

Inappropriateness of Designation of Point Breeze Gas Works

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02.26.2021

“Staff Recommendation: *The staff recommends that the Historical Commission continue and remand the nomination to allow time for the staff to visit and survey the site, which is publicly inaccessible, ...*” (PHC Staff intro to nomination, p. 1 A site visit was offered for 25 February 2021 but the PHC representative was forced to turn down the opportunity because of the risks.)

Executive Summary

- The property is inaccessible and generally invisible to the general public. Because of extraordinary safety risks due to its purpose as a high security liquid natural gas storage site, it will never be publicly accessible.
- As a consequence the drafters of the nomination have only “viewed” the property from distant aerial views which fail to show the extraordinary loss of integrity of the few remaining early structures.
- The nomination ignores the fact that the historical origins of the Philadelphia Gas Works were at another site. Thus the Point Breeze site does not meet Criterion A. As an accessory site, the Point Breeze plant is a minor part of the institutional history
- Moreover the nomination, for what appears to be a largely irrelevant reason, focuses on the question of the architectural style of the complex, nominating those buildings that contain references to the mid-19th-century Gothic Revival style, a fact which is circumstantial and irrelevant to the historical and technological aspects of the site or the corporate history of PGW, which used a variety of styles over its history. The simplistic treatment of the Gothic Revival style without addressing its cultural meaning further undermines the nomination.
- As part of the problem of basing the selections within the site based on a style, the nominators nonetheless include structures that have nothing to do with the Gothic Revival while confusing structurally necessary buttresses, many added at later dates to prevent retaining wall failures, with those of the chosen style. Additionally, the nomination includes other structures that are half a century later than the initial Gothic Revival group and in entirely different styles.
- Moreover, because of massive technological changes to the site, from industrial production of gas from coal and its storage of gas and more recently to cryogenically stored natural gas, the vast majority of the buildings of the site have been demolished in the last 50 years. It is concluded below that the buildings do not meet Criteria C and D on the grounds of loss of site and design integrity, and lack of significance within the style.
- Additionally, because the buildings of the site are no longer functioning in their original uses and pressurized storage tanks are the principal use of the site, the buildings that survive have had little or no investment for more than 50 years and as a result are liabilities to the core purpose of the gas works which is the provision of gas to Philadelphians at the lowest possible cost.
- The claims made for the site engineer, John C. Cresson, confuse his institutional role with real engineering, ignoring the multiple building collapses, site fires and other issues that demonstrate that his engineering career at the gas works site was fraught and largely a failure. Further his design work was rudimentary, based on other sources, and was problematic at the gas works and was unimitated and uninfluential and thus does not meet Criterion E.
- The nomination attempts to control over 2 M square feet of land that has been the subject of environmental regulation and is surrounded on three sides by heavily polluted oil-related sites. Given the circumstances of the site, historic designation may well preclude effective site management and thus is counter to public safety.
- Additionally the control of the entire site goes against policy that should seek to minimize the impact of designation on an owner.
- The ongoing dangers of the area prevented the formation of a proximate, significant residential community and what is there has shrunk to nearly nothing. The industrial complex is also being demolished, undermining any claim to exemplifying a particular community or workplace.
- Finally, and most egregious is the danger of making a site that is viewed as a regional security risk more visible in the public eye. There can be no value to raising the risk level to the city.

Given all of these issues, the inappropriateness of historic designation for the PGW site is clear.

Historic Designation Criteria

The nomination proposes to designate the properties at 3101 and 3143 W. Passyunk Avenue based on Criteria A, C, D, E, and J. The selected criteria are:

CRITERIA FOR DESIGNATION:

The historic resource satisfies the following criteria for designation (check all that apply):

- ☒ (a) Has significant character, interest or value as part of the development, heritage or cultural characteristics of the City, Commonwealth or Nation or is associated with the life of a person significant in the past; or,
- ☐ (b) Is associated with an event of importance to the history of the City, Commonwealth or Nation; or,
- ☒ (c) Reflects the environment in an era characterized by a distinctive architectural style; or,
- ☒ (d) Embodies distinguishing characteristics of an architectural style or engineering specimen; or,
- ☒ (e) Is the work of a designer, architect, landscape architect or designer, or engineer whose work has significantly influenced the historical, architectural, economic, social, or cultural development of the City, Commonwealth or Nation; or,
- ☐ (f) Contains elements of design, detail, materials or craftsmanship which represent a significant innovation; or,
- ☐ (g) Is part of or related to a square, park or other distinctive area which should be preserved according to an historic, cultural or architectural motif; or,
- ☐ (h) Owing to its unique location or singular physical characteristic, represents an established and familiar visual feature of the neighborhood, community or City; or,
- ☐ (i) Has yielded, or may be likely to yield, information important in pre-history or history; or
- ☒ (j) Exemplifies the cultural, political, economic, social or historical heritage of the community.

Factors Affecting Criteria

As is clear, each designation criterion calls for one form or another of superlative of sufficient significance to warrant the impacts of historic designation on a property owner.

Designated structures can't just be of interest in the history of the city; there must be a "significant" level of interest;

- events must be of more than just passing events; they must be "of **importance** to the history;"
- a style must be "**distinctive**" with clear evidence of its "**distinguishing**" characteristics, and, in an era when every building has a style, presumably it has to be a consequential example of the style – with a degree of integrity that makes the style evident and accessible;
- a designer must have "**significantly influenced**" the regional architecture or design in some manner; just having designed a building is not enough;
- and in the case of J, to "**exemplify**" its neighborhood, it must be an exemplary example of the heritage – in a neighborhood that must actually exist.

As is demonstrated below, none of the superlative qualifying standards for these criteria are met and the nomination should not be approved.

Two Owners – One Nomination

The nomination attempts to yoke two property owners with one nomination. While there was at one time a unified ownership, the present situation finds the waterfront along the Schuylkill River under the control of the former Philadelphia Energy Solutions, now Hilco. The nomination for the Point Breeze facility and the Hilco facility should have been treated and completed as two separate and distinct applications, in accordance with historic nomination procedures.

Lack of Site Access

To be acceptable, a nomination must be fact-based and accurate both in the description of the facility and as evidence of the importance of the site and to establish the present condition that is the basis of future review. This is ordinarily accomplished with clear photographs and on-site descriptions which are impossible in the present circumstance in which:

- public access is restricted and only obtainable in limited circumstances;
- is dependent on security clearance,
- requires a course on safety followed by an exam on the safety issues of the site;
- entails surrendering all equipment such as cell phones that may cause sparks;
- permits site access only to those wearing flame-retardant clothing and other safety equipment, and
- requires an accompanying guide from the PGW staff to ensure protection and security.



Required Safety Garb and PGW guide



Main Site Gate with owner and security requirements

In 2013, the City Planning Commission prepared the *Lower Schuylkill Master Plan*. That study consigned most of the region below Grays Ferry to continuing industrial and energy-related uses while recognizing their unique security issues.¹ The Master Plan discusses the Energy Corridor as follows:

The Plan

“The Energy Corridor is planned as a discrete, limited-access campus dedicated to the unique requirements of this business sector. The plan envisions extensive redevelopment of the vacant and underutilized parcels within the Energy Corridor, primarily by energy-related firms, chemical manufacturers, businesses with synergistic processes and/or supply requirements, and complementary companies that benefit from proximity to major energy production facilities and/or the EEB Hub. These parcels include the largely vacant North Yard and under-utilized areas of the South Yard and PGW site. The plan also seeks to develop a distinct identity for the Energy Corridor, raising market awareness of its status as a premier location for this industrial sector and attracting new businesses seeking a competitive location.

“Unlike the Innovation District and the Logistics Hub, isolation and limited access are key benefits of the Energy Corridor. *Its lack of connections and limited permeability are attractive to energy and distribution/transportation companies operating under federal, state, and internal*

¹ City of Philadelphia, “The Lower Schuylkill Master Plan,” (2013) with the “Energy Corridor” treated on pages 49-52.
https://www.pidcphila.com/images/uploads/resource_library/LSMP_ExecSummary.pdf (accessed February 2021)

*regulations requiring secure perimeters and access control. (our emphasis)."*²

Given the circumstances of the site's use and the conclusion that the region is characterized by "*federal, state, and internal regulations requiring secure perimeters and access control*," it is unlikely that the PGW portion of the site will ever be accessible to the public, thus undermining any public value there may be in terms of tourism or other value, while the extent of demolition of the site that continues to the present and which is documented below makes it apparent that in terms of site integrity there is so little remaining as to not warrant designation.

Weakness of the Nomination

The introductory pages of a nomination usually contain readily obtained and specific data that should not be in dispute. This nomination is littered with errors that undermine the document. The current occupancy and uses of the site are claimed to be "unknown", and the condition of the property is listed as "fair." Why these facts would be left out of the nomination or misrepresented raises questions about the integrity of the nomination. Further the nomination is undercut by the fact that the site is inaccessible to the public.

The weakness of the nomination is admitted in the text beginning with this extraordinary statement:

"...there was not time nor resources to further explore the potential historical significance of every resource on the site." p. 6.

The text continues with a statement that the site was not thoroughly analyzed:

"Because the site is not accessible to the public...." p. 7.

Further there are frequent comments about the difficulties of seeing individual structures such as:

"... elevations not visible..." p. 13

The text is replete with uncertainties about materials of one sort or another that could not be adequately identified because of the lack of access to the site:

"... stone, *likely* granite..." p. 10.

"... stone *or* iron material..." p. 11

"... stone *or* terra cotta..." p. 31

The lack of knowledge about specifics of condition also undermines the nomination:

"... *appearing to retain* its original form and details ..." p. 15

"... *appearing to retain* its original form and details ..." 16

"... *appears to be* an infilled aperture" p. 16

"... *appears to have been...*" pp. 11, 11, 13, 14, 18

The problem of access to the site, lack of visibility, and inaccessibility are mentioned 26 times – suggesting that the nomination was significantly based on conjecture.

Uncertainty is indicated in the use of "or" more than forty times, referencing both historical and material questions, again making it inappropriate to accept so speculative a document.

² Ibid. p. 50

CRITERION A

Has *significant* character, interest or value as part of the development, heritage or cultural characteristics of the City, Commonwealth or Nation or is associated with the life of a person *significant* in the past;

The issues that might be examined to make the case for meeting this criterion would be business history, the location of the business offices and primary sites, the relation of the business to the city, Commonwealth, or nation, as well as questions of original innovation, technology and the like.

The Philadelphia Gas Works (PGW) originated in 1834 at a different site north of the Market Street bridge where coal supplies could arrive by river and where gas lines could be laid along Market Street to serve the then city area bounded by and South and Vine Streets between the two rivers. The primary site was constructed under the supervision of Samuel Vaughan Merrick (1801 – 1870), an engineer who studied existing gas works in American and Europe and then planned the Gas Works. He was later president of the Pennsylvania Railroad, a founding member of the Franklin Institute, and its president from 1841 – 1852.³ The complex that he designed and constructed remained the principal gas works of the city until the end of the nineteenth century. The corporate management of the Gas Works remained in center city for most of its history with offices first in the Franklin Institute and later in the UGI building at Broad and Arch Streets. At no time was the accessory Point Breeze plant a corporate center.

- The primary Philadelphia gas works on Market Street were constructed many years after gas works were constructed in other European and American cities and is not critical to the history of the industry.⁴
- The Point Breeze site that is nominated is an accessory location which was constructed to augment the production of gas for the primary plant in the early 1850s.
- No innovations are cited for the Point Breeze site in the nomination, nor is there evidence presented or found by my research that indicates that the Point Breeze works were of particular influence on other gas sites.
- While there is much information in the nomination on other gas plants, the focus on innovation in Philadelphia should have begun with the primary site at 23rd and Market Streets.⁵ However, as the nomination makes clear: 1) Philadelphia was late to the industry, 2) was not central to the industrial evolution, and 3) relied on earlier British models and technologies.⁶

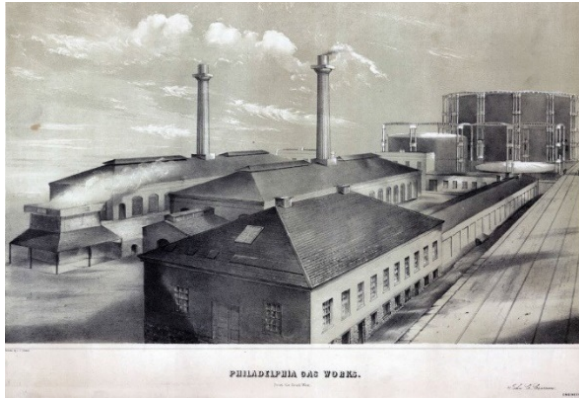
³ *The National Cyclopaedia of American Biography*, v. 13, (New York, James T. White & Company. 1906) 333–334.

⁴ For a list of national mechanical engineering sites of importance as evaluated by the American Society of Mechanical Engineers, see: <https://www.asme.org/about-asme/engineering-history/landmarks/landmark-locations> (accessed 12.5.20). Technological innovations are noted for the Philadelphia Water Works, #21 on the list; the steam engines in the USS Olympia, #22; the creation of standardized screw threads, #234; and the Eddystone Super High Pressure Power Plant, #226. The HAER PA-51 report prepared by David Orr and Herb Levy in 1975 and filed 1983 on the Point Breeze Gas Works Meter House provides an overview of the city's failure to adopt gas lighting until after most of its peer cities. This is a well-researched document that bears comparison with the present nomination, both for its facts and for the condition of the site at the time that it was prepared. When the Orr report was written, 95% of the core buildings were still extant. The HAER- PA-51 report is available online: <https://www.loc.gov/resource/hhh.pa1314.sheet?st=gallery> (accessed Dec. 2020)

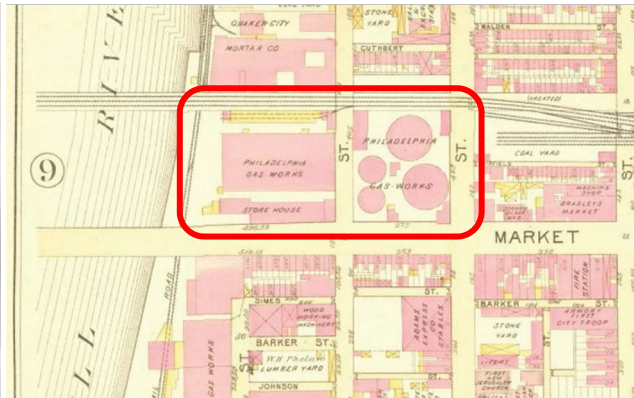
⁵ For an overview of the British origins of gas works history, technology, and site risks see: Dr. Russell Thomas, technical director, Parsons Brinckerhoff, Ltd. "History and Operations of Gasworks (Manufactured Gas Plants) 2013. https://www.researchgate.net/publication/236532402_The_History_and_Operation_of_Gasworks_Manufactured_Gas_Plants (accessed Dec. 2020). The initial plant at 23rd and Market was based on British models that were surveyed by Merrick. See Frederick Binder, "Gas Light," *Pennsylvania History* 22 (Jan-Oct. 1955) 359-373.

⁶ William Strickland, Edward H. Gill, Henry R. Campbell, eds. *Reports, specifications, and estimates of public works in the United States of America :comprising the Philadelphia gas works; reservoir dam across the Swatara; twin locks on the Schuylkill Canal; Delaware Breakwater; Philadelphia Water Works; dam and lock on the Sandy and Beaver Canal; dam on the James River and*

As such, the innovations and benefits claimed in the nomination for the beneficial effects of the gas works on the lives of Philadelphians should be ascribed to the primary Gas Works on Market Street, not the Point Breeze accessory site.



Philadelphia Gas Works, 1852 (Library Company of Phila.)



R. John & Walter Bromley, *Atlas of the City of Philadelphia*, 1895, detail pl. 2

Conclusion Re: Criterion A

As a consequence of its secondary, accessory role in the corporate development of the Philadelphia Gas Works and the massive loss of integrity of the complex caused by a century of demolition, and wear, the Point Breeze site does not meet Criterion A.

CRITERION C

Reflects the environment in an era characterized by a *distinctive* architectural style;

No attempt is made to explain the critical era or the critical style that meets this criterion. In the decade before the Point Breeze works was constructed, the future of industrial design was moving away from details of historic revivals inorganically attached to industrial buildings toward direct expression of purpose, material, and construction systems. The primary Gas Works complex in center city, designed by engineer Samuel Merrick (see 1852 lithograph, p. 7, above) was a simple straight-forward brick structure that represented the directions of future industrial architecture. The later decision to build the second plant in Point Breeze in a Gothic Revival style ran counter to the utilization of contemporary industrial expression in the initial plant which John Cotter and David Orr correctly regarded as "... a bellwether of the industrial architecture to come."⁷

The arbitrary choice of the Gothic Revival style for the Point Breeze site is largely inexplicable, suggesting a designer with little knowledge of contemporary industrial directions.

- While there was an attempt to justify the Gothic style of the Point Breeze plant on the grounds of ventilation to make the buildings more comfortable for the workforce, the physical evidence

Kanawha Canal, Virginia; locks of eight feet lift, on the same; aqueducts across Rivanna River and Byrd Creek, on the same; superstructure, etc., of farm bridges, on the same; lock gates and mitre sills (London: John Weale, 1841). Samuel Merrick's initial 1834 report to Philadelphia City Council on British models is on pages 47-84.

⁷ John Cotter, et al *The Buried Past: An Archaeological History of Philadelphia* (Philadelphia: University of Pennsylvania Press, 1993) 313; the site is covered pp. 312– 317.

of the site shows that the narrow Gothic doors made access difficult for equipment and materials while the Gothic sash blocked airflow and were soon removed.

- Once the Point Breeze site buildings were no longer used for their original purpose, they were turned into storage.
- At that time most of the original sash were bricked and glass-blocked closed.
- Most of the initial Point Breeze complex was demolished when the plant was redesigned in the 1890s.
- The 1890s redesign provided for larger window openings and increased ventilation through roof-level ventilators that were more effective for airflow than the Gothic design.

The extent of demolition of most of the buildings of the original phase of the Point Breeze plant and the loss of integrity of the few surviving structures leave a complex that is not a good example of the Gothic Revival in any way. While there may be a perverse interest in the absolute misapplication of the style to an industrial purpose in this instance, it is not a site that one would seek out to understand the evolution or the key elements of the style.

CRITERION D

Embodies *distinguishing* characteristics of an architectural style or engineering specimen;

By the early 19th century the use of historic revival styles as a tool to express purpose (castles for prisons or jails, Gothic for churches, etc., Egyptian for mausolea) meant that nearly every urban building beyond the most basic referenced a style.⁸ Surely it is not the intention of the Commission to designate every building that has evidence of a style. Criterion D requires design that represents “distinguishing characteristics” of the style that represent examples of quality. It would also suggest that integrity as in relative completeness and ability to represent the original design intention should be apparent in the subject structures.

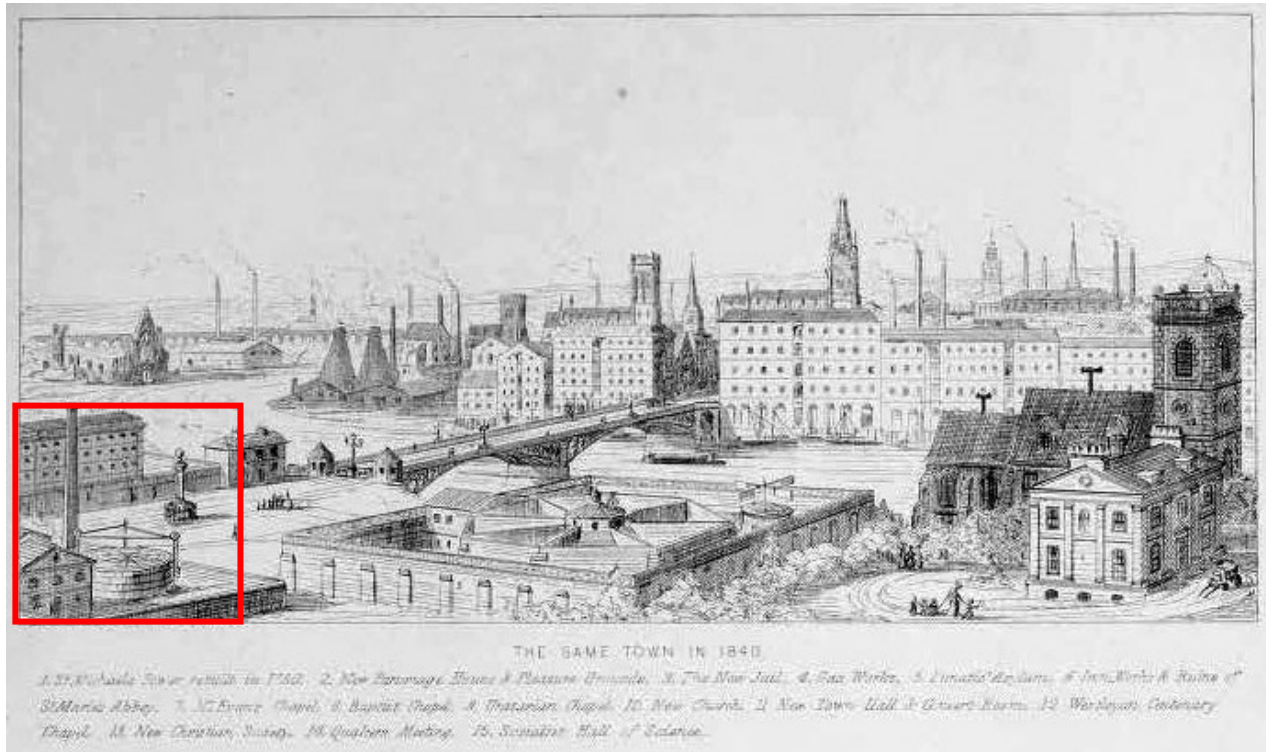
In the case of the mid-19th century Gothic Revival, the style had formal qualities that could be quickly understood— pointed arches, structural buttresses, tall roofs, towers and spires and so on. But the Gothic Revival also represented cultural values and mores against the assaults of modern capitalism on the social order. The social and cultural issues of the style are embodied in the polemical texts of John Ruskin, A. W. N. Pugin, William Morris, and more recently Kenneth Clark, Phoebe Stanton and others leading to the incorporation of aspects of the style in the later literature of modernism as emblematic of social concern and cultural values. There are numerous histories of the Gothic Revival, covering both its evolution and its cultural meaning, none of which are referenced in the text or the bibliography. As a result, the treatment of the style and its application on this site is inadequate.

By the mid-19th century, the Puginian version of the Gothic Revival style entailed much more than the mere use of a few motifs from the Middle Ages; the style was used as a means of addressing issues of morality and social values in a culture that was being transformed by the first great wave of capitalized industrialization. This meant that the style was not just about grafting motifs on a building but about using the motifs in ways that reflected the “honesty” of the construction and design as well as the institutional and social values embodied in the structure.

- The choice of the style for this type of facility is immediately problematic according to the cultural values of the day. The Gothic Revival in the mid-19th century was used to characterize social institutions where people were cared for, hospitals, old peoples' housing, churches,

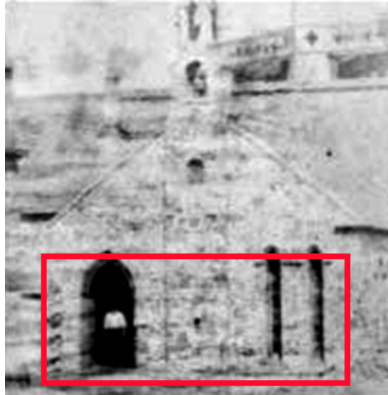
⁸ For a summary of the role of styles in representing purpose and cultural value see: George E. Thomas, “The Statue in the Garden,” *Sculpture of a City: Philadelphia's Treasures in Bronze and Stone* (New York: Walker Publishing Co., 1974) 36-45.

academic institutions and the ultimate social institution of the home. In Pugin's illustrations for *Contrasts* (1836), his polemic on modern Britain, factories are exactly the type of building that would not warrant the uplifting social meaning of the style. Indeed Pugin's illustrations juxtapose humane institutions in Gothic style against the new industrial hellscapes embodied in William Blake's phrase "dark Satanic mills," making clear the inappropriateness of the Gothic Revival style for a complex that was about fire and brimstone.



Augustus Welby Northmore Pugin *Contrasts* (1836) compared contemporary vs. high medieval townscapes. The 1840 townscape is disfigured by a "Gas Works" in lower left with gas holder and chimney, a prison plan work-house for the poor in the center and various coking and industrial processes along the river.

- As a second issue, the elements to represent the style properly would be used in the appropriate manner for their structural purpose. Buttresses for example should actually work against the lateral forces in a roof and wall. In the case of the gas works buildings the buttresses too often are merely decorative and rotated as façade features playing no role in resisting the lateral forces of the roofs and interior structure against the side walls.
- Third, the choice of the style with its narrow openings and pointed windows proved to be a poor one for the industrial use and undercuts claims of Cresson's significance as a designer. This inappropriateness is evidenced by the early and extensive alterations to openings many of which were massively enlarged by joining two openings into single doorways as well as by the removal of trim, moldings, and tracery to bring in light and air. Indeed as is evident from the extent of alterations, there could have been almost no style that was less suited to this industrial purpose.
- The problems of the use of this style for this particular industrial purpose are evident in the extraordinary extent of demolition and removal of details resulting in a critical loss of integrity across every building. With the demolition of those buildings that were most detailed, particularly the retort buildings, it suggests that their style was particularly inappropriate to the site's purpose.



Altered windows and door openings: Gothic door and paired Gothic windows turned into modern doors, Building 1a.

- Further, mid-19th century ecclesiastical publications oppose the use of the Gothic style for an industrial structure such as a gas production factory. In the instance of this site, there is an obvious though crude reference to St. James the Less in East Falls, designed by G.G. Place for the British Oxford Society. That building, based on St. Michael's, Long Stanton, was the Oxford Society's recommended design for parish Gothic churches to embody the conservative social values of the society. Its application to a gasworks runs counter to the cultural meaning of its time.
- The loss of integrity and the extent of demolition of most of the buildings of the original phase of the complex leave a complex that, while evident in its choice of style, is not a good example. While there may be a perverse interest in the absolute misapplication of the style in this instance, it is not a site that one would seek out to understand the style.
- Within the history of industrial design, the use of the Gothic Revival runs counter to the utilization of contemporary industrial expression such as had been utilized for the first complex at 23rd and Market Streets which John Cotter and David Orr regarded as "... a bellwether of the industrial architecture to come."⁹

Because the Point Breeze site has continued in industrial use to the present, there has been little regard for the original design which has been more of an obstacle than an asset. As a result, as the nomination demonstrates, buildings have been continuously modified away from their stylistic origins as window and door frames have been widened and detail removed.



Building 1 b, rear wall, every opening altered because of inadequacy for later uses, resulting in loss of integrity

⁹ John Cotter, et al *The Buried Past: An Archaeological History of Philadelphia* (Philadelphia: University of Pennsylvania Press, 1993) 313; the site is covered pp. 312– 317.

Other buildings in the site have been so altered as to have little to do with the style. An example is Building 5b, which has remnants of its Gothic Revival west façade but, as is evident in the aerial photographs used in the nomination, has been largely rebuilt. The rear is not simply a “blank façade” as stated in the nomination but is instead an entirely rebuilt structure with a flat modern roof and rear walls of cinder block.



Much altered façade Building 5b, frames, windows removed



Rear cement block façade with flat roof– nothing of building remains other than elements of front façade

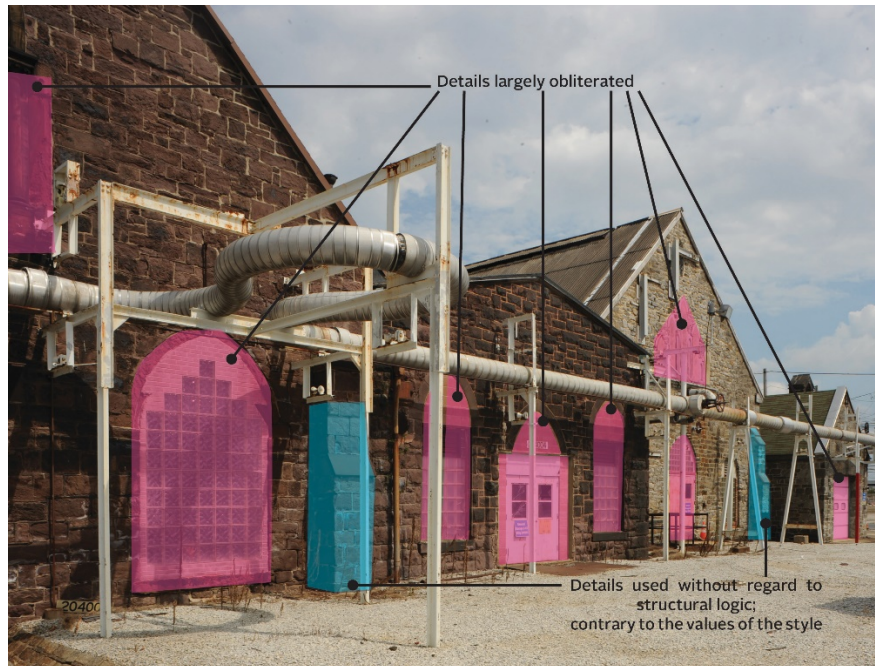
Condition / Building Integrity

The nomination claims on its cover sheet that the buildings are in “fair” condition. Condition plays a critical role in determining whether a structure has sufficient integrity to warrant designation and further, is a good candidate for long-term preservation or whether it will require so much reconstruction as to lose its historic character while affecting the bottom line of a business whose efficiency benefits the entire city. In the case of these buildings, once the shift was made from production of gas by the initial group of buildings, first to the massive retorts and production facilities dating from 1898, and more recently given the shift from production to storage of natural gas, the buildings in question have been reduced to storage of surplus equipment without heat and with minimal maintenance.

Further, because the buildings have had little value to the business, alterations have been made to minimize costs. Window frames have been replaced with cement and openings were infilled with glass block; door frames are entirely removed and door openings partially infilled to receive metal doors.



Door and window frames removed; masonry hoods shaved off, glass block infill. Left: Building 5a; Right: Building 2



Main row of buildings showing extent of alterations and Gothic details used without regard to structural purpose



Shop building alterations: windows infilled and enlarged into doors, later infilled with brick; extensive masonry damage from erosion

Building roofing systems are beyond the end of their useful life. Recently, increasingly strong winds caused by climate change have ripped off areas of roofing. Roofs show evidence of water damage in their interior trusses and at the seating of trusses on walls. Extensive white mildew is evidence of fungal attacks on truss elements and appears on structural elements. This is part of a pattern of decay that will necessitate massive reconstruction for buildings that are presently only used to house surplus materials.



Building 5, roof damage in windstorm, summer 2020 with roof sheathing blown out



Building 5 roof damage—black are as show rot and charring from fires, replacement trusses and plywood sheathing



Building 2: Black rot, white fungi, and charring on roof planking, reconstruction at far end (right)



Building 2 previous roof repairs and reconstruction, replacement truss and plywood roof underlayment on left (Building 2)

Attempt to control the site with irrelevant structures

The nomination is further in error in its assertion that many of the elements of the site are contributing as part of the Gothic Revival style hypothesis. All structures with buttresses are presumed by the nominator to be part of the Gothic Revival style. However, not every buttress is a Gothic Revival buttress. Many on the site were later added to reinforce retaining walls and retaining structures and thus do not contribute to the Gothic Revival narrative. Other buttresses, as in the case of the building fragment of the old coal storage facility, were simply requirements to stabilize masses of coal. The wood warehouse of the second level has no connections to the Gothic Revival style at all.



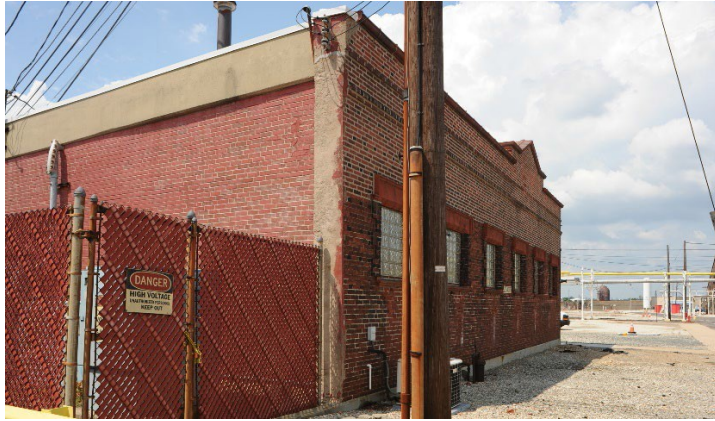
The buttresses of the wall fragment of the long-since demolished coal storage building are simply present to stabilize masses of coal under shelter.



Hexamer General Survey showing Coal Storage building. Unlike the long-since-demolished retort buildings in the foreground right, which had Gothic windows, buttresses, and decorative cornices, the Coal Storage building was a simple frame box onto of a masonry first story. There are no stylistic flourishes on the building and no relation to the Gothic Revival style. The fragment of the wall that survives along the north edge of the site does not contribute to the Gothic Revival narrative.

Further, in an effort to control the entire site, later structures that have a few bits of a much later version of the Gothic style, in brick instead of stone, and with square windows and flat jack arches are also included under the rubric of Gothic in the nomination. The most egregious case is the former garage which, as is evident in the 1929 Sanborn plate and the 1935 Dallin Aerial photograph, originally was nearly four times the present length. In this instance the only element that has anything to do with some type of Gothic Revival is the raised parapet that projects above the main wall. This is clearly not part of the original High Gothic Revival style that the nomination is centered on with its pointed arches,

high roofs, and articulated window and door frames. Instead it is little more than a marker, now rendered even more irrelevant by the demolition of most of the building, thereby removing its original symmetry and leaving a tiny fragmentary detail. By expanding the dates of significance long past the era of Cresson's work, and expanding the Gothic far beyond the Puginian Gothic, the garage is captured in the nomination.



Garage fragment of 6 window openings with raised parapet

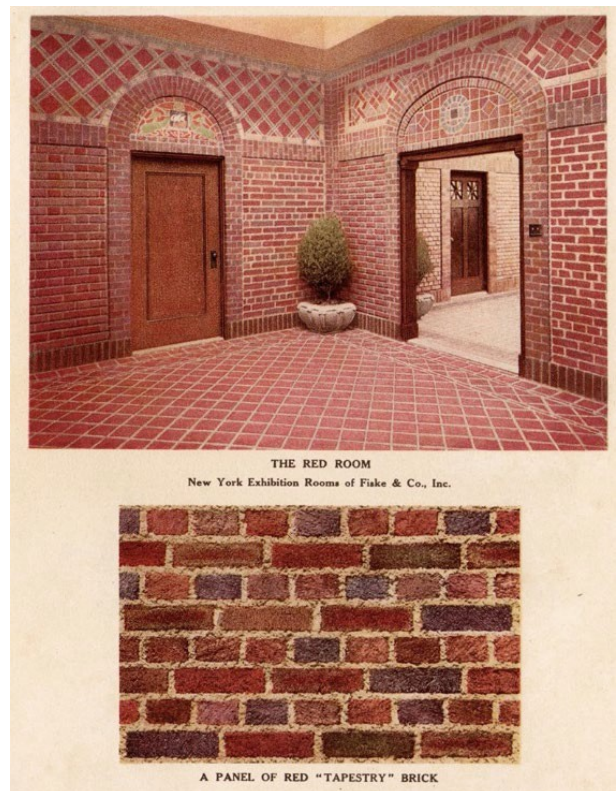


Original scale of garage with two parapets and 25 windows , Dallin Aerial photo 1935 (HagleyMuseum)

The nomination further errs in describing the garage building as being made of “tapestry brick.” As is evident the material is common Philadelphia brick with no evidence of the variations of tone and texture of tapestry brick.



Garage wall, common brick with failing brick surface



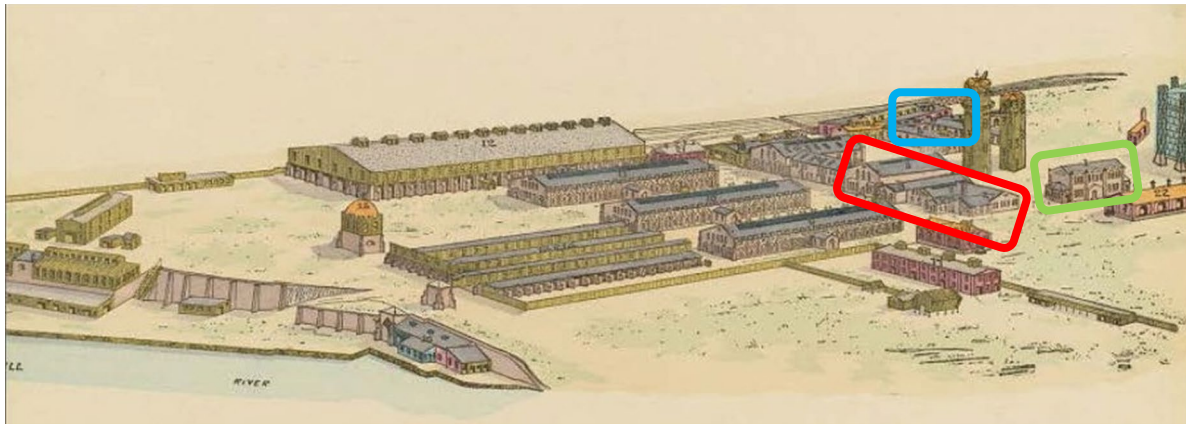
Tapestry brick advertisement, Fiske & Co. with texture and changes of hue

The Dispensary is part of this change in style and material from the original complex. It also shares motifs such as brick with terra cotta jack arches above the window heads with the garage that has more to do with late Victorian design in material and color and early 20th century institutional style rather than the gable-roofed, decorated stone buildings of the original phase.



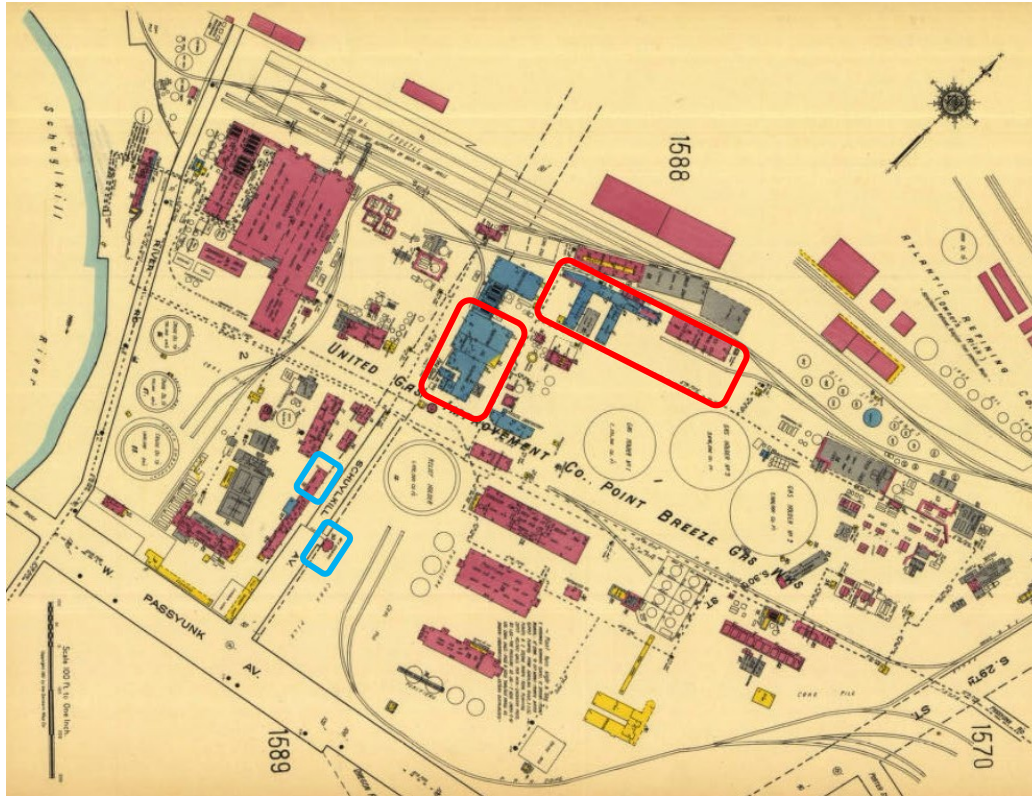
Dispensary, brick late 17th century revival, square windows, c. 1900

Loss of Site Integrity



1894 Hexamer General Survey shows the extent of the Point Breeze plant prior to the massive rebuild of the site in 1898. The retorts, coal sheds, and other buildings of the site were demolished as part of the site rebuild leaving only a portion of the row of early buildings and the rear shops [blue outline]. and meter building [green outline, demolished in 1970s]

Cresson's gas works was a living, noisy, smoke-filled entity that was largely demolished in the late 1890s and was then demolished again in the 1960s. The few fragments of badly damaged buildings that survive convey nothing of the associations and character of the 1850s project.

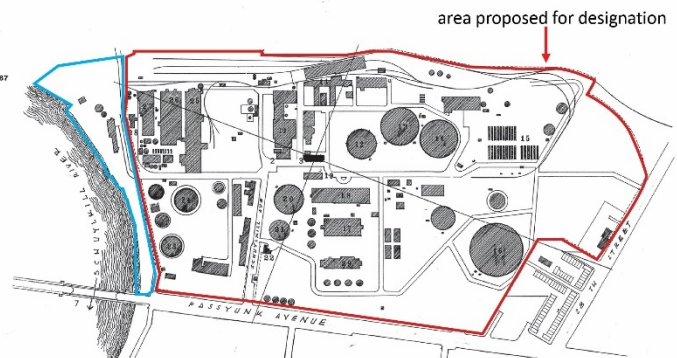


1929 Sanborn Atlas, Pl. 1588. Extant early buildings in blue (representing stone), purifying house on left outlined in red, former shops to right and above also outlined in red. All of the surviving buildings are much altered with significant loss of integrity. Later brick garage building and dispensary (in red, representing brick) outlined in blue

Existing 1974 Site Plan

KEY TO SITE PLANS

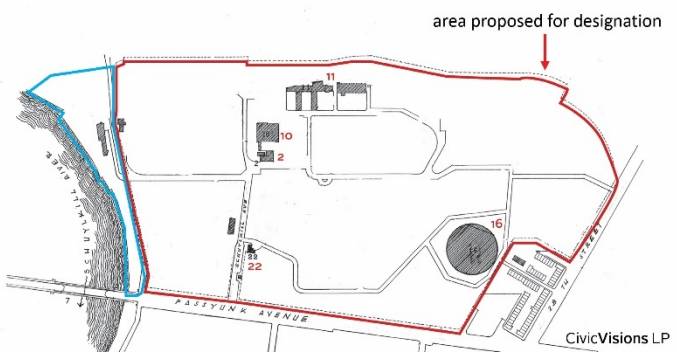
- 1 RETORT HOUSE 1854
- 2 PURIFYING HOUSE 1854
- 3 METER HOUSE 1854
- 4 TELESCOPING DASHOLDER 1854
- 5 FUTURE RETORT HOUSES 1860 & 1867
- 6 GOLDEN SWAN INN PRE 1850
- 7 BASCULE LIFT BRIDGE 1911
- 8 DEEP WATER SHIP WHARF 1853
- 9 COAL STORES 1853
- 10 BOILER HOUSE 1856 & 1884
- 11 SHOPS 1860
- 12 NO. 1 HOLDER 500,000 CU. FT.
- 13 NO. 2 HOLDER 500,000 CU. FT.
- 14 NO. 3 HOLDER 500,000 CU. FT.
- 15 L. P. FARM
- 16 NO. 4 HOLDER 10,000,000 CU. FT.
- 17 PURIFYING HOUSE
- 18 PUSHER HOUSE 1899
- 19 CAFETERIA
- 20 RELIEF HOLDER NO. 4
- 21 RELIEF HOLDER NO. 5
- 22 DISPENSARY 1899
- 23 OIL TANK
- 24 OIL TANK
- 25 RETORT & WATER GAS 1899
- 26 NO. 1 GENERATOR HOUSE
- 27 POWER HOUSE
- 28 WATER TOWER BUILDING 1869
- 29 PURIFYING HOUSE



Existing 2021 Site Plan

KEY TO SITE PLANS

- 2 PURIFYING HOUSE 1854
- 10 BOILER HOUSE 1856 & 1884
- 11 SHOPS 1860
- 16 NO. 4 HOLDER 10,000,000 CU. FT.
- 22 DISPENSARY 1899



Detail, David Orr, Herb Levy, Cover Sheet 1, HAER—PA-41 (1974) site plan showing extent of the remaining gas production buildings in 1974 and the present conditions today. The purifying house (#2), and portions of the boiler house (#10) as well as portions of the shops (#11) along with the dispensary (#22) survive. The other buildings including all of the original retort houses had been demolished by 1900 and the post 1899 plant has also been demolished with the shift to natural gas storage. The PGW portion of the site is outlined in red and the Hilco portion of the site is outlined in blue.



1959 Aerial Photograph of site showing essentially same conditions as the 1974 Survey by Orr and Levy. The rail line bounds the east side of the property and the extension of the Schuylkill Expressway is visible in the upper right corner of the photograph along with the corner of the Tasker Homes public housing that was constructed in the shadow of the refineries.



Google Earth view of site showing nearly total clearance with shift to natural gas storage.

Conclusion: Criteria C and D

Given the inappropriateness of the style for the industrial use, the extent of alterations to character-defining aspects of the buildings and resulting loss of integrity and the general demolition of the vast majority of the pre-Civil War plant, the buildings as they exist are poor examples of the style that do not warrant designation on stylistic grounds.

CRITERION E

Is the work of a designer, architect, landscape architect or designer, or engineer whose work has significantly influenced the historical, architectural, economic, social, or cultural development of the City, Commonwealth or Nation;

The design of the first phase of the Point Breeze complex is attributed to the chief engineer of the gas works, John C. Cresson. As is evident from Cresson's obituary, his early life was one of various attempts at careers beginning with medicine but according to his obituary, while he enjoyed the study, he "...shrank from the labors and uncertainties of the practice."¹⁰ He then turned to farming but failed at that and then turned to commerce in Philadelphia. There remains a question as to whether Cresson himself was the actual designer of the complex. In any case he was not trained as an engineer as will be evident in the extensive professional failures during his tenure as chief engineer.

In the case of the initial primary gas works in center city, William Strickland, in his account of the works described it as the design of "S [amuel]. V. Merrick, Engineer of the Works." The works were shown to Strickland by "J. C. Cresson, Superintendent." This makes clear in the case of the initial plant that Merrick, who had traveled to Britain to study gasworks was the prime designer and Cresson was the manager after the site construction.¹¹ Cresson's obituary (by his son-in-law Fraley) gives no hint that he had any training as an engineer or designer. Moreover, the Philadelphia Architects and Biographies website only lists Fairmount Park as a project of Cresson, confirming his minor role as a designer.¹²

- The later structural problems that plagued the Point Breeze site suggest that if Cresson was the designer, he was not good at his task.

In the initial construction phase there were multiple catastrophes, none of which are mentioned in the nomination:

- One of the original two stone retort buildings collapsed during construction in 1851.
- The large storage tank collapsed during construction in 1852.¹³

the whole sum. Had not the unexpected difficulties in the foundation of the tank, and the accident to the gas-holder occurred, the cost of the section would have been several thousand dollars below the appropriation. Before dismissing this subject, it seems incum-

20th Annual Report of the Trustees of the Philadelphia Gas Works (1855) describing problems with foundations and the subsequent collapse of the gas holder in 1852, p. 21.

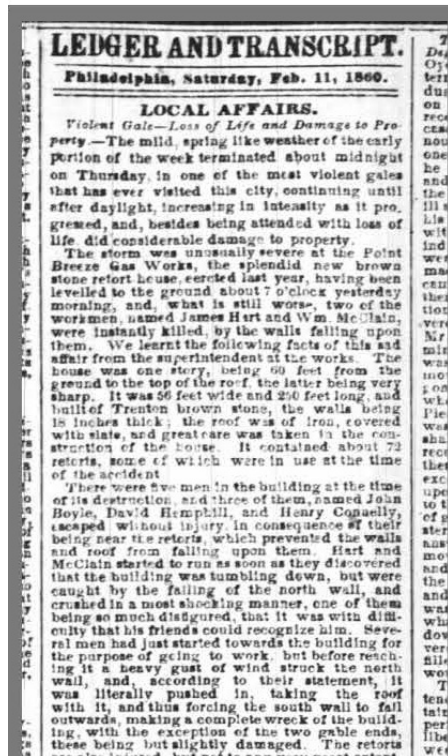
¹⁰ Frederick Fraley, "Obituary Notice of John C. Cresson, read before the American Philosophical Society, October 19, 1877," *Proceedings of the American Philosophical Society*. 17, No. 100 (Jun. - Dec., 1877) pp. 149 – 162. His various careers are discussed pp 150 – 152.

¹¹ Daniel R. Goodwin, "Obituary Notice of Samuel Vaughan Merrick, Esq." *Proceedings of the American Philosophical Society* 11: 81 (Jan., 1869), pp. 584-597.

¹² Cresson is not listed in the standard architectural dictionary, Herbert Withey, *Biographical Dictionary of Architects (Deceased)* (1956) and is not mentioned in George E. Thomas, et al, *Buildings of Pennsylvania: Philadelphia and Eastern Pennsylvania* (Charlottesville, University of Virginia Press, 2010).

¹³ See Orr & Levy HAER PA-51, Data page 6 which reported that "materials and workmanship were of poor quality."

- In a windstorm in February of 1860, a third retort building, then under construction collapsed, causing fatalities and demolishing all but the gable end walls. Reconstruction required extensive additional bracing with the loss explained by the failure to take into account the length of the long walls that were not adequately braced against wind loads, again indicting Cresson's leadership.



Philadelphia Public Ledger February 11, 1860, p. 1 – describes the collapse of the building leaving only the gable ends, the remainder collapsing and taking the roof with it. Gas Works annual reports describe significant additional remedial structure that was necessary to stabilize the reconstructed building with the note that buildings of its extreme length were subject to such disasters. In other words, the building was not adequately braced against wind.

- The main storage tank partially collapsed in 1864.
- These issues plus a continuous occurrence of fires in the coal storage areas were part of the bill of particulars that led to Cresson's resignation as site engineer and his replacement by architect and engineer Thomas Sommerville Stewart.

From an examination of the Reports of the former Engineer, John C. Cresson, Esq., it appears that fire by spontaneous combustion was of almost yearly occurrence. (See Reports of 1852, 7, 8 and 63.) From these Reports it appears that great expense had been incurred to subdue these fires, without any good results.

31st Annual Report of the Trustees of the Philadelphia Gas Works (1866) p. 7. Reports of fires in the coal storage areas in 1852, 1857, 1858, 1863. These problems are not discussed in the nomination though there is plenty of information in the annual reports and additional information on fires in the coal storage in the city council records.¹⁴

- The multiple calamities at the site make it clear that Cresson was not adequately prepared in structural engineering while the inappropriateness of the chosen style for the purpose of the

¹⁴ The 1853-1860 reports and the 1861-1867 reports are available at the Hathi Trust site and describe the continuous problems that characterized Cresson's term as engineer: <https://catalog.hathitrust.org/Record/008634571> (accessed Dec. 2020)

plant, which was made evident in the extensive alterations that undermined the chosen style, provides evidence that if the buildings were designed by Cresson, then he was failure as a designer as well.

Conclusion: Criterion E

The extensive history of structural failures, the incompatibility of the chosen architectural style with the industrial purpose, and the lack of any evidence suggesting that other designers were influenced by Cresson together argue against celebrating Cresson as a designer. In their present condition the Point Breeze buildings are poor examples of Gothic Revival style. As industrial architecture was shifting toward direct and utilitarian expression of material and construction, Cresson's choices at the gas works were not followed. Certainly he does not meet the test of being influential.

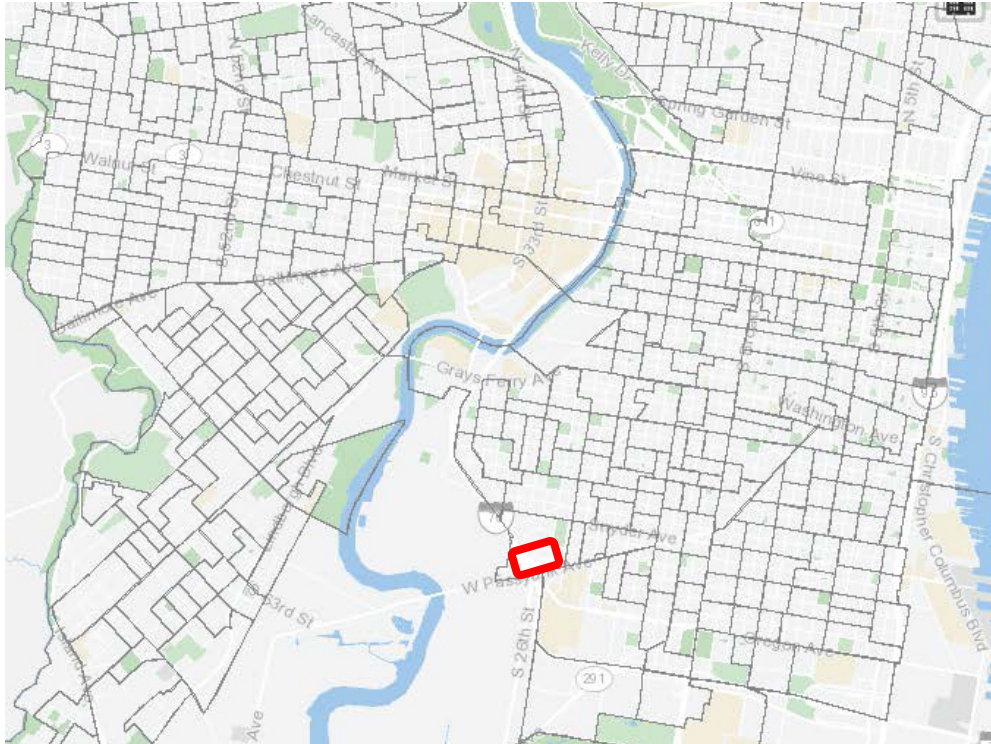
CRITERION J

Exemplifies the Cultural, Political, Social or Historical Heritage of the Community

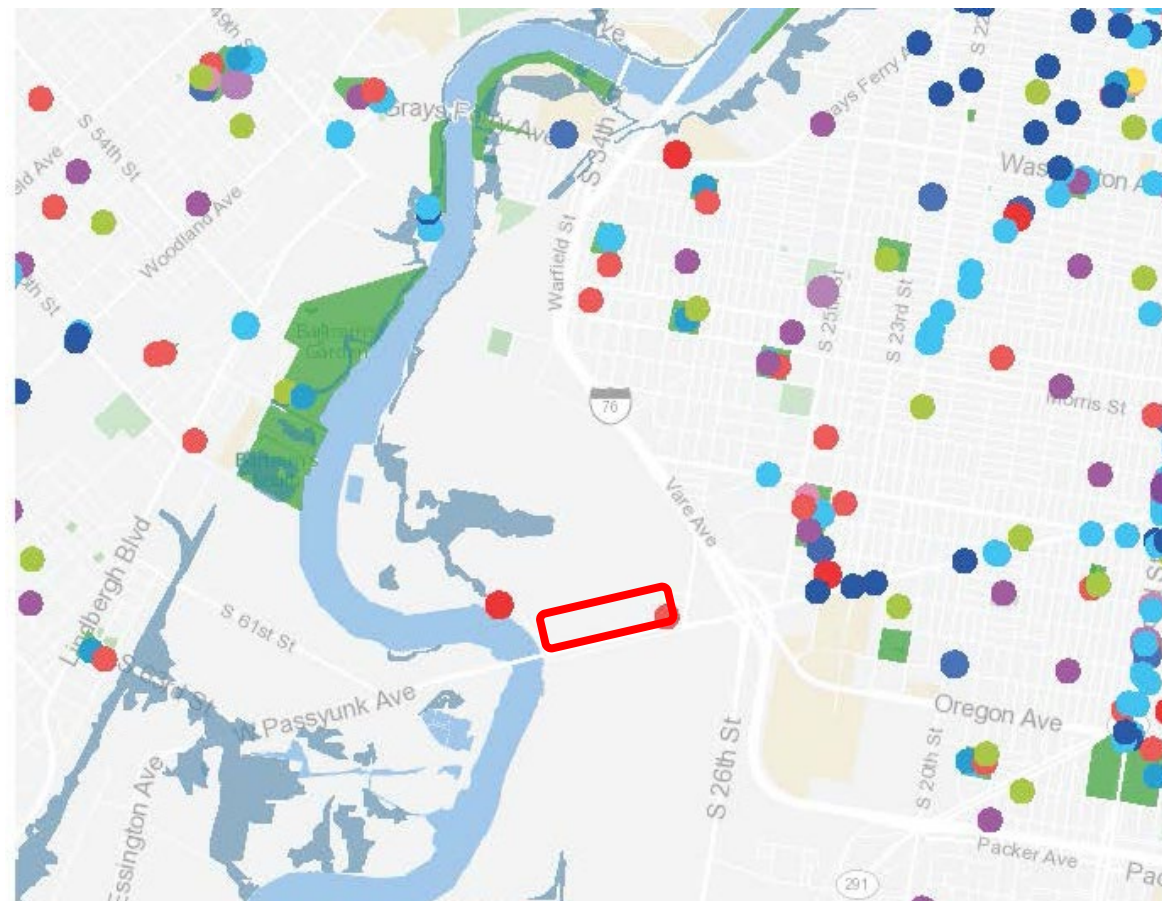
As is apparent in the Google Earth aerial view, the site is largely cut off from the residential city by rail lines along the site paralleled by the Schuylkill Expressway, the refineries to the north and south, and the river on the west. For many years the areas to the north, east and south were largely devoid of housing for many blocks because of the industrial and environmental conditions.



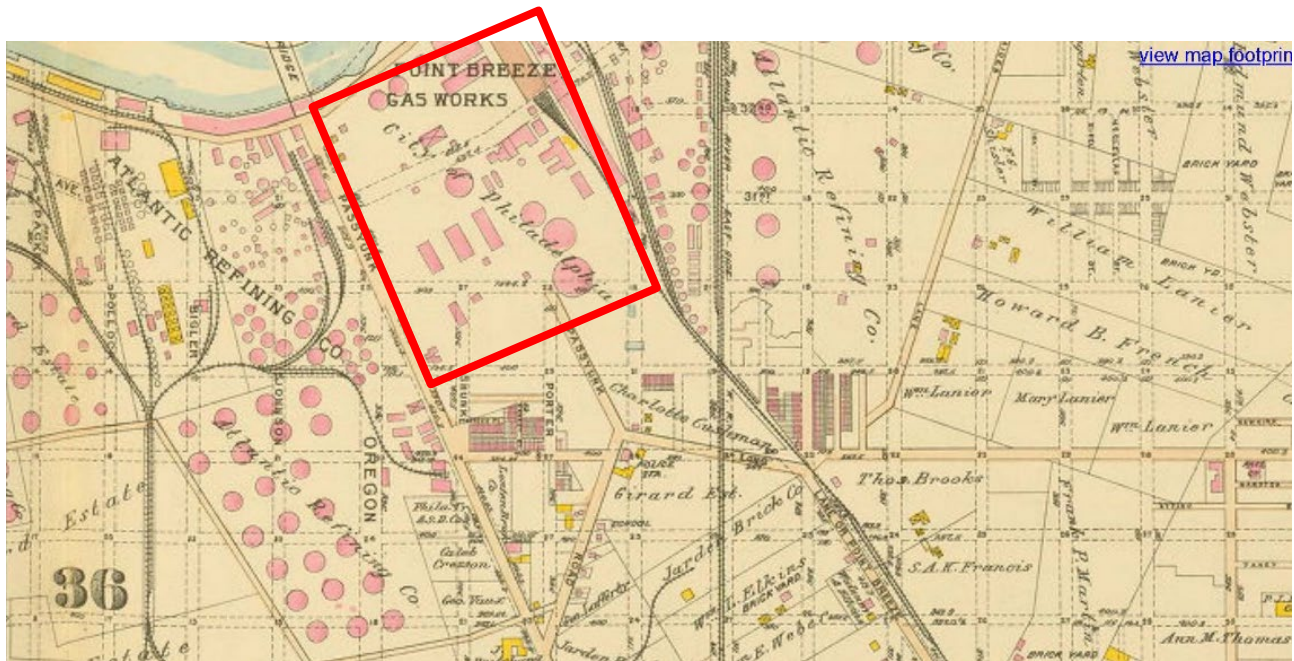
Google Earth image of present site of the Gas Works (red outline) showing the site cut off from the residential city by rail lines, the Expressway, the Schuylkill River, and the adjacent former sites of the Philadelphia Energy Systems, now Hilco site



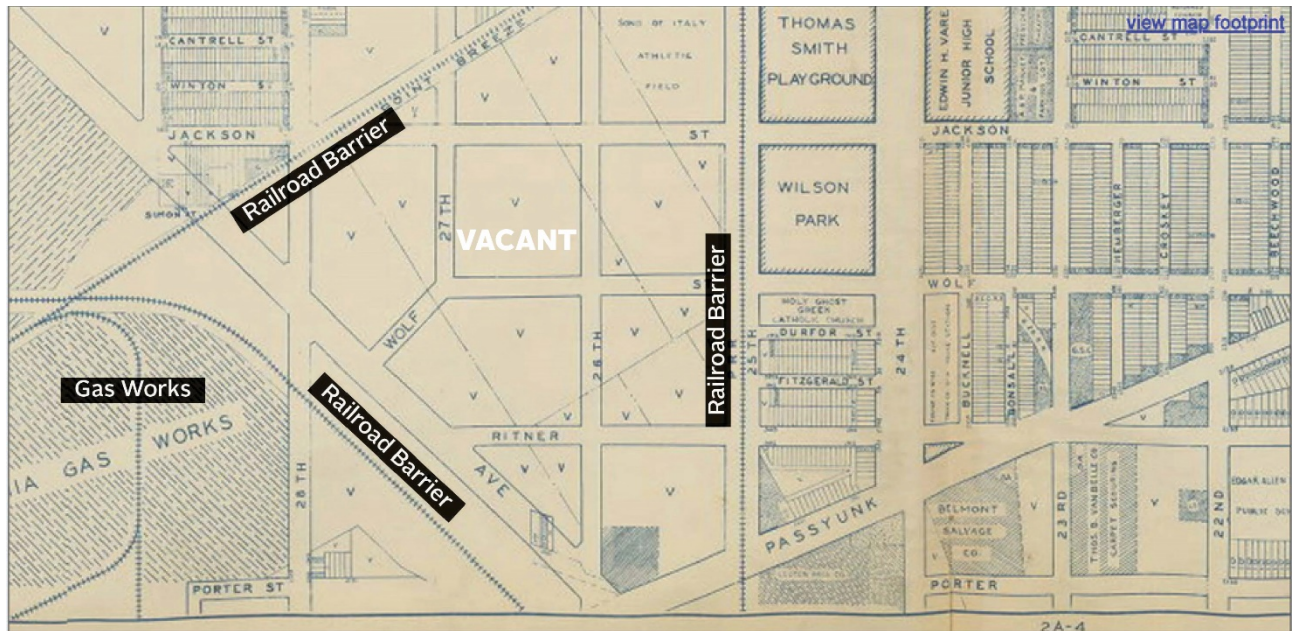
Philadelphia Atlas: US Census tracts – PGW site (red outline) – the huge census tract along the river means it is essentially empty of population



Dot map of City Services of south Philadelphia – the only city service in the PGW area (red outline) is the red dot for the fire boat



1910 Bromley Atlas of Philadelphia, showing lack of housing or institutions in the vicinity



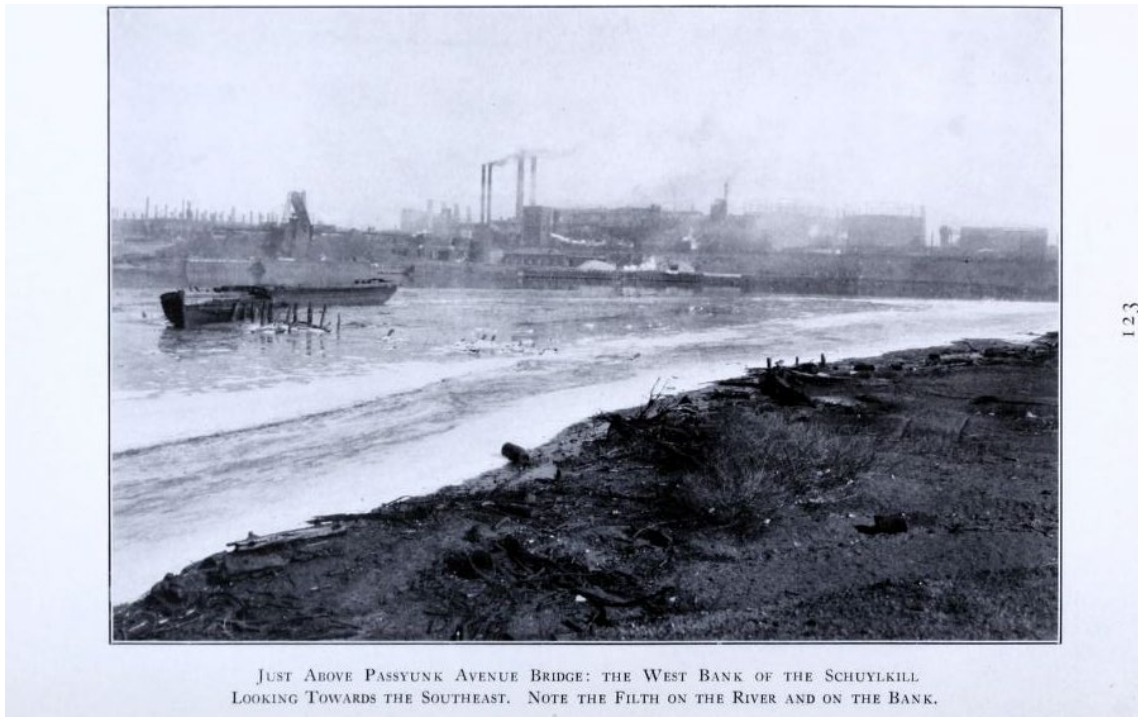
1942 City Land Use map: Gas Works on left; no housing for blocks because of the air pollution

The lack of housing in the vicinity of the plant was discussed in the Orr and Levy data pages for their study of the Point Breeze works. They concluded that "... the stench and heavy smoke associated with the manufacture of gas would naturally have discouraged any workers from living adjacent to the works."¹⁵

¹⁵ Orr & Levy HAER PA-51, Data page 16, n. 20



1935 Dallin Aerial Survey – the empty zone around the refineries prior to the construction of the Tasker Homes in 1937 and then the 1950s construction of the Schuylkill Expressway (I-76) which functions as a barrier between the refinery zone and the residential neighborhoods to the east. Red outline is a general outline of the 1937 PGW property.



JUST ABOVE PASSYUNK AVENUE BRIDGE: THE WEST BANK OF THE SCHUYLKILL.
LOOKING TOWARDS THE SOUTHEAST. NOTE THE FILTH ON THE RIVER AND ON THE BANK.

The lower Schuylkill has suffered from industrial pollutants back into the 19th century, causing it to be prominently featured in John Frederic Lewis *The Redemption of the Schuylkill: The River as it was; As it is; As it Should Be* (Philadelphia 1924). Gas Works smokestacks in center.

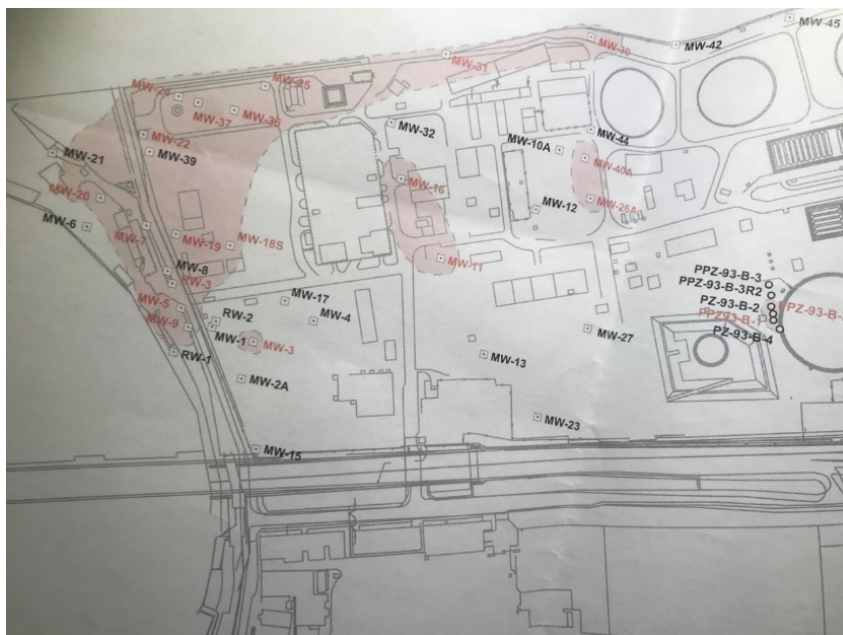
Environmental Issues of the energy corridor

Beyond the historical issues, industrial pollutants have been part of gas plants, refineries, and other fuel production sites throughout their history. PGW is working with state and federal agencies to remediate these products that have infiltrated into its sites through extensive well monitoring and EPA Act II activities.

It is these environmental concerns, coupled with the security protocols presented by the vast amount of liquified natural gas cryogenically stored that underlie the Philadelphia City Planning Commission's conclusions that the site should continue to be controlled by "*federal, state, and internal regulations requiring secure perimeters and access control*". Historic designation runs contrary to the goal of protecting and securing the site.



Ground waterflows as part of Naphtha cleanup, PGW environmental report



MW numbers reference monitoring wells; RW, recovery wells, as part of ongoing Naphtha cleanup issues from adjacent properties

Conclusion: Criterion J

The extent of refineries and other petroleum process plants made the area along the Schuylkill and below Jackson Street and west of 25th Street largely barren of housing until the city constructed the Tasker Homes in 1937. Where in the 1880s there was a small church and a public school near the plant, by 1909 the church was gone and by 1951, the expansion of the rail yards to service the refineries had resulted in community institutions, public schools, were retreating east toward 24th Street. The construction of the Expressway beginning after World War II caused the demolition of blocks of houses and institutions, further cutting off the PGW site from the city.

The counter argument that this is a site of oil refineries and industry is now undercut by the closing of the Atlantic / Philadelphia Energy Systems refineries that will result in site clearance, leaving PGW isolated.

Conclusion

The nomination fails to demonstrate that this site warrants historical designation because it was an accessory plant that augmented the primary gas works. It is of minor significance in the history of the city's gas works and the gas industry:

- the argument that the Gothic Revival style should be a basis for designation is undermined by inappropriateness of the style to the purpose which has resulted in the demolition and defacing of most of the site;
- the loss of integrity of the surviving buildings, and their condition reflects their marginal role in a site now largely devoted to gas storage and parking for PGW service vehicles;
- there is no evidence presented that the site was important in the technology of gas works; no significant technology was invented here and it is not listed as a landmark the American Society of Mechanical Engineers (<https://www.asme.org/about-asme/engineering-history/landmarks>);
- nor is the PGW complex the work of an important designer; the structural failures and stylistic inappropriateness of the design prove Cresson's failings as designer;
- moreover the site no longer exemplifies any community because the post-World War II rail yards and super highway demolished the connections between the plant and the city, creating what is now the emptiest zone in the city. The area is zoned as heavy industry – I-3.

Clearly the lack of access to the site makes the site particularly inappropriate for historical designation and given that the site operates as noted in the Philadelphia City Planning Commission's *Lower Schuylkill Master Plan* section for the Energy Corridor "... under federal, state, and internal regulations requiring secure perimeters and access control" (p.50), it is apparent that calling additional attention to the site is not a positive.

Finally, the mandatory safety requirements in order for a layperson to visit the site were sufficiently daunting that Historical Commission Executive Director Jonathan Farnham was forced to reject a scheduled site visit due to his employer's site visitation restrictions.