



The City of Seattle

Landmarks Preservation Board

700 Third Avenue • 4th floor • Seattle, Washington 98104 • (206) 684-0228

REPORT ON DESIGNATION

LPB 148/99

Name and Address of Property: **Gas Works Park**

Legal Description: See Attachment "A"

At the public meeting held on April 21, 1999, the City of Seattle's Landmarks Preservation Board voted to approve designation of Gas Works Park as a Seattle Landmark based upon satisfaction of the following standards for designation of SMC 25. 12.350:

- C. It is associated in a significant way with a significant aspect of the cultural, political, or economic heritage of the community, city, state or nation.*
- E. It is an outstanding work of a designer or builder.*
- F. Because of its prominence of spatial location, contrasts of siting, age, or scale, it is an easily identifiable visual feature of its neighborhood and the City and contributes to the distinctive quality and identity of its neighborhood and the City.*

DESCRIPTION

Original Appearance and Characteristics

The American Industrial Revolution, and Seattle's own early growth and success, were based on having an abundant supply of energy. One of the most important forms of energy was flammable gas. Before natural gas, it was a man-made product derived from coal or oil. In the U.S. there were over 1400 plants producing such gas. From 1880-1930 they fueled America's growth. Only one remains even marginally intact, to remind us of what we built, of the processes that made our present life style (and Seattle's prosperity) possible. That sole survivor is Seattle's Gas Works Park. The Gas Works on Lake Union was integrated and transformed into a new City of Seattle Park. The Park itself became a landmark, creating a new form of industrial conversion, and setting a precedent for adaptive reuse.

Early History

Gas Works Park occupies a 20.5 acre promontory between the northwest and northeast arms of Lake Union (Figures 1,2, and 3). Little is known of pre-Euro-American site history, but there were Native American settlements around Lake Union. Native names for Lake Union include Kah-chug, Tenas Chuck, and Xa'ten. In the mid-1800's Thomas Mercer named it "Lake Union" in expectation of

Chuck, and Xa'ten. In the mid-1800's Thomas Mercer named it "Lake Union" in expectation of future canals linking it to Puget Sound and to Lake Washington. Dense forests still came down to the water's edge and the lake drained into Salmon Bay through a stream "full of windfalls and brush, impassable even for a canoe". (Bass 1947, p 33) Lake Union in the 1860-70's was a popular vacation spot with Seattlites for summer house-boating and picnicking.

Early Development

Several sawmills were operating on Lake Union's shore by the 1850's, taking advantage of the dense forests. Beginning in 1872, Seattle Coal and Transportation Company ferried coal from its Renton Hill mines across the lake for portage across to Puget Sound. In the 1880's came the Denny sawmill at the south end of Lake Union, brick manufacturing, ship building, a tannery, and iron works. Canals with small locks were cut in 1885 from Lake Washington to Lake Union, and from Lake Union to Salmon Bay. The arrival of the Seattle, Lake Shore and Eastern Railroads in 1887 ensured that Lake Union would continue to be a focus for industrial development. In 1900 the Seattle Gas Light Company¹ began to purchase lots on this promontory (Secrist, Title Search) and its gas plant went into operation in 1906.

Seattle Gas Light Company purchased lots on the North shore promontory from 1900 to 1909. Despite the fact that the land was being acquired by the gas company, the Olmsted brothers in 1903 recommended that "...the point of land between the northeast and northwest arms of Lake Union and the railroad should be secured as a local park, because of its advantages for commanding views over the lake and for boating, and for a playground." (Olmsted Brothers 1903, p 47)

In 1911, Virgil Bogue produced a civic master plan for Seattle's Municipal Plans Commission in which he promoted the idea of Lake Union as an industrial area: "The fact that [Lake Union] is located in the very heart of the city indicates that if properly developed it will become a most important factor in the commercial and business activities of the city." (Seattle Municipal Plans Commission 1911, p 78) Completion of the Lake Washington Ship Canal and Ballard locks in 1917 guaranteed the success of shipping and ship-building industries on Lake Union and thus of the Bogue vision, despite the fact that his plan was defeated by voters.

The Lake Station gas manufacturing plant on Lake Union was the largest private utility then existing in Seattle. It operated as "Seattle Lighting Company" until 1930, when the name was changed to "Seattle Gas Company". Its primary product was illuminating gas (so-called because it was used for lighting) manufactured from coal. The gas was later also used for cooking, refrigeration, and heating homes and water. It was also called city gas to distinguish it from natural gas. The gas was made from coal up to 1937 when the high cost of operating the old coke oven and coal-gas generating sets forced a change-over to oil. A pair of oil-to-gas generators was built in 1937 and the old coal-gas facilities were disassembled. In 1946-7, two more oil gas generator pairs were constructed to keep up with demand for gas. Since by-products from gas manufacturing had strong markets of their own, new equipment was installed at the same time to produce "Gasco" charcoal briquets, toluene, solvent naphtha, sulfur, xylene, and resin tar.

Primary manufacturing and support facilities consisted of storage tanks, boiler house, pump and compressors house, offices, and laboratories. On-site support included electrical, carpentry, machine, blacksmith, and welding shops. Additional facilities included a stable, first aid stations, and a foamite house for storing fire control materials. Running through the north portion of the site was Burlington Northern Railroad's 50 ft. wide right-of-way. Train trestles from the coal days were still in place in front of the laboratories and offices building.

By 1954, the Lake Station plant used 1,071 miles of gas main to serve Seattle, Renton, Kent and Tukwila. Approximately 43,198 customers were served in 1940, decreasing to 36,200 in 1954. The Company averaged about 130 employees, with four crews of 23 men per shift, rotating 24 hours a day on a 7 day run. Production of city gas ended in 1956 when Seattle converted to natural gas.

Present Appearance and Characteristics

Though gas production ceased in 1956 the buildings and manufacturing structures were still intact in 1962 when the City of Seattle began purchasing the abandoned gas works. The \$1,340,000 purchase price was provided by Forward Thrust bonds and H.U.D. Payments were made from 1962 to 1972, and the debt was retired.

During this period there was a considerable public discussion about whether the site should be developed or made into a park. Park advocates led by Myrtle Edwards prevailed. In 1970, Richard Haag Associates (RHA) were retained by the Seattle Park Board to do a site analysis and master plan for a new park at the gas plant site (Figure 4). RHA opened an on-site office to research and analyze the plant site. Richard Haag realized that the site contained the last gas works and a unique opportunity for preservation. Haag recommended preservation of portions of the plant for its "historic, esthetic and utilitarian value". (Master Plan, April 1971) After an intense public appeal to convince the public of the value of the plant, RHA's 1971 master plan for an industrial preservation park was unanimously approved by the Park Board. The proposal centered on recycling the buildings, production structures, machinery and even the grounds themselves. Through bio-phyto-remediation techniques the soil and water would be "cleaned and greened". Through preservation and adaptive re-use of key structures, the rich history of the site, and thus of an important aspect of Seattle, would be preserved and revealed. The preserved and/or adapted structures are shown shaded in black in Figure 5 with their new names, and Figure 6 shows the park structures and overall topography.

The abandoned gas-production plant and its land were deeded to the City of Seattle in 1973, the same year Gas Works Park (GWP) opened to the public. The park site consists of 20.5 acres of land projecting 400 feet into Lake Union with 1900 feet of shoreline.

The site is bordered by Northlake Avenue at the north and abuts Lake Union on the East and South. The Wallingford neighborhood sits to the North. Immediately adjacent to the park are remnants of the industrial development of the area. The industrial dominance is rapidly being replaced by retail development. North of 40th Ave. the area is predominantly a residential neighborhood.

The park is entered through a landscaped parking area or through the Burke-Gilman Trail, a bike and walking path which connects Puget Sound to Lake Washington. Dividing the parking area from the

park is a grassy berm and rows of trees demarcating the old railroad right of way. The park is composed of seven areas: Earth Mound, North Lawn, Towers, Prow, Picnic Lawn and Shelter, Play Barn, and South Lawn (Figure 7). The Earth Mound, Prow, and Lawns are open areas intended for passive and active recreation, and offer magnificent views. The Towers, Play Barn, and Picnic Shelter are adapted from the original manufacturing structures.

The Earth Mound

Part of the master plan, known as the "Great Mound", this hill was molded out of thousands of cubic yards of rubble from building foundations covered with fresh topsoil. The Sundial at the top of the mound was created by two local artists, Chuck Greening and Kim Lazare. Formed out of concrete and delineated with rocks, shells, glass, bronze and many other materials the sundial tells time by using the body of the visitor as stylus. The viewer's shadow tells the time of day and the season.

The North and South Lawns and Picnic Lawn

Soil has been bioremediated with 18" of sewage sludge and sawdust. This process has decontaminated the soil and allowed for the growth of field grass which makes possible constant, hard use with low maintenance.

Towers

There are two groups: 1) six synthetic natural gas generator towers with their attendant processing towers, and 2) oil absorber and oil cooler (between the Play Barn and the generators). The generators operated in pairs and were built at different times.

(A): Towers 1 and 2 (largest and closet to the lake) are Semet-Solvay-type generators built in 1937-38. Each has a single outer shell made of welded steel lined inside with refractory brick. Tower 1 is 80 ft and Tower 2 is 75 ft tall. At their peak they could manufacture 6 million cubic feet of gas a day.

(B): Towers 3 and 4 were built in 1947, Towers 5 and 6 (northern-most), in 1947. They have the same brick inner shell and welded-steel outer shell construction as Towers 1 and 2, but are smaller. All four towers have an outer diameter of 22 feet and are 50 feet tall. The brick liner has an inside diameter of 20 feet and is 33 1/2 feet high. The outer shells are equipped with nozzles for pipe and instrument connections, access doors, air blast doors, gas outlets, and sight holes. The towers rest on concrete pedestals. (Blueprints, 1945-46).

Wash boxes and scrubbers associated with generators 3-6 were also built in 1946-47. The small tanks (10 ft diameter, 11 ft tall, each mounted on three supporting legs) next to the generators are wash boxes, one per generator. For each pair of wash boxes there is one primary scrubber that rests on a concrete pedestal and stands 48 ft tall (11.5 diameter). The output from the two primary scrubbers goes into the single secondary scrubber of welded steel construction (12 ft diameter, 68 ft tall). Farthest from the generators are two small tanks (about 20 ft tall) that were the original secondary scrubbers. All piping that connects these towers is of 3/16 inch plate steel. (Blueprints, 1945-46)

Between the generators and the Play Barn stand the Oil Absorber (80 ft) and Cooler (40 ft). The cooling tower lowered the temperature of the light oil-gas mixture from the scrubbers, then the oils were separated from the gas in the oil absorber tower. The light oils were the secondary products benzene, toluene and solvent naphtha.

The Prow

This concrete platform was built in 1936 as an unloading area for coal. The platform was integrated into the park design and handrails placed at the lakeside edges.

Play Barn and Picnic Shelter

The buildings date back to the original coal-gas facility (ca 1910) and were constructed of wood. The Pump House (also known as the Exhauster House) is about 7,340 sq ft (48 ft x 153 ft) and the Boiler House is about 5,720 sq ft (40 ft x 143 ft). The wood frames of both buildings remain intact and in place on concrete slab foundations.

The Boiler House, now the Picnic Shelter, originally housed two boilers. One provided steam for the gasification process; the other provided steam for the steam engines that powered the Pump House compressors. The tubes from one boiler remain in place at the eastern end of the building and are an impressive display of seldom-seen industrial technology.

The Pump House is now the Play Barn. Most of the pumps, compressors, and piping are still in place. The 3000 hp compressor's 10 ton fly-wheel ran continuously to keep the plant running 24 hours a day. In this building air was compressed for the oxygen-extraction process, the oxygen was then pumped to the generators for the first stage of gas manufacturing, and the final product was compressed and pumped to either the storage tank or down the lines of main to customers. Again, the monumental machinery preserved here so that all can see and touch it, is an integral critical part of Seattle's history.

Outside the Play Barn, the sole surviving smoke arrestor hood has been refurbished as a play structure for climbing. Designed and built by the Company in 1935, three were installed in order to reduce pollutant emissions.

Concrete train trestles now form a part of the GWP entrance. They were part of the original 1906 gas plant and ran along the north side of the Office and Laboratories Building. Nothing remains of this building, but the trestles show where the train tracks ended and coal was delivered. Coal cars would ride up the trestles and release coal into hoppers parked under the trestles.

GWP was designed to be an urban, intensively used pleasure ground utilizing unique structures. "The traditional escape from the city into the sylvan settings of remote areas has changed for many people into a seeking of a more active encounter. Introspection and retreat are easily accomplished without physical isolation, but facilities for social interaction with persons other than intimate friends are more scarce with respect to population growth.new sites should be offered in a vast and

varied park system to accommodate experimentation and innovation in both design and program.” (Master Plan, 1971) Because of the Gas Plant structures and the magnificent setting, GWP complements the rich heritage of Seattle’s Post-Victorian parks and offers expanded programs in ways that the latter cannot. Throughout every year hundreds of thousands of people use GWP. They gather to celebrate Independence Day and watch fireworks. Concerts, kite-flying, jogging, public meetings, and the open space and views of the park itself are attractions that keep GWP in constant use.

SIGNIFICANCE

Gas Works Park is a unique landmark for the City of Seattle. The original structures qualify as industrial archaeology and are the last remaining examples of a type of technology. These structures have been double served by Gas Works Park for not only have they been preserved but they have been integrated into an innovative, ground-breaking park design. Paul Goldberger wrote in the New York Times “Seattle is about to have one of the nation’s most advanced pieces of urban landscape design. The complex array of towers, tanks and pipes of the gas works forms a powerful industrial still life ... serving both as a visual focus for the park and as a monument to the city’s industrial past. The park represents a complete reversal from a period when industrial monuments were regarded, even by preservationists, as ugly intrusions on the landscape, to a time when such structures as the gas works are recognized for their potential ability to enhance the urban experience.” (NY Times, 8/30/75) Few, if any examples of Seattle Architecture have won the national and international recognition given to Gas Works Park. The possibility for National Landmark status was recognized in 1971 when Victor Steinbrueck inventoried the Gas Works and Eric DeLony of the National Park Service wrote: “... Gas Works Park will not only be a unique first in the United States, if not the world, but will set an important precedent for the future preservation of industrial structures through an imaginative plan for adaptive use.”

The combination of a dramatic site and historic structures with the innovative park design has only increased the importance of Gas Works Park. The integrity of the original Gas Works is impressive. Although not all of the structures were saved, the character defining and prominent group of towers remains. The reuse of the Pump House and Boiler House has maintained building structure and much of the machinery. The site retains its original boundaries and lake frontage.

The Seattle Gas Company’s production plant located on Lake Union, now known as Gas Works Park, was co-founded by one of Seattle’s foremost pioneers, A.A. Denny. Throughout the first half of this century the Gas Company was a significant participant in and contributor to the growth of Seattle and adjoining communities. Although its primary product was city gas for energy, the plant also manufactured other basic products necessary for urban growth: tar for roofing; lampblack for pigment in tires and ink; charcoal briquets for odor-free and efficient home heating; sulfur for insecticides, ammonium sulfate, and sulfuric acid; and toluene for use in explosives. Toluene was in high demand during World War II and production of it was essential to the war effort (e.g., for making TNT and various types of gun powder). Through these products the gas works contributed in an integral way not only to daily commercial and domestic life in Seattle, but also to interests at a national level.

The structures and machinery standing in GWP today are remnants of the Industrial Revolution that transformed the face of the world. GWP is the sole survivor of gas works from that era in the United States, preserved as a public park. It is the only site that could be documented with most of the generating equipment intact. During its production era, this gasification plant was only one of 1400 such plants in the U.S., but it is now a unique and dramatic collection of industrial revolution era technology. Though obsolete, these towers, machines, and buildings are a monument to humanity's inventiveness and offer a visual statement of pioneering technology. As UW Professor of Anthropology Kenneth Read expressed it, "History sits on this little wasteland, not only the parochial history of a given city, but also a fragment of the chronicle of world and culture. It is certainly as valuable a document as anything preserved in the Museum of History and Industry." (Read 1969, p 43-45)

In addition to its early history, the impact of Gas Works Park on land reclamation and industrial preservation attitudes and techniques extends far beyond Seattle. GWP has gained national and international standing as a prototype for industrial site conversions. It is studied, cited as an exemplary model, and referenced in educational textbooks and scholarly works. Since opening, GWP has won numerous awards for design excellence, vision, and innovation. The jury for the President's Award of Excellence stated: "A remarkably original and attractive example of how to reclaim a seemingly hopeless and obsolete industrial installation. Instead of being destroyed or disguised, it has been transformed into a lighthearted environment...A project of historical significance for the community. A symbol of American technology preserved."

Gas Works Park and its Towers are of a scale and form easily perceived from any location around Lake Union. The park is a tangible, highly visible piece of Seattle's early history and of industrial revolution era technology. The Towers are a gothic sculptural presence and the contrast of these monolithic forms superimposed on the city skyline is unique and visually exciting. The experience is further enhanced by changes in perspective gained by moving around and through these forms of another era. "The black shapes of the towers on their grassy point leap out with startling clarity against the bright collage of the shoreline, silhouettes that might be the pictogram for the works of industrial man." (Landscape Australia, February 1980)

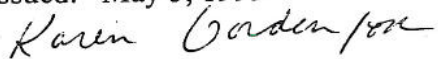
Gas Works Park is also a symbol of attitudes about growth and progress. The structures and machinery that remain in GWP today speak about us, and about our history. These structures tell the story of what we valued decades ago, and they show us how we went about acquiring that which we valued. They remind us of a disregard of the environment which went along with the development of the city. These structures are a constant reminder of the very real industrial history of the site, of Lake Union and of Seattle. They tell us that Seattle was once (not that long ago) a stretch of wilderness, abundant with raw materials for fueling an industrial revolution. Gas Works Park presents in an engaging way the difference between then and now: "then" wilderness was seen simply as a storehouse of raw materials to feed hungry machinery; "now" we also place value on the wild places that remain.

Gas Works Park is also an outstanding work of its designer, Richard Haag, a prominent Seattle landscape architect. Mr. Haag is the only person to twice receive the American society of Landscape Architects Award for design excellence, one of the awards given for his design of Gas Works Park. Mr. Haag has received international acclaim for his design of Gas Works Park.

The features of the Landmark to be preserved, include:

The entire site, including the exteriors of all buildings and structures.

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KG:bjf

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