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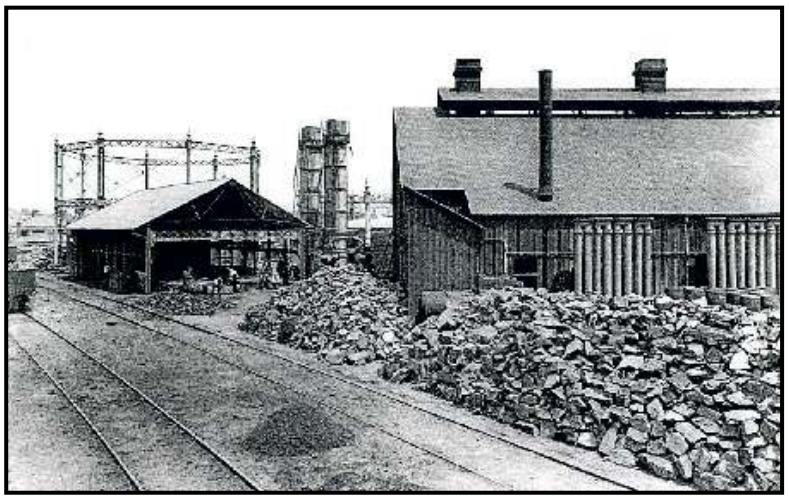

Former Macdonaldtown Gasworks
Heritage Interpretation Plan
For RailCorp

updated February 2011

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1 INTRODUCTION

1.1 BACKGROUND

City Plan Heritage has been engaged by Incoll Management on behalf of Rail Corporation New South Wales (RailCorp) to prepare an Interpretation Plan for the former Macdonaldtown Gasworks site. The Interpretation Plan is based upon the Consent Condition (7) issued by the NSW Heritage Branch (then Heritage Office) in September 2007 for the S60 Application no. 07/S60/90 for the construction of a permanent noise walls along the south eastern boundary of the Macdonaldtown Triangle.

An Interpretation Plan shall be prepared and submitted for approval by the Director, NSW Heritage Office prior to any future approval on this site. The recommendations of the approved Interpretation Plan shall be implemented by the applicant prior to or along with the decontamination/landscaping works or a period of one year whichever is earlier.

It is also based upon the Condition (17) issued by the NSW Heritage Branch in May 2010 for the S60 Application no. 2010/S60/21 for the proposed test excavation of the site of the former Macdonaldtown Gasworks:

An Interpretation Plan for the area is to be updated following the completion of archaeological works at the site, and submitted for the approval of the heritage Council or its delegate. The recommendations of the approved Interpretation Plan shall be implemented by the Applicant or by agreement, with the site owner, along with the decontamination and remediation works or within a period of one year whichever is earlier.

The former Macdonaldtown Gasworks site has been declared by NSW Environment Protection Authority (EPA) as a site that poses a Significant Risk of Harm to human health and/or the environment; as defined by the *Contaminated Land Management Act 1997* (CLM Act). The current planning works for the site incorporate a number of specialist studies including archaeological test excavations, heritage interpretation, geotechnical assessment, community consultation and environmental testing of soil and groundwater.

1.2 LOCATION OF SUBJECT SITE

The former Macdonaldtown Gasworks site is a triangular shaped parcel of land located at the south-western end of the Eveleigh Railway Yards and bounded by Illawarra Rail Corridor to the southeast, the Railway Stabling Yard at the south of Macdonaldtown Railway Station on the north, and the rear boundaries of residential properties fronting Burren Street to the west.

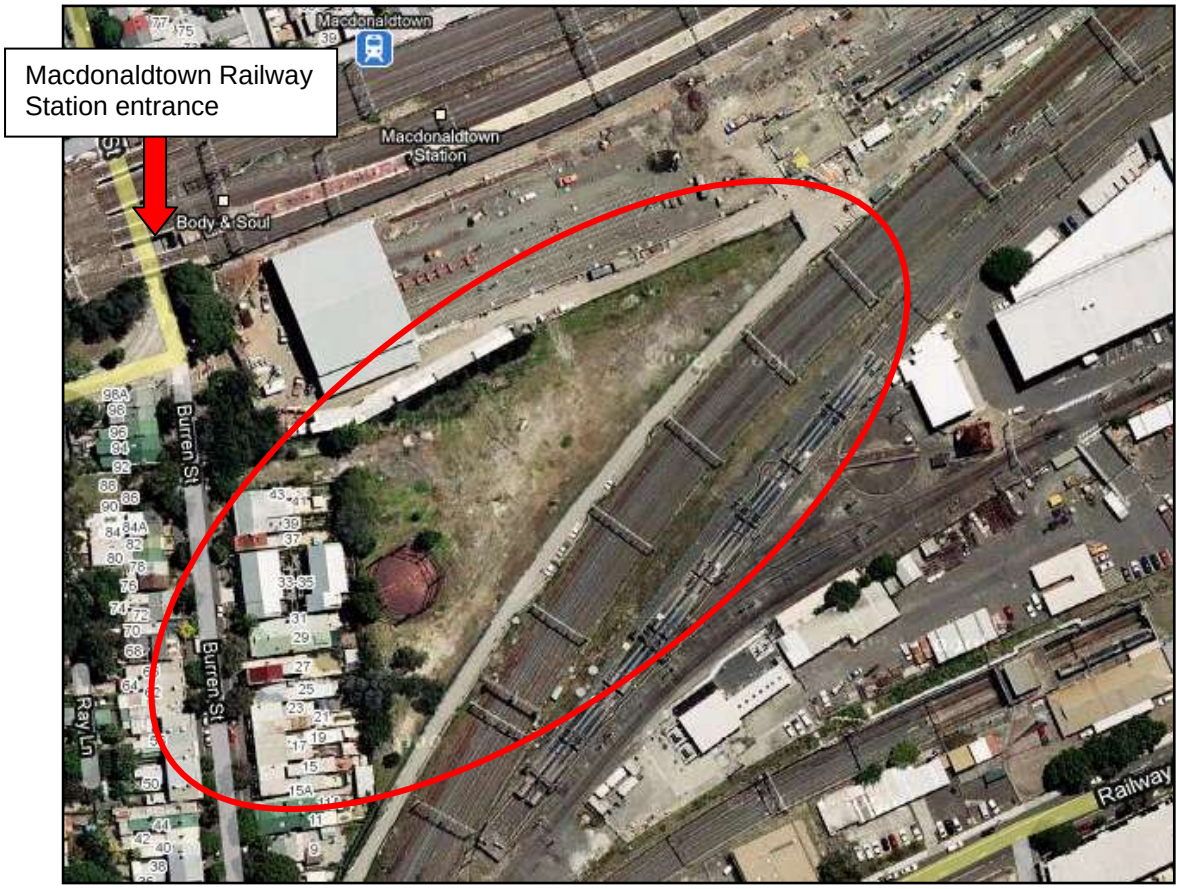


Figure 1: Aerial view of subject site, circled in red. Arrow pointing to Macdonaldtown Railway Station entrance.

1.3 SITE HISTORY AND SIGNIFICANCE

Complete details of the history and significance of the site are contained in the *Eveleigh Gasworks Site History* and the *Archaeological Assessment of Macdonaldtown Station Works,* Banksia Heritage + Archaeology 2004. A brief summary of the history follows.

The subject site was part of the first land grants made to Nicholas Devine (also spelled Divine) who was the superintendent of convicts in Sydney from 1790 to 1808. Devine named his landholdings “Burrin Farm” after his birth place in Ireland. He established a house on the property and lived there until his death in 1830. Burren Street is named after his estate.

The gasworks at Macdonaldtown was constructed on part of the land resumed by the Crown for railway purposes. The railway system was established in 1855, with the western line from the city (Central Station) initially to Granville. This set the boundary line for the north western side of the Macdonaldtown triangle. The southern boundary was formed by the 1857 establishment of the Illawarra line, with Erskineville Station opening nearby the subject site in 1884 to serve the rapidly expanding population (due to subdivision of the large estates). The railway station at Macdonaldtown was opened in 1878 at a site slightly west of the current

location, adjacent to Charles Street. The main suburban railway line through Macdonaldtown was quadruplicated in 1892, which is when the station was reportedly moved to its present site, near the Gasworks.

In 1878 the Railway Commissioner entered into an agreement with a Mr John Louis Castner to fit and maintain gas lights in carriages and to supply gas from his works at Redfern for a five year period. Mr Castner went on to operate gasworks for the railways at Redfern, Newcastle, Bathurst, and Junee. The Railway Commissioners took over Mr Castner's works in 1884, and subsequently established works at Werris Creek, a second works at Junee, two further works at Redfern in Sydney, and the subject site at Macdonaldtown (then known as Eveleigh)..

The land of the subject site was acquired by the railways from 'Trust J Wilson' on 2 July 1888. The land has been in railway ownership ever since.

The former Gasworks site at the Macdonaldtown triangle is recognised as an item of State significance within the heritage listings of the Eveleigh Railway Workshops on the State Heritage Register and the s170 Heritage Register of the State Rail Authority.

The gas required for lighting and for the Eveleigh works was manufactured on the site as with all operations that were carried out within the works, rather than being outsourced.[1] The surviving southern gasholder at the former Gasworks at Macdonaldtown is very significant as an archaeological item that has the ability to provide information about a type of railway and general industrial relic that is now extremely rare. It is the only remnant artefact of its type still standing in New South Wales.[2]

The archaeological remains in these areas may contribute to our understanding of the construction, operation and subsequent modifications carried out at gaswork sites across the State. These remains may provide information regarding the changes in gas production technology over time as it relates to its use in the railway system. They may also provide information regarding the demolition techniques employed for gasworks sites, and hence have a broader application to former gaswork sites across the State.[3]

1.4 ARCHAEOLOGICAL WORK

Archaeological testing was undertaken on this site in July 2010 as part of the pre-remediation proposed by RailCorp. The work was to determine the extent and condition of the archaeological remains, namely the Macdonaldtown Gasworks, surviving within the study

[1] Banksia Heritage + Archaeology, *Macdonaldtown Station Works Archaeological Assessment*, 2004.
[2] ibid.
[3] Heritage Concepts Pty Ltd, *Archaeological Assessment & Remediation Management Strategy for the former Macdonaldtown Gasworks,* 2006.

area. Five test trenches were opened and the results are presented in a separate report which was submitted to RailCorp concurrently with this Interpretation Plan.[4] The results were as follows:

All the trenches revealed ground level remains under an average of about 250mm of local demolition material, coke residue and introduced fill spread over the entire area. The buildings used to house the retorts and the purifiers are shown in the c1917 photograph (covering page, above) and do not appear to be substantial. They were shed like structures and it is likely that the Eveleigh Railway Workshops had or still has similar structures. The annulus for the northern Gasholder on the site appears to be almost completely preserved; however, there was no longer evidence of any specific equipment relating to the gas manufacturing process on the site.

Not many artefacts were uncovered during excavation. Some stamped fire bricks were unearthed in situ, as well as some various metal plates and posts cut at ground level (evidence of supports for roofing).

1.5 AIMS

The aim of this Interpretation Plan is to encompass the history of this site and its relationship to the Railways and the adjoining suburb/community through:

- Identification of the site and the processes of industry that occurred there.
- Identification of the dominant interpretive themes for the site based on NSW historical themes.
- The provision of methods of communicating the historic significance of the site and its relationship to the Railway and the Eveleigh Railway Workshops nearby.
- Identification of appropriate interpretive devices and the most effective locations for these devices.
- Identification of the audience that will visit the site and benefit from the historic interpretation and the site's associated physical and operational opportunities and constraints.
- Provision of interpretive text, representative graphic elements and visual themes to inspire further interpretation proposals and graphic development.
- Provision of guidelines for the preparation and implementation of interpretation proposals by RailCorp.

[4] City Plan Heritage, *Macdonaldtown Archaeological Testing Excavation Report,* July 2010.

1.6 METHODOLOGY

This Interpretation Plan has been prepared in accordance with the *NSW Heritage Manual* and the NSW Heritage Office's recently formulated *Heritage Interpretation Policy* (August 2004). The general philosophy and process adopted is that guided by the Australia ICOMOS *Burra Charter 1999*.

The Burra Charter (1999) defines interpretation as meaning, *"all the ways of presenting the cultural significance of a place. Interpretation may be a combination of the treatment of fabric; the use of and activities at the place; and the use of introduced explanatory material.'*

The NSW Heritage Office *Heritage Interpretation Policy* (August 2005) presents the following 'Ingredients for Best Practice in Heritage Interpretation':

1. PEOPLE AND CULTURE: Respect for the special connections between people and items.
2. SIGNIFICANCE: Understand the item and convey its significance.
3. RECORDS AND RESEARCH: Good research is at the heart of effective interpretation. Use existing records of the item, research additional information, and make the records and research publicly available (subject to security and cultural protocols).
4. AUDIENCE: Explore, respect and respond to the identified audience.
5. THEMES: Make reasoned choices about themes, ideas and stories.
6. ENGAGING THE AUDIENCE: Stimulate thought and dialogue, provoke response and enhance understanding.
7. CONTEXT: Research and understand the physical, historical, spiritual and contemporary context of the item and related items; and respect local amenity and culture.
8. SUSTAINING SIGNIFICANCE: Develop interpretation that strengthens and sustains the significance of the item, its character and authenticity.
9. CONSERVATION PLANNING: Integrate interpretation in conservation planning, and in all subsequent stages of a conservation project.
10. MAINTENANCE, EVALUATION AND REVIEW: Include interpretation in the ongoing management of an item; provide for regular maintenance, evaluation and review.
11. SKILLS & KNOWLEDGE: Involve people with relevant skills, knowledge and experience.
12. COLLABORATION: Collaborate with organisations and the local community.

1.7 RESOURCES

This Interpretation Plan has drawn from a range of sources including:

- 'A brief history of NSW Railway Gasworks' (June 2003), *ARHS Bulletin*, Longworth, J. 203-213.
- *Eveleigh Gasworks Site History* (1999), Rail Services Australia Environmental Services, (Version 1) Reference No. J193-002, J193-003.

- *Archaeological Assessment & Remediation Management Strategy for the former Macdonaldtown Gasworks* (2006), Heritage Concepts Pty Ltd for Parsons Brinckerhoff.
- *Macdonaldtown Station works archaeological assessment – draft* (April 2004), Banksia Heritage + Archaeology for NSW State Rail and Fitzwalter Group.
- State Heritage Register Eveleigh Railway Workshop, SHI No. 5045103, updated August 1997.
- Carriage Workshop Building Conservation Management Plan (2003), Otto Cserhalmi + Partners P/L
- Carriage Works Site Conservation Management Plan (2002), Otto Cserhalmi + Partners PL.
- Various draft interpretive proposals for Carriage Works at Eveleigh by Jean Rice Architect, and Tonkin Greer Architects.
- *Macdonaldtown Gasworks Site Concept Landscape Design Report* (04 July 2004) by Dickson Rothschild – unknown if landscaping plans are valid as of July 2010.
- Broomham, Rosemary. *First Light: 150 Years of Gas.* Hale & Iremonger, 1987, Sydney.

1.8 AUTHORSHIP

This document has been prepared by Ceri Kirkendoll (Heritage Consultant) and Kerime Danis (Manager) of City Plan Heritage with assistance from Gina Scheer (Heritage Consultant) regarding the archaeology and interpretation of the site's built structures.

The authors wish to acknowledge the information provided by Jean Rice of Jean Rice Architect who has prepared a series of studies including Conservation Management Plans for Eveleigh Locomotive and Carriage Workshops, and Interpretation Strategy for Eveleigh Carriage Workshops.

2 AUDIENCE

In order to design appropriate interpretation methods and devices, it is necessary to understand the likely audience who will encounter the information.

The key audience groups and users for the former Macdonaldtown Gasworks have been identified as the following:

Macdonaldtown Station Commuters	
Activities	• Arriving to and leaving from the Station on a daily basis • Commuters passing through the station who will be able to see the top portion of the southern gas holder • Arriving to and leaving from the Station as intermittent commuters • Waiting for trains on the platform
Burren Street Pedestrians	
Activities	• Locals walking to work locally (Newtown, Erskineville, Redfern, etc) • Visitors to Burren Street residents • Locals taking walks along Burren Street
Burren Street Residents	
Activities	• Residents walking to and from their homes • Residents taking weekend/neighbourhood walks/walking dogs • Residents who have views (particularly of the standing gas holder) from the rear of their houses • Visitors of Burren Street residences that have (above) views
Visitors to Carriage Works interpretation centre	
Activities	• Locals and tourists (state, national, and international participants) visiting the Carriage Works to learn about the history of the place • Carriage Works staff • Performing artists and others who frequent the gallery and theatre space • Market goers (Eveleigh fresh produce markets held weekly)
RailCorp Stabling Yards Facility	
Activities	• Staff walking through area of interpretive device (to be confirmed) as part of regular work day

The industrial nature of the site, the adjacent stabling facility and the Illawarra rail corridor do not allow for public access to the former Gasworks site. Therefore the potential audience for interpretive purposes is limited to the Burren Street passersby, occupiers of some of the residential properties along the western boundary of the site fronting Burren Street, RailCorp workers in the sheds of the former Stabling Yard, and possibly railway commuters along the Illawarra and Bankstown Railway Line.

There is also significant potential for a captive audience at the Macdonaldtown Railway Station in the form of daily commuters moving into and out of the station. There are two or three potential locations at the Station that could communicate the link between the Station and the former Gasworks.

Local residents, but particularly those along Burren Street, could provide "untapped" potential to absorb stories about the subject site, engage in further historical investigation of the site, and relate these stories to their friends and visitors.

In addition, the audience catchment can be greatly increased by linking the site with a future Eveleigh Railway Workshops heritage walk, through the interpretive facilities already located at the Carriageworks on Wilson Street, Redfern and through the RailCorp online historical resource. This could also include the occasional Open Day for the subject site that might appeal to archaeologists and historic train enthusiasts and would be included as part of a broader interpretive scheme associated with the Eveleigh Carriage Works.

2.1 INTERPRETIVE APPROACH

This site has considerable constraints to its interpretive potential due to its very limited access and relative audience potential. This is further compounded by the fact that the site's primary location for interpretation is an outdoor, and unprotected area that could be subject to vandalism as it would be for any external street signage of a similar nature. For this reason interpretation for the subject site should be uncomplicated and without high maintenance requirements. It should be considered a site of secondary interpretation within the overall Eveleigh site and the interpretive approach should be relatively minimal, yet encompass all of the selected historical themes outlined in Section 5 in a succinct, informative, and engaging manner.

3 CONSTRAINTS AND OPPORTUNITIES

There are elements of the physical site and its operations that either work to enhance the communication and understanding of its history or create obstacles to disseminating that information. These have been identified below.

3.1 CONSTRAINTS

- The site does not have any public access (for reasons of personal safety due to adjacent rail lines; ongoing use of the site for rail materials; and security support for the neighbouring residences) and has a very limited visual exposure from the public domain. These public views are limited to the views from the rear of some properties fronting Burren Street.
- View glimpses, which were available from the Illawarra railway line to the commuters of the fast running trains, are blocked by a noise wall along the southern boundary of the site.
- The Stabling Yard Facility and the noisewall on the northern boundary restrict views from Macdonaldtown Railway Station.

- Potential views, which are possibly the most exposed views, exist on the eastern corner of the triangular land towards the Stabling Yard accessible by Railway workers only.
- Contaminated soil on the site may restrict retention of other remnant structures within the site. These include currently visible structures such as concrete platforms; brick, steel and concrete retaining walls; an unused signals shed and other associated cable pits and sewer pits as well as remnant sections of the original gasworks structures that were exposed as part of the archaeological test excavations in June 2010.
- The site also has security issues including unauthorised entry, graffiti and property damage.

3.2 OPPORTUNITIES

- The site has a strong association with the Eveleigh Railway Workshops. There is an opportunity to link the site's interpretation with the overall Eveleigh interpretive media. This will have substantial contribution to the exposure of the site's history to a wider public, which otherwise would have a very limited visibility or may not be known to the public.
- There is an opportunity to interpret the northern gas holder annulus through the reinstatement or reconstruction of a ring of bull-nosed bricks that currently mark the location of that gas holder.
- The Burren Street boundary of the site, which is currently secured by a corrugated metal fence, has potential to provide a place for a large interpretive panel to tell the history of the site.
- Opportunities exist at the Macdonaldtown Railway Station for an interpretive panel to be installed near the Station entrance to remind viewers of the old/original access route for railway workers to the former Gasworks and (former) Stabling Yard. This provides a valuable opportunity to interpret the site's history to those who work on or nearby the site daily.
- There is at least one, possibly more, view glimpses of the existing gasholder from Burren Street.
- Opportunities exist to interpret the history of the site within the adjacent RailCorp Stabling Yards Facility. There are areas frequented by RailCorp employees who do not appear to have marked knowledge of the former Gasworks.
- There is also a potential for incorporation of oral history of the former Gasworks workers and their working condition. This could be undertaken as part of the overall program of Eveleigh Railway Workshops oral history.
- The existing interpretation centre at Eveleigh Carriage Works (corner Wilson and Codrington Streets) has a location available for an interpretive panel of the Gasworks and should be utilised to complete the interpretation of the Eveleigh Railway facilities.

- The “Rail Heritage Centre” at Central Station is another potential location for the display of information and brochures.
- The internet provides an immeasurable opportunity for interpreting the site, both as a primary source such as permanent information on a Railway website, but also linked to a number of other websites relating to the history of trains, Sydney Railways, local industry, etc.

4 INTERPRETATION THEMES

Based on the Interpretation Strategy for this site, the general NSW Historical Themes of interpretation, endorsed by the Heritage Council of New South Wales, for the site are Industry, Science, Technology, Transport, Utilities and Labour.

4.1 GASWORKS OPERATIONS & NSW GASWORKS (INDUSTRY, TECHNOLOGY,TRANSPORT, & UTILITIES)

Exploration of the history of the site including its long term use as a gasworks site between 1892 and 1958 and its importance within the NSW Gasworks.

- Other Gasworks in NSW
- Early agreement to provide gas and gasworks by Louis Castnor
- Earlier methods of lighting carriages
- Quality difference between early oil and later gas lighting
- Technology with a commercial application

4.2 MANUFACTURING PROCESS (INDUSTRY, TECHNOLOGY, & UTILITIES)

The works at Macdonaldtown Gasworks comprised two separate and complete plants – one for the manufacture of gas from coal for use at stations and in signals from Sydney to Macdonaldtown; and the other for the manufacture of a much richer gas made from shale for use in the carriages. This is to include the available schematic diagram of the sealing gas after leaving retorts in association with an explanatory text.

- Foul odours associated with gas production
- By-products: coke, tar, and ash
- Individual processes in gas purification
- Manufactured gas vs. Natural gas
- Purification: removing sulphur, ammonia compounds, and heavy hydrocarbons
- Distribution of gas

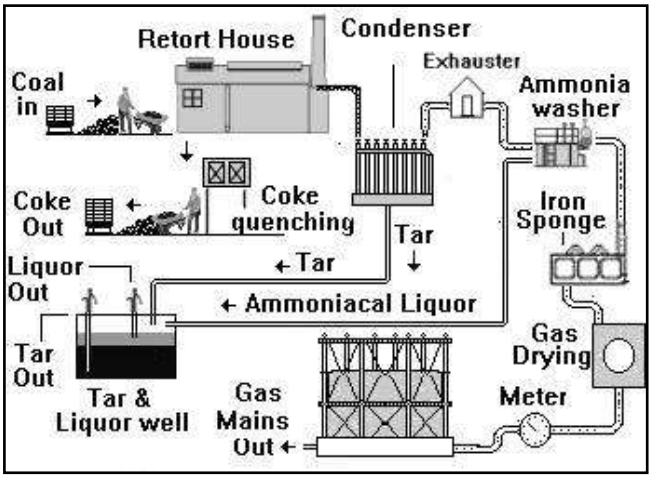


Figure 2: Diagram of the process of coal gasification. A 'similar' process to the gas manufacture at this site. (from http://www.igg.org.uk/gansg/12-linind/gasworks.htm)

4.3 MACHINERY (INDUSTRY, TECHNOLOGY, & UTILITIES)

A description of the machines used at the site to produce purified gas; technological accomplishments in gas production; and original positions of important machines on site. This information is collected from original drawings and plans, photographs, archaeological assessments, and written histories.

- Retorts and retort benches
- Condensers
- Washers
- Scrubbers
- Purfiers
- Gasholders
- Tar tanks

4.4 EVELEIGH RAILWAY WORKSHOPS CONNECTION

The gasworks site's strong association with the Eveleigh Railway Workshops as part of the overall railway maintenance operations.

- Connection to Eveleigh Railway Workshops and the significance of that site

4.5 LABOUR AND WORKERS (LABOUR)

The strong relationship and historical association of the place to the people who worked there in conjunction with the oral history of the overall Eveleigh Railway Workshops. By 1898 there were 50 employers working in the Railway Gasworks in Sydney and country including Junee, Bathurst, Newcastle and Werris Creek.[5]

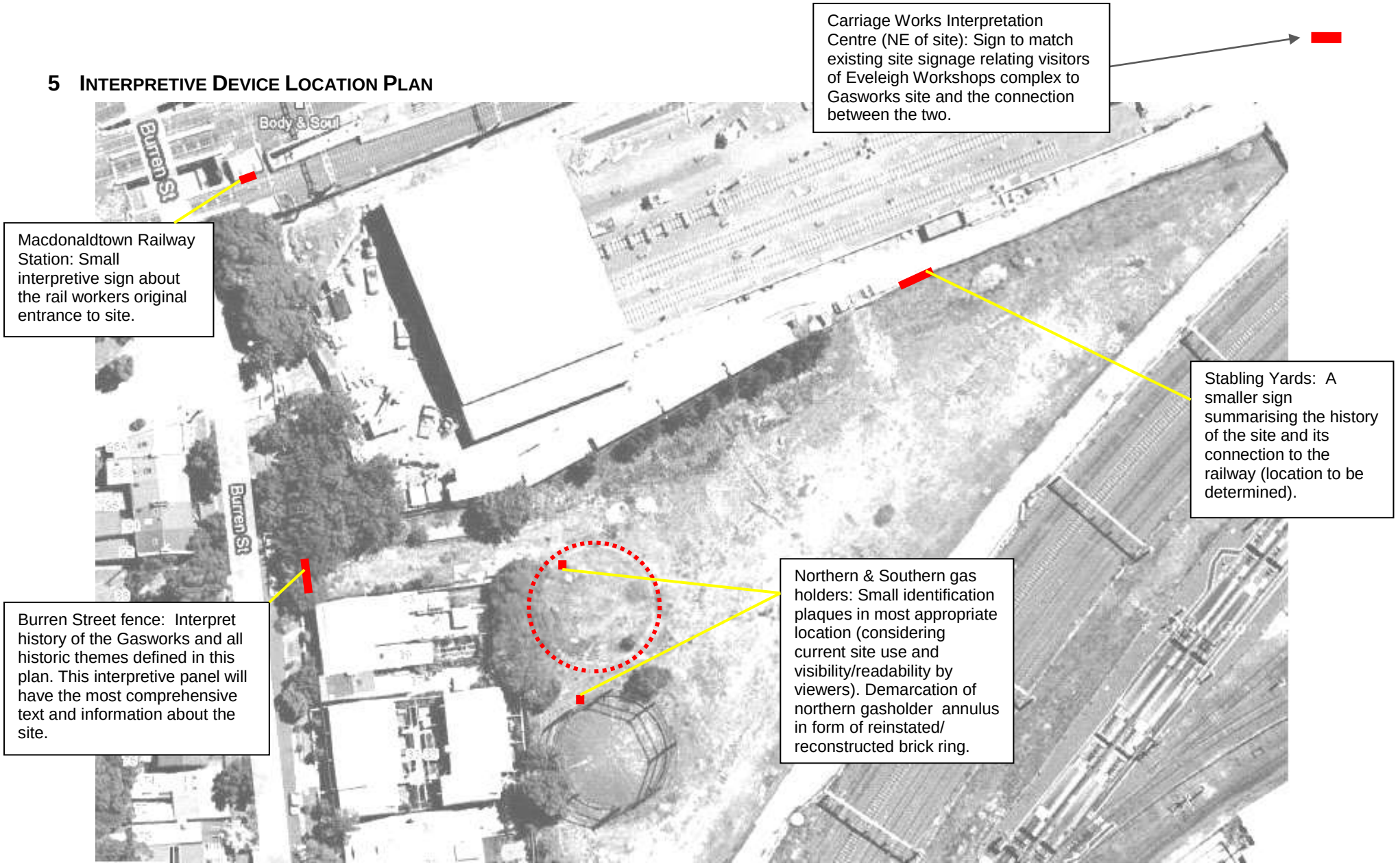
- Coal strike of the 1950s resulting in inferior coal and damage to plant
- Fifty (50) employers at gasworks sites by 1898

4.6 ARCHAEOLOGICAL FINDS (SCIENCE)

Interpretation will include the findings from the recent site excavation (City Plan Heritage, Gina Scheer, under the direction of, Franz Reidel Excavation Director). This includes the extent and condition of archaeological remnants within the site and the exposure of foundations and building footprints, as much as practicable and possible, discovered during this process. It must be noted that there was the complete removal of machinery from the site in the past and that seemed to include any smaller items of moveable heritage. Ground level remains and below ground level remains did exist on the site.

[5] *The NSW Railway Budget*, Oct 20, 1898, p.43.

5 INTERPRETIVE DEVICE LOCATION PLAN



5.1 BURREN STREET FENCE (FORMER GASWORKS ENTRANCE)

This has been identified as the most appropriate location for a large interpretive sign or panel that conveys all of the relevant historic themes of the site. This is because of its public accessibility and convenience. Interpretation in this location will not interfere with other signage (such as safety and directional signage at the Macdonaldtown Rail Station) and can be viewed by most of the individuals in the identified audience in Section 2. This location can also accommodate a larger sign panel. This area does not provide views of the subject site but provides the best tangible physical connection to the site with its proximity. Passersby may be able to glimpse the extant gasholder before approaching the sign, or, have the opportunity to read the sign and then look for the gasholder as they move along Burren Street. This panel should engage and entice the viewer to investigate.

Figure 3: Location for Burren Street interpretation panel (fence marking original entrance to Gasworks).
(Photo taken by Kerime Danis in 2010)

Objectives for interpretation at this location:

- Sign to be a minimum of 1000mm (W) x 600mm (H)
- Sign panel should be securely fixed and resistant to vandalism (anti-graffiti film)
- Sign panel should be fixed so that the bottom edge is no higher than 1200mm from ground (optimum viewing height for mixed audience)
- Interpretive text should be arranged in an 'active' and visually flowing manner so as to ensure the viewers stays engaged with the images and information (ie not large overwhelming blocks of text).

- The panel should include a minimum of three (3) images from the 2010 excavation of the site
- The panel should include an existing plan of the subject site and original location of its significant buildings and elements (ie retort house, gasholders, condensers, scrubbers). See appendix for image.
- The panel should include a diagram of the process and elements of gas production from coal. See appendix for example.

5.2 CARRIAGE WORKS PANEL – EVELEIGH RAILWAY WORKSHOPS PRECINCT (PANEL WITHIN EXISTING SET)

This location has considerable opportunity to reach a broad segment of the public as it is within the existing interpretive media at the Carriage Works interpretation centre at the corner of Wilson and Codrington Streets and will potentially have the most visitations.

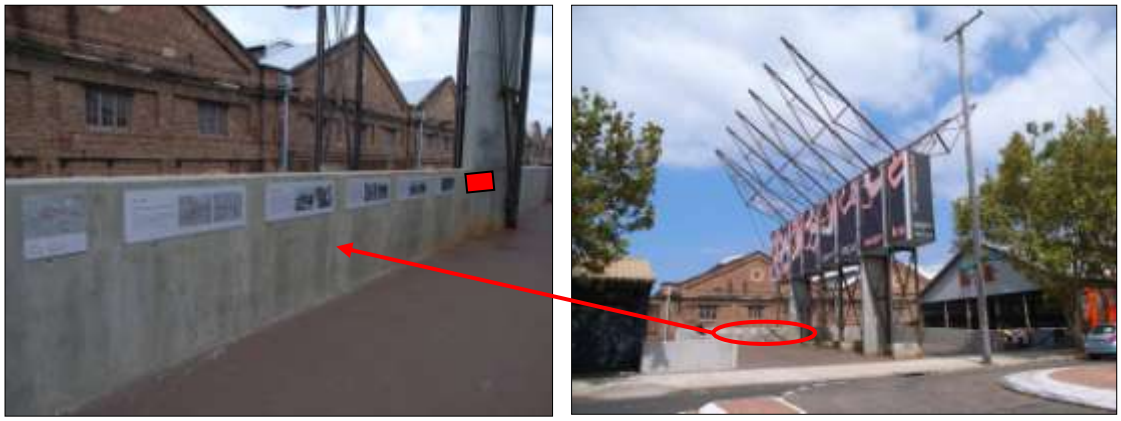


Figure 4: Interpretive signage at the Carriage Works located at the corner of Wilson and Codrington Streets. Above left – row of current signage for new inclusion. Red rectangle is location for new sign. Map of precinct, including former Gasworks is at the far left, Above right – Location of these signs within greater interpretation centre. (Photos taken by Kerime Danis in 2010)

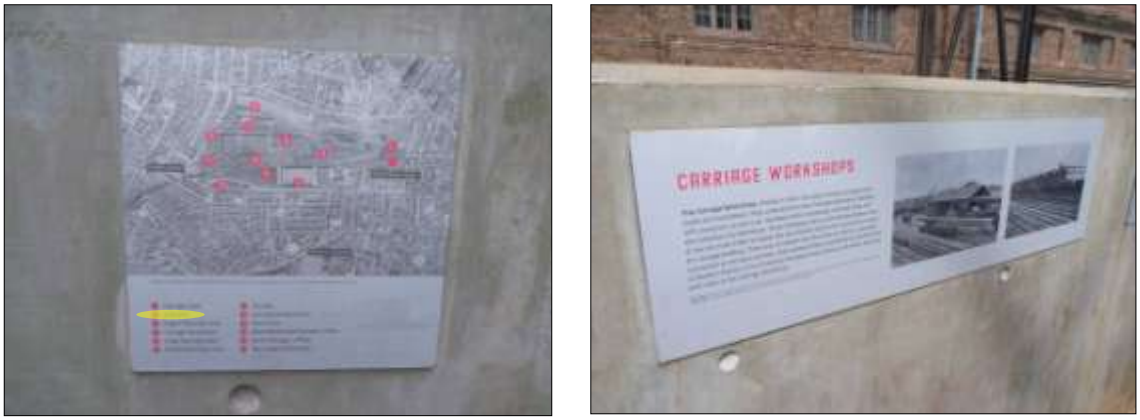


Figure 5: Detail of the interpretive signage at the Carriage Works showing the location map (the former Gasworks is listed as number 2 on the map (highlighted in yellow). The proposed sign for the Gasworks will be similar to the signs seen in the right image. (Photos taken by Kerime Danis in 2010)

Objectives for interpretation at this location:

- Sign should be the same dimensions and materials as the other five (5) in the sequence and should be positioned accordingly
- Body text, title, font and images should be consistent with the other five (5) in the sequence
- Sign panel should be securely fixed and resistant to vandalism (anti-graffiti film)

5.3 MACDONALDTOWN RAILWAY STATION PLATFORM

There is significant potential for a captive audience at the Macdonaldtown Railway Station in the form of daily commuters moving into and out of the station. One location has been identified with the most potential for engaging commuters entering and leaving the station. This location has been selected for its close proximity to the original access route between the subject site and the former Stabling Yard. The proposed sign is subject to any overriding operational and safety considerations which may affect the design and exact placement of interpretive devices.

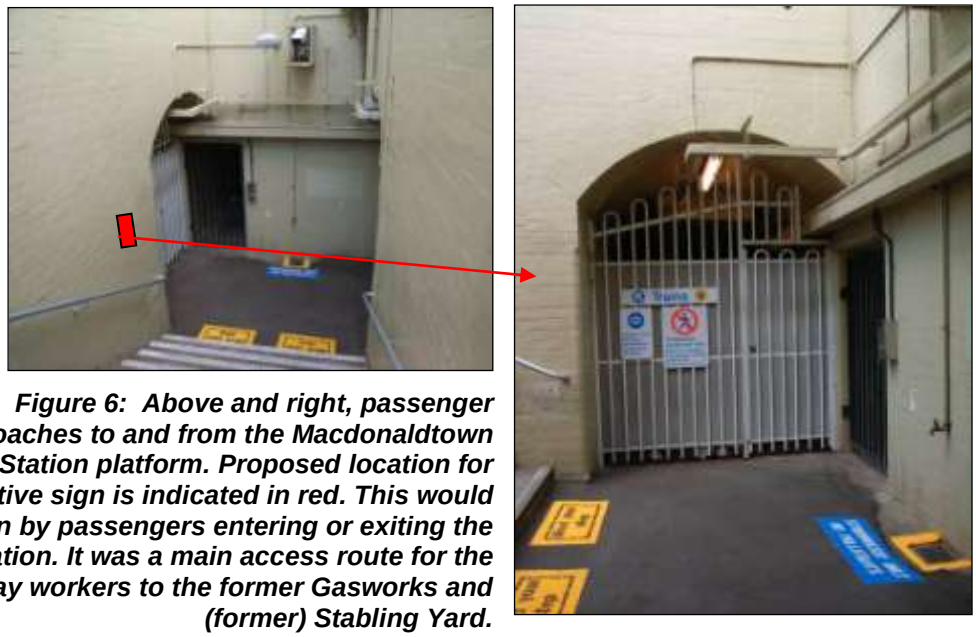


Figure 6: Above and right, passenger approaches to and from the Macdonaldtown Railway Station platform. Proposed location for interpretive sign is indicated in red. This would be seen by passengers entering or exiting the Station. It was a main access route for the railway workers to the former Gasworks and (former) Stabling Yard.

Objectives for interpretation at this location:

- Sign(s) should be a minimum of 400mm (H) x 300mm (W)
- Sign(s) should be located where they don't compete with safety and other regulation signs
- The bottom of the sign(s) should not be higher than 1200mm from the ground
- Sign panel should be securely fixed and resistant to vandalism (anti-graffiti film)
- The panel should include one image of gas workers. See appendix for example image.

- The panel should include one image of the site (eg 1917 image of site, image of gasholder, etc).

5.4 STABLING YARDS FACILITY

This is a medium sized interpretive sign that covers one or two of the described themes for the subject site. It should be located in an appropriate communal area with operational and safety considerations. This sign should be displayed, if possible, in a location with visual reference to the former Gasworks (*see Interpretive Device Location Plan, section 5).*

This sign should convey the history of the site and gas production technology. Interpretive text should be taken directly from the comprehensive recommended text from the Burren Street interpretive sign, Section 7.

Objectives for interpretation at this location:

- Sign should be a minimum of 700mm (H) x 500mm (W)
- Sign should be located where it doesn't compete with safety and other regulation signs
- The bottom of the sign should not be higher than 1200mm from the ground
- Sign panel should be securely fixed and resistant to vandalism (anti-graffiti film)
- Sign panel should include a minimum of three (3) images from the 2010 excavation. One image should be of artefact(s) found.
- Sign panel should include original site plan with location marker for the viewer to orient themselves to the site. See section 5.1 for details of recommended site plan.

5.5 INTERPRETIVE IDENTIFICATION / LOCATION PLAQUES AND DEMARCATION OF GAS HOLDERS

Refer to the Interpretive Device Location Plan (Section 5). For best interpretation, plaques should be a minimum of 400mm (W) x 300mm (H). They should be consistent in their placement inside the annuli (circles) and be made of a durable material. Stainless steel or similar is recommended.

The ring of the northern gasholder should be demarcated. The site reinstatement following remediation will include interpretive elements such as the existing southern gasholder structure, and the footprint (brick ring) of the former northern gasholder. The brick ring of the northern gasholder will be removed as part of the remediation works but will be reinstated as an interpretive footprint following completion of the works. Details of the reinstatement will be provided at the implementation stage in accordance with the condition of the removed bricks of the northern ring.

Figure 7: Remnant brick annulus from northern gas holder as seen during excavation works in June 2010. (photos by Gina Scheer and Franz Reidel)

Objectives for interpretation at this location:

- Original bricks should be used if determined possible after remediation.
- Final interpretation of this annulus should be minimum clearly visible above the ground, similar to the existing.
- If new bricks must be introduced, bull-nosed bricks should be used, where appropriate, to reflect the original. Where possible and practical, bricks will be used of a similar type and colour to the original.
- During the remediation / removal process, the original annulus location and size must be clearly marked and recorded for reinstatement or reconstruction. Depending on the remediation methodology, this should be done taking accurate measurements of diameter, width of ring, etc. through surveying or marking ground location with stakes, string, spray paint, and supported by photographic recording of their location.
- The reinstated or reconstructed brick ring must be laid on an appropriate foundation to ensure its safekeeping and prevent movement.

6 CONCLUSION AND RECOMMENDATIONS

It is recommended that:

1. RailCorp and the Heritage Branch Department of Planning accept this Interpretation Plan as a framework for future development of interpretation for the former Macdonaldtown Gasworks in accordance with the formerly proposed Landscape Concept Plan (Dickson Rothschild 2004) and the Heritage Branch Consent Conditions (7) and (17).
2. That the Strategy is implemented as part of the staged implementation process of the Macdonaldtown Gasworks Remediation Project.
3. That detailed designs of the interpretive panels meet the intent of this Interpretation Plan.
4. Published materials (eg brochures, website, DVD) interpreting the former Gasworks site are incorporated as part of the interpretation of the greater Eveleigh Railway Workshops.

The next steps, following approval of this Plan by the Heritage Branch Department of Planning are to:

a) Implement approved concept (or preliminary) designs. This includes finalisation of interpretive text, finalisation of images to be used and obtaining permission to publish and any other issues of copyright and obtaining appropriate high resolution images for incorporation where necessary. A graphic designer or qualified professional should be engaged to layout images and text for camera-ready artwork and the manufacture and installation must be undertaken by an appropriate professional.

b) Publishing of educational or way finding brochures or web delivery of information should also be undertaken in conjunction with the remediation works on site, if it fits within the time frame of the overall Eveleigh Workshops interpretive publications.

7 ATTACHMENT A: SAMPLE MOCK-UP SIGN FOR BURREN STREET ENTRY

This final interpretation device is to be located at the Burren Street entry, near the original Gasworks entry (see plan of interpretation devices, Section 6). It will represent the primary interpretive device, the largest, and the one that encompasses all identified interpretive themes.

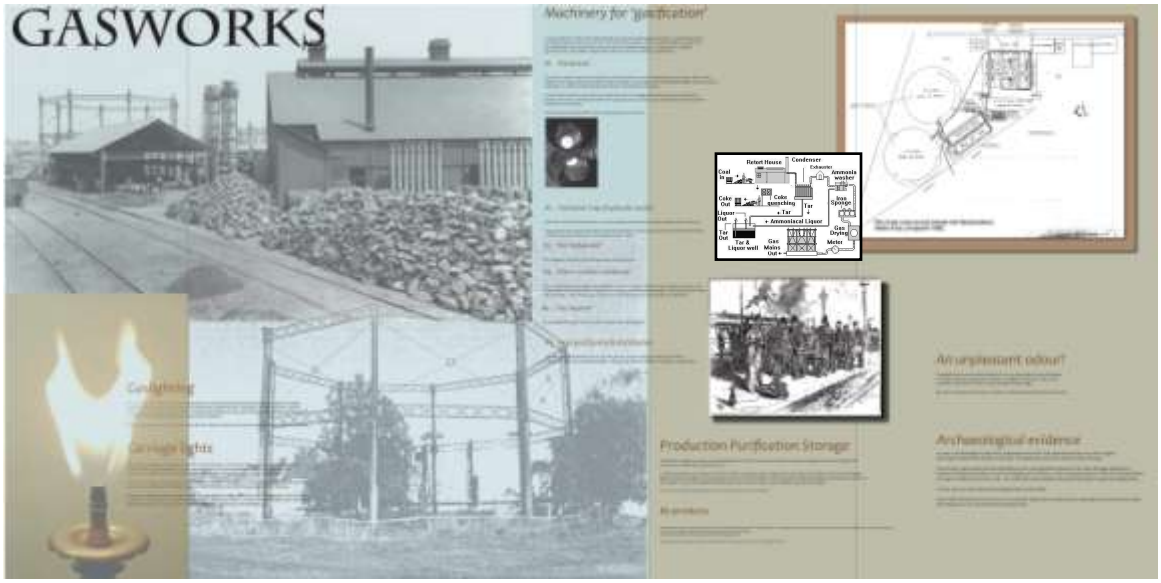


Figure 8: Concept design panel for Burren Street interpretation sign

BELOW IS THE RECOMMENDED TEXT FOR THE ABOVE MOCK-UP SIGN

GASWORKS (Main Title)

The last of an era (Subtitle)

(Body Text: 16-18pt)

The land directly behind this sign formerly known as Eveleigh Gasworks or MacDonaldtown Gasworks holds the last remnant of gas production in Sydney and New South Wales as a whole. Gas production and distribution was revolutionary and lit up the streets of Sydney at night helping to transform it from a dark and sometimes dangerous place to a respectable town. At this plant, however, gas was produced solely for the railways.

(Sub Text: 14pt)

Queen Victoria's birthday, 24th May 1841, was the first time the city streets were lit up by the Australian Gas Light Company.

Production Purification Storage (Subtitle)

(Body Text: 16-18pt)

The former Eveleigh Gasworks was established here in 1892 to provide illumination to railway carriages and stations through the production of shale and coal-derived gas.

(Body Text: 16-18pt)

In 1878 the Railways Commissioner of NSW, Charles Goodchap, made an agreement with John Louis Castner to fit and maintain gas lights in railway carriages and to provide gas from his works in Redfern. A few years later in 1884, the Railway Commissioners took over Mr Castner's works and established further gasworks in Newcastle, Werris Creek, Junee, Redfern, and here at Eveleigh.

(Sub Text: 14pt)

This Works was capable of supplying a town with a population of 20,000 to 30,000 people.

NSW Railway Gasworks (Subtitle)

(Body Text: 16-18pt)

Gas was used for many years to illuminate the interior of railway carriages. The NSW Government Railways manufactured its own gas after gaining control of Castner's gasworks. With the onset of converting to electric power for lighting buildings and carriages during the 1920s and 1930s, the railway gasworks were progressively decommissioned.

Gaslighting (Subtitle)

(Body Text: 16-18pt)

From the late 18th century to the widespread use of electrification, illuminating streetlamps, railway carriages, lanterns and the like was done through the production of gaseous fuels. Hydrogen, methane, propane, butane, and acetylene are some examples of this. Domestic

gas lighting, or the system of piped-gas lighting is attributed to William Murdoch (1754-1839) from East Ayrshire Scotland.

(Sub Text: 14pt)

Before 1790 people used olive oil, bees wax, fish oil, whale oil, and nut oils such as sesame for fuel to light their homes.

Carriage lighting (Subtitle)

(Body Text: 16-18pt)

The earliest passenger carriages in NSW were lit with oil lamps. Two lamps in first and second class carriages and none for third class passengers. Colza oil was used later but it was expensive and had to be imported from overseas. The lighting was unreliable and each lamp had the illumination of about four (4) candlepower.

(Body Text: 16-18pt)

In 1877 John Louis Castner offered to provide gas and fittings to carriages for £2,000 per year. Castner's new gas lamps were twice as bright as the oil lamps and had a distinctly better smell than the gas used for town lighting.

(Body Text: 16-18pt)

Fuel for lighting railway carriage lamps was produced from shale rather than coal. This created a richer better quality fuel. The gasworks here processed fuels from coal and from shale. Coal fuel was used to light station platforms, signals, approaches to stations, parcels and booking offices, stairways and footbridges, etc.

Machinery for 'gasification' (Subtitle)

(Body Text: 16-18pt)

A visual reminder of the former Eveleigh Gasworks still remains at this site. A gasholder looms over this landscape and is the only one of its kind still standing in New South Wales. The gas holder, or storage area for purified gas, was the last step in the process for manufacturing gas. The process of creating gas fuels from combustible materials like coal, oil, and wood is called 'gasification'.

#1 The Retort

(Body Text: 16-18pt)

The retort, made of cast iron or fired clay, functioned like an oven for heating the coal and shale. When coal is heated in an oxygen-poor atmosphere it gives off gases. These gases were funnelled through a series of various machines in order to purify the gas and remove contaminants and toxins.

(Body Text: 16-18pt)

A retort 'house' held rows of retorts called benches. At Eveleigh the Retort House was 80 feet by 60 feet and contained two benches of retorts. Each bench had 5 'D' shaped ovens and each oven contained five retorts built of firebricks over a furnace.

#2 Tar / water Trap (Hydraulic Main) (Subtitle)

(Body Text: 16-18pt)

After the coal is fired in the retorts it is only partially converted and a residue called 'coke' is left over.

(Body Text: 16-18pt)

The gases are then passed through a hydraulic main that cools the gas and the water traps all the volatile heavy substances that have come from the coal or shale.

#3 The Exhauster (Subtitle)

(Body Text: 16-18pt)

The exhauster worked to draw the gas away from the retort.

#4 Water-cooled Condenser (Subtitle)

(Body Text: 16-18pt)

Next the gas is passed through an atmospheric or water-cooled condenser. Here, the gas is cooled to the temperature of the atmosphere. Here again the gas parts with more impurities.- tar, tarry oils, and water with ammonia.

#5 The Washer (Subtitle)

(Body Text: 16-18pt)

Gas is then bubbled through water to extract any more remaining tar.

#6 Final Purification Storage & Distribution (Subtitle)

(Body Text: 16-18pt)

The last step of purification was to pass the gas over trays of moist ferrous oxide. This would remove the hydrogen sulphide. The gas was then distributed to storage or a gas holder. The pressure on the retorts is so substantial that it lifts the gasholder, weighing 18 to 20 tonnes, just by gas being forced into it.

By-products (Subtitle)

(Body Text: 16-18pt)

Besides gas fuel, 'coke' was produced here. Coke is a natural by-product of gasification. Coke appears as a hard porous substance and is the remnant of coal following its destructive distillation in an oxygen deficient chamber. Coke was used widely in several coke-fuelled forges at the nearby Eveleigh Workshops to assist in the manufacture of railway carriages there.

Coke is important because it works as a heat shield and is often used in the process of smelting iron ore.

Archaeological evidence (Subtitle)

(Body Text: 16-18pt)

In 2004 and again in 2006 archaeological surveys were undertaken here and it was determined that some gasworks elements did indeed remain on this site. In 2010 test trenches located the ground level remains of a number of buildings across the site and confirmed the 1917 and 1940s layout plans of the Gasworks production site, including rail tracks for the trains to be loaded from the standing Gasholder.

(Body Text: 16-18pt)

The southern gas holder has been identified as the most significant element with state heritage significance because of its good condition, structural integrity, and rareness. It also has great research value as a representative of a type of railway function that is now rare. Its construction and operation are demonstrated through its existing fabric.

(Body Text: 16-18pt)

It is the only one of its type still standing in New South Wales.

(Body Text: 16-18pt)

Before remediation of this site, some other elements also survived such as the retort flooring, purifier shed flooring, ablutions block and workers tea room as well as the later tar pits and northern gasholder rim. The annulus (or ring shape) of the northern gasholder was removed and reinstated after remediation of the site to preserve its location.

An unpleasant odour! (Subtitle)

(Body Text: 16-18pt)

Coal gasification was a beneficial industry for over one hundred years and allowed for simpler lighting, heating, and cooking. The biggest drawback was the smell! Gasworks could leave an entire suburb stinking of rotten eggs!

(Sub Text: 14pt)

By today's standards, this industry would be considered grossly polluting and unsafe.

Coal strikes (Subtitle)

(Body Text: 16-18pt)

The availability and transport of coal to places like Eveleigh Gasworks was often the cause of conflict and strife. Striking workers unions were commonplace and as late as 1948 gas production and distribution stopped. Most of Sydney's gas was completely shut off without a word of warning and during a city-wide crisis with its electrical supply.

In the 1950s coal strikes caused the use of inferior coal damaged the machinery and on-site gas production ceased.

Natural gas (Subtitle)

(Body Text: 16-18pt)

The era of manufactured gas ended between the 1950s and 1970s. Natural gas was more economic and piped directly from wells to distribution systems. It was better quality, safer, cheaper and did not require purification. Gas-manufacturing plants and staff were being made redundant.

Remediation of the site (Subtitle)

(Body Text: 16-18pt)

A remediation project for this site has been undertaken in phases by RailCorp in order to validate the site and declare it suitable for commercial and industrial use for railway purposes. This has included the preparation of a Site Audit Statement (SAS) by an EPA accredited auditor. Archaeological excavations were also undertaken across the site in order to assess and identify important remains and the impact that remediation would have on these.

(Sub Text: 14pt)

See 'Archaeological evidence' to read about what the archaeologists found!

8 ATTACHMENT B: SAMPLE MOCK-UP SIGN FOR EVELEIGH CARRIAGE WORKS

Figure 9: Concept design panel for Carriage Works interpretation centre

BELOW IS THE RECOMMENDED TEXT FOR THE ABOVE MOCK-UP SIGN

Gasworks

The former Eveleigh Gasworks were located to the southwest of the Eveleigh Railway Workshops. They were adjacent to Macdonaldtown Railway Station and Railway Stabling yard and had moved there from Redfern in 1892. In 1878 the Railway Commissioner had

entered an agreement with a Mr John Louis Castner to fit and maintain gas lights in carriages and to supply gas from his works at Redfern for a five year period. The Railway Commissioners took over Mr Castner's works in 1884, and subsequently established works at Werris Creek, a second works at Junee, two further works at Redfern in Sydney, and the subject site at Eveleigh. The Gasworks operated on the triangle of land bounded by railway lines at Macdonaldtown from 1892 until 1955. Gas was produced at the site during those years and between 1955 and 1977 was brought in from Mortlake and stored there. The surviving (southern) gasholder looms over the landscape but is now only visible from the Stabling Yards and sections of Burren Street.

Although there used to be many of them, this picturesque gasholder is the only one of its kind still standing in NSW. The largest was constructed for the Australian Gas Company in Haymarket from 1879 to 1916. The gas holder, or storage area for purified gas, was the last step in the process for manufacturing gas. The process of creating gas fuels from combustible materials like coal, oil, and wood is called 'gasification'. Fuel for lighting railway carriage lamps was produced from shale rather than coal. This created a richer better quality fuel.

The gasworks here processed fuels from coal and from shale. Coal fuel was used to light station platforms, signals, approaches to stations, parcels, and booking offices, stairways and footbridges, etc.

9 ATTACHMENT C: SAMPLE MOCK-UP SIGN FOR STABLING YARDS FACILITY

Figure 10: Concept design panel for Stabling Yards facility

Recommended text for this sign can be taken from Section 8 suggested text for the Burren Street interpretive sign. This sign should be engaging to RailCorp staff by focusing on the original layout of the site; orientating the viewer to their location along the boundary of the site; the process of gas production; site history; archaeology of the site; and a connection to the human element of labour, gasworkers, coal strikes, etc.

10 ATTACHMENT C: SAMPLE MOCK-UP SIGN FOR MACDONALDTOWN RAILWAY STATION

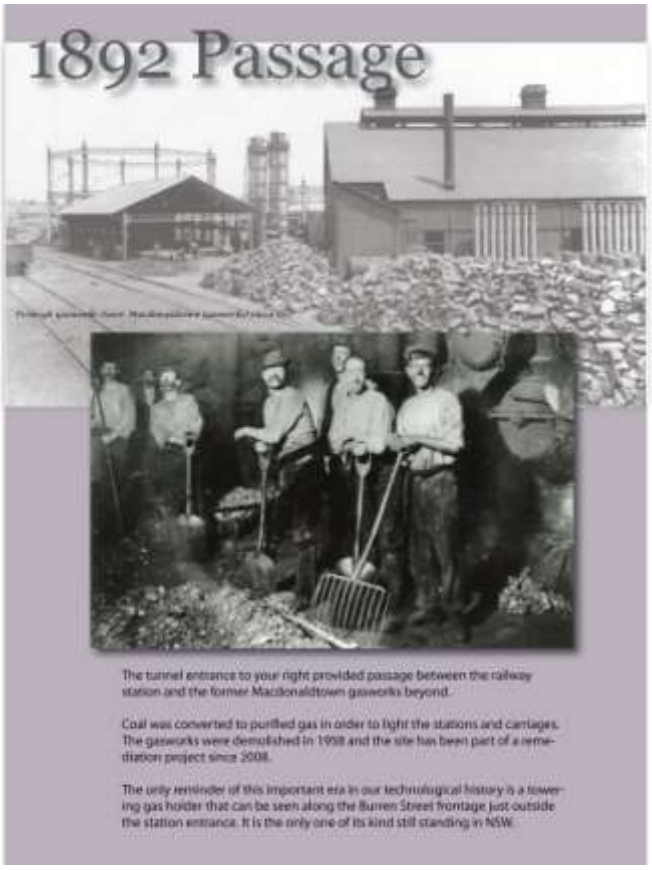


Figure 11: Concept design panel for Macdonaldtown Railway Station entrance

BELOW IS THE RECOMMENDED TEXT FOR THE ABOVE MOCK-UP SIGN

(Body Text: 16-18pt)
The tunnel entrance to your right provided passage between the railway station and the former Macdonaldtown Gasworks beyond.

Coal was converted to purified gas in order to light the stations and carriages. The gasworks were demolished in 1958 and the site has been part of a remediation project since 2008.

The only reminder of this important era in our technological history is a towering gas holder that can be seen along the Burren Street frontage just outside the station entrance. It is the only one of its kind still standing in NSW.

APPENDIX A:

ADDITIONAL IMAGES THAT MAY BE USED FOR INTERPRETATION OF FORMER MACDONALDTOWN GASWORKS

Unemployed gas workers waiting in the yards of Haymarket and Mortlake in 1930s – First Light: 150 Years of Gas, Rosemary Broomham

The Sydney Morning Herald.

TUESDAY, SEPTEMBER 4, 1917.

GAS EMPLOYEES OUT.

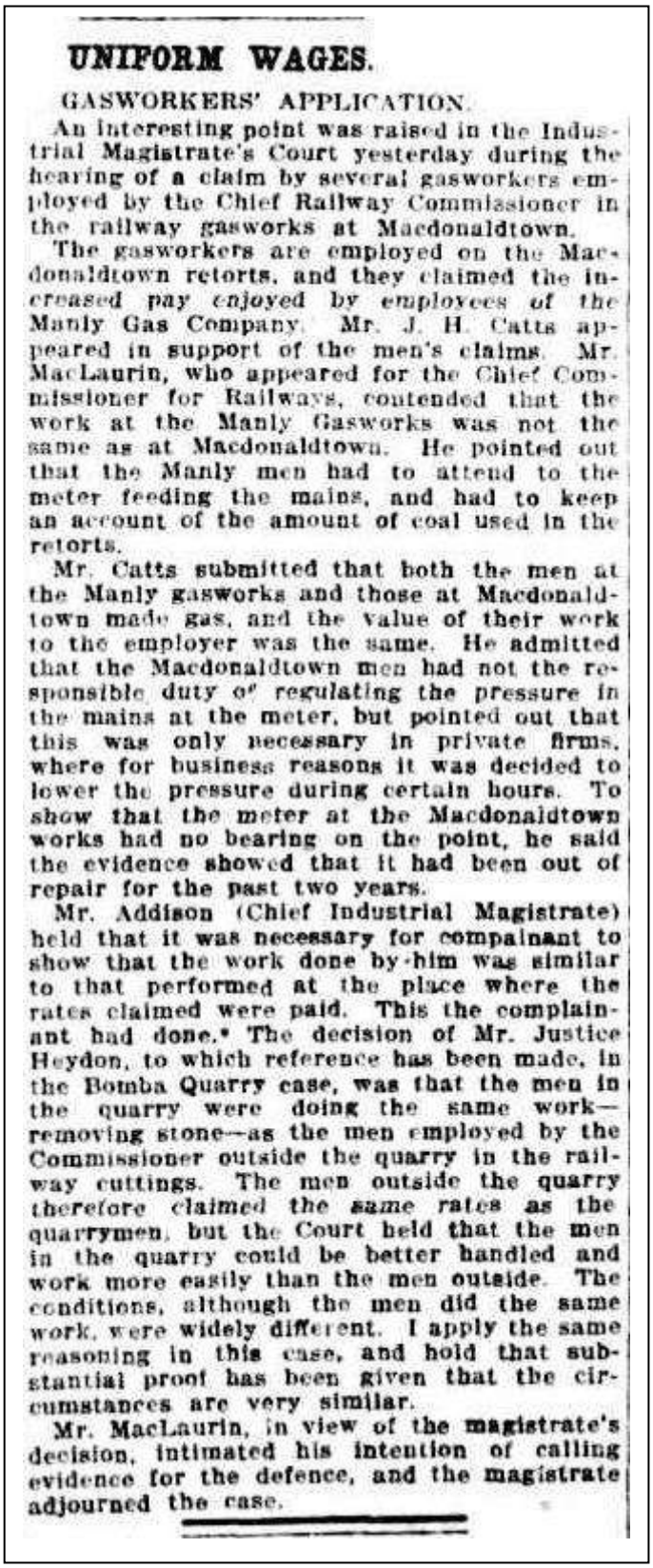
ABOUT 700 MEN AFFECTED.

The employees of the Australian Gaslight Company at Mortlake and at Kent-street ceased work yesterday morning, refusing to handle coal which was regarded as "black," and which had been taken alongside the company's jetty at Mortlake during the morning. About 700 men, it is estimated, are immediately affected by this extension of the strike. Plumbers and gasfitters, meter readers, and lamplighters also form part of the union. Those men, it is stated, number between 300 and 400, and their attitude will be awaited with interest, although the feeling officially is that, as they form part of the union, they will probably come out in sympathy.

The North Shore and Manly employees are not affected so far, and will, according to the secretary of the union, keep working until they are requested to handle "black" coal.

In a statement yesterday afternoon, the secretary of the union (Mr. S. Rawlin) said:—"Members of the union at Mortlake and at Kent-street ceased work this morning. The collier Alice was taken up to the wharf at Mortlake during the morning, and I got word that our coal porterage men had been asked to take up a position on the wharf and at the cranes in order to start unloading, but that they had refused to do so on the ground that they would be handling 'black' coal. They were told to get their money. In all, about 700 men are directly affected by the strike. Apart from mechanics and others, we had about 700 men employed at Mortlake before the restriction in the use of gas became operative, but consequent upon that the

From First Light: 150 Years of Gas. Original media and newspaper releases are effective methods of interpretation for establishing the look and 'feel' of the story and relating extra information not included in the interpretive text.



UNIFORM WAGES.

GASWORKERS' APPLICATION.

An interesting point was raised in the Industrial Magistrate's Court yesterday during the hearing of a claim by several gasworkers employed by the Chief Railway Commissioner in the railway gasworks at Macdonaldtown.

The gasworkers are employed on the Macdonaldtown retorts, and they claimed the increased pay enjoyed by employees of the Manly Gas Company. Mr. J. H. Catts appeared in support of the men's claims. Mr. MacLaurin, who appeared for the Chief Commissioner for Railways, contended that the work at the Manly Gasworks was not the same as at Macdonaldtown. He pointed out that the Manly men had to attend to the meter feeding the mains, and had to keep an account of the amount of coal used in the retorts.

Mr. Catts submitted that both the men at the Manly gasworks and those at Macdonaldtown made gas, and the value of their work to the employer was the same. He admitted that the Macdonaldtown men had not the responsible duty of regulating the pressure in the mains at the meter, but pointed out that this was only necessary in private firms, where for business reasons it was decided to lower the pressure during certain hours. To show that the meter at the Macdonaldtown works had no bearing on the point, he said the evidence showed that it had been out of repair for the past two years.

Mr. Addison (Chief Industrial Magistrate) held that it was necessary for compainant to show that the work done by him was similar to that performed at the place where the rates claimed were paid. This the complainant had done. The decision of Mr. Justice Heydon, to which reference has been made, in the Bomba Quarry case, was that the men in the quarry were doing the same work—removing stone—as the men employed by the Commissioner outside the quarry in the railway cuttings. The men outside the quarry therefore claimed the same rates as the quarrymen, but the Court held that the men in the quarry could be better handled and work more easily than the men outside. The conditions, although the men did the same work, were widely different. I apply the same reasoning in this case, and hold that substantial proof has been given that the circumstances are very similar.

Mr. MacLaurin, in view of the magistrate's decision, intimated his intention of calling evidence for the defence, and the magistrate adjourned the case.

Macdonaldtown Gasworks wage debate, Sydney Morning Herald Saturday 26 April 1913, pg 20, National Library of Australia

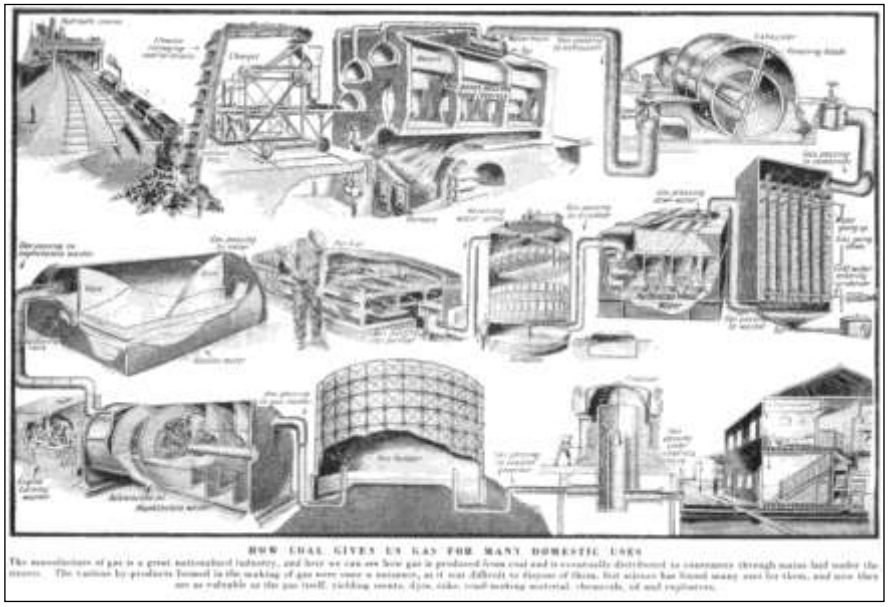


Diagram of gas production. A well-constructed diagram of the process of gas production can be very effective in promoting a visual / cerebral understanding of the site and its story. – Google images search

C. Lewis Construction Team Building Largest Gas Holder in Haymarket

First Light: 150 Years of Gas

"City Railway Terminus Sydney", showing gas lamp lighting

First Light: 150 Years of Gas

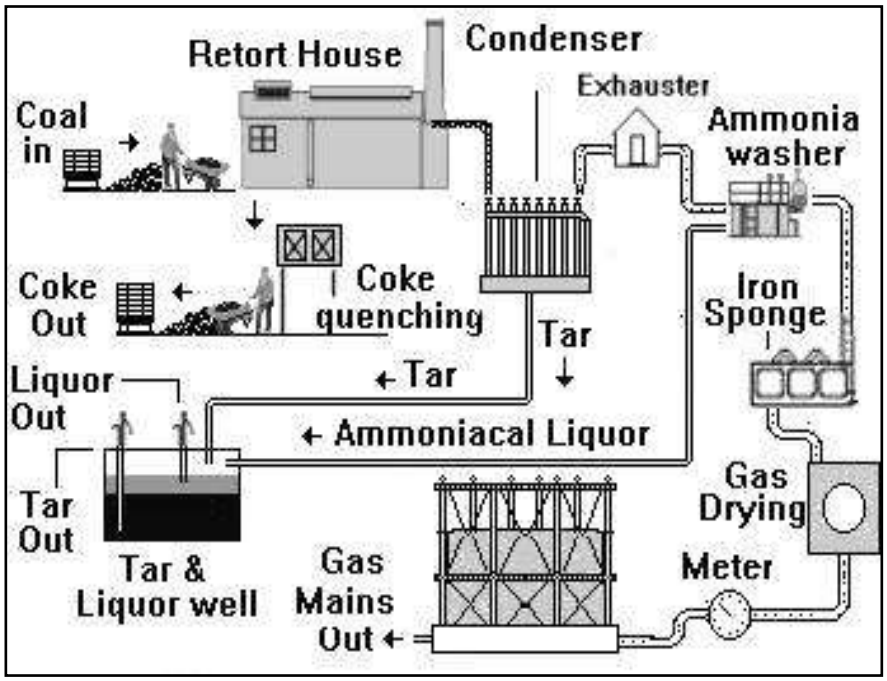
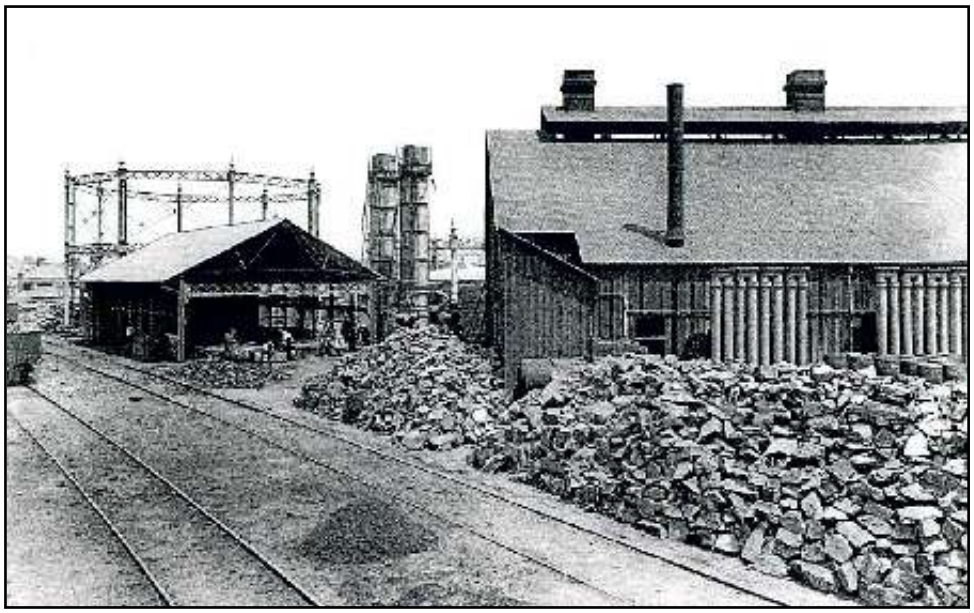
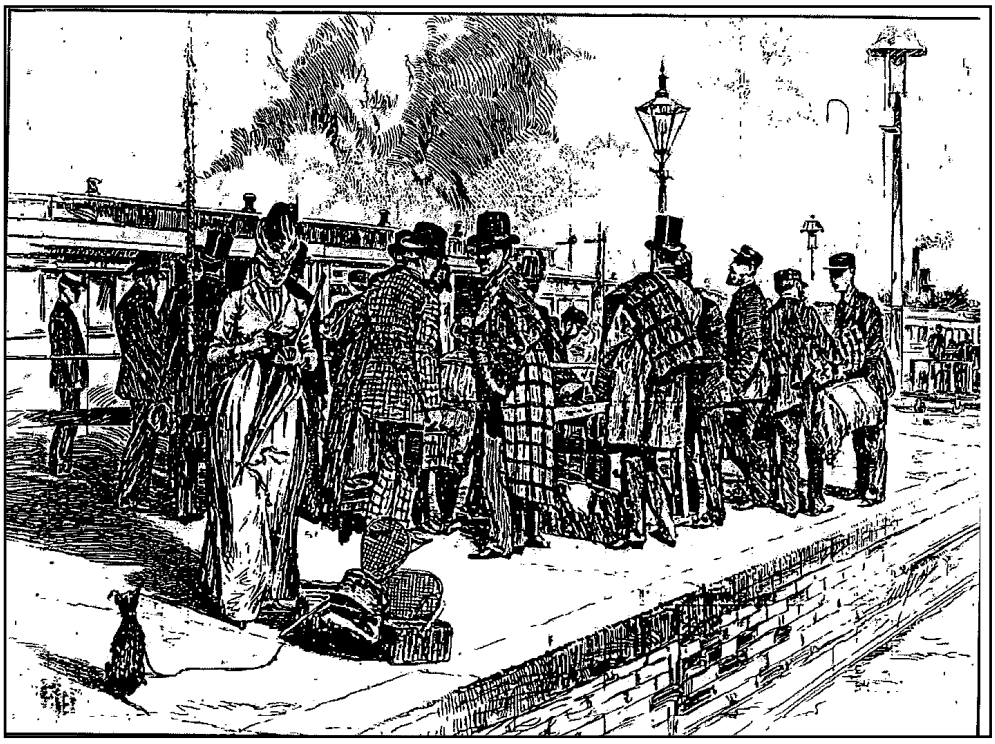


Diagram of process of gas production with coal. From Google images search, 'gasification'. (from http://www.igg.org.uk/gansg/12-linind/gasworks.htm

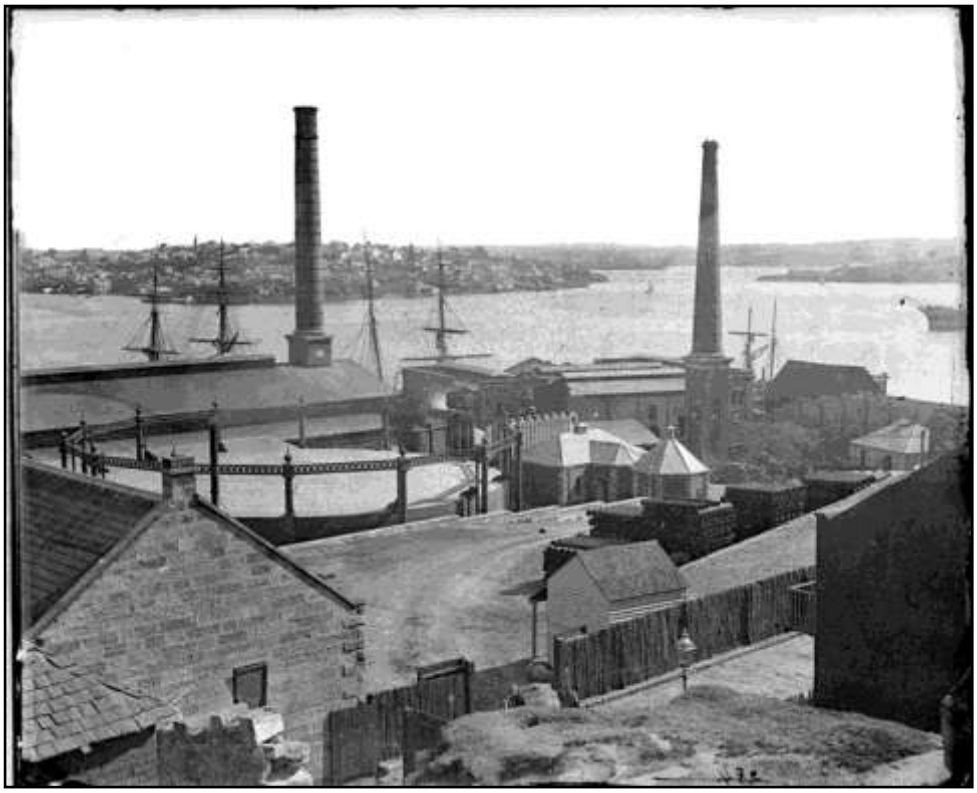


1917 photo of subject site looking west – Railway Gasworks and Gasmaking Macdonaldtown, H. C. Brooks, Gas Superintendent, NSW Railway and Tramway Magazine, December 1917.

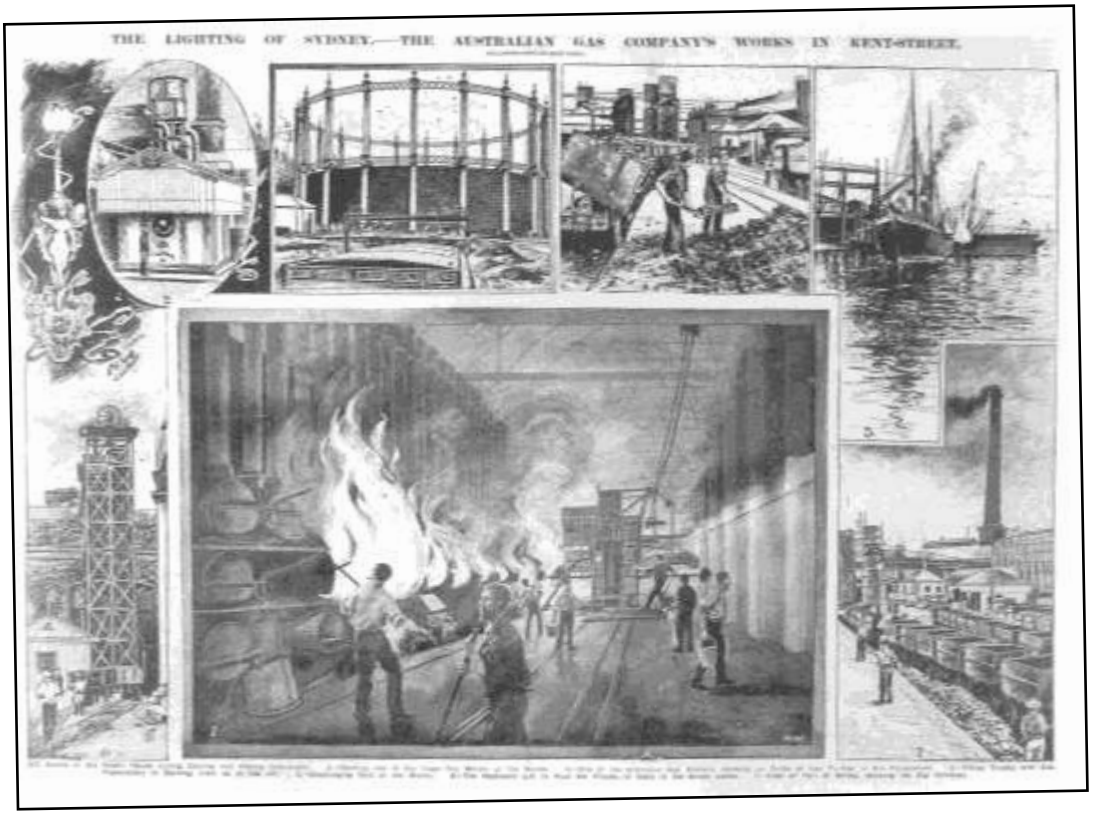


Passengers from the Melbourne Express claiming their luggage – Woodcut from The Town and Country Journal of 2 September 1889.

Gasworker drawing retorts (from http://www.maybole.org/places/gasworks/index.htm)



Australian Gaslight Company, Jenkins Street, Sydney (Millers Point) showing gasholder in middle ground – from State Library of NSW



'The Lighting of Sydney – The Australian Gas Company's Works In Kent Street – First Light 150 Years of Gas, Rosemary Broomham

Gasworkers from Victoria Road, Sutton (UK)
http://www.victoria-road.info/node/11

Trench 3, looking northeast, southern end of trench with in situ railway sleepers in foreground and concrete slab of Retort House in background

Railway sleepers in Trench 3 with the Southern Gasholder in background and Trench 1 in centre left

IFB stamped brick found during 2010 excavation, Illawarra Fire Brick

Pipe flange with 'Tylors' stamp. Found during 2010 excavation.

Trench 3 from 2010 excavation exposed concrete paving, cracked and revealing stress lines from wall or heavy machinery.

Site excavation photo with southern gasholder in background from 2010 excavation.