

## **SUMMARY OF STATE HERITAGE PLACE**

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### **REGISTER ENTRY**

**Entry in the South Australian Heritage Register in accordance with the  
Heritage Places Act 1993**

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**NAME:** Brompton Gasworks

**PLACE NO.:** 26449

**ADDRESS:** 1-21 Chief Street, Brompton

CT 5781/429 – Closed Road Marked A, Road Plan 1093,  
Hundred of Yatala

CT 5781/435 – Closed Road Marked A, Road Plan 2359,  
Hundred of Yatala

CT 6055/957 – Lots 95, 96, 97, 98, 99 & 100, Filed Plan 218912  
Hundred of Yatala

CT 6055/958 – Lot 91, Filed Plan 207183, Hundred of Yatala  
CT 6013/918 – Lot A3, Filed Plan 45833, Hundred of Yatala

**Designated as a place of Archaeological Significance pursuant to Section 14(7)(b) of the Heritage Places Act 1993.**

### **STATEMENT OF HERITAGE SIGNIFICANCE**

The Brompton Gasworks site has significant historic associations with South Australia's industrial development from 1863 to 1964. The Gasworks influenced the early pattern of industrial and economic growth in western Adelaide during the late 19<sup>th</sup> and early 20<sup>th</sup> century. The site was a catalyst for the early industrial growth of the region, supplying an efficient fuel supply from 1863 onwards for manufacturing needs. The works are an integral part of the industrial history and character of the western suburbs, a reminder of an earlier way of life and an industry no longer practiced today.

The Gasworks site also demonstrates rare qualities of cultural significance, being the only surviving former 19<sup>th</sup> and early 20<sup>th</sup> century coal carbonisation gasworks industrial site extant in South Australia. While retort furnaces and equipment have been removed, there is sufficient remaining building fabric of significance – retort houses, chimney, purifying house and ancillary buildings – to understand the scale and functions of the place during its period of operation. The site also has a special association with what became the SA Gas Co, an organisation of historic importance

to South Australia. The SA Gas Co was established in response to the need for heating and lighting in the young colony, becoming publicly listed in the year of its foundation (1861). Testimony to its significance were the many prominent South Australians who served as company directors, including its first Chairman Henry Ayers.

### **STATEMENT OF ARCHAEOLOGICAL DESIGNATION**

The former Brompton Gasworks site played a significant role in the industrial development of western Adelaide and was in operation for more than one hundred years. During that time, various changes in the methods for gas production were reflected in the technologies installed, the design of new structures and modifications to existing structures at the site. Some of these changes are apparent in the surviving structures, including the remaining walls and chimney which illustrate the functional requirements of a horizontal retort coal carbonisation gas plant of the late 19th century. Others are no longer present. The site has archaeological significance as it is likely that it will yield information that will inform a better understanding of these gas production processes and the significant periods of development of the Brompton Gasworks.

### **RELEVANT CRITERIA (under section 16 of the *Heritage Places Act 1993*)**

#### **(a) *it demonstrates important aspects of the evolution or pattern of the State's history.***

The Brompton Gasworks demonstrates an important aspect of the State's history – the early pattern of industrial and economic growth in 19th and early 20th century western Adelaide. The Gasworks was a catalyst for the early industrial growth of western Adelaide, supplying fuel from 1863 onwards to newly established factories, located nearby to minimise gas supply costs. It was an integral part of the industrial history and character of the western suburbs and survives as a reminder of a past way of living and industry no longer practiced today.

The pre-1964 extant structures (including the buildings/structures comprising the existing State Heritage Place and other ancillary buildings/structures) on the site are of significance, as they illustrate the scale and functional needs of coal carbonisation during the first hundred years of the Gasworks (1863 – 1964). After 1964, gas was produced on site using LPG and Natural Gas products. The surviving pre-1964 buildings at the site demonstrate the scale and operation of this significant early industry.

#### **(b) *It has rare, uncommon or endangered qualities that are of cultural significance.***

The Brompton Gasworks is a rare surviving example of a largely intact set of buildings and structures demonstrating the early processes of coal gas carbonisation in South Australia. This was a highly significant industry in the late 19<sup>th</sup> and early 20<sup>th</sup> century, providing energy for lighting, heating water and many manufacturing processes.

The surviving pre-1964 buildings at the Gasworks, including the existing State Heritage Place and the extant pre-1964 ancillary buildings/structures illustrate the scale and functional needs of a South Australian coal carbonisation gasworks. The Brompton Gasworks is the only surviving coal carbonisation gasworks site in the State of sufficient integrity to understand such industrial processes.

**(g) it has a special association with the life or work of a person or organisation or an event of historical importance.**

The Brompton Gasworks has a special association with the SA Gas Co, an organisation of historic importance to South Australia. The SA Gas Co was a publicly listed company from establishment in 1861 and company directors included many of South Australia's most prominent citizens of the 19<sup>th</sup> and early 20<sup>th</sup> Century.

The Brompton site was not only the first and principal site of the Company, but was also the last site to be de-commissioned by the Company after the business was absorbed by Boral/ Origin Energy.

# SITE PLAN

Brompton Gasworks  
1-21 Chief Street, Brompton

PLACE NO: 26449



Brompton Gasworks, 1-21 Chief Street, Brompton, CT 6013/918 F45833 A3, CT 6055/958 F207183 A91, CT 5781/435 R2359 AA, CT 6055/957 F218912 A95, A96, A97, A98, A99 & A100, CT 5781/429 R1093 AA

## Legend



- Boundary of State Heritage Place
- Components with High Heritage Value (Dashed line part of SHP 11823)
- Components with Medium Heritage Value

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## **COMMENTARY ON THE LISTING**

### **Description and notes with respect to a place entered in the South Australian Heritage Register in accordance with the *Heritage Places Act 1993***

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#### **Physical Description**

The site contains many buildings of a variety of construction dates and materials, including:

#### **High Heritage Value:**

##### **SHP1 – Horizontal Retort House No. 3 (1879)**

Component 1 of SHP No. 11823. Last used for maintenance and storage activities. The former (Horizontal) Retort House No. 3 is of random rubble bluestone construction, with brick quoins, brick trims to openings and face red brick 'dentil' trims to shallow eaves and across gables. The masonry gable form roof is clad with corrugated galvanised iron (CGI) and features a raised ridge vent along the length of the roof. The principal facade to the railway line incorporates a variety of segmental arch doorways and windows – all altered over time. It is clearly evident that one opening was used for coal delivery and another used for removal of waste. Two high level, stucco trimmed roundel vents have been modified to accommodate later metal louvre vents. A stuccoed, blind, triple-arched window features in the gable front. The rear gable end is similarly detailed, with an additional, later CGI clad shed attached to the facade and a roller door opening adjacent. The East Street facade is without openings and the internal facade (faces north-west) has openings to the adjacent shed structure. The construction detailing is similar to that evident on buildings B18, B24, B27 & B106 (bluestone walling, brick quoins, brick dentils to shallow eaves). SHP2 is only similar in construction material.

##### **SHP2 – Horizontal Retort House No. 4 (Ruin) (1900-11)**

Component 2 of SHP No. 11823. Last used for storage and as a boundary wall. The former Retort House No.4 is of random rubble bluestone construction, with brick quoins and red brick pilasters and brick trims to openings. The roof of the building (now removed) was supported by a cast iron column and beam frame, some of which is still extant. The brick trimmed roundel vent tubes along the plinth of the Chief St facade are of note, illustrating the number of now-removed retort furnaces. The railway facade gable has been cut down at some time after the roof was removed and the parapet re-moulded flat. Three roundel vent openings trimmed with face brick and several coal/waste delivery openings feature on this facade. It is clearly evident that some openings were used for coal delivery and others were used for removal of waste. The rear and internal side walls have been demolished at some stage. The construction detailing is only generally similar to that evident on buildings B18, B24, B27, B106 & SHP1 (bluestone walling, brick quoins).

### **SHP3 – Former Horizontal Retort House No. 4 Chimney (1900)**

Component 3 of SHP No. 11823. The former Retort House No. 4 Chimney is of brick construction – detailed with a plinth, pass through tunnel and decorative coping. The chimney was originally enclosed by the retort house, with just the top section protruding through the now lost gable roof. The chimney vented two retorts, located either side of the flue, along the centre of Retort No. 4. Arched openings (bricked over) can still be seen as evidence of the venting system of the retorts.

### **B22 – Former Purifying House, last used as an Amenities Building & cafeteria (1873)**

The former 1873 Purifying House is of random rubble bluestone construction, with red brick striped quoins and trims to all openings. The building features a series of archways to three sides, all originally open for ventilation purposes (necessary for gas purification process). Brickwork detailing is similar to other early buildings on site, with feature eaves dentil brickwork and striped brick corner quoins (see also B23). The roof is a low-pitch, CGI clad, hip form roof and is of recent construction (all roof framing replaced (visually evident on site)). It replaces an earlier slate-clad roof of similar proportion. The original ridge vent to the roof was not retained when the roof was rebuilt. All archways have been enclosed (probably post Second World War) and the interior adapted as the canteen, storerooms, laboratories and locker/ amenities rooms. Internal walls have been rendered and a concrete floor slab laid. The building is of architectural interest as (originally) an open pavilion, featuring stonework and brick detailing common to other early buildings on the site.

#### **Medium Heritage Value:**

### **B18 – Former Boiler House, last used as a Maintenance Building (c1870-80) (Demolished 2018 DA 252-V015-17)**

The former Boiler House is of random rubble bluestone construction, with gable parapet ends and red brick quoins and trims to openings. Two round head brick arch windows and a central door feature along the North-east facade, fitted with c1980s window and door joinery. Stucco trimmed roundel vents feature to gable ends. The building form and construction detailing is similar to that evident on buildings B24, B106 & B27 (gables, bluestone walling, brick quoins, brick dentils to shallow eaves, roundel gable vents). This form and detailing is also evident on the first purifying house (now demolished) featured in the 1866-1873 Sweet photograph of the site. Based on this evidence, it is probable that B18 dates from the early years of the Gasworks – broadly 1870-80. Later additions (1920s) are attached to the rear. Three wide round arch head openings are still evident along the rear abutting wall, suggesting the need for considerable access inside. A later canopy shelters the entrance. A late 20th century transportable office is attached to the side of the building, with an opening in the original wall of the building. Past repairs to the masonry of the building have been executed using furnace bricks sourced from elsewhere on the site. The interior of the building is a single space and was last refitted as an administration space in c1990s, with smooth plaster walls, suspended ceilings and a concrete floor slab.

## **B102 – Building, last used as a former Reticulated Gas Workshop (c1890-1910) (Demolished 2018 DA 252-V015-17)**

B102 is of masonry construction, with a (later) render finish to exterior walls and face red brick 'dentil' trims to eaves. The gambrel roof form is clad in CGI. Little evidence of early wall openings is extant today, mostly due to the later render finish and past additions to the building. Later openings to the side of the building (large sliding timber door) and the windows facing railway line all date from post-Second World War. The building corner adjacent the Retort House is chamfered in form – most likely to accommodate a past rail turntable/ trolley (refer 1913 plan of site in *The Unquenchable Flame*). A recent transportable office has been attached to the building, with further wall penetrations to suit access. The interior features bagged render masonry to walls, a recent concrete floor slab and an early 'mini-flute' lined ceiling, following the roof line in part for further internal height. The construction of the building has not been confirmed, but the roof form and ceiling lining is gambrel in form – a more common design feature in South Australia from the 1890s onwards.

## **B24 – Former Works Superintendent's Cottage, later meter shop, last used as a Museum (c1870-1880)**

The former Works Superintendent's Cottage is of random rubble bluestone construction, with brick quoins, brick trims to openings and face red brick 'dentil' trims to shallow eaves. The hip form roof is clad with CGI. Principal facade incorporates a central door, flanked by pairs of round arch head windows (with later window joinery). Symmetrical arrangement of facade reflects local domestic design typologies of the period. Segmental head archway formed in bluestone 'lean-to' wall between this building and B106 (former Carpenters' Workshop) adjacent. The East Street facade masonry has been fully rendered at some stage. Fireplaces/ chimneys are no longer evident. Interior has been substantially refurbished, with a recent concrete floor slab, replastered walls and a plasterboard ceiling. The building form and construction detailing is similar to that evident on buildings B18, B106 & B27 (bluestone walling, brick quoins, brick dentils to shallow eaves). A hipped roof is evident in about the position of this building in the 1866-1873 Sweet photograph of the site. Based on this evidence, it is probable that B24 dates from the early years of the Gasworks – broadly 1870 – before the erection of the 2nd Retort House. Of further note is the siting of the cottage, on the perimeter of the site, continuing the Gasworks tradition of enclosing the site from surrounding streets.

## **B106 - Former Carpenters' Workshop, last used for general storage/ maintenance (c1870-1880)**

The former Carpenters' Workshop is of random rubble bluestone construction, with brick quoins, brick trims to openings and face red brick 'dentil' trims to shallow eaves. The masonry gable form roof is clad with CGI and features a raised ridge vent along the length of the roof. The principal facade incorporates a central, wide, segmental arch door/s, flanked by matching width, segmental arch head windows (with later window joinery). The exposed side facade features a brick trimmed loft window/door and also a recent roller door opening. The East Street facade masonry has been fully rendered at some stage. The building form and construction detailing is similar to that evident on buildings B18, B24 & B27 (bluestone walling, brick quoins, brick dentils to shallow eaves). This form and detailing is also evident on the first purifying house (now demolished) featured in the 1866-1873 Sweet photograph of the site. Based on this evidence, it is probable that B106 dates from the early years of the Gasworks – broadly

1870-80. Post-Second World War rectangular windows have been cut into the East Street facade. A bluestone, lean-to structure of similar style and provenance joins this building to the adjacent B24 building. The lean-to features a pair of segmental arch timber doors to the front facade and a similar opening in the side wall, connecting to the rest of the building. The interior of the building has been altered over time, but two chimney flues are evidence of former forges/ boilers. A later concrete floor has been laid inside. Of note is the siting of the Workshop, on the perimeter of the site, continuing the Gasworks tradition of enclosing the site from surrounding streets.

**B27 – Former (reputed) Chemistry Laboratory, last used as an office, plus attached bluestone wall (c1870-1880)**

The former Chemistry Laboratory is of random rubble bluestone construction, with gable parapet ends and red brick quoins and trims to openings. Walling is laid in a variety of bedding patterns, but these appear to reflect ongoing repairs, rather than extensions to the building. Door and windows facing courtyard have all been changed and small window openings formed (c1980s) within render infill panels in walling. Window and door joinery is c1980s, as is glazed lobby joinery at south end. A brick trimmed roundel vent features to internal gable end. The construction detailing is similar to that evident on buildings B24, B18 & B106 (gables, bluestone walling, brick quoins, brick dentils to shallow eaves, roundel gable vents). This form and detailing is also evident on the first purifying house (now demolished) featured in the 1866-1873 Sweet photograph of the site. Based on this evidence, it is probable that B27 dates from the early years of the Gasworks – broadly 1870-80. A bluestone boundary wall sits on the boundary, between this building and B106. A c1980s steel framed verandah is erected along the courtyard faces of the building and along the inside face of the adjacent masonry boundary wall. The interior of the building has been upgraded with plaster to walls, a new ceiling and a recent concrete floor slab. Of note is the siting of the Laboratory and adjacent boundary wall, on the perimeter of the site, continuing the Gasworks tradition of enclosing the site from surrounding streets.

**Sundry platform walls, along the railway alignment (c1870-1900)**

The platform walls are of bluestone construction, with red brick copings and quoins.

**Low heritage value:**

**B18 – Workshop/Store Addition - last used as a Maintenance Building (c1910-20s) (Demolished 2018 DA 252-V015-17)**

The former workshop/store is of red brick construction, with gable parapet ends featuring brick dentil work. Several windows and doorways have been added/ altered over time. A later canopy shelters the entrance. The interior of the building is a single space and was last refitted as an administration space with partitioned offices in c1990s, with smooth plaster walls, suspended ceilings and a concrete floor slab.

**B29 – Office (c1920s) + Additions (c1950-70) (Demolished 2018 DA 252-V015-17)**

The former administration building was erected by 1924 and was constructed of red brick, with render face concrete lintels and band beams, with a CGI gambrel roof. Additions in the 1950s and then by 1970 mostly matched the detailing of the 1920s building.

## **B23 – Appliance Testing & Research & Development Building – laboratory (c1870s bluestone section) + 1920s + 1979) (Demolished 2018 DA 252-V015-17)**

B23 was erected in three stages. The ground floor masonry section was constructed as a pointed random rubble bluestone building, with red brick quoins and trims to openings. Altered, original narrow brick arched head windows and wide doorways remain today, facing the interior of the c1979 addition to the building. The architectural detailing of the quoin work matches that of B22 (Former Purifying House) and hence most likely dates from the 1870s period.

The building was substantially modified c1920. The original roof was removed (potentially a gable roof, but details are unknown) and a brick upper floor added, complete with a hipped CGI roof (without eaves). The addition today features a timber floor and office partitions from the late 1930-50s period. Windows throughout were replaced during this period and were all steel framed in construction. Ground floor window openings featuring steel frames were probably also incorporated at this time.

The most recent addition to the place was erected 1979, to the SW side, in red brick. The addition conceals original brick arch openings to the building.

The c1920s hipped roof was replaced with a new roof after 1980 – the upper floor did not have an eaves overhang before this period

The components identified as being intrinsic to the heritage significance of the former 1863-1964 Gasworks, Brompton, include (using Origin Energy building numbers):

### **High heritage value**

- **SHP1** – Horizontal Retort House No. 3 (1879)
- **SHP2** – Horizontal Retort House No. 4 (Ruin) (1900-11)
- **SHP3** – Former Horizontal Retort House No. 4 Chimney (1900)
- **B22** – Former Purifying House, last used as an Amenities Building & cafeteria (1873)

### **Medium heritage value**

- **B18** – Former Boiler House, last used as a Maintenance Building (c1870-80) (Demolished 2018 DA 252-V015-17)
- **B102** – Building, last used as a former Reticulated Gas Workshop (c1890-1910) (Demolished 2018 DA 252-V015-17)
- **B24** – Former Works Superintendent's Cottage, later meter shop, last used as a Museum (c1870-1880)
- **B106** – Former Carpenters' Workshop, last used for general storage/maintenance (c1870-1880)
- **B27** – Former (reputed) Chemistry Laboratory, last used as an office, plus attached bluestone wall (c1870-1880)
- **Sundry platform walls**, along the railway alignment (c1870-1900)

### **Low heritage value**

- **B18** – Workshop/Store Addition - last used as a Maintenance Building (c1910-20s) (Demolished 2018 DA 252-V015-17)
- **B29** – Office (c1920s) + Additions (c1950-70) (Demolished 2018 DA 252-V015-17)
- **B23** – Appliance Testing & Research & Development Building – laboratory (c1870s (bluestone section) + 1920s + 1979) (Demolished 2018 DA 252-V015-17)

Exclusions – components with no heritage value:

- Free-standing transportable office buildings, free-standing carport and transportable building, located within the shell of SHP2
- Transportable buildings, located between SHP2 & B18
- 'Onie-Gegi' Catalytic Re-Forming Plant Building (c1960)
- Shedding, located adjacent to SHP1
- Shedding (free-standing, gable roof), located in centre of site

### **History of the Place**

The Brompton Gasworks site has a long and complicated history. It was in gas production of one kind or another for almost 150 years. There were five distinct generations of technology operated on the site to produce flammable gas for sale. The gas product itself changed over time. Since the 1860s, Adelaide's gas appliances have at times burned carbon monoxide, hydrogen, propane, butane and today methane. The site itself reflects these changes in its built heritage. It has been repeatedly rebuilt, and whole generations of buildings and engineering structures have been demolished. The fragments that remain are a fascinating cross-section of one of Adelaide's early major industrial enterprises.

The technology of gas production in the nineteenth century involved taking coal and subjecting it to 'destructive distillation' - that is burning it with insufficient oxygen to allow it to burn completely. Burned in a fireplace, the combustion products of coal are mainly carbon dioxide and water vapour. But heated slowly in a controlled atmosphere with very little oxygen, the volatile hydrocarbons in coal will evaporate and the coal will smoulder, emitting a number of substances but principally carbon monoxide, which is flammable and can be sold as a fuel for heating and other purposes. The solids remaining in the retort will be reduced to coke, mostly carbon, which is also commercially valuable as a very efficient fuel.

When South Australia was settled by Europeans in 1836, the use of gas distilled from coal as a fuel in Europe was about 30 years old. There were already civic gasworks in large cities in England, Germany and the USA. In 1836 the Australian Gas Light Company was formed in Sydney and gas production commenced there five years later. Gas production proliferated in Melbourne and major Victorian towns in the 1850s with the prosperity of the gold rushes. Construction of a gasworks was seen as a landmark event in a city, proclaiming economic prosperity, urban amenity and civic pride.

In 1861 the South Australian Gas Company was formed in Adelaide. Its chairman was Henry Ayers, who had made his fortune from the Burra copper mine in the 1840s, and was a prominent politician and serial Premier of South Australia throughout the second half of the nineteenth century. The directors were all prominent Adelaide entrepreneurs.

A site for the gasworks was purchased at Brompton, an industrial suburb which had been surveyed in 1849 on the route of the Port Railway, and work commenced in 1862. On 23 December 1862, Henry Ayers laid the foundation stone of the gasworks in the base of the smokestack. Work on the retort house, coal store and gasholder was already substantially underway, and the eight 6 metre iron columns for the gasholder frame were being unloaded at Port Adelaide.

An early account said that engineer S.R. Scoltock, who had designed the Geelong gasworks, 'is now engaged in preparing the plans for the buildings and erections required by the company'. But that changed, for a year later Scoltock's name was forgotten, and the work was under the supervision of Clerk of Works, George Anderson, who was said to have designed 'The whole of the buildings and works'. In July 1863 the board would appoint him Engineer and Manager on a salary of £300 per annum and a house on the premises. He would remain in charge of all the Gas Company's operations on its multiple sites until 1886.

On 30 May 1863 Ayers returned to Brompton for another ceremony, as the fires in the retort were lit amid the customary speeches and toasts. 'Success to the Adelaide Gas Company, and may its light never go out.' (Loud cheering.)' Commercial gas production at the Brompton gasworks had commenced. It was a labour-intensive process: coal was manually loaded into horizontal retorts, and red-hot coke manually unloaded after firing about six hours later.

To sell gas, the Company also had to build a distribution network, a system of leak-proof iron pipes buried under the streets, capable of taking gas long distances under pressure. Legislation had given the company the right to dig up public streets to install gas mains, effectively giving them a state-sanctioned monopoly. The first mains headed for the City of Adelaide, where the largest concentration of customers lived, but the extension of the pipes was slow and expensive. It would take decades before large areas of metropolitan Adelaide had a gas supply.

There was more at Brompton than retorts and a gasholder. If coal was pure carbon, the product distilled from the retort would be pure carbon monoxide, and the process would be over. However, coal is the geological product of vegetation which rotted on the bed of an anaerobic swamp millions of years ago, and contains much more than carbon. The gas generated by the retorts contained water vapour and carbon dioxide, which reduced its flammability as well as rusting the pipes, complex hydrocarbons in the form of phenols, resins and tars, and noxious products such as sulphur dioxide, phosphorus pentoxide and ammonia. These had to be removed by a series of processes involving condensers, scrubbers and purifiers, in which the gas was progressively bubbled through water, sprayed with ammonium hydroxide, and passed through quicklime and iron oxide. These activities were housed in a complex of buildings which expanded and became more sophisticated over time. There were some saleable by-products: the ammonia and sulphur were combined to form ammonium sulphate, which was in demand as an agricultural fertiliser. But the tars

and other liquid wastes were simply discarded into pits on site. Another growing industry on site was the manufacture and maintenance of meters for customers.

To the Gas Company, the holy grail they sought was the contract to light the streets of Adelaide. Previously Adelaide was in darkness at night; the only street lighting was the obligatory lantern each tavern had to keep burning in the street. In 1867 they gained a small contract, and the first gas street lighting was installed in part of the City. But the Council were deterred by the Company's steep asking price of £7 per lamp per annum, and weren't convinced that street lighting was a local government responsibility anyway. For decades there was debate about the desirability of gas lighting, but by the early 20th century electricity was available as an alternative, and it became apparent that gas was better suited to heating, and electricity was more efficient for lighting. The last gas street lights disappeared from Adelaide in 1922. By that time the company was concentrating on selling gas for commercial and domestic cooking and heating.

There was relatively little physical change at Brompton in the first ten years. The original plant of 1862 had deliberately been built with excess capacity, to allow for production to be expanded. A report on a board meeting in 1870 heard that 'In the original construction of the retort-house and the various parts of the machinery for the manufacture of gas an ample margin was allowed for a large increase of production, so that there have been but few alterations made, nor will many others be necessary for many years to come.' One improvement was laying a branch line off the Port Railway into the gasworks site in 1869: the rails actually ran through the retort house. Previously the coal had had to be double-handled from rail wagons onto drays for delivery. The coke was back-loaded on the same line and sold to the railway company as locomotive fuel. A second gasholder was also built in 1870.

The Gas Company expanded its customer base and its manufacturing capacity in increments over many decades. The first major expansion at Brompton came in 1873 when a second retort house was built alongside the first one. This too was planned to be extended, and met demand for some years. In 1879 the third retort house was added, probably the one still standing on the East Street frontage. By 1881 a third larger gasholder was built to increase storage capacity. In 1883 an explosion at the new gasholder woke the neighbours and brought a flood of anxious letters to the newspapers. While the explosion sounded impressive, it involved only a small quantity of gas outside the gasholder, while workers were trying to repair a leak; there were no injuries and the damage was slight.

Demand for gas was booming as the 20th century dawned, and the Gas Company shareholders were told 'a new retort house at Brompton was necessary'. The plans had already been drawn up four years earlier. It went up the following year, on the Chief Street frontage, next to the railway. It was called the Fourth Retort House, but it was much bigger and more sophisticated than its predecessors, and was loaded and unloaded by a mechanical stoking machine, making a huge saving in labour and time, and bringing down production costs. For the remainder of the era of gas-making in horizontal retorts, the bulk of gas produced would come from the Fourth Retort House. It was extended in three stages, probably in 1904, 1906 and 1911, each stage a duplicate of the original, eventually presenting a long handsome masonry facade in Chief Street. Completion of the Fourth Retort House in 1911 made most of the old gas-making retorts redundant. A plan of the gasworks in 1913 shows the Second Retort

House still in use, the First apparently demolished, and the Third used as a coal store. By 1924 the Third was the Engineering Shop.

Horizontal retorts had another nine years of dominance at Brompton. In 1920 the first vertical retort house was built. Vertical retorts had many advantages over the old technology. They were tall steel furnaces, and they worked continuously, with coal loaded into the top, and coke withdrawn from the bottom. By contrast, the horizontal retorts operated intermittently, with repeated cycles of loading and unloading. Also the vertical retorts had a much smaller footprint and were operated mechanically and to a large extent automatically, making a big labour saving. The First Vertical Retort House was built beside Chief Street, at the north-west end of the Fourth Retort House. Its efficiency meant that the outlying Glenelg and Port Adelaide gasworks could close, and gas production could be concentrated at Brompton. The Second Vertical Retort House was built alongside it in 1925, and others were steadily added until there were six vertical retorts by 1945. During this period the horizontal retorts progressively fell into disuse.

A new technological development in 1950 added water gas plants to the vertical retorts at Brompton. This involved adding a new stage after carbonisation to extract more energy from the coal. Steam is blown through the heated coke to generate hydrogen, so the finished product is a mixture of carbon monoxide and hydrogen.

An even more radical new technology arrived in 1959. A pipeline was built connecting Brompton to the new oil refinery at Port Stanvac, and new re-forming plant was built to treat by-product refinery gas. This was a new product, mostly a mixture of the flammable gases propane and butane, and was a far more flexible fuel than coal gas because it lent itself to liquefaction. Gas could be delivered in bottles to customers far from a gas main. A liquid petroleum gas (LPG) bottling plant was built at Brompton to serve this completely new market. In 1964 a second re-forming plant was added to treat Port Stanvac by-product gas. The carbonisation of coal was winding down, and the old retorts were falling into disuse.

There were even bigger changes ahead. In 1966 South Australia had its first natural gas strike at Moomba in the far north-east of the state, and large methane gas deposits were proved over the next few years. In 1969 a natural gas pipeline opened connecting Moomba to Adelaide, and the coal gas era was over. Brompton became the centre of the reticulation system, distributing natural gas from Moomba through the existing mains. Over the next few years, all remaining coal carbonisation retorts at Brompton were demolished. In 1971 re-forming Port Stanvac gas ceased at Brompton, and the plant was removed the following year. There was extensive demolition of old buildings and structures, but at the same time, outlying technical and administrative functions were being relocated to redundant buildings at Brompton. During the years of deconstruction at Brompton, the shell of the Third Retort House and part of the Fourth Retort House were retained, possibly because they formed sections of the masonry perimeter wall which had been a feature of the Brompton Gasworks site since 1863.

In 1978 the SA Gas Company merged with the SA Oil & Gas Corporation, to become SAGASCO, which was acquired by Boral in 1993. In 2000, Boral's energy arm was spun off to become Origin Energy. All operations ceased at Brompton over the next few years, and the land was acquired by the Land Management Corporation (now Renewal SA) in 2010.

## **References**

The primary source for this Summary was:

- Grieve Gillett Pty Ltd/Dr Peter Bell 2015, Heritage Assessment Report 'Former SAGASCO Gasworks, 1-21 Chief Street, Brompton', commissioned by DEWNR.

Refer to the Heritage Assessment Report for more detailed information about the history of the Brompton Gasworks, 1-21 Chief Street, Brompton and references.

## SITE DETAILS

**Brompton Gasworks**  
**1-21 Chief Street, Brompton**

**PLACE NO: 26449**

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<b>FORMER NAME:</b>	n/a
<b>DESCRIPTION OF PLACE:</b>	Whole of exterior and interior of buildings/ structures on the site known as SHP1, SHP2, SHP3, B22, B18, B102, B24, B106, B27, Sundry platform walls along railway alignment, B18, B29, B23.
<b>DATE OF COMPLETION:</b>	1863-1964
<b>SA HERITAGE REGISTER STATUS:</b>	<b>Description:</b> Nominated <b>Date:</b> 17 September 2014
	<b>Description:</b> Provisionally entered <b>Date:</b> 17 June 2015
	The <b>Brompton Gasworks - 1879 Retort House, Remains of 1891 Retort House and Chimney Stack</b> , (SHP No. 11823) was entered in the South Australian Heritage Register in May 1987.
<b>LOCAL HERITAGE STATUS</b>	Not Applicable
<b>CURRENT USE:</b>	<b>Description:</b> Vacant <b>Dates:</b> 2010-2015
<b>PREVIOUS USE(S):</b>	<b>Description:</b> Gasworks <b>Dates:</b> 1863 - 2010
<b>ARCHITECT:</b>	<b>Name:</b> SAGAS Co (Engineers) <b>Dates:</b> 1863-1964
<b>BUILDER:</b>	<b>Name:</b> SAGAS Co <b>Dates:</b> 1863-1964
<b>LOCAL GOVERNMENT AREA:</b>	<b>Description:</b> City of Charles Sturt
<b>LOCATION:</b>	<b>Unit No.:</b> n/a <b>Street No.:</b> 1-21 <b>Street Name:</b> Chief Street <b>Town/Suburb:</b> Brompton <b>Post Code:</b> 5007

## SITE DETAILS

Brompton Gasworks  
1-21 Chief Street, Brompton

PLACE NO: 26449

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<b>LAND DESCRIPTION:</b>	<b>Title Type:</b> CT <b>Volume:</b> 6013 <b>Folio:</b> 918 <b>Lot No.:</b> A3 <b>Section:</b> Filed Plan 45833 <b>Hundred:</b> Yatala
	<b>Title Type:</b> CT <b>Volume:</b> 6055 <b>Folio:</b> 957 <b>Lot No.:</b> Lots 95, 96, 97, 98, 99 & 100 <b>Section:</b> Filed Plan 218912 <b>Hundred:</b> Yatala
	<b>Title Type:</b> CT <b>Volume:</b> 6055 <b>Folio:</b> 958 <b>Lot No.:</b> Lot 91 <b>Section:</b> Filed Plan 207183 <b>Hundred:</b> Yatala
	<b>Title Type:</b> CT <b>Volume:</b> 5781 <b>Folio:</b> 429 <b>Lot No.:</b> Closed Road Marked A, Road Plan 1093 <b>Section:</b> n/a <b>Hundred:</b> Yatala
	<b>Title Type:</b> CT <b>Volume:</b> 5781 <b>Folio:</b> 435 <b>Lot No.:</b> Closed Road Marked A, Road Plan 2359 <b>Section:</b> n/a <b>Hundred:</b> Yatala

## PHOTOS

**Brompton Gasworks**  
1-21 Chief Street, Brompton

**PLACE NO: 26449**



**Brompton Gasworks - Building SHP1**  
**(Horizontal Retort House 3) from NE end (2015)**



**Brompton Gasworks - Building SHP2**  
**(Horizontal Retort House 4) from NE end (2015)**

## PHOTOS

**Brompton Gasworks**  
1-21 Chief Street, Brompton

**PLACE NO: 26449**



**Brompton Gasworks – Building SHP 3  
(Horizontal Retort House 4 Chimney), from NE end (2015)**



**Brompton Gasworks – Building B22  
(Former Purifying House), from SE end (2015)**

## PHOTOS

**Brompton Gasworks**  
1-21 Chief Street, Brompton

**PLACE NO: 26449**



**Brompton Gasworks – Building B18**  
**(Former Boiler House), view from NE end (2015) (Demolished 2018)**



**Brompton Gasworks – Building B102**  
**(Former Reticulated Gas Workshop), view from SE end (2015) (Demolished 2018)**

## PHOTOS

**Brompton Gasworks**  
1-21 Chief Street, Brompton

**PLACE NO: 26449**



**Brompton Gasworks – Building B24**  
**(Former Works Superintendent's Cottage), view from NW side (2015)**



**Brompton Gasworks – Building B106**  
**(Former Carpenter's Workshop), view from NW side (2015)**

## PHOTOS

**Brompton Gasworks**  
1-21 Chief Street, Brompton

**PLACE NO: 26449**



**Brompton Gasworks – Building B27  
(Former Chemistry Laboratory), view from NW side (2015)**



**Brompton Gasworks  
– Sundry platform walls,  
view from railway line (2015)**



**Brompton Gasworks  
– Building B18 (Workshop/ Store),  
view from SE side (2015)  
(Demolished 2018)**



**Brompton Gasworks  
– Building B29 (Former Administration  
Building), view from NW side (2015)  
(Demolished 2018)**



**Brompton Gasworks  
– Building B23 (Former Appliance Testing/  
R&D/Laboratory), view from SW side (2015)  
(Demolished 2018)**