detroit, and Chicago, and to conquer the Wild West. And industry moved with them, to find new opportunities, new sources of raw materials, new sources of energy, and cheaper labor. Industry moved out of Philadelphia and land flows slowed.³ Post World War II, we find other reasons for migration out of city centers such as urban decentralization, diminishing resources, decline of labor-intensive manufacturing making former centers of industrial activity obsolete. Government policy also had a significant hand in land flows through massive mortgage assistance subsidies, road building/highway construction, and poorly executed urban renewal programs that left large tracts of vacant land. Other reasons for migration out of cities included racism, escape from crime and other urban problems, preference for low density living, and access to open space and better schools.⁴ By the year 2000, Philadelphia had 30,000 vacant lots – twice the number from 1990, just 10 years earlier. They also had 25,000 vacant structures.⁵

Defining Land Flows

Here are a few definitions that help describe land flows.

- Greenfields – previously undeveloped land in a city or more usually in rural areas that is currently agricultural or open space.
- Greyfields – urban and older suburban properties that have been under-utilized or abandoned but do not have environmental issues preventing reuse and expansion (e.g., closed shopping strip malls).
- Brownfields – vacant, abandoned or underutilized property the development of which is hindered by actual or perceived environmental contamination.
- HI-TOAD – high-impact temporarily obsolete abandoned derelict site (a brownfield).⁶

Greenfields are appealing places for new development because of access to skilled workers, no old buildings or old foundations to demolish and the ease of implementing adequate and modern

³ Licht

⁴ Bonham

⁵ Bonham

⁶ Lange

infrastructure. But development of greenfields also despoils critical farmland, woodlands, wetlands, and contributes to sprawl, congestion and air pollution, as well as contributes to and perpetuates inner city decline. Such land use is not sustainable.⁷ Besides the potential contamination concerns, brownfields and HI-TOADs are avoided because of potentially erroneous environmental regulations for cleanup, they are usually in declining areas, their old structures may not fit or support the intended use, inner city land is often subject to higher taxes, they may be more vulnerable to crime, they are served by decaying or outmoded infrastructure, and they are often removed from higher skilled labor⁸ (who have long ago moved to the suburbs).

Opportunities of Land Flows

But if we stop and think about it, vacant land in older cities is an opportunity to do something different. Blaine Bonham in his book Old Cities/Green Cities: Communities Transform Unmanaged Land, wrote, "...existing vacant land – along with the land made available when abandoned housing is razed – can actually be an urban asset as older communities are reconfigured and new ones are built."⁹ Going back to the Olympic Sculpture Park, when Unocal closed down, its empty site was the only piece of undeveloped land on Seattle's waterfront. The area surrounding it was growing into a kitschy high-density residential area with fun eateries and artisanal shops. And the waterfront extending south from there was pushing against the constraints of outdated transportation corridors, Seattle wanted to redevelopment its wharfs to more recreational and retail purposes, and it wanted to restore fish habitat along the seawall. The empty Unocal site allowed the development of the Sculpture Park, which became a catalyst for change. Fortunately for many cities around the country, including Philadelphia, planners, regulatory agencies, non-profit organizations, and citizens' actions groups see these opportunities as well.

⁷ Bonham

⁸ Bonham

⁹ Bonham

Participants in Philadelphia Land Flows

This is a list of some of the organizations and programs that are involved in resuscitating land flows in Philadelphia – very often in collaborative partnerships.

- Philadelphia Green Vacant Land Management
- Pennsylvania’s Green Opportunities for Brownfields Initiative
- Pennsylvania Land Recycling Program¹⁰
- Infill Philadelphia
- Philadelphia Industrial Development Corporation
- Philadelphia City Planning Commission
- Philadelphia Department of Commerce
- U.S. Department of Commerce
- U.S. Environmental Protection Agency’s Brownfields Program
- U.S. Conference of Mayors
- Delaware Valley Regional Planning Commission

To highlight just a few of them, the U.S. Conference of Mayors doesn’t have an actual brownfield program, but reviews brownfields redevelopment around the nation and publishes periodic reports called “Recycling America’s Land: A National Report on Brownfields Redevelopment,” where cities can share their experiences and learn from each other.¹¹ The U.S. EPA’s Brownfield Program provides federal support for cleaning up brownfields. They assist with identification, environmental assessment, and cleanups. This assistance is available to state and local governments, Indian tribes, economic development corporations, industrial development authorities, regional councils, community or neighborhood organizations, and non-profits. Over the past two years they have provided assistance for the clean-up of 19,000 properties for a total of 250,000 acres and this is in the state, local and tribe programs only. Pennsylvania’s Green Opportunities for Brownfields Initiative is a collaboration among the Department of Environmental Protection, the Department of Conservation and Natural Resources, the Department of Community and Economic Development, and the Natural Lands Trust. They actively promote development of brownfields instead of greenfields using a number of tools such as transfer of development rights.¹² And, finally, I’ve attached three case studies

¹⁰ McGinty

¹¹ US Mayors.org

¹² National Governors Association

from the Pennsylvania Land Recycling Program. This program has greatly facilitated cleanup and reuse of brownfields in Pennsylvania by establishing: uniform cleanup standards, liability relief, standardized reviews and time limits, and financial assistance.¹³

Green & Sustainable

As with all things in life, land flows can be negative or positive. The cleanup, redevelopment and reuse of brownfields, especially in city centers, is an opportunity to improve neighborhoods, provide jobs, remove eyesores, and re-establish a strong tax base that can afford other neighborhood improvements such as more efficient infrastructure and better schools. Brownfields redevelopment represents positive land flows. And I hope Philadelphia sees more such land flows in the future.

¹³ Pennsylvania DEP

Resources

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PENNSYLVANIA
Land
Recycling
Program



The site of a former sprawling LTV Steel plant in Pittsburgh is now home to a model urban brownfield redevelopment featuring office buildings, medical facilities, a manufacturing firm, retail shops, a sports medicine complex and practice fields and more than 400 housing units. This 123-acre success story is the result of over 13 years of collaboration and cooperation between local, state and federal governments, local economic development leaders and private investors.

In addition to the loss of

10,000 jobs when LTV closed this plant, environmental contamination from decades of steel making was left behind. But, a determined effort has turned this into an urban gem, including road improvements, renovation of a bridge, and construction of two parking garages. American Eagle Outfitters recently located their corporate headquarters here. Other companies now on the South Side Works site include UPMC Health Systems, the University of Pittsburgh Center for Biotechnology and Bioengineering, the UPMC Sports Medicine Facility, IBEW's regional headquarters, the McGowan Center for Artificial Organ Development, two phases of the Soffer Office and Retail Development, the Matcon Diamond Company, and other office buildings. 5,400 jobs are expected at full build out, and hundreds of people will live in this attractive back-to-the-city neighborhood.

While past environmental damage was cleaned up at this site, the quality of life here has also been enhanced by the cre-

ation of a waterfront park and river trail system. Incorporated into the trail and park design was an art sculpture to commemorate the site's steel heritage. The monument is located near the approach to the MONCON Bridge South Side Works is a first-class riverfront development utilizing a mix of office, medical, recreational, housing and retail uses. At build out of the SSW development, total private investment is expected to reach \$250 million and will provide up to 5,400 employment opportunities and over 400 housing units. In addition to the job creation and housing potential of the development, public access to the riverfront will be created. Employment generated by initial development is approximately 1,500 jobs. Public investment to date to support this development, including Parking Garages #1 and #2, has totaled approximately \$95 million, including approximately \$17 million in state funding. Once Tax Increment Financing expires, the project will generate \$8 million in annual tax revenues to local taxing bodies.

South Side Works



South Side Works
Pittsburgh, Pennsylvania
Allegheny County

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PENNSYLVANIA
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Recycling
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The Northern Delaware River section
of Philadelphia's River City Project



River City Project
Philadelphia, Pennsylvania
Philadelphia County

The Schuylkill River section
of Philadelphia's River City Project

Philadelphia River City Project

Cities, towns and boroughs are not only economic centers, but also serve as regional hubs that offer residents culture, recreation and a unique way of living. Two ambitious projects along Philadelphia's waterfront, the Schuylkill River and Northern Delaware River sections of Philadelphia's River City Project, aim to help Pennsylvania's largest city continue to offer outstanding recreational and lifestyle opportunities.

In the past, these two rivers brought commerce to southeastern Pennsylvania, and industrial properties built up along the riverbanks. Now, following the assessment and remediation of several properties along the Schuylkill River, the sites will be developed as residential neighborhoods with supporting service businesses. The Northern Delaware River section also calls for the redevelopment of several

properties into residential uses, with as many as 2,600 residential units, and supporting service businesses.

Working with the Schuylkill River Development Corporation, plans call for creation of a 14-foot wide asphalt recreation trail along a section of the east bank of the river in the 34th Street/ Grays Ferry Avenue area, which will provide recreational riverfront access that is now lacking. Together, all these projects will bring families back to the city, create jobs, provide recreational opportunities and clean the environment.

This planned redevelopment along the riverfront compliments ongoing work at another major brownfield in the city, the Philadelphia Naval Business Center, formerly the Philadelphia Naval Yard. Approximately 50 private companies are already on site here, employing about 2,500 people. The Philadelphia Naval Business Center is expected to employ as many as 18,000 at full build out.



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The Wharf at Rivertown

In 1917, Philadelphia Electric Company (PECO) built a landmark power plant along the banks of the Delaware River in Chester, Pennsylvania. PECO vacated the antiquated coal-to-steam-to-electric plant in 1981 after it was deemed inefficient compared to modern generation facilities. The 400,000-square-foot structure, which resides on 100 acres, was laden with environmental challenges both in the building and on the site.

Exelon Corporation (PECO Energy at the time) remediated the 90-acre site and sold 63 acres to Preferred Real Estate Investments (PREI). Exelon also donated seven acres to the City of Chester, and continues to operate small peak generating

units and a substation on the other 20 acres.

Exelon and PREI spent one-and-a-half years and nearly \$10 million on environmental clean up and demolition to prepare the building for conversion into a modern office facility. The project includes 1.4 million-square-feet of space, two marinas, restaurants and a river walk. This development also opens the site's half mile of riverfront to the community for the first time in nearly 100 years. The \$60 million development has garnered remarkable support from all levels of government, including completion of remediation under Pennsylvania's award-winning Land Recycling Program.

As part of the development, PREI had the site's Keystone Opportunity Zone (KOZ) designation reconfigured to maximize the development opportunity and allow future tenants to realize exceptional tax incentives for locating their businesses at the site. The Wharf at Rivertown is a prime

example of how a KOZ is supposed to work to bring jobs to the community.

The space was 70 percent leased at the beginning of 2006. Key tenants now in place at The Wharf at Rivertown include financial services firm Wells Fargo and Synogy, a technology company. The redevelopment is expected to create over 2,500 jobs in a community that had only 5,000 permanent jobs at the beginning of 2000.



This project is a Phoenix Award Winner.



Community Impact from Chester Waterfront



The Wharf at Rivertown
City of Chester, Pennsylvania
Delaware County

Photos Courtesy of Exelon Corporation

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